

## AUTHOR INDEX, 1978

- Aberhart, D. John, 333-4  
 Abou-Donia, Amina, 1078-9  
 Abramovitch, Rudolf A., 149-50  
 Acheson, R. Morrin, 332-3  
 Adams, John M., 210-11, 288-9  
 Addison, C. Clifford, 580-1  
 Adesogan, E. Kayode, 152  
 Adiwidjaja, Gunadi, 820-1  
 Adlington, Robert M., 1071-2  
 Agawa, Toshio, 12-13  
 Ager, David J., 177-8  
 Ai, Tu Hoa, 411-12  
 Akbar, Sher, 548-9  
 Akermark, Bjorn, 66-8  
 Akhtar, M., 967-8  
 Albinati, A., 195-6  
 Al-Borno, Amal, 1025-6  
 Alder, Roger W., 89-90  
 Alexander, David W., 101-2  
 Al-Hamdany, Raad, 397  
 Ali, Badie, 397  
 Al-Khayat, Isam, 265-6  
 Allen, David G., 346-7  
 Allen, Mark C., 901-2  
 Allen, Robert W., 832-3  
 Almemark, Mats, 66-8  
 Alper, Howard, 311-12  
 Altena, D., 226  
 Alworth, William L., 22-3  
 Amupitan, Joseph, 852-3  
 Anastassiou, Apostolos G., 915-16  
 Anderson, Gordon K., 709, 819-20  
 Anderson, Lowell R., 1066-7  
 Ando, Akira, 509  
 Ando, Wataru, 120-1, 894-5  
 Andreou, Andreas D., 271-2  
 Andrews, Adrian F., 389-91  
 Anet, Frank A. L., 58-9  
 Angelini, Giancarlo, 213-14  
 Anke, Timm, 665-6  
 Ansell, Herbert V., 586-7  
 Aoyama, Yasuhiro, 494-6  
 Appleman, Evan H., 310-11  
 Aquilino, Angelo, 347-8  
 Arata, Kazushi, 121-2  
 Arcamone, Federico, 1101-2  
 Aripovsky, A. V., 147-8  
 Armstrong, Fraser A., 1102-3  
 Arnold, Dennis, 73-4  
 Arnold, Donald R., 181-2, 743-4  
 Arnoux, Bernadette, 318-19  
 Asada, Miyako, 364-5  
 Asao, Masaaki, 667-8, 668-7  
 Asao, Tetsuji, 367  
 Asgill, Joan O., 59-60  
 Ashby, Eugene C., 30-1  
 Ashcroft, Peter L., 113-14  
 Atherton, E., 537-9, 539-40  
 Atherton, Malcolm J., 254-5  
 Atkins, Martin P., 954-6  
 Attina, Marina, 938-40  
 Atwood, Jerry L., 140-2, 451-2, 465-6, 1081-3  
 Augustin, Mary Ann, 370-2  
 Avnir, David, 1109-10  
 Azam, Kazi A., 1086-8  
 Azman, Andrej, 575-6  
 Bachmann, Jean Pierre, 203-4  
 Baciocchi, Enrico, 597-8  
 Back, Thomas G., 278-9, 952-4  
 Bacquet, Cathy, 194-5  
 Baddeley, G. Vernon, 411-12  
 Baikie, Andrew R. E., 62-3  
 Bailey, A. Sydney, 779-81, 845-6  
 Bailey, Pamela M., 142-3  
 Bailey, Stephen J., 474-5  
 Baird, Michael C., 11-12  
 Bakal, Yitzhak, 983-4  
 Baker, Fred C., 292-3  
 Baker, Raymond, 410-11, 981-3  
 Balaram, Padmanabhan, 996-7  
 Baldwin, Jack E., 239-40, 609-10  
 Balk, Roelof W., 1016-17  
 Ballard, Denis G. H., 994-5  
 Bardoli, Giuliano, 235-6  
 Banerji, Asoke, 843-5  
 Baradarani, M. Mehdi, 309-10  
 Barata, Lauro, 577-8  
 Barker, Geoffrey K., 169-71  
 Barltrop, John A., 131-3  
 Barluenga, Jose, 847  
 Barnes, James F., 113-14  
 Barnes, John D., 164-5  
 Barnette, William E., 375-7, 1067-8  
 Barrett, Anthony G. M., 68-9, 471-2, 1071-2  
 Barron, Laurence D., 259-60  
 Barsanti, Pia, 1085-6  
 Bartlett, Neil, 200-1  
 Bartolini, Giovanni, 215-16  
 Barton, Derek H. R., 68-9, 130-1, 276-7, 393-4, 843-5, 952-4, 1099-100  
 Basset, J. M., 38-9, 341-2  
 Bassett, Jean-Marie, 1000-1  
 Bassez, Marie Paule, 547-8  
 Battersby, Alan R., 150-1, 185-6, 1064-6  
 Bau, Robert, 825-6, 1053-5  
 Baudry, Denise, 694-5  
 Baydar, Ahmet E., 902-3  
 Bayley, Peter M., 850-2  
 Beagley, Brian, 493-4  
 Becker, Dan, 237-8  
 Beckwith, Athelstan L. J., 413-14  
 Beecroft, Richard A., 911-13  
 Beggato, Giancarlo, 285  
 Begley, Michael J., 60-1, 461-2  
 Behan, John, 444-5  
 Behr, Jean Paul, 143-6  
 Belew, John S., 729-30  
 Belikov, A. B., 592-3  
 Bell, Andrew, 988-9  
 Bell, Kevin A., 900-1  
 Bellamy, Francois, 998-9  
 Bellitto, Carlo, 511-12  
 Benati, Luisa, 530-1  
 Ben-David, Yehoshua, 480-1  
 Bennett, Martin A., 582-3  
 Bennetto, H. P., 523-4  
 Benson, Ian B., 878-9  
 Ben Taarit, Y., 38-9  
 Bentley, Peter H., 439-41, 518-19  
 Berger, Yves, 951-2  
 Bergmark, William R., 61-2  
 Bergstrom, Donald E., 284  
 Bernad, Pablo, 847  
 Bernal, Ivan, 187-8, 451-2, 691-2  
 Berry, Frank J., 308-9  
 Berry, Madeleine, 99-100  
 Bewick, Alan, 738  
 Bhaduri, Sumit, 343-4, 991-2  
 Bhakuni, Dewan S., 226-8  
 Biagioni, R. N., 200-1  
 Bianchi, Giorgio, 962-3  
 Bibolino, Leonetta, 524-5  
 Biftu, Tesfaye, 491-2  
 Bigley, David B., 1025-6  
 Bilhou, J. L., 341-2  
 Bilhoul, J. L., 38-9  
 Billington, David C., 208-9  
 Birtwistle, David T., 381  
 Bishop, A. Clive, 986-7  
 Bishop, M. M., 476-8  
 Bishop, Michael M., 828-9  
 Bittner, Magalis, 79-80  
 Bjork, Jon A., 1057-8  
 Blackburn, G. Michael, 870-1  
 Blackley, David C., 381  
 Blandamer, Michael J., 963-4  
 Blatcher, Philip, 657  
 Blum, Peter M., 569-71  
 Boar, Robin B., 68-9  
 Boegge, Hartmut, 739  
 Bojes, Josef, 391-2  
 Bolster, John, 630-1  
 Bondoux, Daniel, 1022-4  
 Bonilavri, Edith, 914-15  
 Bonnett, Raymond, 310-11  
 Bor, Gyorgy, 841-3  
 Borchers, Friedrich, 796-7  
 Bortolus, Pietro, 285  
 Boshart, Geraldine, 173-5  
 Botha, Jacobus J., 698-700, 700-2  
 Bottaro, Jeffrey C., 990  
 Bottomley, Frank, 234-5  
 Bouab, Otmame, 678-9  
 Bouas-Laurent, Henri, 403-4  
 Boulton, A. J., 1052-3  
 Bouma, Willem J., 724-5  
 Bour, Jan J., 907-9  
 Bowen, Richard D., 24-6  
 Boyd, Gerhard V., 902-3  
 Boydens, Roland, 46-7  
 Boyer, Gregory L., 889-90  
 Bradbury, Roy, 113-14  
 Bradshaw, A. Peter W., 303-4  
 Brady, Kieran, 871-3  
 Braenden, Olav J., 107-8  
 Braga, Dario, 927-8  
 Bramwell, Fitzgerald B., 429-30  
 Brandsma, L., 596-7  
 Braz Filho, Raimundo, 831-2  
 Breuer, Eli, 6-7  
 Brewster, Andrew G., 952-4  
 Briner, Paul H., 410-11, 981-3  
 Brinkmeyer, Raymond S., 876-7  
 Brintzinger, Hans H., 234-5  
 Brodsky, Ursula, 831-2  
 Brodsky, Naphtali C., 237-8  
 Brook, Peter R., 10-11, 87-8  
 Broom, Nigel J. P., 162-4  
 Brough, Lawrence F., 1092-3  
 Brouwers, Leon, 46-7  
 Brown, Charles, 7-9, 156-7  
 Brown, Eric, 556-7  
 Brown, John M., 321-2, 646-7  
 Brown, Michael P., 749-51  
 Brown, Richard T., 725-6  
 Brown, Ronald D., 547-8  
 Brown, Ronald E., 116-17  
 Brown, Simon C., 1063-4  
 Bruckner, S., 195-6  
 Bruice, Thomas C., 703-4  
 Brundish, Derek E., 901-2  
 Brunner, Henri, 451-2, 691-2  
 Brunsvold, William R., 633-4  
 Bryan, Eric G., 723-4  
 Bucciarelli, Maria, 456-7  
 Buck, Henk M., 382-3, 1103-5  
 Buckingham, David A., 705-7, 892-4  
 Buckner, Michael T., 759-61  
 Buloup, Anne, 1090-1  
 Buncel, Erwin, 758-9  
 Bundy, Gordon L., 714-16  
 Burgess, John, 963-4  
 Burke, Steven D., 76-8  
 Burns, Robert C., 957-60  
 Burski, Janusz, 940-1  
 Burwell, Robert L., Jr., 127-8  
 Buss, B., 226  
 Butler, Anthony R., 652-4  
 Butler, G., 352-3  
 Bycroft, Barrie W., 256-8  
 Bykhovsky, V. Ya., 150-1  
 Cacace, Fulvio, 938-40  
 Caddy, Peter, 839-41  
 Cadogan, J. I. G., 182-3  
 Calado, Jorge C. G., 737  
 Calas, Raymond, 272  
 Calhoun, H. P., 560-1  
 Callot, Henry J., 937-8  
 Calo, Vincenzo, 1085-6  
 Cambie, Richard C., 919  
 Cameron, Donald W., 688-9  
 Camilleri, Patrick, 807-8  
 Campbell, Bradley C., 854-5  
 Candela, G. A., 69-70  
 Canas, Mario, 347-8  
 Canonica, Luigi, 679-80  
 Cape, T., 69-70  
 Capp, R. J., 98-9  
 Cardin, Christine J., 899-900  
 Cardin, David J., 899-900  
 Carganico, Germano, 989-90  
 Carnahan, Gary E., 249-50  
 Carpino, Louis A., 358-9, 450-1  
 Carrano, Carl J., 501-2  
 Carrie, Robert, 356-7  
 Carroll, W. Eamon, 825-6  
 Carrondo, Maria A. A. F. de C. T., 463-4  
 Carson, A. S., 778-9  
 Carturan, Giovanni, 979-80  
 Cartwright, Brian A., 853-4  
 Carty, Arthur J., 1017-19  
 Casella, Luigi, 991-2  
 Caspi, Eliahu, 333-4  
 Cassola, Adrian, 807-8  
 Castelijns, Marianne M. C. F., 382-3  
 Castle, Laurence, 704-5  
 Castonguay, Andre, 951-2  
 Cauquis, Georges, 809-10  
 Cava, Michael P., 18-19  
 Cavazza, Marino, 167-8, 710, 945-6  
 Cave, Andre, 826-8  
 Cevasco, Giorgio, 613-14

- Chalenko, E. G., 147-8  
 Challis, Brian C., 707-8  
 Chaloner, Penny A., 321-2, 646-7  
 Chambers, Richard D., 304-5, 305-6, 431-2, 433, 475-6  
 Chan, Henry W. S., 82-3, 756-7  
 Chan, Tak-Hang, 761-2  
 Chandler, James H., 726-7  
 Chandler, Malcolm, 997-8  
 Chandrasekhar, Sosale, 171-2  
 Chaney, Michael O., 377-9  
 Chantrapromma, Kan, 670-1, 672-3, 673-5  
 Chapman, Peter J., 731-2  
 Charpin, Pierrette, 90-2  
 Chatt, J., 352-3  
 Chattopadhyaya, Jyoti B., 86-7, 639-40  
 Chaudret, Bruno N., 463-4  
 Chaussin, Raymond, 1032-3  
 Chen, Samuel, 879-80  
 Cherry, Peter C., 467-8, 469-70  
 Chikamatsu, Hiroaki, 667-8, 668-7  
 Chikira, M., 906-7  
 Chini, P., 195-6  
 Chittattu, Gim, 41-2, 441-2, 770-1  
 Chiu, I-Ching, 29  
 Chivers, Tristram, 212-13, 391-2, 642-3  
 Chowdhary, M. S., 664-5  
 Christensen, James J., 386-7  
 Christie, Michael A., 239-40  
 Christini, Alessandro, 347-8  
 Christou, George, 740-1  
 Churchill, Melvyn Rowen, 534-5, 1045-6, 1048-9  
 Ciampolini, Mario, 788-9  
 Cipiciani, Antonio, 597-8  
 Ciranni, Giovanna, 938-40  
 Claesson, Alf, 621-3  
 Clark, James H., 466-7, 789-91  
 Clark, Timothy, 137-8  
 Clarke, David A., 744-5  
 Clarke, T. C., 489-90  
 Claude, Renee, 1012-13  
 Clearfield, Abraham, 187-8  
 Clegg, D. Eldon, 1037-8  
 Clemente, Dore A., 235-6  
 Clementi, Sergio, 597-8  
 Cleophax, Jeanine, 771-3, 773-4  
 Clive, Derrick L. J., 41-2, 356, 379-80, 441-2, 770-1  
 Cloke, F. Geoffrey N., 72-3, 431  
 Coates, Harold, 7-9  
 Cocco, Giorgio, 979-80  
 Cockrum, Peter A., 423-4  
 Colburn, Veronica M., 453  
 Cole-Hamilton, David J., 463-4, 883-4  
 Colombo, Lino, 434, 679-80  
 Colomer, Ernesto, 435-6  
 Colonna, Stefano, 238-9  
 Colquhoun, Howard M., 322-4  
 Colvin, Ernest W., 689-91  
 Commeyras, A., 118-19  
 Constable, Anthony G., 1061-2  
 Cook, Diana H., 279-80  
 Cooke, Frank, 714-16  
 Cookson, Richard C., 608, 821-2, 822-4, 924-5  
 Cooper, Mervyn K., 861-3  
 Corbally, Roger P., 778-9  
 Corkill, Michael J., 388-9  
 Corrie, John E. T., 275-6  
 Corriu, R. J. P., 104-5  
 Corriu, Robert J. P., 435-6  
 Cosmesent, Eric, 46-7  
 Costa, Giacomo, 339-40  
 Costes, Rose Marie, 90-2  
 Coudanne, Hubert, 1012-13  
 Coudwell, Claire, 1009-11  
 Coulon, Claude, 337-8  
 Courtis, Andrew, 994-5  
 Cowling, Antony P., 1006-7  
 Cox, A. Peter, 388-9  
 Coxon, James M., 111-12  
 Crabbe, Pierre, 601-2  
 Cragg, Gordon M. L., 510-11  
 Crawford, E. Sian, 986-7  
 Creaser, I. I., 289-90  
 Crocker, Christopher, 1056-7  
 Crombie, Leslie, 59-60, 107-8  
 Crombie, W. Mary L., 107-8  
 Crosby, John, 113-14  
 Cross, Brian E., 1013-15  
 Cross, Ronald J., 709, 819-20  
 Crossland, Noelle M., 660-1, 661-2, 662-4  
 Csasko, Bernd, 964-5  
 Cuffe, John, 641-2  
 Cullis, Paul M., 512-14, 850-2  
 Culvenor, Claude C. J., 423-4  
 Currie, Janie K., 311-12  
 Curtis, Neville J., 770-1  
 Cussans, Nigel J., 393-4  
 Cutler, Timothy P., 232-4  
 Da Costa Ferreira, Ana Maria, 126-7  
 Dahlgren, R. Marc, 863-4  
 Dalaumeny, Jeanne-Marie, 771-3  
 Damude, Leslie C., 1083-4  
 Dapporto, Paolo, 788-9  
 Das, Bhupesh C., 318-19  
 David, Serge, 535-7  
 Davidowitz, Bette, 510-11  
 Davidson, Alan H., 988-9  
 Davidson, R. Stephen, 911-13, 913-14  
 Davies, Alwyn G., 353-4, 569-71, 791-2  
 Davies, Brian, 36-8  
 Davies, Geoffrey, 1045-6  
 Davies, Kenneth L., 9-10  
 Davies, S. Elizabeth, 930-1  
 Davies, Stephen G., 99-100  
 Davis, Brian R., 614-15  
 Davis, Ralph A., 105-6, 714  
 Dawoodi, Zain, 1035-6  
 Day, A. Colin, 131-3  
 Day, Peter, 511-12  
 De Alvarenga, Marden A., 831-2  
 De Amici, Marco, 962-3  
 Dean, Francis M., 265-6, 461-2  
 Dean, Philip A. W., 1083-4  
 De Boer, Jan J., 1005-6  
 Declercq, Jean Paul, 499  
 Deeming, Antony J., 344-5, 1086-8  
 Deguchi, Yasuo, 817-19  
 De Haan, Jan W., 94-5, 1103-5  
 Delaumeny, Jeanne Marie, 773-4  
 De Laveleye, Françoise, 46-7  
 Del Buttero, Paola, 989-90  
 Delhaes, Pierre, 337-8  
 Dell'Erba, Carlo, 613-14, 886-8  
 De Mayo, Paul, 1109-10, 1110-11  
 Denney, Donald B., 854-5  
 Denney, Dorothy Z., 854-5  
 Dennis, Nicholas, 316-18  
 De Rango, Colette, 90-2  
 Deronzier, Alain, 809-10  
 Des Abbayes, Herve, 311-12, 1090-1  
 De Santis, Alberto, 873-4  
 Deshayes, Henri, 567-8  
 Desvergne, Jean Pierre, 403-4  
 De Tannoux, Nancy M., 394-5  
 Detty, Michael R., 365-6  
 Deutsch, Edward, 1038-40  
 De Valera, Eamon, 218-19  
 De Villardi, George C., 90-2  
 De Waal, Dirk J. A., 1007-8  
 Dhal, Robert, 556-7  
 Diamond, Steven E., 562  
 Dias, Alberto R., 737  
 Dietrich, Bernard, 934-6  
 Dilts, Robert V., 249-50  
 Diomedei Camassei, Fabio, 207-8  
 Di Stefano, Maria, 761-2  
 Diversi, Pietro, 735-6  
 Dixneuf, Pierre, 552-3, 573-4  
 Do Khac Duc, 771-3  
 Dong, Dennis, 11-12  
 Dorman, Douglas E., 683-4  
 Dowlatshahi, Hossein A., 316-18  
 Down, Michael G., 52-3  
 Downs, Anthony J., 502-4  
 Draper, Mark R., 445-6  
 Drew, Michael G. B., 415-16  
 Driessen-Engels, Jeanne M. G., 1103-5  
 Duben, Josef, 287  
 Duddeck, Helmut, 306-8  
 Dukes, Gary R., 583-4  
 Dunkin, Ian R., 1020-22  
 Dunn, Andrew W., 533-4  
 Dunogues, Jacques, 272  
 Duong, Thach, 413-14  
 Dupuis, Paul, 337-8  
 Dwyer, John, 493-4  
 Dyke, S. F., 289-90  
 Eady, Colin R., 421-3  
 Earnshaw, Chris, 988-9  
 Earwaker, Lyndsay G., 1011-12  
 Eaton, Gareth R., 944-5  
 Eaton, Sandra S., 944-5  
 Ebata, Mitsuo, 577-8  
 Ebine, Seiji, 215  
 Edgar, John A., 423-4  
 Edwards, John H., 438-9  
 Edwards, Julian D., 892-4  
 Einhorn, Jacques, 194-5  
 Eldeeb, Afaf M., 10-11  
 El-Feraly, Farouk S., 75-6  
 Elix, John A., 1041-2  
 Elliott, C. Michael, 399-400  
 El Murr, Nabil, 552-3  
 El-Shazly, Mohamed F., 1045-6  
 Emsley, John, 658  
 Endo, Tadashi, 786-8  
 Engel, Dennis W., 695-6  
 Engel, Juergen, 33-4  
 Enkaku, Michiko, 568-9  
 Ephritikhine, Michel, 694-5  
 Erasmuson, Anton, 1013-15  
 Eriksson, Birgitta, 616-17  
 Ernhoffer, Robert, 859-61  
 Ershova, T. E., 592-3  
 Evans, David A., 410-11, 753-4, 981-3  
 Evans, Gareth, 267-8  
 Evans, John, 1063-4  
 Evans, Myron, 267-8  
 Evans, Stephen, 210-11  
 Fabbriuzzi, Luigi, 833-4  
 Fachinetti, Giuseppe, 269-70  
 Fagherazzi, Giuliano, 979-80  
 Faigle, G., 126-7  
 Fang, Tai-Shan, 116-17  
 Farrell, Patrick G., 455-6  
 Farrugia, Louis J., 260-2  
 Fazakerley, G. Victor, 510-11  
 Feakins, David, 218-19  
 Felkin, Hugh, 694-5  
 Fell, Elke, 358-9  
 Fenton, David E., 279-80  
 Fernandez, Juan M., 421-3, 1015-16  
 Fernando, Jose, 126-7  
 Ferran, Herbert E., Jr., 49-50  
 Ferraris, John P., 992-3  
 Ferreira, Daneel, 698-700, 700-2  
 Ferrier, Gordon G., 835-6  
 Ferrier, Robert J., 1019-20  
 Ferris, James P., 1094-6  
 Feutrell, Geoffrey I., 688-9  
 Field, Lamar, 249-50  
 Fielding, Harold C., 431-2, 475-6  
 Fielding, Lee, 212-13  
 Figliuolo, Roberto, 831-2  
 Finnegan, T. F., 69-70  
 Fiorentino, Michele, 93-4  
 Fischer, Boda E., 1053-5  
 Fischer, John E., 544-5  
 Fischer, Robert, 905-6  
 Fisher, John R., 749-51  
 Flandrois, Serge, 337-8  
 Flatman, Ivor J., 900-1  
 Fleming, Ian, 176-7, 177-8, 178-80, 245-7  
 Fletcher, Stephen R., 903-4  
 Floriani, Carlo, 269-70, 921-2  
 Foglio, Maurizio, 1101-2  
 Folcher, Gerard, 90-2  
 Fookes, Christopher J. R., 185-6, 324-5, 1064-6  
 Foose, Daniel S., 534-5  
 Forni, Arrigo, 456-7  
 Forsek, Jozse, 916-18  
 Foucaud, Andre, 274-5  
 Fox, Hazel, 537-9, 539-40  
 Foxman, Bruce M., 500-1  
 Frahn, John L., 423-4  
 Franceschi, Giovanni, 1101-2  
 Franklin, Kenneth J., 97-8  
 Franklin, Susan J., 749-51  
 Franks, David, 941-3  
 Fraser-Reid, Bert, 325-6  
 Freeman, Ray, 684-6  
 French, Sidney J., 193-4  
 Friesen, G. Delbert, 349-50  
 Fry, Albert J., 1040-1  
 Fu, Peter P., 585-6  
 Fuganti, Claudio, 299-300  
 Fujii, Yuki, 266-7  
 Fujimori, Takane, 563-4  
 Fujino, Masahiko, 220-1  
 Fujita, Eiichi, 330  
 Fujita, Hideo, 817-19  
 Fujita, Yoshiji, 651-2, 972-3  
 Fujiwara, Takaji, 197-8  
 Fukuda, Tsunehiko, 220-1  
 Fukui, Akio, 121-2  
 Fumagalli, A., 195-6  
 Funabiki, Takuzo, 63-5, 1059-61  
 Furusaki, Akio, 563-4, 800-1  
 Fyles, Deborah L., 934-6  
 Fyles, Thomas M., 934-6  
 Gaete-Holmes, Ricardo, 73-4  
 Gainsford, Graeme J., 857-8  
 Galembeck, Sergio E., 126-7  
 Gallagher, Michael J., 54-5, 324-5

- Gallagher, Peter T., 453  
Galwey, Andrew K., 273-4  
Games, David E., 757-8  
Ganem, Bruce, 248, 869-70  
Garcia-Alvarez, Maria C., 318-19  
Gardner, Sylvia A., 187-8  
Garito, Anthony F., 18-19  
Garner, C. David, 204-5, 262-3, 740-1  
Garrigues, Bernard, 219-20  
Garson, Mary J., 158-9  
Gates, Bruce C., 540-1  
Gaudemer, A., 1084-5  
Gedanken, Aharon, 983-4  
Gedge, David R., 60-1, 880-2  
Geiss, R. H., 489-90  
Gemal, Andre Luis, 976-7  
Gennari, Cesare, 434, 679-80  
Gensmantel, Nigel P., 374-5  
Germain, A., 118-19  
Germain, Gabriel, 499  
Gero, S. D., 771-3, 773-4  
Gervasio, Giuliana, 841-3  
Geue, Rodney J., 647-9  
Ghera, Eugene, 480-1  
Giacomello, Pierlugi, 938-40  
Giam, Choo Seug, 615-16  
Giannini, Ivo, 207-8  
Gielen, Marcel, 81-2  
Gilbert, Andrew, 129-30  
Gilbert, Bruce C., 78-9  
Gilchrist, Thomas L., 847-9, 1049-50  
Giles, Jeremy R. M., 623-4  
Gill, Barbara, 78-9  
Gill, G. Bryon, 655-6  
Gillard, Robert D., 428-9, 936-7  
Gillespie, Roger J., 83-4, 85-6, 641-2  
Ginebreda, Antonio, 742-3  
Ginsburg, Geoffrey S., 1040-1  
Gladysz, J. A., 599-600, 838-9  
Gleim, Robert D., 242-4  
Glemser, O., 226  
Gleria, Mario, 285  
Glidewell, Christopher, 652-4  
Godfrey, Peter D., 547-8  
Goedken, Virgil L., 909-10  
Goff, Harold, 777-8  
Goggin, Peter L., 1056-7  
Gold, Victor, 507-8  
Goldborn, Peter, 900-1  
Goldhill, Jon, 176-7  
Golding, Bernard T., 208-9, 954-6  
Goldschmidt, Zeev, 983-4  
Goodall, David M., 515-16  
Goode, Nigel C., 89-90  
Goodfellow, Robin J., 1056-7  
Goodwin, Hilary J., 861-3  
Gopalakrishna, E. M., 79-80  
Gopalan, R., 608, 924-5  
Gordon, Janice M., 56  
Gordon, Sheffield, 1038-40  
Gore, Peter H., 271-2  
Gorgues, Alain, 573-4  
Goringe, Michael J., 134-5  
Goto, Toshio, 781-2  
Gottardi, Vittorio, 979-80  
Gottlieb, Otto R., 831-2  
Gower, John L., 757-8  
Gowland, Maxim S., 256-8  
Graefing, R., 596-7  
Graham, Colin L., 1011-12  
Graham, Samuel H., 930-1  
Granger, Pierre, 957-60  
Grant, Michael W., 157-8  
Grasselli, Piero, 299-300  
Grayson, B. Terence, 156-7  
Grayson, J. Ian, 657  
Green, Dennis C., 832-3  
Green, Malcolm L. H., 72-3, 99-100, 431, 604-6  
Green, Michael, 169-71, 839-41, 1000-1  
Greenhough, Trevor J., 322-4, 1036-7  
Greenslade, Dennis, 947-8  
Greenwood, Andrew J., 580-1  
Gregory, Gordon I., 467-8  
Grijdanus, Ben, 427-8  
Grieco, Paul A., 76-8  
Griffith, William P., 853-4  
Griffiths, David W., 658  
Griffiths, Peter G., 688-9  
Grigg, Ronald, 109-11, 571-2  
Griller, David, 525-6  
Grindley, T. Bruce, 1073-4  
Grossel, Martin C., 941-3  
Grossi, Anthony V., 401-2  
Gruen, Dieter M., 581-2  
Gruenbaum, William T., 228-30  
Grundon, Michael F., 624-6  
Gruner, Gyorgy, 974-5  
Gruntz, Urban, 133-4  
Guanti, Giuseppe, 613-14, 886-8  
Guarini, Giulio G. T., 273-4  
Guerny, Philip J., 861-3  
Guest, Martyn F., 204-5  
Guixer, Joan, 742-3  
Gulasekharan, Vijeyalaksmi, 1073-4  
Gunatilaka, A. A. Leslie, 980-1  
Gupta, S. K., 885-6  
Gupta, Y. P., 885-6  
Guseinov, M. M., 147-8  
Gust, Devens, 681-2  
Guzman, Ernesto Carmona, 465-6  
Gynane, Michael J. S., 34-6, 192-3  
Haddon, Robert C., 429-30  
Haines, Raymond J., 510-11  
Haines, Robert I., 963-4  
Haley, Martin J., 52-3, 580-1  
Hall, Elizabeth A. H., 387-8  
Hall, M. Sharon, 290-2  
Hall, Michael B., 161-2  
Halpern, Jack, 44-6  
Halpern, Marc, 155-6  
Halvorsen, Arne, 327-8  
Hamaguchi, Masashi, 247-8  
Hamill, Robert L., 683-4  
Hanson, James R., 303-4  
Harada, Kaoru, 522-3  
Harbour, John R., 417-18  
Haritos, Demetris, 965-7  
Harkiss, Diana, 537-9, 539-40  
Harlow, Richard L., 579-80  
Harris, R. N., III, 420-1  
Harrison, Charles R., 813-15  
Harrison, Philip G., 112-13  
Hart, F. Alan, 549-50  
Hartford, Terry W., 242  
Hartshorn, Angus J., 643-4  
Haruna, Mitsumasa, 733-4  
Harvey, Ronald G., 585-6  
Harvie, Ian J., 747-8  
Harwood, Laurence M., 712-13  
Hashiba, Nobuhiro, 563-4, 800-1  
Hashimoto, Harukichi, 446-7  
Hata, Tsujiaki, 285-6  
Hattingh, Marthinus, 695-6  
Hattori, Hideshi, 1091-2  
Hattori, Tadashi, 127-8  
Hauck, Albert E., 615-16  
Hawker, Pelham N., 730-1  
Hayashi, Shuichi, 198-200  
Haycock, Derek E., 262-3  
Haylett, Bernard J., 112-13  
Haymore, Barry L., 386-7  
Hayward, Rodney C., 941-3  
Hazra, Braja G., 491-2  
Heaton, B. T., 195-6  
Hecht, Hans Juergen, 665-6  
Hediger, Markus, 14-15  
Hegarty, Anthony F., 871-3  
Heimbach, Heinz, 796-7  
Heineman, William R., 1038-40  
Hemmingson, Jacqueline A., 92-3  
Henderson, Keith, 15-16  
Henderson, Richard A., 569-71, 1102-3  
Hensel, Friedrich, 905-6  
Henshaw, Brian G., 1011-12  
Herbert, Richard B., 794-5  
Hercliffe, Robert D., 304-5, 305-6  
Hermanek, Stanislav, 287  
Herndon, William C., 933-4  
Hettrich, Gernot, 358-9  
Heveldt, Paul F., 340-1  
Hibbert, Frank, 89-90  
Hibino, Satoshi, 414-15  
Hiemstra, Henk, 238-9  
Higuchi, Kazuaki, 1029-30  
Hillier, Ian H., 204-5, 262-3  
Hillyard, Raymond W., Jr., 209-10  
Hirano, Atsushi, 800-1  
Hiraoka, Tetsuo, 517-18  
Hirobe, Masaaki, 485-6  
Hirose, Yoshiki, 668-7  
Hirota, Kosaku, 367  
Hodder, D. Jeanne, 688-9  
Hodge, Philip, 813-15  
Hodgkinson, Leslie C., 712-13  
Hoefler, R., 226  
Hoefle, Gerhard, 611-12, 665-6, 896-8  
Holbert, Gene W., 248  
Holker, John S. E., 626-7  
Hollander, Frederick J., 534-5  
Holloway, John H., 254-5  
Hollywood, Frederick, 306-8  
Hollywood, Frank, 806-7  
Holmes, David R., 113-14  
Holton, John, 140-2, 994-5  
Holy, Norman L., 1074-5  
Hombo, Toshiyasu, 197-8  
Honda, Koichi, 589-90  
Honegger, Herbert, 54-5, 324-5  
Hood, Roger A., 300-1  
Hori, Akira, 16-18  
Hosokawa, Takahiro, 687-8  
Houalla, Doureid, 1022-4  
Hough, Leslie, 664-5  
Houghton, Leonard E., 461-2  
Housecroft, Catherine E., 765-6  
Howard, Colin C., 662-4  
Howard, Judith A. K., 260-2, 1000-1  
Hsu, Shaw L., 1066-7  
Huang, Harry C., 1094-6  
Huang, Tai-Nang, 582-3  
Hubberstey, Peter, 52-3  
Hudson, Robert F., 7-9, 156-7  
Huettermann, Juergen, 313-14  
Hughes, David L., 1001-3  
Hui, Raymond A. H. F., 952-4  
Hull, Roy, 806-7  
Hull, William E., 577-8  
Humphreys, Robert W. R., 181-2  
Hundt, Hans K. L., 695-6, 696-8  
Hunt, Eric, 439-41, 518-19  
Hunt, Keith, 10-11  
Hunt, W. Edward, 188-90  
Hunte, Kenneth P. P., 89-90  
Hunter, Brian K., 11-12  
Hunter, Geoffrey, 768-9  
Hunter, Roger, 843-5  
Hunter, William E., 140-2, 451-2, 465-6, 1081-3  
Huq, Enamul, 526-8  
Hurst, Roger, 1038-40  
Hursthouse, Michael B., 62-3, 549-50, 991-2, 1086-8  
Husson, Henri-Philippe, 618-19  
Hutchins, Robert O., 1088-9  
Hutchinson, John, 431-2  
Ibrahim, Talib K., 493-4  
Ichikawa, Katsuhiko, 65-6  
Ichikawa, Masaru, 566-7  
Iddon, Brian, 453  
Igersheim, Françoise, 559-60  
Ihara, Yasuji, 984-5  
Iida, Hideo, 766-7  
Iino, Kimio, 517-18  
Iitaka, Yoichi, 160-1, 364-5  
Ikeda, Masazumi, 197-8  
Ikeda, Yutaka, 350-1  
Ikeguchi, Masahiko, 328-9  
Ikehara, Morio, 824-5  
Ikemikono, Yukio, 543-4  
Ikota, Nobuo, 869-70  
Imajo, Seiichi, 810-12  
Imanaka, Toshinobu, 47-8, 650-1  
Imizu, Yuzo, 1091-2  
Inbasekaran, Muthia N., 149-50  
Ingleson, David, 870-1  
Ingold, Keith U., 525-6  
Ingresso, Giovanni, 735-6  
Inkrott, Kenneth E., 866-7  
Inoue, Yasuko, 124  
Inoue, Yoshihisa, 1024-5  
Inubushi, Toshiro, 106-7  
Irie, Hiroshi, 717-18  
Ishida, Masaru, 12-13  
Ishida, Noboru, 517-18  
Ishigami, Tatsuzo, 786-8  
Isobe, Kimiaki, 1076-7  
Ito, Kazuo, 733-4  
Itoh, Mitsuomi, 481-2, 812-13  
Itoh, Nobuo, 1089-90  
Ivin, Kenneth J., 603-4, 604-6  
Iwai, Yuzuru, 800-1  
Iwakuma, Takeo, 1089-90  
Iwamoto, Masakazu, 1058-9  
Iwamura, Hiizu, 720-1  
Izatt, Neil E., 386-7  
Izatt, Reed M., 386-7  
Izumi, Yu, 446-7  
Jackels, Susan C., 1027-9  
Jackson, Anthony H., 645, 734-5, 779-81  
Jackson, Peter F., 920-1  
Jacob, James N., 49-50  
Jacobson, Stephen E., 888-9  
Jain, Sudha, 226-8  
Jakovac, Ignac J., 722  
James, Brian R., 746-7, 929-30  
Jameson, Reginald F., 768-9  
Janossy, Andras, 974-5  
Jarvis, John A. J., 474-5  
Jaxa-Chamiec, Albert A., 118  
Jeffers, Eamon F., 381  
Jefferson, David A., 986-7  
Jeffery, John, 34-6, 1081-3

- Jeffs, Peter W., 1078-9  
 Jemmis, Eluvathingal D., 190-1  
 Jeremic, Dragoslav, 302-3  
 Jewur, Shantappa S., 801-2  
 Jick, Bryan S., 838-9  
 Jindal, Satya P., 333-4  
 John, Christopher S., 835-6  
 Johnson, Alan W., 73-4, 643-4  
 Johnson, Brian F. G., 340-1, 343-4, 421-3, 551-2, 920-1, 1015-16  
 Johnson, David W., 40-1  
 Johnson, Howard D., 242  
 Johnson, Peter R., 606-7  
 Johnson, Robert S., 461-2  
 Johnson, Stephen J., 614-15  
 Johnstone, Robert A. W., 354-5, 444-5, 533-4  
 Jones, C. R., 967-8  
 Jones, David W., 404-5  
 Jones, J. Bryan, 722  
 Jones, John H., 472-3  
 Jones, Noel D., 377-9  
 Joniaux, Denise, 125-6  
 Jonkman, Harry T., 751-2  
 Jordan, Peter M., 967-8  
 Joukhadar, Laurette, 68-9  
 Joule, John A., 309-10  
 Joyce, Colin J., 113-14  
 Joyner, Richard W., 548-9  
 Judy, Kenneth J., 290-2  
 Julia, Sebastian, 742-3  
 Jung, Mankil, 609-10  
 Jung, Michael E., 95-6, 315-16  
 Kabalka, George W., 726-7  
 Kabbani, Raifah M., 462-3  
 Kaberia, Festus, 459-60  
 Kaden, Thomas A., 14-15  
 Kagawa, Shuichi, 1058-9  
 Kagotani, Masahiro, 367-8  
 Kahn, Olivier, 1012-13  
 Kaiser, E. T., 457-9  
 Kaji, Aritsune, 865-6  
 Kaji, Ryoji, 594-5  
 Kajiwara, Masahiro, 967-8  
 Kalbacher, Barbara J., 1027-9  
 Kalyanam, Nagabushanam, 201-2  
 Kalyanasundaram, K., 628-30  
 Kamaras, Katalin, 974-5  
 Kamboj, Indra K., 523-4  
 Kamiyama, Yoshiyasu, 80-1  
 Kanaki, Jun, 482-3  
 Kaneda, Kiyotomi, 650-1  
 Kaneda, Miyuki, 160-1  
 Kaneko, Hajime, 563-4  
 Kane-Maguire, Leon A. P., 757-8  
 Kan-Fan, Christiane, 618-19  
 Kano, Shinzo, 414-15, 785-6  
 Kan-Woon, Thoe, 1052-3  
 Kao, H. I., 301-2  
 Kapil, Randhir S., 226-8, 281-2  
 Kaplan, Martin L., 429-30  
 Karban, James, 729-30  
 Karim, Amna, 306-8  
 Kasai, H., 798-800  
 Kasuga, Reiko, 563-4  
 Katakai, Ryoichi, 692-3  
 Katakawa, Junichi, 717-18  
 Kataoka, Fumio, 864-5  
 Kato, Atsumasa, 810-12  
 Kato, Masahiro, 478-9  
 Kato, Tadahiro, 359-60  
 Kato, Takeshi, 620-1  
 Katritzky, Alan R., 133-4, 316-18  
 Kaufmann, D., 496-7  
 Kawabata, Kohji, 330  
 Kawamura, Takashi, 65-6, 804  
 Kay, I. Trevor, 903-4  
 Kay, Martin H., 22-3  
 Keasey, Alan, 142-3  
 Keat, Rodney, 372-3  
 Keenan, Sheue L., 731-2  
 Keith, Alison N., 372-3  
 Keller, Heimo J., 331-2  
 Keller, Philip C., 971  
 Kellogg, Richard M., 383-4, 630-1, 923-4  
 Kelly, Richard P., 329-30  
 Kemmitt, Raymond D. W., 744-5  
 Kemp, James, 109-11  
 Kennedy, John D., 791-2  
 Kennedy, John J., 1079-80  
 Kennedy, Lois V. F., 835-6  
 Kennedy, Shaun M., 643-4  
 Kennewell, Peter D., 118  
 Kertesz, Miklos, 575-6  
 Kessar, S. V., 885-6  
 Khamsithideth, Souvanh, 274-5  
 Khosrowshahi, J. Sattari, 1052-3  
 Kibayashi, Chihiro, 766-7  
 Kida, Masaaki, 494-6  
 Kiel, William A., 379-80  
 Kieszkowski, Jan, 940-1  
 Kikuchi, Junichi, 494-6  
 Killups, Stephen D., 486-8  
 Kimura, Takahide, 328-9  
 King, Frank D., 351-2  
 King, James F., 48-9  
 King, R. Bruce, 514-15, 898-9  
 King, Trevor J., 112-13, 533-4, 571-2, 740-1  
 Kirby, Anthony J., 171-2, 803-4, 807-8  
 Kirby, C., 19-20  
 Kirby, Gordon W., 275-6  
 Kirchen, Roger P., 769-70  
 Kirnse, Wolfgang, 392-3  
 Kise, Yoko, 348-9  
 Kiss, Tamas, 768-9  
 Kitada, Chieko, 220-1  
 Kitazume, Tomoya, 154-5  
 Kitchin, Jonathan P., 1099-100  
 Kitson, David E., 87-8  
 Klei, Bert, 659-60  
 Klun, Robert T., 228-30  
 Knapp, Craig K., 971  
 Knecht, Josef, 905-6  
 Knoechel, Arndt, 595-6  
 Knox, Selby A. R., 221-3, 486-8, 878-9  
 Knutsen, Lars J. S., 941-3  
 Kobayashi, Mitsunobu, 1029-30  
 Kobayashi, Yoshiro, 509  
 Koch, Michel, 826-8  
 Koden, Mitsuhiro, 830  
 Koehler, J. J., 166-7  
 Koenig, Max, 219-20  
 Koeniger-Ahlborn, Elisabeth, 739  
 Kohmoto, Shigeo, 120-1, 894-5  
 Kokozzka, G. F., 69-70  
 Koller, Joze, 575-6  
 Kolthammer, Brian W. S., 1036-7  
 Kon, H., 906-7  
 Kopf, Juergen, 595-6  
 Korp, James, 729-30  
 Kotlarek, Wojciech, 153-4  
 Kovac, Franci, 122-4  
 Kozikowski, Alan P., 1076-7  
 Kozuka, Seizi, 312-13  
 Kraus, George A., 30  
 Kroto, H. W., 19-20  
 Kueh, Joseph S. H., 5-6  
 Kuendig, E. Peter, 730-1  
 Kulkowit, Sunanta, 1069-70  
 Kumadaki, Isumaro, 509  
 Kumazawa, Toshiaki, 362-3  
 Kunitomi, Yoko, 1024-5  
 Kuramoto, Masahiro, 266-7  
 Kurosawa, Hideo, 716-17  
 Kushi, Yoshihiko, 266-7  
 Kutsal, Charles, 363-4  
 Kutner, Wlodzimierz, 244-5  
 Kuwajima, Isao, 478-9  
 Kuz'mina, L. G., 27-8  
 Kwak, J. F., 489-90  
 Labes, M. M., 301-2  
 Ladd, Mark F. C., 791-2  
 Lafferty, Joseph, 51-2  
 Laguerre, Michel, 272  
 Laing, Michael, 1035-6  
 Laird, Ann E., 275-6, 335  
 Lamaty, Gerard, 678-9  
 Lamb, John D., 386-7  
 Lambert, Joseph B., 172-3  
 Lana, J. Carlos A., 471-2  
 Langlois, Nicole, 102-3  
 Lanneau, G. F., 104-5  
 Lappert, Michael F., 34-6, 140-2, 146-7, 192-3, 643-4, 925-6, 1017-19, 1081-3  
 Larsen, David W., 1093-4  
 Larsson, Lars Olof, 616-17  
 Lassigne, Claude R., 956-7  
 Lau, Mariana S. W., 891-2  
 Laurence, Gerald S., 408-9  
 Law, Kock-Yee, 1110-11  
 Laye, P. G., 778-9  
 Leach, H. Frank, 835-6  
 Leary, Gordon J., 92-3  
 Le Bozec, Hubert, 573-4  
 Leclercq, D., 104-5  
 Leclercq, Jacques, 46-7  
 Lecomte, M., 38-9  
 Leconte, Michael, 341-2  
 Lee, Eun, 290-2  
 Lee, S. F., 967-8  
 Lee, Teresa M., 48-9  
 Leeper, Finian J., 406-7  
 Leete, Edward, 610-11, 1055-6  
 Legzdins, Peter, 1036-7  
 Lehn, Jean Marie, 143-6, 934-6, 949-51  
 Leigh, G. J., 352-3  
 Lelandaïs, Daniel, 194-5  
 Le Marechal, Alenka, 447-8  
 Lenhart, P. Galen, 249-50  
 Lenz, George R., 241  
 Leonard, John, 725-6  
 Lerverend, Pierre, 1032-3  
 Lessinger, Leslie, 533-4  
 Lester, David J., 130-1, 276-7, 952-4  
 Letcher, Roy M., 332-3  
 Levett, Gordon, 82-3, 756-7  
 Levitin, I. Ya., 44-6  
 Levsen, Karsten, 796-7  
 Levy, Louis A., 574-5  
 Lewis, Edward S., 424-5  
 Lewis, Jack, 340-1, 343-4, 421-3, 476-8, 551-2, 828-9, 920-1, 1015-16  
 Lewis, Trevor W., 892-4  
 Ley, Steven V., 130-1, 276-7, 393-4, 952-4  
 Libert, Walburgis, 46-7  
 Lieto, Joseph, 540-1  
 Liles, David C., 652-4  
 Lincoln, Stephen F., 1047-8  
 Lindley, Andrew, 475-6  
 Lindley, Andrew A., 431-2  
 Lindsay, Barry G., 919  
 Lindsay Smith, John R., 329-30, 704-5  
 Litman, Sara, 983-4  
 Livinghouse, Tom, 754-6  
 Livingstone, David A., 1026-7  
 Lloyd, Douglas, 499  
 Lobo, Ana M., 884-5  
 Logan, C. J., 537-9  
 Logan, Norman, 580-1  
 Lombardi, Paolo, 1101-2  
 London, Robert E., 1070-1  
 Lopez, Luigi, 1085-6  
 Lopusinski, Andrzej, 450-1  
 Lorenc, Ljubinka, 916-18  
 Lotz, T. J., 514-15  
 Love, P., 301-2  
 Lovelady, Steve R., 583-4  
 Lowe, Gordon, 512-14, 565-6, 783-5, 850-2  
 Lowe, John A., 95-6  
 Lubineau, Andre, 535-7  
 Luche, Jean-Louis, 601-2, 976-7  
 Lucherini, Antonio, 735-6  
 Lukacs, Gabor, 577-8  
 Lukas, Rainer, 451-2  
 Lukehart, Charles M., 183-4  
 Luong-Thi, N. Tuyet, 1081-3  
 Lyons, James E., 636-8, 638-9  
 Lyster, Mark A., 315-16  
 Mabbs, F. E., 740-1  
 McAtee, James L., Jr., 729-30  
 McCann, Malachy, 415-16  
 McCarthy, Patrick J., 218-19  
 Macco, Anton A., 1103-5  
 Macdonald, A. M. G., 1011-12  
 Macdonald, J. Gavin, 1020-22  
 Macdonald, Timothy L., 876-7  
 McDonald, Edward, 150-1, 185-6, 1064-6  
 McDonald, Walter S., 10-11, 1061-2  
 McFarlane, H. Christina E., 531-2  
 McFarlane, William, 531-2, 791-2  
 McGhie, James F., 68-9  
 Mackenzie, Grahame, 882-3  
 McKenzie, William M., 541-3  
 McKervey, M. Anthony, 306-8, 1069-70  
 Mackinnon, Linda W., 275-6  
 McLaughlin, George M., 892-4  
 MacLeod, John K., 724-5  
 McMeeking, John, 140-2, 994-5  
 McMillin, David R., 759-61  
 McNeese, Timothy J., 500-1  
 McNeish, Allister, 36-8  
 McPartlin, Mary, 861-3, 920-1  
 McPhail, Andrew T., 75-6, 209-10, 1078-9  
 Macphee, Alistair, 372-3  
 McQuillan, B. W., 200-1  
 McQuillin, Francis J., 15-16, 438-9, 747-8  
 MacQuitty, Jonathan J., 643-4  
 McSweeney, Peter, 306-8  
 Maddock, Alfred G., 308-9  
 Maddocks, Peter J., 805-6  
 Maeda, Yasuaki, 525-6  
 Magnus, Philip, 297-8, 714-16  
 Magnusson, Roy H., 44-6  
 Magolda, Ronald L., 375-7, 1067-8  
 Mah, Talat, 961-2  
 Mahaffey, Robert L., 915-16  
 Mahtab, Rahina, 604-6  
 Maiorana, Stefano, 989-90  
 Maitlis, Peter M., 142-3

- Majima, Tetsuro, 490-1  
 Maki, Yoshifumi, 836-8  
 Makino, Katsumi, 720-1  
 Malik, K. M. Abdul, 549-50  
 Malik, Nouman A., 711-12  
 Manandhar, Mangala D., 281-2  
 Mancini, Vittorio, 100-1  
 Mandelbaum, Asher, 521-2  
 Manfredotti, Amelia Gaetani, 921-2  
 Manley, Paul W., 396-7, 902-3  
 Mann, John, 1006-7  
 Mao, David T., 479-80  
 Marangoni, Giampaolo, 235-6  
 Marazano, Christian, 318-19  
 Marchese, Giuseppe, 1085-6  
 Mares, Frank, 562, 888-9  
 Mark, Harry B., Jr., 244-5  
 Marongiu, Giaime, 347-8  
 Marshall, James H., 429-30  
 Marsich, Nazario, 339-40  
 Martin, John R., 901-2  
 Martin, Robert J., 803-4  
 Martinengo, S., 195-6  
 Martinus, Nicholas, 56  
 Maruhashi, Kazuo, 367  
 Maruyama, Kazuhiro, 702-3  
 Marziano, Nunziata C., 873-4  
 Maskiewicz, Richard, 703-4  
 Masson, C. R., 560-1  
 Masters, Christopher, 1005-6  
 Masui, Masaichiro, 407-8  
 Masui, Takeshi, 361  
 Matcham, George W. J., 1064-6  
 Matkin, David A., 265-6  
 Matlin, Stephen A., 79-80, 645  
 Matloob, Mohammed H., 40-1  
 Matsumoto, Akiteru, 407-8  
 Matsumoto, Hiroyuki, 16-18  
 Matsumoto, Kiyoshi, 543-4, 817-19  
 Matsumoto, Takeshi, 563-4, 800-1  
 Matsumura, Koichi, 1092-3  
 Matsumura, Yasuo, 926-7  
 Matsuo, Akihiko, 198-200  
 Matsushita, Yoshiko, 398-9  
 Matteson, Donald S., 357-8  
 Matthew, Jennifer A., 756-7  
 Mays, Martin J., 1035-6  
 Mazid, Muhammed A., 744-5  
 Mazo, G. J., 27-8  
 Mazur, Yehuda, 554-5  
 Meegan, Mary J., 185-6  
 Meij, Ruud, 506-7  
 Melhuish, W. Hugh, 970-1  
 Mellor, John M., 557-8, 738  
 Mellor, Michael, 5-6, 138-40, 526-8, 528-9  
 Mellows, Graham, 843-5  
 Meltz, Clifford, 355  
 Mencarelli, Paolo, 564-5  
 Menchen, Steven M., 356, 379-80, 770-1  
 Mendelsohn, Marshall H., 581-2  
 Mendoza, Abel, 357-8  
 Menon, Balachandran, 758-9  
 Mentzen, Bernard F., 1022-4  
 Merienne, Claude, 318-19, 771-3  
 Metcalf, Brian W., 914-15  
 Metts, Lewis L., 588-9  
 Metz, William, 76-8  
 Michael, Joseph P., 245-7  
 Michalski, Jan, 940-1  
 Micheloni, Mauro, 833-4  
 Michl, Josef, 751-2  
 Middleton, Roderick, 305-6  
 Mihailovic, Mihailo Lj., 302-3, 916-18  
 Mihaly, Gyorgy, 974-5  
 Mikes, Frantisek, 173-5  
 Miki, Masaki, 504-5  
 Mile, Brynmor, 263-4  
 Miles, Stuart J., 192-3  
 Miller, Ian J., 92-3  
 Miller, Jack M., 466-7  
 Miller, Nigel, 89-90  
 Miller, R. D., 496-7  
 Miller, Richard W., 1078-9  
 Milligan, W. O., 729-30  
 Milne, Charles R. C., 925-6  
 Milner, John A., 113-14  
 Milosavljevic, Slobodan, 302-3  
 Mimoun, Hubert, 559-60  
 Minale, Luigi, 524-5  
 Minami, Toru, 12-13  
 Minihan, Alan R., 502-4  
 Minto, Francesco, 285  
 Misra, Satish C., 68-9  
 Mitani, Kazuya, 482-3  
 Mitchell, Paul R., 428-9  
 Mitcheson, George R., 204-5, 262-3  
 Mitprachachon, Pachanee, 260-2  
 Mitsudo, Takeaki, 252-3  
 Miwa, Masahiro, 815-16  
 Miyagi, Shyogo, 687-8  
 Miyamae, Hiroshi, 875-6  
 Miyano, Sotaro, 446-7  
 Miyashi, Tsutomu, 442-3  
 Miyashita, Masaaki, 362-3  
 Mizuno, Kazuhiko, 594-5  
 Mizuno, Masao, 18-19  
 Mizuno, Yoshihisa, 124  
 Mizuno, Yukio, 717-18  
 Moegel, Liena, 57-8  
 Moffat, John B., 801-2  
 Mohanraj, Subramaniam, 423-4  
 Moilliet, John S., 475-6  
 Moiseev, I. I., 27-8  
 Mongelli, Nicola, 133-4  
 Monstrey, Joost, 796-7  
 Montevicchi, Pier Carlo, 530-1  
 Moodie, Roy B., 180-1  
 Moore, J. A., 1079-80  
 Moorhouse, Stephen, 549-50  
 Morchat, Richard M., 743-4  
 Moreau, Claude, 678-9  
 Morel, Georges, 274-5  
 Moretti, Irene, 456-7  
 Morganti, Gioia, 167-8, 710, 945-6  
 Mori, Kenya, 764  
 Morishima, Isao, 106-7  
 Morita, Tsuyoshi, 874-5  
 Morita, Yutaka, 620-1  
 Moriyama, Hiroshi, 348-9  
 Moroni, Wilko, 331-2  
 Morris, Caroline, 193-4  
 Morris, Donald F. C., 271-2  
 Morris, Edwin R., 515-16  
 Morris, Gareth A., 684-6  
 Morris, Gareth M., 263-4  
 Morris, George E., 72-3  
 Morris, Jeffrey J., 591-2  
 Morris, Robert H., 929-30  
 Morrison, Harry, 558-9, 600-1  
 Morton, Howard E., 1033-4  
 Moss, Gerard P., 387-8  
 Moss, Robert A., 775-6  
 Motherwell, William B., 1099-100  
 Mrotzek, Herbert, 820-1  
 Mudd, Alan, 1075-6  
 Mueller, Achim, 739  
 Mueller, Warren, 588-9  
 Muhs, Wolfgang H., 677-8  
 Muir, Kenneth W., 372-3  
 Mujahid, Tasneem G., 807-8  
 Mukai, Toshio, 442-3  
 Mulac, William A., 1038-40  
 Mullane, Maria, 871-3  
 Mullica, Donald F., 729-30  
 Munjal, Ramesh C., 775-6  
 Munoz, Aurelio, 219-20  
 Murahashi, Shunichi, 687-8  
 Murakami, Hiroshi, 667-8  
 Murakami, Yukito, 494-6  
 Murata, Tomoji, 786-8  
 Murawski, Hans Ruediger, 392-3  
 Murray-Rust, Judith, 83-4  
 Murray-Rust, Peter, 83-4  
 Mursakulov, I. G., 147-8  
 Muschiol, Manfred, 691-2  
 Musgrave, W. Kenneth R., 304-5  
 Myer, G. H., 301-2  
 Myers, Harry K., 636-8, 638-9  
 Naemura, Koichiro, 667-8, 668-7  
 Nagai, Yoichiro, 1029-30  
 Nagakura, Naotaka, 896-8  
 Nagao, Yoshimitsu, 330  
 Nagaraj, Ramakrishnan, 996-7  
 Nagashima, Kazuo, 682-3  
 Naidoo, Balakrishna, 779-81  
 Nair, Mridula, 793-4  
 Naish, Pamela J., 878-9  
 Naito, Shuichi, 175-6, 217-18, 1105-6  
 Nakadaira, Yasuhiro, 80-1  
 Nakagawa, Y., 457-9  
 Nakai, Hiroshi, 682-3  
 Nakajo, Tetsuo, 442-3  
 Nakamura, Hideshi, 781-2  
 Nakamura, Isao, 522-3  
 Nakamura, Yushin, 620-1  
 Nakanishi, K., 798-800  
 Nakasone, Akira, 490-1  
 Nakatsu, Kazumi, 252-3  
 Nakayama, Akira, 74-5  
 Nakayama, Hiroshi, 875-6  
 Nakayama, Mitsuru, 198-200  
 Nakazaki, Masao, 667-8, 668-7  
 Nanda, A. K., 885-6  
 Narasimham, Lakshmi, 719-20  
 Nardi, Nicoletta, 788-9  
 Narisano, Enrica, 613-14  
 Naso, Francesco, 1085-6  
 Nassimbeni, Luigi R., 510-11  
 Natale, Nicholas R., 1088-9  
 Natile, Giovanni, 654-5  
 Neal, David N., 681-2  
 Neary, Noreen, 562  
 Neidigk, David D., 600-1  
 Neidle, Stephen, 711-12  
 Nelson, S. Martin, 415-16  
 Nelson, William J. H., 920-1  
 Neumann, Susanne, 946-7  
 New, Douglas B., 62-3  
 New, Lucy, 1086-8  
 Newall, Christopher E., 467-8, 469-70  
 Newby, Vilas K., 82-3  
 Newton, M. Gary, 514-15  
 Newton, Ray J., Jr., 726-7  
 Newton, Roger F., 660-1, 661-2, 662-4  
 Ngoc-Tuyet Luong-Thi, 918-19  
 Nguyen, Tam T., 868-9  
 Nicholson, Philip N., 646-7  
 Nicolaou, Kyriacos C., 375-7, 1067-8  
 Niinisto, Lauri, 616-17  
 Nilsen, Nils O., 128-9  
 Nishida, Shinya, 864-5, 931-2  
 Nishida, Takashi, 651-2, 972-3  
 Nishigaki, Satoshi, 252-3  
 Nishimura, Edward K., 858-9  
 Nishino, Masayoshi, 667-8  
 Nishizawa, Kyojun, 894-5  
 Nishizawa, Mugio, 76-8  
 Nitta, Keiichi, 160-1  
 Noethe, Dietrich, 331-2  
 Noguchi, Masao, 563-4  
 Nolte, Magriet J., 973-4  
 Noltes, Jan G., 250-2  
 Norman, Joe G., Jr., 1027-9  
 Norris, James R., 502-4  
 Norris, Judith A., 388-9  
 Norris, Timothy, 932-3  
 Norrish, Howard K., 988-9  
 Norton, Ian T., 515-16  
 Nowak, Robert J., 244-5  
 Nowell, Ian W., 279-80  
 Nozaki, Hiroshi, 198-200  
 Nugent, William A., 579-80  
 Numan, Henk, 259-60  
 Nunami, Kenichi, 270-1  
 Nyburg, Stanley C., 555-6  
 Oberwinkler, Franz, 665-6  
 Occolowitz, John L., 683-4  
 Oda, Taiko, 135-6  
 O'Donoghue, Timothy D., 476-8, 828-9  
 Oduwale, Duro, 164-5  
 Oehler, Joachim, 595-6  
 Ogasawara, Kunio, 943-4  
 Ogiwara, Yukio, 364-5  
 Ogino, Kenji, 312-13  
 Ogita, Takeshi, 875-6  
 Ohmori, Hidenobu, 407-8  
 Ohno, Atsuyoshi, 328-9  
 Ohta, Hiromichi, 849-50  
 Ohtsuka, Eiko, 824-5  
 Oikawa, Atsushi, 727-8  
 Oka, Shinzaburo, 328-9  
 Okabe, Kei, 577-8  
 Okada, Hiroshi, 594-5  
 Okahara, Mitsuo, 504-5  
 Okamoto, Tsutomu, 293-4  
 Okamoto, Yasuaki, 47-8  
 Okamoto, Yoshiki, 874-5  
 Okano, Masaya, 65-6, 926-7  
 Okano, Tamon, 855-6  
 Okawara, Makoto, 74-5  
 Okuhara, Toshio, 53-4  
 Okunade, Adewole L., 152  
 Olesker, Alain, 577-8  
 Olin, George R., 417-18  
 Ollis, W. David, 670-1, 672-3, 673-5, 675-6  
 Olsson, Lars Inge, 621-3  
 Omura, Satoshi, 800-1  
 Onak, Thomas P., 169-71  
 Onan, Kay D., 75-6, 209-10  
 O'Neill, Robert, 218-19  
 Onishi, Takaharu, 217-18  
 Onishi, Takashi, 651-2, 972-3  
 Ono, Isao, 1109-10  
 Ono, Toshihiro, 414-15  
 Oritani, Takayuki, 454-5  
 Orito, Kazuhiko, 812-13  
 Orpen, A. Guy, 723-4  
 Ors, Jose A., 400-1  
 Osaka, Kenji, 717-18  
 Osborn, Ruth, 658  
 Oskam, Ad, 1016-17  
 Otake, Noboru, 875-6  
 Otake, Nomas A., 138-40  
 Otsuji, Yoshio, 594-5  
 Otsuka, Hideo, 577-8

- Otsuka, Sei, 855-6  
 Otsuki, Tetsuo, 457-9  
 Ott, Karl H., 612-13  
 Outram, Jerry R., 707-8  
 Overhof, Harold, 905-6  
 Overton, Karl H., 454-5  
 Pac, Chyongjin, 490-1  
 Pacht, Anthony, 900-1  
 Pacut, Ryszard, 153-4  
 Paddon-Row, Michael N., 296-7  
 Page, Michael I., 374-5, 591-2  
 Pakulski, Marek, 940-1  
 Pallmer, Michael, 558-9  
 Palmer, Robert J., 338-9  
 Panteleo, Nantelle S., 514-15  
 Paoletti, Piero, 833-4  
 Paolucci, Gino, 235-6  
 Paquer, Daniel, 1032-3  
 Paquette, Leo A., 365-6  
 Parente, Roberta A., 1040-1  
 Park, B. Kevin, 461-2  
 Park, Su-Moon, 933-4  
 Parkinson, Gordon M., 134-5  
 Parrott, Stephen J., 655-6  
 Parry, Ronald J., 294-5  
 Parsons, Philip J., 821-2, 822-4  
 Parvizi, Bahman, 265-6  
 Pascard, Claudine, 318-19  
 Pascard-Billy, Claudine, 125-6  
 Pasquali, Marco, 921-2  
 Passini, Paulo, 100-1  
 Patney, Harish K., 296-7  
 Paton, R. Michael, 113-14  
 Patroni, Joseph J., 449-50  
 Pattenden, Gerald, 5-6, 60-1, 138-40, 880-2  
 Payne, Alan, 932-3  
 Peach, Josephine M., 845-6  
 Pearce, Ronald, 140-2, 994-5  
 Pease, Lila G., 934-6  
 Pelter, Andrew, 805-6  
 Pennings, Marcel L. M., 1103-5  
 Percival, Alan, 178-80  
 Perkins, M. John, 778-9  
 Pero, Francesca, 886-8  
 Perot, Guy, 114-15  
 Perutz, Robin N., 762-3  
 Pesaro, Mario, 203-4  
 Pesce, Giannangelo, 1085-6  
 Pete, Jean Pierre, 567-8  
 Petty, Randall H., 483-5  
 Pews, R. Garth, 105-6, 714  
 Pez, Guido P., 1066-7  
 Phillips, Ian G., 709  
 Philpot, Paul D., 431-2  
 Piacenza, Lorenzo P. L., 425-6  
 Piepers, Oscar, 383-4  
 Piers, Edward, 1033-4  
 Pietra, Francesco, 167-8, 710, 945-6  
 Piette, Lawrence, 215-16  
 Pike, Stephen, 351-2  
 Ping-Lin, Kuo, 504-5  
 Pinkus, A. George, 201-2  
 Pippard, David, 551-2, 723-4  
 Pisaniello, Dino L., 1047-8  
 Plesnicar, Bozo, 122-4  
 Plurien, Pierre, 90-2  
 Poilblanc, Rene, 617-18  
 Pointer, David J., 816-17  
 Pojer, Peter M., 111-12  
 Poliakov, Martyn, 36-8  
 Pons, B. Stanley, 738  
 Pople, John A., 137-8, 190-1  
 Popli, Satya P., 281-2  
 Porter, Alexander E. A., 83-4, 85-6, 641-2  
 Porter, Quentin N., 255-6  
 Potier, Pierre, 102-3  
 Pousset, Jean Louis, 826-8  
 Povey, D. C., 791-2  
 Powell, Richard L., 433  
 Power, Philip P., 192-3  
 Prabhakar, Sundaresan, 884-5  
 Pradat, Christian, 1022-4  
 Pratt, Albert C., 101-2  
 Pratt, David W., 394-5  
 Pratt, John M., 606-7  
 Price, David H., 431  
 Priestler, Witta, 26-7  
 Prince, Reg. H., 300-1  
 Pritchard, Robin G., 288-9  
 Procter, Garry, 332-3  
 Proctor, John, 642-3  
 Prokopiou, Panayiotis A., 68-9  
 Prout, Keith, 1009-11  
 Pucci, Sergio, 269-70  
 Puddephatt, Richard J., 444-5, 749-51  
 Pulham, Richard J., 52-3  
 Purcell, Keith F., 497-9  
 Puxeddu, Anna, 339-40  
 Pye, Peter L., 1017-19  
 Pyne, G. S., 791-2  
 Queau, Rene, 617-18  
 Quick, James, 355  
 Raban, Morton, 965-7  
 Rabinovitz, Mordecai, 155-6  
 Radford, Curtis, 22-3  
 Radom, Leo, 724-5  
 Rafalko, Joseph J., 540-1  
 Raithby, Paul R., 340-1, 343-4, 421-3, 551-2, 828-9, 991-2, 1015-16  
 Raithby, Paul R., 476-8  
 Rall, Gerhardus J. H., 224-5  
 Ramage, William I., 472-3  
 Ramazanov, E. A., 147-8  
 Ramdas, Subramaniam, 134-5  
 Ramsden, John N., 828-9  
 Ranzi, Bianca M., 679-80  
 Rash, Kenneth F., 284  
 Rastetter, William H., 377-9  
 Rauffuss, Thomas B., 705-7  
 Rausch, Marvin D., 187-8, 401-2  
 Rautenstrauch, Valentin, 519-20  
 Ravichandran, Ramanathan, 249-50  
 Rawlins, Michael F., 557-8  
 Raymond, Kenneth N., 501-2  
 Redman, Richard P., 43-4  
 Rees, Alun H., 645  
 Rees, Charles W., 1049-50  
 Rees, David A., 515-16  
 Rees, John C., 1096-7  
 Reese, Colin B., 86-7, 639-40, 1050-2  
 Reeves, David L. R., 396-7  
 Reimann, W., 341-2  
 Reimer, Kenneth J., 746-7  
 Reisner, George M., 187-8, 691-2  
 Rey, Max, 675-6  
 Reynolds, Derek P., 662-4  
 Rezende, Marcos C., 133-4  
 Ribeiro Da Silva, Manuel A. V., 737  
 Riccardi, Gianna, 989-90  
 Richard, Thomas J., 377-9  
 Richardson, A. C., 664-5  
 Richardson, Mary Frances, 97-8  
 Richtarsky, Gerhard, 946-7  
 Ridd, John H., 445-6  
 Ridge, Richard J., 310-11  
 Riding, Geoffrey H., 486-8  
 Riederer, Heinz, 313-14  
 Riess, Jean, 1022-4  
 Rigny, Paul, 90-2  
 Ringsdorf, Helmut, 358-9  
 Ripamonti, Alberto, 927-8  
 Riveccie, Marcel, 552-3  
 Rivera, A. Valentina, 723-4  
 Riveros, Jose M., 126-7  
 Riviere, Henriette, 918-19  
 Robbins, Heather J., 89-90  
 Robert, Albert, 447-8  
 Roberts, Brian P., 545-6, 623-4, 752-3, 960-1  
 Roberts, M. Wyn, 40-1  
 Roberts, Nicholas K., 346-7  
 Roberts, Rex D., 49-50  
 Roberts, Stanley M., 660-1, 661-2, 662-4  
 Roberts, Tony G., 847-9  
 Robertson, A. S., 200-1  
 Robin, Jean Pierre, 556-7  
 Robins, Morris J., 677-8  
 Robinson, Malcolm L., 265-6  
 Robinson, Ward T., 111-12  
 Robinson, William R., 879-80  
 Rodgers, Alex, 415-16  
 Rodriguez, Ludovic A. M., 46-7  
 Rodriguez-Hahn, Lydia, 601-2  
 Roellgen, Franz W., 612-13  
 Roeser, Karl, 611-12  
 Rogers, Robin D., 140-2, 451-2, 465-6  
 Rolland, Alain, 771-3, 773-4  
 Rolland, Nicole, 773-4  
 Rolston, John H., 1037-8  
 Rooney, John J., 603-4, 604-6  
 Rosanske, Richard C., 588-9  
 Roselli, Alberto, 269-70  
 Rosenblum, Myron, 26-7  
 Rossetti, Rosanna, 841-3  
 Rossiter, Bryant E., 386-7  
 Rotella, Frank J., 1045-6  
 Rothwell, Ian P., 344-5, 1086-8  
 Rouse, Keith D., 723-4  
 Roux, David G., 224-5, 695-6, 696-8, 698-700, 700-2  
 Rowley, Dennis H., 101-2  
 Roy, Abhijit, 899-900  
 Roy, Glenn, 297-8  
 Rubinson, Kenneth A., 300-1  
 Rudakova, Inna P., 592-3  
 Rudolph, Gert, 595-6  
 Rund, John V., 971  
 Rupich, Martin W., 1045-6  
 Russell, David R., 744-5  
 Rutledge, Peter S., 919  
 Sachinidis, John, 157-8  
 Sadler, Peter J., 711-12  
 Saegusa, Takeo, 815-16  
 Saeva, Franklin D., 417-18  
 Saito, Gunzi, 992-3  
 Saito, Hazime, 135-6  
 Saito, Yasukazu, 348-9  
 Saito, Yoshihiko, 875-6  
 Sakamura, Sadao, 563-4  
 Sako, Magoichi, 836-8  
 Sakuma, Yoshiharu, 398-9, 764  
 Sakurai, Hideki, 80-1  
 Sakurai, Hiroshi, 16-18, 490-1, 874-5, 1024-5  
 Sala, Tony, 253-4, 1041-2, 1043-4, 1044-5  
 Salahub, Dennis R., 385-6  
 Salties, Jack, 588-9  
 Samaan, H. Joseph, 411-12  
 Sammes, Peter G., 79-80, 118, 162-4  
 Sampoli, Marco, 873-4  
 Sams, John R., 746-7  
 Sanitra, Robert, 719-20  
 Sano, Kotaro, 650-1  
 Santini, Sergio, 100-1  
 Santos, Albert, 528-9  
 Sargent, Melvyn V., 253-4, 1041-2, 1043-4, 1044-5  
 Sargeson, A. M., 289-90  
 Sargeson, Alan M., 647-9  
 Sasaki, Teruhiko, 252-3  
 Sato, Masaaki, 943-4  
 Sato, Masaru, 215  
 Sato, Mitsuo, 106-7  
 Sato, Shoichi, 875-6  
 Sato, Toshio, 478-9  
 Sato, Yoshihiro, 135-6  
 Satoh, James Y., 409-10  
 Satoh, Shoji, 481-2  
 Savoia, Diego, 927-8  
 Sawanishi, Hiroyuki, 568-9  
 Sawkins, Lynne C., 1061-2  
 Scarafie, Cosimo, 1101-2  
 Schaeffer, Evelyn, 937-8  
 Schantz, Edward J., 889-90  
 Schaubmann, Ernst, 820-1  
 Scheinmann, Feodor, 900-1  
 Schilling, Michael D., 744-5  
 Schipper, Pieter, 382-3  
 Schleyer, Paul v. R., 137-8, 190-1  
 Schmid, Peter, 525-6  
 Schmidpeter, Alfred, 470-1  
 Schmutzler, Reinhard, 946-7  
 Schneider, Abraham, 636-8, 638-9  
 Schneider, Manfred P., 964-5  
 Schnoes, Heinrich K., 889-90  
 Schofield, Kenneth, 180-1  
 Schomburg, Dietmar, 946-7  
 Schooley, David A., 290-2, 292-3  
 Schorstein, David, 795-6  
 Schrader, Glenn L., Jr., 540-1  
 Schreiner, Paul R., 223-4  
 Schrobilgen, Gary J., 957-60  
 Schroeder, Martin, 853-4  
 Schroth, Werner, 57-8  
 Schultz, Arthur G., 29  
 Schwalbe, Carl H., 188-90  
 Schwarz, Wolfgang, 451-2  
 Scolastico, Carlo, 434, 679-80  
 Scott, A. Ian, 947-8, 967-8  
 Scott, Lawrence T., 633-4  
 Scovell, Edward G., 526-8, 528-9, 529-30  
 Scriven, Eric F. V., 806-7  
 Sebastiani, Giovanni V., 597-8  
 Seddon, Kenneth R., 749-51  
 Sedgwick, Brian, 193-4  
 Seebach, Dieter, 689-91  
 Segal, Michael G., 1102-3  
 Seitz, Steven, 1067-8  
 Sekine, Mitsuo, 285-6  
 Sellars, Philip J., 954-6  
 Senda, Shigeo, 367  
 Seo, Shujiro, 319-20  
 Sermon, Paul A., 891-2  
 Seta, Akinori, 350-1  
 Sexton, Michael D., 78-9  
 Sghibartz, Cristian M., 507-8  
 Shahidi, Fereidoon, 455-6  
 Shamala, Narayanaswamy, 996-7  
 Shannon, Patrick V. R., 734-5  
 Shapley, John R., 534-5  
 Shaw, Bernard L., 1061-2  
 Shaw, David B., 146-7  
 Shaw, Gordon, 882-3  
 Shechter, Harold, 793-4  
 Sheldrick, George, 109-11

- Sheldrick, George M., 340-1, 421-3, 723-4  
Shepherd, Rex E., 859-61  
Sheppard, Norman, 868-9  
Sheppard, P. Julian, 586-7  
Sheppard, R. C., 537-9, 539-40  
Sherman, Edward O., Jr., 223-4  
Sherrington, David C., 541-3  
Sheves, Mordechai, 554-5  
Shibuya, Shiroshi, 414-15, 785-6  
Shih, Li Shang, 854-5  
Shimizu, Nobujiro, 931-2  
Shimizu, Toru, 668-7  
Shimokawa, Takafumi, 47-8  
Shingu, Keiji, 810-12  
Shinoda, Sumio, 348-9  
Shinozuka, Kazuo, 764  
Shiozaki, Masao, 517-18  
Shiro, Motoo, 682-3  
Shishido, Kozo, 943-4  
Shoeb, Aboo, 281-2  
Shold, David M., 978  
Shore, Sheldon G., 866-7  
Shreeve, Jean'ne M., 154-5  
Sialom, Bonita, 554-5  
Sidebottom, Philip J., 753-4  
Siebrecht, Barbara, 691-2  
Siedle, A. R., 69-70  
Siegel, Samuel, 114-15  
Sih, Charles J., 242-4  
Silber, Ernesto, 933-4  
Silva, Mario, 79-80  
Silverthorn, William E., 1009-11  
Sim, Kim-y, 843-5  
Simes, John J. H., 411-12  
Simmons, Miriam G., 634-6  
Simoes, Jose A. Martinho, 737  
Simpson, Colin F., 586-7  
Simpson, Thomas J., 626-7, 627-8  
Singer, Lawrence A., 116-17  
Singh, Awadhesh N., 226-8  
Singh, Paramjit, 885-6  
Singleton, Eric, 973-4, 1007-8  
Sipio, William J., 1067-8  
Sirat, Hasnah M., 961-2  
Sirlin, Claude, 949-51  
Siverns, Michael, 303-4  
Skapski, Andrzej C., 463-4, 853-4  
Skarnulis, A. Jerome, 1030-2  
Skattebol, Lars, 128-9  
Sklarz, Benjamin, 533-4  
Skowronska, Aleksandra, 940-1  
Smart, Lesley E., 839-41  
Smith, Allan E., 779-81  
Smith, Anthony K., 582-3  
Smith, Barry C., 765-6  
Smith, David, 369-70  
Smith, Donald R., 71-2  
Smith, K. M., 906-7  
Smith, Keith, 805-6  
Smith, Leslie W., 423-4  
Smith, Tim, 30-1  
Smith, Wayne F., 1017-19  
Snow, Michael R., 647-9  
So, Kwok-Hung, 466-7  
Sodano, Guido, 524-5  
Soltz, Barbara A., 1093-4  
Soma, Mitsuyuki, 217-18  
Somanathan, Ratnasamy, 396-7  
Sommerville, Polly, 1035-6  
Songstad, Jon, 327-8  
Sonoda, Akio, 687-8  
Soos, Zoltan G., 331-2  
Sorensen, Ted S., 769-70  
Sotheeswaran, Subramaniam, 980-1  
Southby, David T., 932-3  
Spangler, Charles W., 242  
Speckamp, W. N., 166-7  
Spek, Anthony L., 250-2  
Spencer, John L., 260-2  
Spencer, Thomas A., 49-50  
Speranza, Maurizio, 213-14  
Springborg, Johan, 647-9  
Sprinivasan, Ra., 400-1  
Sproat, Brian S., 565-6, 783-5  
Stang, Peter J., 1057-8  
Stanghellini, Pier Luigi, 841-3  
Stansfield, Robert F. D., 221-3  
Stanton, James L., 436-8  
Stapleton, B. Jane, 24-6  
Staron, Thadee, 318-19  
Stary, Frank E., 1093-4  
Staunton, James, 158-9, 406-7  
Stavber, Stojan, 969-70  
Steel, Peter J., 111-12  
Steele, W. V., 778-9  
Stegel, Franco, 564-5  
Steglich, Wolfgang, 665-6  
Stein, Lawrence, 502-4  
Steinmetz, Mark G., 228-30, 230-2  
Stevens, Robert V., 754-6  
Stevenson, Robert, 491-2  
Stewart, Cecil D., 603-4, 604-6  
Stewart, Nevin J., 182-3  
Stibbard, John H. A., 557-8  
Stibr, Bohumil, 287  
Stick, Robert V., 449-50  
Stirling, Charles J. M., 43-4, 338-9, 975-6  
Stoekigt, Joachim, 1097-9  
Stone, F. Gordon A., 169-71, 221-3, 260-2, 1000-1  
Stoodley, Richard J., 997-8  
Storey, John W. V., 547-8  
Storr, Richard C., 9-10, 396-7, 902-3  
Street, G. B., 489-90  
Stromnova, T. A., 27-8  
Strong, Pamela J., 1030-2  
Stroud, Mark A., 586-7  
Struchkov, Y. T., 27-8  
Struckmeier, Gerhard, 33-4  
Stufkens, Derk J., 506-7, 1016-17  
Subramanian, Polur S., 423-4  
Suckling, Colin J., 795-6  
Sudoh, Rokuro, 350-1  
Sugimoto, Hirohiko, 30  
Sugimoto, Toyonari, 926-7  
Sugiyama, Yoshio, 804  
Sullivan, James C., 1038-40  
Sum, F. W., 985-6  
Surgenor, Samuel A., 624-6  
Suschitzky, Hans, 453, 806-7  
Sutherland, Ian O., 670-1, 672-3, 673-5, 675-6  
Sutherland, James K., 526-8, 528-9, 529-30, 712-13, 852-3  
Sutton, Harry C., 970-1  
Suzuki, Fumio, 242-4, 733-4  
Suzuki, Kazuo T., 485-6  
Suzuki, Mamoru, 270-1  
Swenton, John S., 719-20  
Sydnes, Leiv Kr., 128-9  
Sykes, A. Geoffrey, 1102-3  
Sykora, Jan, 207-8  
Symons, Martyn C. R., 71-2, 313-14, 418-20, 686-7  
Szendrei, Kalman, 107-8  
Tachimori, Yoshifusa, 350-1  
Tada, Akihiro, 160-1  
Tada, Masao, 727-8  
Taffer, Ira M., 1088-9  
Taga, Tooru, 717-18  
Takahashi, Thomas T., 409-10  
Takamoto, Tetsuyoshi, 350-1  
Takamuku, Setsuo, 16-18, 1024-5  
Takano, Seiichi, 943-4  
Takaoka, Daisuke, 198-200  
Takayanagi, Hisao, 359-60  
Takegami, Yoshinobu, 252-3  
Takenaka, Shunsuke, 830  
Takeyama, Masaharu, 482-3  
Tamaru, Kenzi, 217-18, 1105-6  
Tamaru, Yoshinao, 367-8  
Tamura, Ryosuke, 266-7  
Tamura, Yasumitsu, 197-8  
Tanabe, Kozo, 1091-2  
Tanaka, Hideaki, 589-90  
Tanaka, Kazuhiko, 865-6  
Tanaka, Kenichi, 53-4  
Tanaka, Toshiki, 824-5  
Tang, Reginald, 562, 888-9  
Tanikaga, Rikuhei, 865-6  
Tanimoto, Shigeo, 926-7  
Taniyama, Yoshio, 824-5  
Tarama, Kimio, 63-5, 1059-61  
Tavares, M. Regina, 884-5  
Taylor, Donald, 647-9  
Taylor, Garry L., 711-12  
Taylor, Graham, 433  
Taylor, Grahame, 129-30  
Taylor, M. J., 19-20  
Taylor, Nicholas J., 1017-19  
Taylor, Paul W., 734-5  
Taylor, Peter J., 369-70  
Taylor, Roger, 586-7, 732-3  
Telford, Robert P., 354-5  
Teranishi, Shiichiro, 47-8, 650-1  
Terasawa, Masami, 650-1  
Testaferri, Lorenzo, 93-4  
Tetsukawa, Hatsuki, 849-50  
Teuben, Jan H., 659-60  
Thea, Sergio, 886-8  
Thebtaranonth, Chachanat, 265-6  
Thomas, Desmond R., 806-7  
Thomas, Eric J., 474-5, 961-2  
Thomas, John M., 134-5, 210-11, 288-9, 930-1, 986-7  
Thomas, Patsy J., 43-4, 975-6  
Thomas, Wayne A., 92-3  
Thompson, A. C., 200-1  
Thompson, David G., 372-3  
Thompson, Mervyn, 150-1  
Thornton, Andrew T., 408-9  
Thornton, Peter, 62-3  
Thunder, Anne E., 52-3  
Tiecco, Marcello, 93-4  
Tillequin, Francois, 826-8  
Tilley, R. Ian, 606-7  
Timko, Joseph M., 436-8  
Timmer, Klaas, 250-2  
Timms, Peter L., 730-1, 898-9  
Ting, Tai L., 1011-12  
Tingoli, Marco, 93-4  
Tipping, Anthony E., 101-2  
Tkatchenko, Igor, 1022-4  
Tobin, Geoffrey D., 180-1  
Todd, Lee J., 349-50  
Tokas, Edward F., 187-8  
Tokuda, Masao, 481-2  
Tokura, Katsuya, 577-8  
Tomita, Kenichi, 197-8  
Tomita, Yutaka, 319-20  
Tondeur, Yves, 81-2  
Toong, Yock C., 205-6  
Tori, Kazuo, 319-20, 577-8  
Torii, Sigeru, 293-4  
Torr, Richard S., 988-9  
Torre, Giovanni, 456-7  
Torrence, G. Paull, 183-4  
Toshimitsu, Akio, 65-6  
Towill, Robert, 645  
Townsend, David E., 588-9  
Toyoshima, Isamu, 121-2  
Traiman, S., 798-800  
Tranquille, Michel, 36-8  
Traverso, Pietro G., 873-4  
Trenbeath, Steven, 242-4  
Tretthewey, Kenneth R., 913-14  
Trocha-Grimshaw, Jadwiga, 571-2  
Troisi, Luigino, 93-4  
Trombini, Claudio, 927-8  
Trooster, Jan M., 907-9  
Trost, Barry M., 436-8  
Trotter, James, 1036-7  
Trotter, Jill, 109-11  
Truscott, T. George, 51-2  
Tsao, J. H., 358-9  
Tse, Man-Wing, 353-4, 791-2  
Tsin, Tsang Bik, 746-7  
Tsuchiya, Takashi, 568-9  
Tsuda, Tetsuo, 815-16  
Tsudo, Yoshisuke, 160-1  
Tsuji, Naoki, 682-3  
Tsunetsugu, Josuke, 215  
Tucker, P. A., 289-90  
Tundo, Antonio, 530-1  
Turner, James J., 36-8  
Turner, W. Brian, 474-5  
Turney, Terence W., 582-3  
Tweddle, Neil J., 182-3  
Tyler, J. Kelvin, 275-6, 335, 835-6  
Tyler, Peter C., 1019-20  
Uchida, Kiyoshi, 217-18  
Uchida, Takane, 543-4  
Uehara, Setsuko, 717-18  
Uehara, Masatoshi, 786-8  
Uemura, Sakae, 65-6  
Ueno, Naoki, 293-4  
Ueno, Yoshio, 74-5  
Ugo, Renato, 991-2  
Umani-Ronchi, Achille, 927-8  
Umezawa, Yoshio, 1106-7  
Umgermann, Charles B., 169-71  
Urch, David S., 262-3  
Utlej, James H. P., 255-6, 387-8  
Uyehara, Tadao, 359-60  
Valente, Lydia, 577-8  
Van Bergen, T. J., 923-4  
Vandenbulcke, Brigitte M. J., 389-91  
Van der Helm, Jur, 506-7  
Van der Merwe, Pieter J., 224-5  
Van der Stok, Erwin, 973-4, 1007-8  
Van der Veen, Reinout H., 923-4  
Van Derveer, D., 420-1  
Van der Velden, Jan W. A., 907-9  
Van de Sande, Christian C., 796-7  
Van de Ven, Leo J. M., 94-5  
Van Doorn, Johannes A., 1005-6  
Vandrevala, Marazban H., 779-81, 845-6  
Van Duyn, R. P., 69-70  
Van Koten, Gerard, 250-2  
Van Meerseeck, Maurice, 499  
Vargaftig, M. N., 27-8  
Vatele, Jean Michel, 535-7  
Vaughan, David, 1049-50  
Vaultier, Michel, 356-7  
Vause, John, 369-70

- Veracini, Carlo A., 167-8  
 Verkruijsse, H. D., 596-7  
 Vickery, Brian, 459-60  
 Vilkas, Erna, 125-6  
 Vilkas, Michel, 125-6  
 Vincent, Colin A., 56, 499  
 Vitullo, V. P., 98-9  
 Vollenbroek, Frans A., 907-9  
 Vol'pin, M. E., 44-6  
 Von Criegern, Thomas, 470-1  
 Vos, Aafje, 923-4  
 Voulgaropoulos, Anastasios N., 244-5  
 Vrieze, Kees, 506-7  
 Wade, Kenneth, 765-6  
 Wade, Roy, 901-2  
 Wadsworth, Alan H., 662-4  
 Waghorne, W. Earle, 218-19  
 Waigh, Roger D., 1026-7  
 Wakabayashi, Toshiaki, 824-5  
 Walker, Brian J., 424-5  
 Walker, Philip E., 279-80  
 Wallace, Brian, 655-6  
 Wallbridge, Malcolm G. H., 322-4  
 Walton, David J., 499  
 Walton, David R. M., 351-2  
 Walton, John C., 389-91  
 Ward, Peter, 467-8  
 Ward, Robert W., 131-3  
 Wardman, Peter, 71-2  
 Waring, Wilson S., 369-70  
 Warren, Leslie F., 909-10  
 Warren, Stuart, 657, 988-9  
 Warren, Ronald N., 296-7  
 Wartew, Gary A., 7-9  
 Washita, Hiroshi, 815-16  
 Watanabe, Fumiyouki, 361  
 Watanabe, Hamao, 1029-30  
 Watanabe, Katsuhiko, 815-16  
 Watanabe, Masataka, 748-9  
 Watanabe, Yoshihisa, 252-3  
 Waters, William A., 741-2  
 Watson, Douglas J., 343-4  
 Watson, Nigel S., 467-8, 469-70  
 Watson, William H., 79-80  
 Webb, Colin F., 660-1  
 Weedon, Basil C. L., 387-8  
 Wehrli, Felix W., 302-3  
 Wei, Chiau-Yu, 1053-5  
 Weiler, Larry, 985-6  
 Weisz, Adrian, 521-2  
 Welch, Alan J., 169-71, 486-8, 878-9  
 Wells, E. J., 956-7  
 Welter, Thomas R., 228-30  
 Werner, Baldur, 57-8  
 West, Robert, 1092-3, 1093-4  
 Wharry, Stephen M., 172-3  
 Wheatley, Peter J., 1035-6  
 Whelan, Terence D., 911-13, 913-14  
 White, Nicolas, 839-41  
 Whiting, Donald A., 59-60, 107-8  
 Whittaker, David, 1096-7  
 Whittaker, Graham, 431-2, 475-6  
 Whittle, Peter J., 9-10  
 Wild, Stanley Bruce, 346-7  
 Wilford, John B., 816-17  
 Wilkinson, Geoffrey, 463-4, 465-6, 883-4  
 Williams, B. J., 537-9  
 Williams, Dudley H., 24-6  
 Williams, Evan H., 1047-8  
 Williams, James R., 450-1  
 Williams, John O., 134-5  
 Williams, Robert J. P., 1030-2  
 Willner, Itamar, 155-6  
 Wilmott, W. Eric, 85-6  
 Wilson, Catherine, 752-3  
 Wilson, Lon J., 483-5, 634-6  
 Wilson, Stephen R., 479-80  
 Wimmer, Franz L., 936-7  
 Wingfield, Jonathan N., 1001-3  
 Winter, Jeremy N., 545-6, 960-1  
 Winter, Mark J., 221-3  
 Wiseall, Barrie, 164-5  
 Wolf, Robert, 1022-4  
 Wong, Chi Kwong, 41-2, 379-80, 441-2  
 Wong, Edward H., 462-3  
 Wong, Kam-Han, 282-3  
 Wong, Victor K., 838-9  
 Wong-Ng, Winnie, 555-6  
 Wood, Michael, 438-9  
 Woodgate, Paul D., 919  
 Woodhouse, Anthony D., 92-3  
 Woodward, Peter, 221-3, 260-2  
 Woolhouse, Anthony D., 857-8  
 Woyciesjes, P. M., 69-70  
 Wrackmeyer, Bernd, 402-3  
 Wreford, Stan S., 500-1  
 Wrigglesworth, Roger, 795-6  
 Wrighton, Mark, 588-9  
 Wudl, Fred, 429-30  
 Wynberg, Hans, 238-9, 259-60, 427-8  
 Yabe, Akira, 589-90  
 Yager, Thomas D., 944-5  
 Yajima, Haruaki, 482-3  
 Yamada, Hiroshi, 485-6  
 Yamada, Koichiro, 1089-90  
 Yamagishi, Akihiko, 361  
 Yamamoto, Makoto, 649-50  
 Yamamoto, Takakazu, 1003-4  
 Yamamoto, Yoshinori, 702-3  
 Yamamoto, Yuzuru, 160-1  
 Yamamura, Takeshi, 1106-7  
 Yamazaki, Yasuyuki, 63-5  
 Yandell, John K., 370-2  
 Yang, Darchum B., 363-4  
 Yang, Dominic T. C., 726-7  
 Yang, Nien-Chu C., 978  
 Yarbrough, Linton W., II, 161-2  
 Yasuda, Masahide, 716-17  
 Yatagai, Hidetaka, 702-3  
 Yates, Peter, 205-6  
 Yau, Laval, 1050-2  
 Yavari, Issa, 58-9  
 Yeh, C. L., 947-8  
 Yoder, Claude H., 209-10  
 Yokomatsu, Tsutomu, 414-15, 785-6  
 Yoko-o, Seiya, 1058-9  
 Yoneda, Fumio, 398-9, 764  
 Yoneda, Hayami, 266-7  
 Yoneda, Naoto, 270-1  
 Yonezawa, Tejiro, 65-6, 804  
 Yoshida, Katsuhisa, 312-13  
 Yoshida, Kunihisa, 20-2, 1108-9  
 Yoshida, Massayoshi, 831-2  
 Yoshida, Satoshi, 1059-61  
 Yoshida, Toshikatsu, 855-6  
 Yoshida, Zenichi, 367-8  
 Yoshikoshi, Akira, 362-3, 748-9  
 Yoshizawa, Tadashi, 266-7  
 Youngs, Wiley J., 1048-9  
 Yu, Yeung S., 599-600  
 Yuasa, Yoshifumi, 766-7  
 Yunker, Mark Bernard, 325-6  
 Yurkevich, A. M., 592-3  
 Yus, Miguel, 847  
 Yuta, Kohtaro, 943-4  
 Zabel, V., 79-80  
 Zalkow, L. H., 420-1  
 Zapata, J. P., 497-9  
 Zaworotko, Michael J., 465-6  
 Zbaida, Shmuel, 6-7  
 Zefirov, N. S., 147-8  
 Zenk, Meinhard H., 896-8  
 Zentgraf, Rolf, 402-3  
 Zimmerman, Howard E., 228-30, 230-2, 232-4  
 Zink, Jeffrey I., 863-4  
 Ziurys, Lucy M., 424-5  
 Zuccaro, Camilo I., 991-2  
 Zupan, Marko, 969-70  
 Zylber, Jean, 1084-5  
 Zylber, N., 1084-5



## SUBJECT INDEX, 1978

## ABS CONFIGURATION

- Stereoselective synthesis of (–)-acorenone and (–)-acorenone B; the absolute configuration of natural (–)-acorenone, 203–4
- Determination of the absolute configuration of bis(dipeptidato)cobaltate(III) complexes by proton nuclear magnetic resonance spectroscopy, 428–9
- Condensed tannins. Circular dichroism method of assessing the absolute configuration at carbon-4 of 4-arylflavan-3-ols, and stereochemistry of their formation from flavan-3,4-diols, 698–700

## ABSORPTION

- Hydrogen absorption in YNi<sub>4</sub>Mn, an alloy with the cubic UNi<sub>5</sub> structure, 581–2
- Copper(I) ethylenediamine carbonyl complexes: 'models' for carbon monoxide activation. X-ray structure of the ion-pair carbonyl ethylenediaminetetraphenylboratocopper, 921–2

## ABSTRACTION

- Stereochemistry of the transition state of hydrogen abstraction by vinyl radicals, 574–5

## ACACIA

- Condensed tannins: direct synthesis, structure, and absolute configuration of four biflavonoids from black wattle bark ('mimosa') extract, 700–2

## ACETAL

- Acetal hydrotrioxides, 122–4
- Cleavage of  $\alpha$ -(phenylthio)alkylboron compounds to monothioacetals and acetals, 357–8
- Spiro(5.5)undecane sesquiterpene analogues. Bridging vinyl ether and vinyl acetal formation via intramolecular attack by an enol during bromination, 425–6
- Crown ether acetals: detection of cation binding by kinetic measurements, 507–8
- New syntheses of 1- and 2-phenylthiobutadienes, 657
- Stereoelectronic control of acetal hydrolysis, 803–4
- Novel method for dealkylation of esters, ethers, and acetals by chlorotrimethylsilane-sodium iodide, 874–5
- $\beta$ -Diphenylphosphinoyl ketones (Ph<sub>2</sub>POCH<sub>2</sub>CH<sub>2</sub>COR): stable reagents for  $\beta$ -ketoanions, 988–9
- Formation of allenyl or  $\gamma$ -ketoesters from reactions of oxyallyls with acetylenes or 1,1-dimethoxyethene, 1006–7

## ACETALDEHYDE

- Light-induced conversion of ethane-1,2-diol or 2-aminoethanol into acetaldehyde in the presence of 8-methoxy-5'-deoxy-5'-adenosylcobalamin or a simpler cobalt(III) alkyl, 643–4

## ACETALIZATION

- Efficient synthesis of acetals catalysed by rare earth chlorides, 976–7

## ACETAMIDATION

- Use of ion exchange resins to trap electrogenerated intermediates: acetamidation of hydrocarbons, 738

## ACETATE

- Regioselective oxidation of unactivated methylene and methine groups by dry ozonation: similarity to microbiological oxidation, 413–14
- Reduction of alkyl esters to alkanes by sodium in hexamethylphosphoric triamide. A new method for the deoxygenation of alcohols, 567–8
- Oxidative displacement of iodine from vicinal iodocarboxylates and alkyl iodides, 919
- Stereospecific synthesis of chiral acetic acid from glycine, 967–8

## ACETATOCARBONYLPALLADIUM

- New palladium carbonyl clusters: X-ray crystal structure of (Pd<sub>4</sub>(CO)<sub>4</sub>(OAc)<sub>4</sub>)(AcOH)<sub>2</sub>, 27–8

## ACETONE

- Selectivity in the addition of organic radicals to the alkene bond, 438–9
- X-ray crystal structure of a 1,4-dihydropyridine-crown ether-sodium perchlorate complex crystallized with a molecule of acetone, 923–4
- Maleic anhydride-benzene and maleic anhydride-acetone molecular complexes, 933–4

## ACETONE ARYLSULPHONYLHYDRAZONE

- Novel synthesis of  $\alpha$ -methylene- $\gamma$ -lactones, 1071–2

## ACETONITRILE

- Pulsed laser photolysis of chlorocopper(II) complexes in acetonitrile: evidence for chlororadical formation, 207–8
- Inter- and intramolecular condensations of cyanide and amide ions with coordinated acetonitrile: an amido acid synthesis. X-ray crystal structure of ((NH<sub>3</sub>)<sub>3</sub>Co(Me)C(NH<sub>2</sub>)(NH<sub>2</sub>:CNH<sub>2</sub>)<sub>2</sub>)Br<sub>3</sub>·2/3H<sub>2</sub>O, 289–90
- Experimental determination of the standard reduction potential of the gold(I) ion, 606–7
- Reduction of tris(triphenylphosphine)dichlororuthenium(II) in acetonitrile: reformulation of the nature of the product; detection of the first paramagnetic d<sup>8</sup> complex, 883–4

## ACETOPHENONE

- Photolysis of  $\alpha$ -chloro- $\alpha$ -methylacetophenones, 61–2
- Electrochemical removal of 1,3-dithiane protecting groups, 255–6
- New method of access to selenoacetal chemistry: use of tris(phenylseleno)borane, 356
- Cyanoborohydride supported on an anion exchange resin as a selective reducing agent, 1088–9

## ACETOPHENONE HYDROXY

- Reaction of *o*-hydroxyacetophenone with dichlorophenylphosphine. X-ray crystal and molecular structure of an unusual tricyclic tetraoxaphospho-undecane, 510–11

## ACETOXYMETHYLPHENYLBENZOTRIAZOLE

- Action of chlorine on a 2-substituted benzotriazole, 932–3

## ACETOXYOCTYNE

- Direct displacement and coupling of prop-2-ynyl acetates with organocuprates, 876–7

## ACETYLACETONE

- 1-Nitro-1-phenylthiopropene, a new reagent for 3-methylfuran synthesis, 362–3

## ACETYLATION

- Acetylation of 2,3-dimethylbenzofuran. The first example of a non-conventional Friedel-Crafts reaction, 597–8
- Drifluor reagents: non-hygroscopic sources of the fluoride ion, 789–91

## ACETYLENE

- Hydrogenolysis of unsaturated alcohols; hydrocyanation and hydrogenation of acetylenes catalysed by pentacyanocobaltate(II), 63–5
- Acetylene linkage at a di-metal centre: X-ray crystal structures of (Cr<sub>2</sub>(CO)( $\eta$ -C<sub>5</sub>H<sub>5</sub>)<sub>2</sub>(PhC<sub>2</sub>Ph)<sub>2</sub>) and (Mo<sub>2</sub>( $\eta$ -C<sub>5</sub>H<sub>5</sub>)<sub>2</sub>)((MeO<sub>2</sub>CC<sub>2</sub>CO<sub>2</sub>Me)(HC<sub>2</sub>H)(MeO<sub>2</sub>CC<sub>2</sub>CO<sub>2</sub>Me)<sub>2</sub>)), 221–3
- Production, in electrical discharges, of fluorine cyanide, fluoroacetylene, and related substances as monitored by microwave spectroscopy, 335
- (Ir<sub>4</sub>(CO)<sub>8</sub>((MeCO<sub>2</sub>)<sub>2</sub>C<sub>2</sub>)<sub>4</sub>): a rectangular cluster, 340–1
- Conversion of aldehydes and ketones into chloroolefins and acetylenes using chloriodomethane as a chloromethylene source, 446–7

- Some epoxy-acetylene cyclizations, 528–9

- Selective homo Diels-Alder addition of acetylenic hydrocarbons to norbornadiene catalysed by a cobalt complex, 636–8

- New synthesis of dienals, 924–5

- A novel conducting polyacetylene derivative, 1066–7

## ACETYLENE POLY

- Highly conducting transition metal derivatives of polyacetylene, 489–90

## ACETYLENECARBOXYLATE

- High-pressure reaction of 2-halogenopyridines with dimethyl acetylenedicarboxylate, 543–4
- Versatility of cycloaddition of electrophilic alkynes to  $\eta^2$ -CS<sub>2</sub> metal complexes. Reversible isomerization of 1,3-dithiol-2-ylideneiron and heterometallo-cyclic complexes, 573–4
- Cyclization of acetylenecarboxylic acids; a novel route to  $\gamma$ -methylenebutyrolactones, 649–50

## ACETYLENEDICARBOXYLATE

- 1,3-Dipolar cycloaddition reactions of imines of  $\alpha$ -amino acid esters: X-ray crystal and molecular structure of methyl 4-(2-furyl)-2,7-diphenyl-6,8-dioxo-3,7-diazabicyclo(3.3.0)octane-2-carboxylate, 109–11

- Some novel transformations in indole chemistry, 332–3

**ACETYLIDE**

Synthesis of the dilithium salt of cyanamide in liquid lithium; X-ray crystal structure of  $\text{Li}_2\text{NCN}$ , 52-3  
Carbon-carbon bond-making by trapping of a nucleophilic carbene (from an electron-rich olefin) by a  $\sigma$ - $\pi$ -acetylido(hexacarbonyl) di-iron complex; X-ray crystal and molecular structure, 1017-19

**ACETYLNAPHTHALENE**

Photochemical reactions of 1,8-diacetylnaphthalene and 1,3-dimethoxy-1,3-dimethyl-1H,3H-naphtho(1,8-cd)pyran, 589-90

**ACID CATALYSIS**

1,2-Hydrogen shifts during acid-catalyzed hydrogen exchange, 586-7

Intramolecular nucleophilic and general acid catalysis in the hydrolysis of an amide, 591-2

**ACID SENSITIVE**

The acid-sensitive proton nuclear magnetic resonance spectra of tocopherols and other derivatives of 6-hydroxychroman, 265-6

**ACIDITY**

Bronsted acidity of rutile developed during alcohol dehydration as shown by simultaneous alkene isomerization: microwave spectroscopic analyses, 835-6

**ACIDO**

Absence of common five-coordinate intermediates in the induced reactions of some cobalt(III)-acido complexes, 892-4

**ACORENONE**

Stereoselective synthesis of (-)-acorenone and (-)-acorenone B; the absolute configuration of natural (-)-acorenone, 203-4

**ACRYLAMIDE**

Reaction of isopropylidencarbene with isonitriles. Evidence for the formation of alkadienylideneamine, 1057-8

**ACRYLATE**

Regioselectivity in the Diels-Alder reactions of 3- and 4-substituted 1-trimethylsilylbutadienes, 178-80

**ACRYLONITRILE**

A general route to substituted naphthols, 162-4

**ACRYLONITRILE CHLORO**

Production, in electrical discharges, of fluorine cyanide, fluoroacetylene, and related substances as monitored by microwave spectroscopy, 335

**ACTIVATION PARAMETER**

Ring inversion in the cyclohexenyl radical, 394-5

**ACYL**

Convenient synthesis of unesterified acylphosphonic acids, 285-6  
Efficient method for the preparation of trimethylsilyl enol ethers of acyltrimethylsilanes, 478-9

Introduction of sulphur into organic molecules via lithium triethylborohydride reduction of  $\text{S}_8$ , 838-9

**ACYL CHLORIDE**

New photochemical reaction of 6-azido-1,3-dimethyluracil with acyl halides to give 5-acylamino-6-chloro-1,3-dimethyluracils, 367

**ACYLAMINOURACIL**

New photochemical reaction of 6-azido-1,3-dimethyluracil with acyl halides to give 5-acylamino-6-chloro-1,3-dimethyluracils, 367

**ACYLATION**

A mild, regioselective but-2-enolide synthesis and a convenient preparation of acylated dienes, 311-12

Silylhydroxylamines as reagents for high-yield  $\text{RCOCl} \rightarrow \text{RNCO}$  conversions, 351-2

Electrochemical reductive acylation of astacene; a route to the carotenoid astaxanthin, 387-8

Selective acylation of amines using 18-crown-6, 471-2

Formation of an acyl species from hept-1-ene and carbon monoxide on an evaporated nickel surface, 617-18

Formation of abnormal products in the aluminium chloride-catalysed ene additions of chloral and bromal to mono- and 1,2-dialkyl ethylenes, 655-6

A simple route to  $\alpha$ -aminoketones and related derivatives by dianion acylation reactions; an improved preparation of  $\delta$ -aminolevulinic acid, 753-4

The acylation of 3-alkyl-indoles, 779-81

Novel synthesis of isothiocyanatophosphoranes and isothiocyanatophosphonium salts via ligand substitution. Versatile reagents for converting hydroxy groups into thiocyanate and isothiocyanate functions, 940-1

**ACYLPHENYLALANINE**

Stereoselective reaction of p-nitrophenyl N-acyl-phenylalanines with N-acyl-L-histidine in mixed micelles, 984-5

**ADAMANTANONE**

Raman optical activity due to isotopic substitution: (1S)-4,4-dideuterioadamantan-2-one, 259-60

New method of access to selenoacetal chemistry: use of tris(phenylseleno)borane, 356

**ADAMANTYL**

Radical alkydenitration. A synthetically useful example of homolytic aromatic ipso-substitution reactions, 93-4

**ADAMANTYLACETAMIDE**

Use of ion exchange resins to trap electrogenerated intermediates: acetamidation of hydrocarbons, 738

**ADAMANTYLIDENEADAMANTANE**

Preparation of some S-methyl thiuramium salts of adamantylideneadamantane. Demethylation and desulphurization with nucleophiles, 630-1

**ADDN**

Solvent effects in homogeneous asymmetric catalysis, 427-8

Unexpected regioselective nucleophilic addition to 3-(4,4-dimethyloxazolin-2-yl)pyridine: formation of stable 1,4-dihydropyridines, 615-16

Formation of abnormal products in the aluminium chloride-catalysed ene additions of chloral and bromal to mono- and 1,2-dialkyl ethylenes, 655-6

Ortho ester hydrolysis: rate determining addition of water to a carboxonium ion intermediate, 678-9

Regiospecific carbon-2-addition of thiolates to methoxytropylium ion. The first practical entry to the monocyclic 1,7-difunctionalized cycloheptatriene series, 710

Homoconjugate addition of Grignard reagents spiroactivated cyclopropanes. An approach to the total synthesis of ( $\pm$ )-brefeldin A, 754-6

Homolytic addition to N-methylene-tert-butylamine: a new route to aminyl radicals, 960-1

**ADENINE**

New synthesis of 4',5'-unsaturated nucleosides, 1084-5

**ADENOSINE**

Reactions of methylhydrazine and hydrazine with 8-bromo-2'-O-toluene-p-sulphonyl adenosine, 86-7

Synthesis of (5'R)-(2H<sub>1</sub>)adenosine, 294-5

New synthesis of 4',5'-unsaturated nucleosides, 1084-5

**ADENOSYLCOBALAMIN**

Light-induced conversion of ethane-1,2-diol or 2-aminoethanol into acetaldehyde in the presence of 8-methoxy-5'-deoxy-5'-adenosylcobalamin or a simpler cobalt(III) alkyl, 643-4

**ADSORBATE**

Luminescence from  $(\text{Ru}(\text{bipyridyl})_3)^{2+}$  ions adsorbed on ion exchange surfaces. Dynamic quenching reactions between adsorbed cations, 408-9

**ADSORPTION**

Adsorption of nitric oxide on copper(100) surfaces; an electron spectroscopic study, 40-1

**AGERATUM**

Structure of conyzorigon, a new chromone from Ageratum conyzoides, 152

**AJMALICINE**

Indirect involvement of geissoschizine in the biosynthesis of ajmalicine and related alkaloids, 1097-9

**ALANGIUM**

Deacetylisoipecoside: the key intermediate in the biosynthesis of the alkaloids cephaeline and emetine, 896-8

**ALANINE**

Stereoselective chelate and amino acid synthesis with chelated 2-iminopropionate; crystal and molecular structures of  $\alpha$ -(N<sup>2</sup>-2-aminoethylamidino)alaninato-ONN<sup>''</sup>N<sup>'''</sup>-(ethylenediamine)cobalt(III) and  $\alpha$ -(N<sup>2</sup>-2-aminoethylamidino)alanine-NN<sup>''</sup>N<sup>'''</sup>-(chloro)ethylenediaminecobalt(III) tetrachlorozincates, 647-9  
Phenyl trans-2-chlorovinyl sulphone, a vinyl cation equivalent, 914-15

**ALBUMIN**

Asymmetric reduction of aromatic ketones by sodium borohydride in the presence of bovine serum albumin, 926-7

**ALC**

Trifluoroacetylation of alcohols: a newly detected reaction of trifluoroacetic acid, 248

Efficiently monitored reduction of carboxylic acids into alcohols or aldehydes via 2-thiazoline-2-thiol esters by sodium borohydride or diisobutylaluminium hydride, 330

Homogeneous catalytic oxidation of amines and secondary alcohols by molecular oxygen, 562

- Reduction of natural enones in the presence of cerium trichloride, 601-2
- A new synthesis of conjugated dienones, 608
- Silyl nitronates: improved nitro-aldol reactions and reductive routes to 2-aminoalcohols, 689-91
- Increase in reaction rate consequent on the use of a polymer-supported reagent. Evidence for interaction between a high proportion of the groups of a polymer-supported reagent, 813-15
- Broensted acidity of rutile developed during alcohol dehydration as shown by simultaneous alkene isomerization: microwave spectroscopic analyses, 835-6
- Oxidative displacement of iodine from vicinal iodocarboxylates and alkyl iodides, 919
- Asymmetric reduction of aromatic ketones by sodium borohydride in the presence of bovine serum albumin, 926-7
- Solvent transfer hydrogenation of  $\alpha\beta$ -unsaturated aldehydes to the unsaturated alcohols catalysed by hydrido-iridium sulphoxide complexes, 929-30
- Gas-phase condensation of tert-butyl cations with Lewis bases, 938-40
- Oxidation of alcohols using benzeneseleninic anhydride, 952-4
- $\mu$ -Oxo-bis(chlorotriphenylbismuth): a mild reagent for the oxidation of the hydroxy group, especially in allylic alcohols, 1099-100
- ALC DEHYDROGENASE**
- Latent inhibition of liver alcohol dehydrogenase by a substituted allyl alcohol, 795-6
- ALDEHYDE**
- Oxidation of aldehyde hydrazones, hydrazone compounds, and hydroxylamines with benzeneseleninic anhydride, 276-7
- Efficiently monitored reduction of carboxylic acids into alcohols or aldehydes via 2-thiazoline-2-thiol esters by sodium borohydride or diisobutylaluminium hydride, 330
- Metal-assisted borohydride reduction of acid chlorides to aldehydes 354-5
- Conversion of aldehydes and ketones into chloroolefins and acetylenes using chloriodomethane as a chloromethylene source, 446-7
- Silyl nitronates: improved nitro-aldol reactions and reductive routes to 2-aminoalcohols, 689-91
- Solvent transfer hydrogenation of  $\alpha\beta$ -unsaturated aldehydes to the unsaturated alcohols catalysed by hydrido-iridium sulphoxide complexes, 929-30
- Efficient synthesis of acetals catalysed by rare earth chlorides, 976-7
- ALDEHYDE CYCLOPROPYL**
- Cyclopropylidene insertion. Evidence for bicyclo(1.1.0)butan-2-olate formation, 128-9
- ALDEHYDE SYNTHESIS**
- Vacuum pyrolysis of salts of 1-acyl-2-arylsulphonylhydrazines; a general McFadyen-Stevens aldehyde synthesis, 793-4
- ALDER AMINOBUTADIENE**
- Novel conversion of a 3-oxidopyridinium into a 4-oxidoisoquinolinium, 316-18
- ALDOPYRANOSE**
- Introduction, substitution, and elimination of bromine at C-5 of aldopyranose peresters, 1019-20
- ALDRIN**
- Stereochemistry of the transition state of hydrogen abstraction by vinyl radicals, 574-5
- ALK EARTH**
- Alkaline earth metal complexes of pyridinyl containing Schiff base macrocycles: X-ray crystal and molecular structures of the calcium and strontium complexes, 279-80
- ALKADIENAL**
- New synthesis of dienals, 924-5
- ALKADIENE**
- Regioselectivity in the di- $\pi$ -methane rearrangement; alternative processes in the photochemistry of halogeno-1,4-dienes, 101-2
- Anti-Markownikoff 1,2-hydrosulphonylation of 1,3-dienes via  $\pi$ -allylpalladium complexes, 367-8
- Synthesis of fluorinated dienes and cyclobutenes, 475-6
- Role of exciplex in the photocycloaddition of 2,5-dimethylhexa-2,4-diene to anthracene, 978
- ALKADIENONE**
- A new synthesis of conjugated dienones, 608
- New synthesis of conjugated ketones from 2-phenylthioallyl and -allyl alcohols, 821-2
- ALKALI**
- Evidence of halogen exchange between gaseous halogenated alkanes and solid alkali halides obtained by field desorption mass spectrometry, 612-13
- ALKALI METAL**
- Novel carbon-carbon reductive cleavage of terphenyls with alkali metal-hexamethylphosphoric triamide, 153-4
- Reduction of the carboxyl-function in aromatic carboxylic acids by alkali metal-liquid ammonia solutions, 941-3
- ALKALI METAL EFFECT**
- Crown ether acetals: detection of cation binding by kinetic measurements, 507-8
- ALKALI METAL HALIDE**
- Partition of viscosity B-coefficients into ionic components, 56
- ALKALOID**
- Heteroatom directed photoarylation; an approach to the synthesis of *Aspidosperma* alkaloids, 29
- New alkaloids from *Aristolotelia chilensis* (Mol.) Stunz, 79-80
- Antitumour alkaloids of the vinblastine-type: is leurosine an artefact, 102-3
- Structures of cathedulin alkaloids from *Catha edulis* (khat) of Kenyan and Ethiopian origin, 107-8
- Absolute configuration and biosynthesis of tiliacorine and tilacorinine, 226-8
- Curassavine, an alkaloid from *Heliotropium curassavicum* Linn. with a C<sub>8</sub> neric acid skeleton, 423-4
- Stereochemistry of the reduction of nicotinic acid when it serves as a precursor of anatabine, 610-11
- Stereochemical control in the biomimetic conversion of heteroyohimbine alkaloid precursors. Isolation of a novel key intermediate, 618-19
- Asymmetric synthesis and absolute stereochemistry of the alkaloids araliopsine, isoplatydesmine, and ribalinine. Dual mechanism for a dihydrofuroquinolone-dihydropyranoquinolone rearrangement 624-6
- Stereoconservative transformation of secologanin into meroquinene and its derivatives, 725-6
- Novel total synthesis of ( $\pm$ )-erysotramidine, an oxo-erythrinan alkaloid, 733-4
- X-ray structure of staurosporine: a new alkaloid from a *Streptomyces* strain, 800-1
- New route to the protochanes, 812-13
- Biomimetic synthesis of borreverine and isoborreverine, 826-8
- Deacetylisoipecoside: the key intermediate in the biosynthesis of the alkaloids cephaline and emetine, 896-8
- New synthetic routes to synthons for the synthesis of functionalized *Aspidosperma* alkaloids, 943-4
- X-ray crystal and molecular structure of channaine, an unusual alkaloid, probably an artefact from *Sceletium strictum*, 1078-9
- Indirect involvement of geissoschizine in the biosynthesis of ajmalicine and related alkaloids, 1097-9
- ALKALOIDS**
- An economical synthesis of the alkaloids, 3,4-dimethoxy- $\omega$ -(2-piperidyl)acetophenone, julandine, and cryptopleurine, 794-5
- ALKANAL**
- Vacuum pyrolysis of salts of 1-acyl-2-arylsulphonylhydrazines; a general McFadyen-Stevens aldehyde synthesis, 793-4
- ALKANE**
- Evidence of halogen exchange between gaseous halogenated alkanes and solid alkali halides obtained by field desorption mass spectrometry, 612-13
- ALKANOATE**
- Phase-transfer catalysis using chiral catalysts. Synthesis of optically active 2-phthalimido-esters, 742-3
- ALKANOL**
- Methyltriphenoxyphosphonium trifluoromethanesulphonate: a new versatile synthetic reagent, 424-5
- ALKANONE**
- New method of access to selenoacetal chemistry: use of tris(phenylseleno)borane, 356
- $\beta$ -Diphenylphosphinoyl ketones (Ph<sub>2</sub>POCH<sub>2</sub>CH<sub>2</sub>COR): stable reagents for  $\beta$ -keto-carbanions, 988-9
- ALKANOYL CHLORIDE**
- Metal-assisted borohydride reduction of acid chlorides to aldehydes 354-5
- ALKENE**
- Hydrometallation of alkenes and alkynes with magnesium hydride, 30-1
- Unusual stereoselectivities in olefin metathesis, 341-2

- Anti-Markownikoff 1,2-hydrosulphonylation of 1,3-dienes via  $\pi$ -allylpalladium complexes, 367-8
- Activation and transfer of molecular oxygen. Oxidation of terminal olefins to methyl ketones by rhodium dioxygen complexes, 559-60
- Formation of abnormal products in the aluminium chloride-catalysed ene additions of chloral and bromal to mono- and 1,2-dialkyl ethylenes, 655-6
- Protonolysis of alkenylboranes under neutral conditions by treatment with catalytic amounts of palladium diacetate, 702-3
- Interception of alkylchlorocarbenes, 775-6
- Broensted acidity of rutile developed during alcohol dehydration as shown by simultaneous alkene isomerization: microwave spectroscopic analyses, 835-6
- Convenient 'one-flask' synthesis of olefins. Reaction of  $\alpha$ -chloroketones with Grignard reagents and lithium, 847
- Addition of 3-nitrosobut-3-en-2-one to olefins and to electron-rich heterocycles, 847-9
- Palladium-promoted vinylic hydrogen substitution of alkenes by Grignard reagents. Stoichiometric and catalytic reactions, 918-19
- Substitution of allylic sulphides of benzothiazole-2-thiol with organomagnesium compounds in the presence of copper(I) iodide. A regioselective synthesis of olefins, 1085-6
- ALKENE TERMINAL**  
Microbial epoxidation of long-chain terminal olefins, 849-50
- ALKENOL**  
Hydrogenolysis of unsaturated alcohols; hydrocyanation and hydrogenation of acetylenes catalysed by pentacyanocobaltate(II) 63-5
- ALKENONE**  
A silicon-based protecting group for the  $\alpha\beta$ -unsaturation of  $\alpha\beta$ -unsaturated ketones, 177-8
- ALKENYL**  
Some epoxy-acetylene cyclizations, 528-9  
Synthesis of 2-alkenyl-3-methylcyclohex-2-en-1-ones, 852-3  
Synthesis and x-ray crystal and molecular structure of tetrakis(2,2-dimethyl-1-phenylethenyl)chromium(IV), the first structurally-characterized homoleptic alkenyl compound of a transition metal 899-900
- ALKOXYCARBONYLMETHYLIDE**  
Formation of a novel complex between pyridinium bis(alkoxycarbonyl)methylides and diphenylcyclopropenone; trapping of pyridinium bis(alkoxycarbonyl)methylide cation radicals, 817-19
- ALKOXYLATION**  
Direct formation of trialkyl phosphites from elemental phosphorus, 7-9  
Novel synthesis of isothiocyanatophosphoranes and isothiocyanatophosphonium salts via ligand substitution. Versatile reagents for converting hydroxy groups into thiocyanate and isothiocyanate functions, 940-1
- ALKYL**  
Aromatic hydroxylation by O(<sup>3</sup>P) atoms on  $\gamma$ -radiolysis of liquid carbon dioxide solutions of alkylbenzenes, 16-18  
Reduction of alkyl esters to alkanes by sodium in hexamethylphosphoric triamide. A new method for the deoxygenation of alcohols, 567-8  
The acylation of 3-alkyl-indoles, 779-81  
Introduction of sulphur into organic molecules via lithium triethylborohydride reduction of S<sub>8</sub>, 838-9  
Novel method for dealkylation of esters, ethers, and acetals by chlorotrimethylsilane-sodium iodide, 874-5  
Alkyl bridged complexes of the group 3A and lanthanoid metals as homogeneous ethylene polymerization catalysts, 994-5
- ALKYL IODIDE**  
Oxidative displacement of iodine from vicinal iodocarboxylates and alkyl iodides, 919
- ALKYL RADICAL**  
Bromodemetalation of  $\beta$ -methoxyphenethylthallium(III) diacetate and  $\beta$ -methoxyphenethylmercury(II) acetate with copper-(I) and -(II) bromide, direct evidence for alkyl radicals in bromodemetalation by the spin trapping technique, 65-6
- ALKYLAMINOMETHOXYNAPHTHALENE**  
Extremely strong but sluggish amine bases, 89-90
- ALKYLAMINYL**  
Homolytic addition to N-methylene-tert-butylamine: a new route to aminyl radicals, 960-1
- ALKYLATION**  
Hydrogen bond assisted organic reactions: C- and O-alkylations, sulphenylations, and Michael additions aided by polymer immobilized fluoride ion, 466-7  
Unusual reactivity of the 2H-thiopyran anion in alkylation with tert-butyl bromide and cyclohexyl bromide, 596-7  
Amino acid-catalysed alkylation of hydroxyanthraquinones with 2-hydroxytetrahydropyrans, 951-2
- ALKYLATIVE**  
New 1,2-transpositions and alkylative 1,2-transpositions of a carbonyl group, 414-15
- ALKYLCHLOROCARBENE**  
Interception of alkylchlorocarbenes, 775-6
- ALKYLIDENE COMPLEX**  
A new approach to cationic transition metal alkyls:  $(M(\eta-C_5H_5)_2(CH_2SiMe_3)_2)(Y)$  (M = Nb or Ta, Y = BF<sub>4</sub> or SbF<sub>6</sub>) and their conversion into the alkylidene complexes  $(M(\eta-C_5H_5)_2(CHSiMe_3)(CH_2SiMe_3))$ , 925-6
- ALKYLNICKEL**  
Insertion of the carbene :CH<sub>2</sub> into Ni-R bonds of mono- and di-alkylnickel(II) complexes, 1003-4
- ALKYLTHIO**  
 $(Os_3(CO)_9H(SR))$ , a highly reactive molecule. The X-ray structure of a  $\pi$ -bound ethylene adduct  $(Os_3(CO)_9H(C_2H_4)(SMe))$ , 551-2
- ALKYLTHIOTROPENYLUM**  
Regiospecific synthesis of 1,7-dialkylthiocycloheptatrienes. A case of rapid (1,7) sigmatropic migration of unhindered alkylthio-groups, 945-6
- ALKYNE**  
Hydrometallation of alkenes and alkynes with magnesium hydride, 30-1  
A mild, regiospecific but-2-enolide synthesis and a convenient preparation of acylated dienes, 311-12  
Protonolysis of alkenylboranes under neutral conditions by treatment with catalytic amounts of palladium diacetate, 702-3  
Evidence for the ready insertion of rhodium into a carbon-hydrogen bond of ethylene; crystal and molecular structure of  $\mu$ -but-2-ene- $\mu$ -ethylenebis-( $\eta^5$ -1-methylindenyl)dirhodium, 839-41  
Direct displacement and coupling of prop-2-ynyl acetates with organocuprates, 876-7  
Formation of allenes or  $\gamma$ -ketoesters from reactions of oxyallyls with acetylenes or 1,1-dimethoxyethene, 1006-7
- ALKYNONE**  
Synthesis of allenes via reduction of acetylenic p-tolylsulphonylhydrazones, 726-7
- ALKYNYL**  
Novel synthesis of substituted allenes via organoboration of alkynylstannanes, 402-3
- ALKYNYLSTANNANE**  
Novel synthesis of substituted allenes via organoboration of alkynylstannanes, 402-3
- ALLATUM**  
Juvenile hormone biosynthesis: homomevalonate and mevalonate synthesis by insect corpus allatum enzymes, 290-2
- ALLENE**  
Novel synthesis of substituted allenes via organoboration of alkynylstannanes, 402-3  
Synthesis of allenes via reduction of acetylenic p-tolylsulphonylhydrazones, 726-7  
Formation of allenes or  $\gamma$ -ketoesters from reactions of oxyallyls with acetylenes or 1,1-dimethoxyethene, 1006-7
- ALLENYL**  
A new synthesis of conjugated dienones, 608  
Convenient synthesis of allenyl sulphides; application to the synthesis of  $\alpha\beta$ -unsaturated ketones, 822-4
- ALLOY**  
Hydrogen absorption in YNi<sub>4</sub>Mn, an alloy with the cubic UNi<sub>5</sub> structure, 581-2
- ALLYL**  
Anti-Markownikoff 1,2-hydrosulphonylation of 1,3-dienes via  $\pi$ -allylpalladium complexes, 367-8  
Stereochemistry of the S<sub>N</sub>2' reaction with acyclic allylic esters, 454-5  
Reduction of natural enones in the presence of cerium trichloride, 601-2  
A new synthesis of conjugated dienones, 608  
Palladium(II)-catalysed asymmetric cyclization of 2-allylphenols by the use of optically active  $\beta$ -pinene, 687-8

- Isomerization of allyl ethers catalysed by the cationic iridium complex (Ir(cyclo-octa-1,5-diene)(PMePh<sub>2</sub>)<sub>2</sub>)PF<sub>6</sub>. A highly stereoselective route to trans-propenyl ethers, 694-5
- Raman spectra of molecules adsorbed on heavy metal oxides. Propylene on zinc oxide: the anionic nature of the adsorbed allyl species, 868-9
- Formation of allenes or  $\gamma$ -ketoesters from reactions of oxyallyls with acetylenes or 1,1-dimethoxyethene, 1006-7
- Substitution of allylic sulphides of benzothiazole-2-thiol with organomagnesium compounds in the presence of copper(I) iodide. A regioselective synthesis of olefins, 1085-6
- ALLYL ALC**  
New synthesis of dienals, 924-5
- ALLYLIC**  
Oxidative-addition of tertiary phosphine-ruthenium complexes to allylic carbon-hydrogen bonds, 223-4
- ALLYLIC ISOMERIZATION**  
Versatile deuterium exchange and isomerization of hydrocarbons via phase transfer catalysis, 155-6
- ALLYLIC REARRANGEMENT**  
1,3-Transposition of primary allylic alcohols: a new application of selenoxide chemistry, 770-1
- ALLYLOXY**  
Elimination of an allyloxy-group during the Claisen rearrangement of 1,2-diallyloxyanthraquinone, 900-1
- ALOESAPONARIN**  
Synthesis of the insect dyestuff kermesic acid and related anthraquinones, 688-9
- ALTERNARIOL**  
Biomimetic syntheses of heptaketide metabolites: alternariol and a derivative of rubrofusarin, 406-7
- ALUM**  
The role of stress in nucleus development during dehydration of certain alums, 273-4
- ALUMINIUM**  
Phosphorus-31 nuclear magnetic resonance and infrared spectroscopic evidence for coordinatively unsaturated zerovalent tungsten generated by interaction of W(CO)<sub>5</sub>L (L PPh<sub>3</sub> or PBu<sub>3</sub>) with aluminium tribromide, 38-9
- The role of stress in nucleus development during dehydration of certain alums, 273-4
- ALUMINIUM CHLORIDE**  
Ring opening polymerization of norbornene catalysed by ethyl aluminium dichloride; olefin metathesis in the absence of a transition metal, 603-4
- Formation of abnormal products in the aluminium chloride-catalysed ene additions of chloral and bromal to mono- and 1,2-dialkyl ethylenes, 655-6
- ALUMINIUM HYDRIDE DIISOBUTYL**  
Efficiently monitored reduction of carboxylic acids into alcohols or aldehydes via 2-thiazoline-2-thiol esters by sodium borohydride or diisobutylaluminium hydride, 330
- ALUMINOHYDRIDE**  
Preparation and molecular structure of (Ta(H<sub>2</sub>Al(OC<sub>2</sub>H<sub>4</sub>OMe)<sub>2</sub>)(Me<sub>2</sub>PC<sub>2</sub>H<sub>4</sub>PMe<sub>2</sub>)<sub>2</sub>)<sub>2</sub>, a coordinatively unsaturated aluminohydride adduct of tantalum(I), 500-1
- AMBERLYST**  
Cyanoborohydride supported on an anion exchange resin as a selective reducing agent, 1088-9
- AMICETOSE**  
Stereospecific synthesis from noncarbohydrate precursors of the deoxy and methyl branched deoxy sugars L-amicetose, L-mycarose, and L-olivomycose, 299-300
- AMIDE**  
Intramolecular nucleophilic and general acid catalysis in the hydrolysis of an amide, 591-2
- AMIDINE**  
Stereoselective chelate and amino acid synthesis with chelated 2-iminopropionate; crystal and molecular structures of  $\alpha$ -(N<sup>2</sup>-2-aminoethylamidino)alaninato-ONN''N'''-(ethylenediamine)cobalt(III) and  $\alpha$ -(N<sup>2</sup>-2-aminoethylamidino)alanine-NN''N'''-(chloro)ethylenediaminecobalt(III) tetrachlorozincates, 647-9
- AMIDINECOBALT**  
Inter- and intramolecular condensations of cyanide and amide ions with coordinated acetonitrile: an amido acid synthesis. X-ray crystal structure of ((NH<sub>3</sub>)<sub>3</sub>Co((Me)C(NH<sub>2</sub>)(NH<sub>2</sub>:CNH<sub>2</sub>))Br<sub>3</sub>2/3H<sub>2</sub>O, 289-90
- AMIDOIMIDOMETAL**  
Structure and reactivity in the group 5B tert-butylimido complexes (Me<sub>2</sub>N)<sub>3</sub>M = NCM<sub>2</sub>; X-ray crystal and molecular structure of N-tert-butylimidotris(dimethylamido)tantalum, 579-80
- AMINATION**  
Different behaviour of cis- and trans-aminodichloro( $\pi$ -ethene) platinum(II) complexes in their reaction with the free amine, 654-5
- AMINE**  
Resolved nitrogen-14 hyperfine coupling for surface electrons on magnesium oxide in the presence of ammonia and amines, 71-2
- Conversion of primary aliphatic amines into thiocyanates and thiocarbonate esters, 133-4
- Catalytic conversion of nitric oxide into nitrogen and dinitrogen oxide by dinitrobis(ethylenediamine)cobalt(III) cation, 175-6
- Conversion of alkyl carbamates into amines via treatment with trimethylsilyl iodide, 315-16
- The  $\beta$ -(trimethylsilyl)ethoxycarbonyl amino-protecting group, 358-9
- Selective acylation of amines using 18-crown-6, 471-2
- Homogeneous catalytic oxidation of amines and secondary alcohols by molecular oxygen, 562
- Rapid formation of N-nitrosamines from nitric oxide in the presence of silver(I) salts, 707-8
- Preparation of urethanes from carbon dioxide via a copper(I) carbamate complex, 815-16
- AMINE AROM**  
Synthesis of intercalating and carcinogenic nitroxide spin labels, 215-16
- AMINE PHENYL ETHYL**  
Asymmetric substituent effect on the reaction of (R)- and (S)-indan-1-carboxylic acids with (S)- $\alpha$ -phenylethylamine derivatives, 830
- AMINIUM**  
Stabilizing influence of a strong acid medium on tertiary aminium radicals, 329-30
- AMINO**  
p-Tolylmethylsulphonyl: a new amino-protecting group in peptide synthesis, 220-1
- A mild procedure for solid phase peptide synthesis: use of fluorenylmethoxycarbonylamino-acids, 537-9
- Silyl nitronates: improved nitro-aldol reactions and reductive routes to 2-aminoalcohols, 689-91
- Novel synthesis of pyrimido(4,5-b)quinoline-2(3H),4(10H)-diones (5-deazaflavins), 764
- AMINO ACID**  
A mild procedure for solid phase peptide synthesis: use of fluorenylmethoxycarbonylamino-acids, 537-9
- Application of polyamide resins to polypeptide synthesis: an improved synthesis of  $\beta$ -endorphin using fluorenylmethoxycarbonylamino-acids, 539-40
- Amino acid-catalysed alkylation of hydroxyanthraquinones with 2-hydroxytetrahydropyrans, 951-2
- AMINO GROUP**  
Polymeric de-blocking agents for the fluorenylmethoxycarbonyl (Fmoc) amino-protecting group, 450-1
- AMINO KETONE**  
A simple route to  $\alpha$ -aminoketones and related derivatives by dianion acylation reactions; an improved preparation of  $\delta$ -aminolevulinic acid, 753-4
- AMINOALKANE**  
The quenching of aromatic hydrocarbon fluorescence by  $\alpha,\omega$ -diaminoalkanes and the formation of excited ternary complexes, 911-13
- The quenching of excited singlet states of Rose Bengal by bifunctional compounds, 913-14
- AMINOCYCLITOL**  
Synthesis of  $\alpha$ -linked 3'-deoxy-cyclitol and -aminocyclitol glycosides, 771-3
- Synthesis of  $\alpha$ -linked 3'-deoxy-pseudo-di- and -tri-saccharides related to aminocyclitol-glycoside antibiotics, 773-4
- AMINOETHANE**  
Light-induced conversion of ethane-1,2-diol or 2-aminoethanol into acetaldehyde in the presence of 8-methoxy-5'-deoxy-5'-adenosylcobalamin or a simpler cobalt(III) alkyl, 643-4
- AMINOETHANOL**  
Light-induced conversion of ethane-1,2-diol or 2-aminoethanol into acetaldehyde in the presence of 8-methoxy-5'-deoxy-5'-adenosylcobalamin or a simpler cobalt(III) alkyl, 643-4
- AMINOETHYLAMIDINE**  
Stereoselective chelate and amino acid synthesis with chelated 2-

- iminopropionate; crystal and molecular structures of  $\alpha$ -(N<sup>2</sup>-2-aminoethylamidino)alaninato-ONN''N'''-(ethylenediamine)cobalt(III) and  $\alpha$ -(N<sup>2</sup>-2-aminoethylamidino)alanine-NN''N'''-(chloro)ethylenediaminecobalt(III) tetrachlorozincates, 647-9
- AMINOETHYLBENZOATE ANION**  
Nucleophilic attack by amine nitrogen on the ionized carboxy group, 807-8
- AMINOISOBUTYRATE**  
The 3<sub>10</sub> helical conformation of a pentapeptide containing  $\alpha$ -aminoisobutyric acid (Aib): X-ray crystal structure of tos-(Aib)<sub>5</sub>-OMe, 996-7
- AMINOLYSIS**  
A tetrahedral intermediate in the aminolysis of benzylpenicillin, 374-5  
Stereochemistry of the S<sub>N</sub>2' reaction with acyclic allylic esters, 454-5  
Neighbouring carboxylate group participation in ester aminolysis in nonhydroxylic solvents. The n-butylaminolysis of aspirin in acetonitrile, 886-8
- AMINOMETHYLTOLUENEIODOPLATINUM**  
A novel type of platinum-carbon interaction and a model for the final stage in reductive elimination processes involving carbon-carbon coupling at platinum; synthesis and molecular geometry of (1,N,N'- $\eta$ -2,6-bis(dimethylamino)methyl)toluene iodoplatinum(II) tetrafluoroborate, 250-2
- AMINOPHTHALIMIDE**  
Preparation and thermal rearrangement of an azaanalogue of 4,5-homotropone (bicyclo(5.1.0)octa-3,5-dien-2-one), 404-5
- AMINOPROPANOATE METHYLIDENE**  
Total synthesis of clavulanic acid analogues from 7-oxo-3-vinyl-4-oxa-1-azabicyclo(3.2.0)heptanes, 439-41
- AMINOTHYMININE**  
Synthesis of a photoproduct from ultraviolet irradiation of bacterial spores: 5,6-dihydro-5-( $\alpha$ -thyminyloxy)thymine, 284
- AMINOTRIOXAUNDECANE**  
Alkaline earth metal complexes of pyridinyl containing Schiff base macrocycles: X-ray crystal and molecular structures of the calcium and strontium complexes, 279-80
- AMINYL**  
Generation and some reactions of the bis(trimethylsilyl)aminyl radical, 545-6  
Homolytic addition to N-methylene-tert-butylamine: a new route to aminyl radicals, 960-1
- AMMINECOBALT**  
Inter- and intramolecular condensations of cyanide and amide ions with coordinated acetonitrile: an amido acid synthesis. X-ray crystal structure of ((NH<sub>3</sub>)<sub>3</sub>Co(Me)C(NH<sub>2</sub>)(NH<sub>2</sub>:CNH<sub>2</sub>))Br<sub>3</sub>·2/3H<sub>2</sub>O, 289-90
- AMMONIA**  
Resolved nitrogen-14 hyperfine coupling for surface electrons on magnesium oxide in the presence of ammonia and amines, 71-2  
Reduction of the carboxyl-function in aromatic carboxylic acids by alkali metal-liquid ammonia solutions, 941-3
- AMMONIA SYNTHESIS**  
Ammonia synthesis from methane, water, and nitrogen over silica-supported ruthenium, 1105-6
- AMMONIOSULPHATE**  
Trimethylammoniosulphate esters, 48-9
- AMMONIUM**  
Asymmetric induction in the base-catalysed Michael addition of nitromethane to chalcone, 238-9  
Radical coupling products derived from ammonium ylides.  
Competing (1,2), (1,3), and (1,4) anionic rearrangements, 670-1  
Stereoselectivities in competing (1,2) and (1,3) rearrangements, 672-3  
The thermal rearrangements of pentadienylammonium ylides.  
Competing (1,2), (3,2), and (5,2) rearrangements, 673-5
- AMMONIUM REDN**  
'One-pot' conversion of Mannich bases via quaternary ammonium salts into the corresponding methyl compounds with sodium cyanoborohydride in hexamethylphosphoramide, 1089-90
- AMP**  
Oxygen-18 isotope shifts on the phosphorus-31 nuclear magnetic resonance of adenosine-5'-phosphate and inorganic phosphate, 565-6
- ANAGASTA**  
Novel  $\beta$ -triketones from Lepidoptera, 1075-6
- ANATABINE**  
Stereochemistry of the reduction of nicotinic acid when it serves as a precursor of anatabine, 610-11
- Biomimetic synthesis of anatabine from 2,5-dihydropyridine produced in situ by the action of sodium hypochlorite on baikiain** 1055-6
- ANCHIMERIC**  
Intramolecular nucleophilic and general acid catalysis in the hydrolysis of an amide, 591-2
- ANCISTROFURAN**  
Total synthesis of ancistrofuran, a defensive compound from the termite *Ancistrotermes cavithorax*, 981-3
- ANCISTROTERMES**  
Chemical defence in the termite *Ancistrotermes cavithorax*: ancistrodial and ancistrofuran, 410-11  
Total synthesis of ancistrofuran, a defensive compound from the termite *Ancistrotermes cavithorax*, 981-3
- ANDIBENIN**  
Biosynthesis of andibenin, a novel polyketide terpenoid metabolite of *Aspergillus varicolor*, 626-7
- ANDILESIN**  
Andilesin, a C<sub>25</sub> polyisoprenoid from *Aspergillus* sp. X-ray crystallographic and spectroscopic determination of the structure, 533-4
- ANGULAR METHYL FUNCTIONALIZATION**  
Synthesis of tetrahydrosantonin derivatives functionalized at their angular methyl groups, 748-9
- ANHYDRIDE**  
Oxidation of aldehyde hydrazones, hydrazone compounds, and hydroxylamines with benzeneseleninic anhydride, 276-7  
A simple route to  $\alpha$ -aminoketones and related derivatives by dianion acylation reactions; an improved preparation of  $\delta$ -aminolevulinic acid, 753-4  
Synthesis and reactions of an insoluble polymeric yneamine, 1079-80
- ANHYDROVINBLASTINE**  
Antitumour alkaloids of the vinblastine-type: is leurosine an artefact, 102-3
- ANIL**  
Novel ring transformation of a thiophene into a pyrrole, 453
- ANILINE**  
The  $\beta$ -(trimethylsilyl)ethoxycarbonyl amino-protecting group, 358-9  
Preparation of urethanes from carbon dioxide via a copper(I) carbamate complex, 815-16
- ANILINE CHLORO**  
Polymeric de-blocking agents for the fluorene-9-ylmethoxycarbonyl (FMOC) amino-protecting group, 450-1
- ANILINIUM**  
Thermodynamics of formation of 18-crown-6 complexes with arenediazonium and anilinium salts in methanol at 25 °C, 386-7
- ANILINOCYCLOHEXENONE**  
Heteroatom directed photoarylation; an approach to the synthesis of *Aspidosperma* alkaloids, 29
- ANION**  
Detection of organic dianions by carbon-13 nuclear magnetic resonance spectroscopy, 172-3  
X-ray crystal structure of (AsPh<sub>4</sub>)<sup>+</sup>(NSF<sub>2</sub>NSO<sub>2</sub>F)<sup>-</sup>: three different types of sulphur-nitrogen bonds in the anion, 226  
Electron-transfer reactions between the semiquinone anion radical and metallo-tetraphenylporphyrins, 361  
Anion receptor molecules. Synthesis and some anion binding properties of macrocyclic guanidinium salts, 934-6
- ANISOLE**  
Mechanism of formation of 4-methyl- and 4-chloro-2-nitrophenol in the nitration of 4-methyl- and 4-chloro-anisole, respectively, in aqueous sulphuric acid, 180-1  
The NIH shift of deuterium during the oxidation of aromatic compounds by iron perchlorate and hydrogen peroxide in acetonitrile, 704-5
- ANODIC**  
Stereochemical control of anodic cyanomethoxylation, 20-2  
Regiospecific anodic pyridination of 2-hydroxy-3-methoxy-5-methylbenzaldehyde Schiff bases, 407-8
- ANODIC DECOMP**  
Anodically induced decomposition of some arylnickel(II) phosphine complexes, 66-8
- ANOMERIC EFFECT**  
Unusual population of the axial-equatorial conformation in NN'-dichloropiperazine, 58-9

## ANTHRACENE

- A new phase of crystalline anthracene: its importance in solid-state photodimerization, 134-5  
 Role of exciplex in the photocycloaddition of 2,5-dimethylhexa-2,4-diene to anthracene, 978

## ANTHRACENETETRAONE

- 4a,9a-Epoxy-4a,9a-dihydroanthracene-1,4,9,10-tetrone: a versatile synthon in anthracyclinone synthesis, 997-8

## ANTHRACYCLINONE SYNTHON

- 4a,9a-Epoxy-4a,9a-dihydroanthracene-1,4,9,10-tetrone: a versatile synthon in anthracyclinone synthesis, 997-8

## ANTHRAQUINONE

- Synthesis of the insect dyestuff kermesic acid and related anthraquinones, 688-9  
 Elimination of an allyloxy-group during the Claisen rearrangement of 1,2-diallyloxyanthraquinone, 900-1  
 Amino acid-catalysed alkylation of hydroxyanthraquinones with 2-hydroxytetrahydropyrans, 951-2

## ANTI MARKOVNIKOV

- Photosensitized anti-Markovnikov addition of methanol to homoconjugated aryl olefins, 600-1

## ANTIBIOTIC K41

- X-ray determination of the structure of the polyether antibiotic K-41, 682-3  
 Structure of the polyether antibiotic K-41 by mass and nuclear magnetic resonance spectrometry, 683-4

## ANTIBIOTIC 6016

- X-ray crystal structure of the thallium salt of antibiotic-6016, a new polyether ionophore, 875-6

## ANTIBIOTICS

- Natural abundance nitrogen-15 nuclear magnetic resonance spectroscopic evidence for the structural relation between the peptide antibiotics thiostrepton and siomycin-A, 577-8  
 Striatin A, B, and C: novel diterpenoid antibiotics from *Cyathus striatus* X-ray crystal structure of striatin A, 665-6  
 Synthesis of  $\alpha$ -linked 3'-deoxy-pseudo-di- and -tri-saccharides related to aminocyclitol-glycoside antibiotics, 773-4

## ANTIFEEDANT

- X-ray crystal structure of canellal, a novel antimicrobial sesquiterpene from *Canella winterana*, 75-6

## ANTIFERROMAGNETISM

- Metal-metal interactions in 2-Fe ferredoxins; SCF-X $\alpha$ -SW calculations, 1027-9

## ANTIFOLATE DRUG

- Cycloguanil hydrochloride: X-ray crystal structure of the antifolate drug, 188-90

## ANTIGENIC

- Chemical synthesis of 2-O-( $\alpha$ -L-fucopyranosyl)-3-O-(2-acetamido-2-deoxy- $\alpha$ -D-galactopyranosyl)-D-galactose, the terminal structure in the blood-group A antigenic determinant, 535-7

## ANTIGORITE

- Investigation of structure composition relationships in the serpentine minerals by combined X-ray K-emission spectrometry and high-resolution electron microscopy, 986-7

## ANTIMICROBIAL

- X-ray crystal structure of canellal, a novel antimicrobial sesquiterpene from *Canella winterana*, 75-6

## APERGILLUS

- Biosynthesis of andibenin, a novel polyketide terpenoid metabolite of *Aspergillus varicolor*, 626-7

## AQ SOLVOLYSIS

- Mechanisms of aqueous solvolyses, 418-20

## AQUA

- First case of an eleven coordinated trivalent lanthanoid: X-ray crystal structure of penta-aqua-tri(nitrato)lanthanum(III) monohydrate, 616-17

## AQUATION

- Absence of common five-coordinate intermediates in the induced reactions of some cobalt(III)-acido complexes, 892-4

## ARABINOFURANOSYL

- New synthesis of 1- $\beta$ -D-arabinofuranosyl-aminoimidazoles and of related purine nucleosides, 882-3

## ARALIOPSISINE

- Asymmetric synthesis and absolute stereochemistry of the alkaloids araliopsisine, isoplatydesmine, and ribalinine. Dual mechanism for a dihydrofuroquinolone-dihydropyranoquinolone rearrangement 624-6

## ARALIOPSIS

- Asymmetric synthesis and absolute stereochemistry of the alkaloids araliopsisine, isoplatydesmine, and ribalinine. Dual mechanism for a dihydrofuroquinolone-dihydropyranoquinolone rearrangement 624-6

## ARALKENYL

- Synthesis of 2-alkenyl-3-methylcyclohex-2-en-1-ones, 852-3

## ARALKYL

- Introduction of sulphur into organic molecules via lithium triethylborohydride reduction of S<sub>8</sub>, 838-9

## ARALKYL ALC

- Oxidation of alcohols using benzeneseleninic anhydride, 952-4

## ARALKYLCYANOSULPHONIUM

- Evidence for the participation of a nitrile group in (2,3) sigmatropic rearrangements of sulphonium ylides, 274-5

## ARBUZOV

- Methyltriphenoxyphosphonium trifluoromethanesulphonate: a new versatile synthetic reagent, 424-5

## ARENE

- Arene-tungsten chemistry: bis(arene)tungsten hydride derivatives; co-condensation of tungsten atoms from an electron gun source with aromatic hydrocarbons, 72-3  
 Synthesis of zerovalent bis-areneniobium compounds using niobium vapour, 431  
 Recovery of the chromium tricarbonyl unit in the removal of organic ligands from their chromium carbonyl complexes, 989-90  
 Synthesis and solution stoichiometries and stabilities of mercury(II)-arene complexes, 1083-4

## ARENE METAL

- Preparation of diarene metal complexes by potassium atom reduction, 730-1

## ARENESULPHENYL CHLORIDE

- Convenient synthesis of allenyl sulphides; application to the synthesis of  $\alpha\beta$ -unsaturated ketones, 822-4

## ARENETHIOSULPHONATE

- Detection of aromatic sulphinyl (ArSO $\cdot$ ) radicals during the photolysis and thermolysis of S-aryl arenethiosulphonates and diaryl sulphoxides, 78-9

## ARGININE

- The mesitylene-2-sulphonyl group, a acidolytically removable NG $\cdot$ -protecting group for arginine, 482-3

## ARISTOTELININE

- New alkaloids from *Aristolelia chilensis* (Mol.) Stunz, 79-80

## AROM

- Addition of furans to electron rich olefins through photo-induced electron transfer in the presence of electron acceptors, 594-5  
 The NIH shift of deuterium during the oxidation of aromatic compounds by iron perchlorate and hydrogen peroxide in acetonitrile, 704-5  
 Asymmetric reduction of aromatic ketones by sodium borohydride in the presence of bovine serum albumin, 926-7

## AROM COMPD

- Tetrabutylammonium permanganate; an efficient oxidant for organic substrates, 253-4

## AROM HYDROCARBON

- The quenching of aromatic hydrocarbon fluorescence by  $\alpha,\omega$ -diaminoalkanes and the formation of excited ternary complexes, 911-13

## AROMATIZATION

- New approach to the aromatization of ring B in 19-norsteroids and to the synthesis of equilenin-type compounds, 916-18

## ARSENATE

- Novel salts of graphite and a boron nitride salt, 200-1

## ARSENIC

- X-ray crystal structure of (AsPh<sub>4</sub>)<sup>+</sup>(NSF<sub>2</sub>NSO<sub>2</sub>F)<sup>-</sup>: three different types of sulphur-nitrogen bonds in the anion, 226  
 Insertion of selenium, tellurium, or arsenic atoms into borane cage compounds using element oxide reagents, 349-50  
 Formation of platinum(II) compounds containing isomeric  $\sigma$ -vinylic and  $\sigma$ -allylic six-membered chelate rings by deprotonation of the coordinated isopropenyl group: X-ray structure of the  $\sigma$ -vinylic complex di- $\mu$ -acetato-bis(o-isopropenylphenyl)(diphenyl)arsineplatinum(II), 861-3

## ARSENIC FLUORIDE

- Acid salts of graphite: large or small fractional ionization, 544-5

## ARSONIUM

- Partial asymmetric synthesis of substituted trans-2,3-diaryloxiranes using optically active arsonium ylides, 346-7

- ARYL**  
Intramolecular homolytic aromatic ipso substitution in halogenobenzenes by aryl radicals, 530-1  
Novel method for dealkylation of esters, ethers, and acetals by chlorotrimethylsilane-sodium iodide, 874-5
- ARYL ALC**  
Oxidation of alcohols using benzeneseleninic anhydride, 952-4
- ARYLATION**  
Intramolecular photochemical arylation of N-substituted enamines: application to synthesis of heterocyclic compounds, 766-7  
Palladium-promoted vinylic hydrogen substitution of alkenes by Grignard reagents. Stoichiometric and catalytic reactions, 918-19
- ARYLBENZAMIDINE**  
New syntheses of 1,4,2,4-benzothiadiazines, 1049-50
- ARYLHYDROXYINDAZOLE**  
Auwers's 2-hydroxy-3-arylidazoles: a structure revision, 1052-3
- ARYLNITRILE**  
Benzazetes as precursors for benzotriazepines, 396-7
- ARYLSULPHONYL**  
Linear free energy relations in intramolecular aromatic ipso-substitutions by substituted methyl radicals, 166-7
- ASCORBIC ACID**  
Reductant-induced homolysis of the thallium-carbon bond: novel oxygenation of alkylthallium(III) compounds with ascorbic acid, 716-17
- ASPERGILLUS**  
Asperric acid, a new sesquiterpenoid of the carotane group, a metabolite from *Aspergillus terreus* IFO-6123. X-ray crystal and molecular structure of its p-bromobenzoate, 160-1  
Andilesin, a C<sub>25</sub> polyisoprenoid from *Aspergillus* sp. X-ray crystallographic and spectroscopic determination of the structure, 533-4  
Use of long range proton-carbon-13 couplings in structure determination: stellatin, a novel dihydroisocoumarin from *Aspergillus varicolor*, 627-8
- ASPIDOSPERMA**  
Heteroatom directed photoarylation; an approach to the synthesis of *Aspidosperma* alkaloids, 29  
New synthetic routes to synthons for the synthesis of functionalized *Aspidosperma* alkaloids, 943-4
- ASPIRIN**  
Neighbouring carboxylate group participation in ester aminolysis in nonhydroxylic solvents. The n-butylaminolysis of aspirin in acetonitrile, 886-8
- ASPTERRATE**  
Asperric acid, a new sesquiterpenoid of the carotane group, a metabolite from *Aspergillus terreus* IFO-6123. X-ray crystal and molecular structure of its p-bromobenzoate, 160-1
- ASTACENE**  
Electrochemical reductive acylation of astacene; a route to the carotenoid astaxanthin, 387-8
- ASYM**  
Mechanism of asymmetric hydrogenation catalysed by rhodium(I) trans-4,5-bis(diphenylphosphinomethyl)-2,2-dimethyldioxolan (DIOP) complexes, 321-2  
Solvent effects in homogeneous asymmetric catalysis, 427-8  
Asymmetric reduction of trifluoromethyl ketones by actively fermenting yeast, 456-7  
Asymmetric synthesis and absolute stereochemistry of the alkaloids araliopsine, isoplatydesmine, and ribalinine. Dual mechanism for a dihydrofuroquinolone-dihydropyranoquinolone rearrangement 624-6  
Asymmetric reduction of aromatic ketones by sodium borohydride in the presence of bovine serum albumin, 926-7
- ASYM ALKYLATION**  
Phase-transfer catalysis using chiral catalysts. Synthesis of optically active 2-phthalimido-esters, 742-3
- ASYM INDUCTION**  
Asymmetric induction in the base-catalysed Michael addition of nitromethane to chalcone, 238-9  
Synthesis and circular dichroism of methyl (R)-(16O,17O,18O) phosphate, 512-14
- ASYM PREPN**  
Synthesis of (5'R)-(2H<sub>1</sub>)adenosine, 294-5  
Phase-transfer catalysis using chiral catalysts. Synthesis of optically active 2-phthalimido-esters, 742-3  
Microbial epoxidation of long-chain terminal olefins, 849-50
- Stereospecific synthesis of chiral acetic acid from glycine, 967-8
- ASYM REDN**  
Asymmetric reduction of methyl benzoylformate with a chiral NAD(P)H model compound, 328-9
- ASYM SYNTHESIS**  
Asymmetric synthesis of aziridine-2-carboxylic acid and the formation of chiral serine, 522-3
- ATLANTONE**  
Convenient synthesis of allenyl sulphides; application to the synthesis of  $\alpha\beta$ -unsaturated ketones, 822-4
- ATP**  
Evidence for a dissociative S<sub>N</sub>1(P) mechanism of phosphoryl transfer by rabbit muscle pyruvate kinase, 783-5
- AURATE**  
ESCA study of compounds of gold in the oxidation state-1, 905-6
- AUWERS**  
Auwers's 2-hydroxy-3-arylidazoles: a structure revision, 1052-3
- AXINELLA**  
Investigations on the ring contraction step in the biosynthesis of A-nor-stanols by the marine sponge *Axinella verrucosa*, 524-5
- AZA**  
(2+2) Cycloadducts from isocyanates and azaphospholes, 470-1  
Enthalpy of formation of copper(II) complexes with 14-membered tetraaza macrocycles, 833-4
- AZAANNULENE**  
Syntheses and reactivity of cofacial, dimeric metal-metal bonded ruthenium(II) mixed valence ruthenium(II/III), and ruthenium(III) complexes of (C<sub>22</sub>H<sub>22</sub>N<sub>4</sub>)<sup>2-</sup>, a dibenzo-tetra-aza(14)annulene ligand, 909-10
- AZABICYCLOOCTADIENONE**  
Preparation and thermal rearrangement of an azaanalogue of 4,5-homotropone (bicyclo(5.1.0)octa-3,5-dien-2-one), 404-5
- AZABICYCLOPENTENE**  
Phototransposition of 2-cyanopyrroles: evidence for the intermediacy of 5-azabicyclo(2.1.0)pent-2-enes, 131-3  
Synthesis of the N-unsubstituted Dewar pyrrole 1,2,3,4-tetrakis(trifluoromethyl)-5-azabicyclo(2.1.0)pent-2-ene, 509
- AZACHOLESTANONE**  
Dehydrogenation of hydrazines and of 4-azacholestan-3-one with benzeneseleninic acid and benzeneseleninic anhydride, 278-9
- AZADIOXABICYCLOHEPTANONE**  
1,3-Dipolar cycloaddition of anhydro-4-hydroxy-1,3-oxazolium hydroxides with carbonyl compounds, 247-8
- AZADISILABICYCLOOCTADIENE**  
Photochemical reactions of a silacyclopentene with nitriles leading to new organosilicon ring systems, 80-1
- AZATHIABENZENE OXIDE**  
X-ray crystal structures of a thiabenzene 1-oxide and its 2-azathia-analogues, 197-8
- AZATRICYCLE SYNTHON**  
Preparation and chemoselective thermolysis of potential azatricyclic synthons containing an eight-membered nucleus, 915-16
- AZATRICYCLODECADIENE**  
Preparation and chemoselective thermolysis of potential azatricyclic synthons containing an eight-membered nucleus, 915-16
- AZEPINOINDOLE**  
Some novel transformations in indole chemistry, 332-3
- AZETIDINONE**  
New synthesis of  $\alpha$ -methylenecyclobutanones and  $\alpha$ -methylenazetidin-2-one derivatives, 12-13  
Preparation of a penicillin-derived 4-mercaptoazetid-2-one, 239-40  
Conversion of penicillins into biosynthetically significant peptides, 609-10  
Concentration-dependent photoreaction of benzothiazolyldithioazetid-2-ones: novel photochemical formation of penam derivatives, 836-8
- AZIDE**  
Inverse substituent effect in an imido-yl azide to tetrazole cyclization limited by nitrogen inversion, 871-3
- AZIDO**  
Novel carbon-carbon bond cleavage of  $\alpha$ -azido steroidal ketones, 409-10  
Matrix photolysis of trimethylazidosilane: silicon-hydrogen bond formation, 762-3  
Ring expansion of azidoquinolines to benzo-1,4-diazepines, 806-7
- AZIDOPHENOL**  
Phosphorus-containing heterocycles from phosphorus(III) reagents and ortho-azidoaromatic compounds: synthesis of 2,2-



- di(dimethylamino)-1,3,2-benzoxazaphosphole and various 2,3-dihydro-1,3,2-benzoxazaphosph(V)oles, 182-3
- AZIDOSTYRENE**  
Benzazetes as precursors for benzotriazepines, 396-7
- AZIRIDINE**  
Formation of a 1,2,4-oxadiazoline from an aziridine: mechanism of the reaction and photochemical conversion into a benzimidazole derivative, 356-7
- AZIRIDINECARBOXYLATE**  
Asymmetric synthesis of aziridine-2-carboxylic acid and the formation of chiral serine, 522-3
- AZIRINYLACRYLOPHENONE**  
Novel type of transformation of a 2H-azirine in the presence of  $\text{Fe}_2(\text{CO})_9$ , 998-9
- AZONIABICYCLOOCTANE**  
Limited rotational equilibration in reactions involving diradical intermediates, 675-6
- BACTERIAL HYDROXYLATION**  
Carboxyl-migration facilitated by bacterial hydroxylation of 4-hydroxybenzoate, 731-2
- BAIKIAIN**  
Biomimetic synthesis of anatabine from 2,5-dihydropyridine produced in situ by the action of sodium hypochlorite on baikiain 1055-6
- BASE**  
Effects of structural distortion on the ligand exchange reactions of copper(II) Schiff base complexes, 583-4
- BASICITY**  
Extremely strong but sluggish amine bases, 89-90  
Determination of the basicity of nitric acid in concentrated sulphuric acid by Raman and ultraviolet spectroscopy, 873-4
- BENZALDEHYDE**  
Tetrabutylammonium permanganate; an efficient oxidant for organic substrates, 253-4  
Partial asymmetric synthesis of substituted trans-2,3-diaryloxiranes using optically active arsonium ylides, 346-7  
Regiospecific anodic pyridination of 2-hydroxy-3-methoxy-5-methylbenzaldehyde Schiff bases, 407-8  
Reaction of some arylacetic acids and related compounds with alkaline sodium hypochlorite solution, 459-60  
Vacuum pyrolysis of salts of 1-acyl-2-arylsulphonylhydrazines; a general McFadyen-Stevens aldehyde synthesis, 793-4  
Novel method for dealkylation of esters, ethers, and acetals by chlorotrimethylsilane-sodium iodide, 874-5  
 $\beta$ -Diphenylphosphinoyl ketones ( $\text{Ph}_2\text{POCH}_2\text{CH}_2\text{COR}$ ): stable reagents for  $\beta$ -ketocarbanions, 988-9  
Novel synthesis of phenyltrimethylsilyldiazene and generation of the phenyl anion synthon therefrom, 990
- BENZAMIDE**  
Synthesis and reactions of an insoluble polymeric yneamine, 1079-80
- BENZAMIDINE**  
New syntheses of 1,4,2,4-benzothiadiazines, 1049-50
- BENZAMIDO**  
Mechanism of asymmetric hydrogenation catalysed by rhodium(I) trans-4,5-bis(diphenylphosphinomethyl)-2,2-dimethyldioxolan (DIOP) complexes, 321-2
- BENZANTHRACENE**  
A triplet state path for adduct formation between benz(a)anthracene and the penta-1,3-dienes, 588-9
- BENZANTHRACENYL**  
Two micromethods for determining the linkage of adducts formed between polyaromatic hydrocarbons and nucleic acid bases, 798-800
- BENZAZETE**  
Benzazetes as precursors for benzotriazepines, 396-7
- BENZENE**  
Aromatic hydroxylation by  $\text{O}(^3\text{P})$  atoms on  $\gamma$ -radiolysis of liquid carbon dioxide solutions of alkylbenzenes, 16-18  
Arene-tungsten chemistry: bis(arene)tungsten hydride derivatives; co-condensation of tungsten atoms from an electron gun source with aromatic hydrocarbons, 72-3  
Cis-trans isomerism in bis(trihalogenoacetyl)polymethylbenzenes resulting from restricted rotation about carbonyl groups: proton nuclear magnetic resonance evidence, 201-2  
Production, in electrical discharges, of fluorine cyanide, fluoroacetylene, and related substances as monitored by microwave spectroscopy, 335  
Synthesis of zerovalent bis-areneniobium compounds using niobium vapour, 431  
An arene hydrido complex of ruthenium(II) as catalyst for the homogeneous hydrogenation of benzene and olefins, 582-3  
Maleic anhydride-benzene and maleic anhydride-acetone molecular complexes, 933-4  
Recovery of the chromium tricarbonyl unit in the removal of organic ligands from their chromium carbonyl complexes, 989-90
- BENZENEDICARBOXYLATE**  
Synthesis of 'crown ether' macrocyclic bislactones using caesium carboxylates of pyridine and of benzene dicarboxylic acids, 383-4
- BENZENEDITHIOL**  
A new and versatile chelating dithio ligand: X-ray crystal structure of  $(\text{Ru}(\text{CO})(\text{SC}_6\text{H}_3\text{Me}-o-\text{SC}_6\text{H}_4\text{Me})(\eta\text{-C}_5\text{H}_5))$ , 486-8
- BENZENEMETHANOL**  
A new class of linkage between carbohydrates and lignin model compounds, 92-3
- BENZENERUTHENIUM**  
Preparative applications of metal vapours obtained by evaporation of metal powders from coated filaments: a new preparation of dibenzeneruthenium and observation of its limiting NMR spectrum, 898-9
- BENZENESELENIC ANHYDRIDE**  
Oxidation of aldehyde hydrazones, hydrazo compounds, and hydroxylamines with benzeneseleninic anhydride, 276-7
- BENZENESELENINATE**  
Dehydrogenation of hydrazines and of 4-azacholestan-3-one with benzeneseleninic acid and benzeneseleninic anhydride, 278-9  
Conversion of thiocarbonyl compounds into their corresponding oxo derivatives using benzeneseleninic anhydride, 393-4
- BENZENESELENINIC ANHYDRIDE**  
Dehydrogenation of steroidal ketones using benzeneseleninic anhydride, 130-1  
Oxidation of aldehyde hydrazones, hydrazo compounds, and hydroxylamines with benzeneseleninic anhydride, 276-7  
Oxidation of alcohols using benzeneseleninic anhydride, 952-4
- BENZENESELENYL**  
Cyclofunctionalization of olefinic urethanes with benzeneselenenyl reagents: a new general synthesis of nitrogen heterocycles, 379-80
- BENZENESULPHONAMIDE**  
Coordination chemistry of macrocyclic polyethers. An unusual conformation of complexed 18-crown-6; X-ray crystal and molecular structure of a 1:2 host-guest complex of 18-crown-6 with benzenesulphonamide, 595-6
- BENZENETHIOL**  
Rate acceleration by steric inhibition to solvation of sulphur nucleophiles in acyl transfer processes. A comparison of steric effect in nucleophilic substitutions at carbonyl and aromatic carbon atoms, 613-14  
A new group of nitroxide free radicals formed from aliphatic nitrosamines and thiols, 741-2
- BENZIL**  
Perturbation of the benzil ground and excited state geometries at low temperatures in hydrocarbon glasses, 116-17  
1,3-Dipolar cycloaddition of anhydro-4-hydroxy-1,3-oxazolium hydroxides with carbonyl compounds, 247-8  
Photolysis of imidazole N(3)-oxides. Formation of unsymmetrical benzil di-imines; X-ray crystal structure of one such di-imine, 857-8
- BENZIL DIIMINE**  
Photolysis of imidazole N(3)-oxides. Formation of unsymmetrical benzil di-imines; X-ray crystal structure of one such di-imine, 857-8
- BENZIMIDAZOLE**  
Biosynthesis of 5,6-dimethylbenzimidazole from 6,7-dimethyl-10-(1- $^{14}\text{C}$ )formylmethylisalloxazine, 22-3
- BENZIMIDAZOLECARBOXYLATE**  
Formation of a 1,2,4-oxadiazoline from an aziridine: mechanism of the reaction and photochemical conversion into a benzimidazole derivative, 356-7
- BENZINDENOAZEPINE**  
New route to the protopanes, 812-13
- BENZISOXAZOLE**  
Ring transpositions in the pyrolysis of benzisoxazoles and 2,3-benzoxazin-1-ones, 9-10
- BENZISOXAZOLOPYRIDINE**  
Benzisoxazolo(2,3-a)pyridinium tetrafluoroborates. Possible generation of an aryloxenium ion, 149-50
- BENZOANTHRACENEDIONE**  
5,8-Dihydroxy-9,10-dihydro-9,10-(1,2)benzoanthracene-1,4-

- dione. An intramolecular triptycene quinhydrone, 720-1
- BENZOATE**  
Reaction of some arylacetic acids and related compounds with alkaline sodium hypochlorite solution, 459-60  
Asymmetric cis-trans photoisomerization of cyclo-octene sensitized by chiral aromatic esters, 1024-5  
Biphasic photochemistry: the photo-Fries rearrangement on silica gel, 1109-10
- BENZOAXAZOLE**  
Reaction of diborane with benzoxazole and its sulphur and selenium analogues. A novel rearrangement to benzoxazaboroles benzothiazaboroles, and benzoselenazaboroles, 971
- BENZOCYCLOBUTENEQUINONE**  
Small ring-annulated nonbenzenoid aromatic compounds: 1,2-dihydrocyclobuta(e)tropolone, 215
- BENZODIAZEPINE**  
Synthesis of bridged 1,5-benzodiazepines by condensation of o-phenylenediamines with 4,6-dimethylbicyclo(3.3.1)nona-3,6-diene-2,8-dione, 557-8  
Ring expansion of azidoquinolines to benzo-1,4-diazepines, 806-7
- BENZODITHIOLE**  
Tetrathio-derivatives of quinodimethane. Synthesis and ion-radical complex formation of cyclohexa-2,5-diene-1,4-diyliidenbis-1,3-benzodithiole derivative, 74-5
- BENZOFURAN**  
Acetylation of 2,3-dimethylbenzofuran. The first example of a 'non-conventional' Friedel-Crafts reaction, 597-8  
Palladium(II)-catalysed asymmetric cyclization of 2-allylphenols by the use of optically active  $\beta$ -pinene, 687-8
- BENZOFURANOID**  
Hydrobenzofuranoid-bicyclo(3.2.1)octanoid neolignan rearrangement, 831-2
- BENZOFURANONE**  
1-Nitro-1-phenylthiopropene, a new reagent for 3-methylfuran synthesis, 362-3
- BENZOFUROPYRIDINE**  
Benzisoxazolo(2,3-a)pyridinium tetrafluoroborates. Possible generation of an aryloxonium ion, 149-50
- BENZOIC**  
Synthesis and reactions of an insoluble polymeric yneamine, 1079-80
- BENZOINDOLE**  
Cyclofunctionalization of olefinic urethanes with benzeneselenenyl reagents: a new general synthesis of nitrogen heterocycles, 379-80
- BENZONITRILE**  
Study of the distribution of metals on the surface of polymer-bound palladium(II) complexes by X-ray photoelectron spectroscopy, 650-1  
Ready hydrogenation of nitrobenzene and benzonitrile with a polymer-bound palladium catalyst, 1074-5
- BENZOPHENONE**  
Regioselectivity in the di- $\pi$ -methane rearrangement; alternative processes in the photochemistry of halogeno-1,4-dienes, 101-2  
Selectivity in the addition of organic radicals to the alkene bond, 438-9  
Ready conversion of 1,1-diphenylethylene into benzophenone and 1,1-diphenylethane over a synthetic hectorite, 930-1
- BENZOPORPHYRIN**  
Cyclizations involving meso-substituents of crowded porphyrins, 73-4
- BENZOPYRANYL**  
New method for reduction of ketones and primary alcohols to hydrocarbons: reaction of the derived selenides with tin hydrides, 41-2
- BENZOPYRENYLGUANOSINE**  
Two micromethods for determining the linkage of adducts formed between polyaromatic hydrocarbons and nucleic acid bases, 798-800
- BENZOQUINONE**  
Electron-transfer reactions between the semiquinone anion radical and metallo-tetraphenylporphyrins, 361  
Diels-Alder reaction of o-benzoquinones with acyclic dienes, 397  
Synthesis of the insect dyestuff kermesic acid and related anthraquinones, 688-9
- BENZOSELENAZABOROLE**  
Reaction of diborane with benzoxazole and its sulphur and selenium analogues. A novel rearrangement to benzoxazaboroles benzothiazaboroles, and benzoselenazaboroles, 971
- BENZOTHIADIAZINE**  
New syntheses of 1,4,2,4-benzothiadiazines, 1049-50
- BENZOTHAZABOROLE**  
Reaction of diborane with benzoxazole and its sulphur and selenium analogues. A novel rearrangement to benzoxazaboroles benzothiazaboroles, and benzoselenazaboroles, 971
- BENZOTHAZOLYL**  
Substitution of allylic sulphides of benzothiazole-2-thiol with organomagnesium compounds in the presence of copper(I) iodide. A regioselective synthesis of olefins, 1085-6
- BENZOTHAZOLYLDITHIO**  
Concentration-dependent photoreaction of benzothiazolyldithioazetidinones: novel photochemical formation of penam derivatives, 836-8
- BENZOTRIAZEPINE**  
Benzazetes as precursors for benzotriazepines, 396-7
- BENZOTRIAZOLE**  
Action of chlorine on a 2-substituted benzotriazole, 932-3
- BENZOTRICYCLONONENE**  
Novel reaction of 2-aryl-3,3-dimethylbicyclo(2.2.1)heptan-2-yl cations; X-ray crystal and molecular structure of 11-fluorosulphonyl-7,8,12-trimethyltetracyclo(7.4.0.0<sup>2,7</sup>.0<sup>4,8</sup>)trideca-1(9),10,12-triene, 111-12
- BENZOTRIHALIDE**  
Novel synthesis of benzotrihalides: the pyrolysis of phenyl trihalogenoacetates, 714
- BENZOXAZABOROLE**  
Reaction of diborane with benzoxazole and its sulphur and selenium analogues. A novel rearrangement to benzoxazaboroles benzothiazaboroles, and benzoselenazaboroles, 971
- BENZOXAZAPHOSPHOLE**  
Phosphorus-containing heterocycles from phosphorus(III) reagents and ortho-azidoaromatic compounds: synthesis of 2,2-di(dimethylamino)-1,3,2-benzoxazaphosphole and various 2,3-dihydro-1,3,2-benzoxazaphosph(V)oles, 182-3
- BENZOXAZINONE**  
Ring transpositions in the pyrolysis of benzisoxazoles and 2,3-benzoxazin-1-ones, 9-10
- BENZOXAZOLE**  
Ring transpositions in the pyrolysis of benzisoxazoles and 2,3-benzoxazin-1-ones, 9-10
- BENZOYL CHLORIDE**  
Metal-assisted borohydride reduction of acid chlorides to aldehydes 354-5
- BENZOYLFORMATE**  
Asymmetric reduction of methyl benzoylformate with a chiral NAD(P)H model compound, 328-9
- BENZOYLOXYETHYL INDOLECARBOXYLATE**  
2-(1-Methylindol-3-yl)-3-phenyldihydro-1,4-dioxin 2,3-epidioxide, a dioxetan resulting in efficient ultraviolet chemiluminescence, 781-2
- BENZYL**  
A tetrahedral intermediate in the aminolysis of benzylpenicillin, 374-5
- BENZYL CHLORIDE**  
High catalytic activity of calcined iron sulphates for the polycondensation of benzyl chloride, 121-2  
Double carbonylation of substituted benzyl chlorides with cobalt carbonyl anion by phase transfer catalysis to give arylpyruvic acids, 1090-1
- BENZYLAMINE**  
Selective acylation of amines using 18-crown-6, 471-2
- BENZYLATION**  
Kinetics of the esterification of potassium p-nitrobenzoate by benzyl bromide using dicyclohexyl-18-crown-6 as phase transfer agent, 282-3
- BENZYLIDENE**  
Solvolysis of substituted benzylidene chlorides in dioxane-water; an unusual role for a distant carboxy-group in a carbonium ion reaction, 98-9
- BENZYLIDENEACETONE**  
A new route to 5-substituted resorcinols, 118
- BENZYLIDENEACETONETRICARBONYLIRON**  
Electrochemical reduction of a heterodienetricarbonyliron(0) complex as a route to novel tricarbonyliron anions, 552-3
- BENZYLIDENEAMINE**  
Unusual incorporation of the cyano group of tert-butylcyanoketene into a cycloadduct. X-ray structure of the pyrimido(1,6-e)(1,3-s)dioxazine formed, 820-1

- BENZYLIDENEURACIL**  
Novel synthesis of pyrimido(4,5-b)quinoline-2(3H),4(10H)-diones (5-deazaflavins), 764
- BENZYLIDYNE**  
Bromide catalysis in the preparation of benzylidyne trichlorides via photochlorination, 105-6
- BENZYL MAGNESIUM**  
Copper-catalysed 1,6-addition of a benzyl Grignard reagent to a dienone: a new synthesis of ring c aromatic diterpenoids, 614-15
- BENZYLOXYCINNAMATE**  
Treatment of cinnamic acids with polyphosphoric acid, 355
- BICYCLE REACTION**  
Topology of the photochemical 'bicycle' reaction. Mechanistic and exploratory organic photochemistry, 232-4
- BICYCLOALKANE**  
Synthesis of  $\alpha$ -alkoxycarbonylcycloalkanones by electrolysis of 1-trimethylsilyloxybicyclo(n.1.0)alkanes, 293-4
- BICYCLOALKANONE**  
Organosilicon chemistry in synthesis: silylcyclopropanation, 714-16
- BICYCLOBUTANOLATE**  
Cyclopropylidene insertion. Evidence for bicyclo(1.1.0)butan-2-olate formation, 128-9
- BICYCLOHEPTADIENE**  
Diversity of behaviour of bicyclo(2.2.1)heptadiene-bisphosphine-rhodium complexes on hydrogenation in methanol, 646-7
- BICYCLOHEPTANONE**  
 $\alpha$ -Ketol rearrangements involving small rings: the formation and rearrangement of 1-hydroxy-6-isopropylbicyclo(3.2.0)heptan-7-one, 87-8
- BICYCLOHEPTENE**  
Carbonium ion rearrangements in the norbornyl series controlled by a silyl group, 245-7
- BICYCLOHEPTENOL**  
(1.3) Shifts of potassium alkoxides: the bicyclo(3.2.0)heptene-norbornene transformation, 479-80
- BICYCLOHEPTYL CATION**  
Novel reaction of 2-aryl-3,3-dimethylbicyclo(2.2.1)heptan-2-yl cations; X-ray crystal and molecular structure of 11-fluorosulphonyl-7,8,12-trimethyltetracyclo(7.4.0.0<sup>2,7</sup>.0<sup>4,8</sup>)trideca-1(9),10,12-triene, 111-12
- BICYCLOHEXENE**  
Topology of the photochemical 'bicycle' reaction. Mechanistic and exploratory organic photochemistry, 232-4
- BICYCLONONADIENE**  
3-Methylenebicyclo(3.2.2)nona-6,8-diene, 964-5
- BICYCLONONADIENEDIONE**  
Synthesis of bridged 1,5-benzodiazepines by condensation of o-phenylenediamines with 4,6-dimethylbicyclo(3.3.1)nona-3,6-diene-2,8-dione, 557-8
- BICYCLONONANE**  
An unexpected cyclization of an olefinic epoxy-ketone, 529-30  
Standard enthalpies of formation of cis- and trans-bicyclo(6.1.0)nonanes, 778-9
- BICYCLOOCTANOID**  
Hydrobenzofuranoid-bicyclo(3.2.1)octanoid neolignan rearrangement, 831-2
- BICYCLOOCTENONE**  
Intramolecular photochemical cycloadditions involving enolized cyclopentane-1,3-diones. A new approach to the bicyclo(3.2.1)octane ring system, 138-40
- BICYCLOPHETANONE**  
Synthesis of prostaglandin E<sub>2</sub> and prostaglandin C<sub>2</sub> from 5-endo, 7-anti-disubstituted bicyclo(2.2.1)heptan-2-ones, 660-1
- BIFLAVONOID**  
Condensed tannins: direct synthesis, structure, and absolute configuration of four biflavonoids from black wattle bark ('mimosa') extract, 700-2
- BIINDAN**  
Circular dichroism of diastereomeric 3,3'-di-tert-butyl-1,1'-spirobiindans, 810-12
- BILANE**  
Biosynthesis of type-III porphyrins: proof of intact enzymic conversion of the head-to-tail bilane into uro'gen-III by intramolecular rearrangement, 185-6
- BILANE CYCLIZATION**  
Biosynthesis of natural porphyrins: enzymic experiments on isomeric bilanes, 1064-6
- BILATRIENE**  
X-ray crystal and molecular structure of 1,19-diethoxycarbonyl-2,3,7,8,12,13,17,18-octamethylbilatriene-abc hydrobromide, 33-4
- BINAPHTHYL**  
Binaphthyl-2,2'-diyl hydrogen phosphate. A new chiral atropisomeric selector for the resolution of helices using high performance liquid chromatography, 173-5
- BINARY**  
Relative solvent transport of ions in binary aqueous mixtures: an unambiguous assignment to ionic constituents, 218-19
- BINDING**  
Anion receptor molecules. Synthesis and some anion binding properties of macrocyclic guanidinium salts, 934-6
- BIOL SPACE**  
Mapping organic molecules in biological space by high resolution NMR spectroscopy and electron microscopy, 1030-2
- BIOMIMETIC**  
Stereochemical control in the biomimetic conversion of heteroyohimbine alkaloid precursors. Isolation of a novel key intermediate, 618-19
- BIOMIMETIC PREPN**  
Biomimetic syntheses of heptaketide metabolites: alternariol and a derivative of rubrofusarin, 406-7  
Biomimetic synthesis of borreverine and isoborreverine, 826-8  
Biomimetic synthesis of anatabine from 2,5-dihydropyridine produced in situ by the action of sodium hypochlorite on baikian 1055-6
- BIOSYNTHESIS**  
Biosynthesis of 5,6-dimethylbenzimidazole from 6,7-dimethyl-10-(1-<sup>14</sup>C)formylmethylisalloxazine, 22-3  
Deuterium nuclear magnetic resonance studies on biosynthesis: stereochemistry of the 5'-hydrogen atoms of griseofulvin derived from griseophenone B and 4-demethyldehydrogriseofulvin, 135-6  
Biosynthesis of vitamin B<sub>12</sub>: proof of A-B structure for sirohydrochlorin by its specific incorporation into cobyrinic acid, 150-1  
Biosynthesis of sclerin: incorporation studies with advanced precursors, 158-9  
Biosynthesis of type-III porphyrins: proof of intact enzymic conversion of the head-to-tail bilane into uro'gen-III by intramolecular rearrangement, 185-6  
Absolute configuration and biosynthesis of tiliacorine and tilacorinine, 226-8  
Juvenile hormone biosynthesis: homomevalonate and mevalonate synthesis by insect corpus allatum enzymes, 290-2  
Juvenile hormone biosynthesis: identification of 3-hydroxy-3-ethylglutarate and 3-hydroxy-3-methylglutarate in cell-free extracts from *Manduca sexta* incubation with propionyl- and acetyl-CoA, 292-3  
Biosynthesis of illudin sesquiterpenoids from (1,2-<sup>13</sup>C<sub>2</sub>)acetate, 303-4  
Biosynthesis of  $\beta$ -sitosterol from (4-<sup>13</sup>C)mevalonic acid and sodium (1,2-<sup>13</sup>C)acetate in tissue cultures of *Isodon japonicus* hara, 319-20  
Nonoxidative cyclization of squalene by *Tetrahymina pyriformis*. The incorporation of a 3 $\beta$ -hydrogen (deuterium) atom into tetrahymanol, 333-4  
Biosynthesis of mycophenolic acid. Oxidation of 6-farnesyl-5,7-dihydroxy-4-methylphthalide in a cell-free preparation from *Penicillium brevicompactum*, 434  
Investigations on the ring contraction step in the biosynthesis of a-nor-stanol by the marine sponge *Axinella verrucosa*, 524-5  
Conversion of penicillins into biosynthetically significant peptides, 609-10  
Biosynthesis of andibenin, a novel polyketide terpenoid metabolite of *Aspergillus varicolor*, 626-7  
Biosynthesis of cochlioquinones, 679-80  
Use of deuterium as a tracer with carbon-13 nuclear magnetic resonance spectroscopy in following deuteride migration in terpenoid biosynthesis: mechanism of geranylgeranyl pyrophosphate cyclization in fusicoccin biosynthesis, 843-5  
Laboratory model for the biosynthesis of vallesimine, apparicine, and related alkaloids, 947-8  
Biosynthesis of natural porphyrins: enzymic experiments on isomeric bilanes, 1064-6  
Indirect involvement of geissoschizine in the biosynthesis of ajmalicine and related alkaloids, 1097-9
- BIPHENYL**  
Novel carbon-carbon reductive cleavage of terphenyls with alkali metal-hexamethylphosphoric triamide, 153-4

**BIPHENYL CYANOHEPTYL**

Far infrared spectra of nematic 4-cyano-4'-n-heptylbiphenyl aligned with electric fields, 267-8

**BIPHENYLCARBOXYLATE**

Reduction of the carboxyl-function in aromatic carboxylic acids by alkali metal-liquid ammonia solutions, 941-3

**BIPYRIDINE**

Photochemistry of tris(2,2'-bipyridine)ruthenium(II) in chlorinated solvents, 285

**BIPYRIDYL**

Luminescence from  $(\text{Ru}(\text{bipyridyl})_3)^{2+}$  ions adsorbed on ion exchange surfaces. Dynamic quenching reactions between adsorbed cations, 408-9

Photoredox reaction in micellar solutions sensitized by surfactant derivative of tris(2,2'-bipyridyl)ruthenium(II), 628-30

Initial state and transition state solvation in the peroxodisulphate oxidation of dicyanobis(2,2'-bipyridyl)iron(II), 963-4

**BIPYRIMIDINE**

Cytochrome oxidase models: a binuclear iron-copper site with a bipyrimidine bridge, 483-5

**BISALKYLIDENE**

Evidence for an almost 'T-shaped' coordination geometry for carbon in the bis(alkylidene) complex  $\text{Ta}(\text{CHCMe}_3)_2(2,4,6\text{-Me}_3\text{C}_6\text{H}_2)(\text{PMe}_3)_2$ : X-ray crystal structure, 1048-9

**BISANTHRACENE**

Cation complexing photochromic materials involving bisanthracenes linked by a polyether chain. Preparation of a crown-ether by photocycloisomerization, 403-4

**BISHOMOCYCLOHEPTATRIENE**

Stereospecific double rearrangement of anti-1,5-bishomocycloheptatriene. A rebound path of thermal rearrangement involving intermediate geminal hydrogen interchange, 365-6

**BISMUTH**

$\mu$ -Oxo-bis(chlorotriphenylbismuth): a mild reagent for the oxidation of the hydroxy group, especially in allylic alcohols, 1099-100

**BLOOD GROUP**

Chemical synthesis of 2-O-( $\alpha$ -L-fucopyranosyl)-3-O-(2-acetamido-2-deoxy- $\alpha$ -D-galactopyranosyl)-D-galactose, the terminal structure in the blood-group A antigenic determinant, 535-7

**BLOOD PLATELET AGGREGATION INHIBITOR**

Total synthesis of carboprostacyclin, a stable and biologically active analogue of prostacyclin ( $\text{PGI}_2$ ), 1067-8

**BOND**

Unexpectedly strong hydrogen bonding in some tetrahydro-4,7-phenanthroline-1,10-dione-3,8-dicarboxylic acids, 369-70

Bond strengths in metal carbonyl clusters, 765-6

Metal-metal interactions in 2-Fe ferredoxins; SCF-X $\alpha$ -SW calculations, 1027-9

**BOND CLEAVAGE**

Opening of the phosphorus-nitrogen bond of bicyclic phosphoranes

Synthesis and X-ray crystal and molecular structure of rhodium complexes of perhydro-1,3,6,2-dioxazaphosphocine, 1022-4

Reaction of ozone with vinyl sulphides. Reactions retaining hydrocarbon chains, 1032-3

**BOND STRENGTH**

Bond strengths in metal carbonyl clusters, 765-6

**BORANE**

Reaction of bis(triethylphosphine)platinum and pentakis(tert-butyl isocyanide)ruthenium with dicarba-nido-hexaboranes(8):

molecular structures of (nido- $\mu_4$ ,5-(trans-(Et<sub>3</sub>P)<sub>2</sub>Pt(H))- $\mu_5$ ,6-H-2,3-C<sub>2</sub>B<sub>4</sub>H<sub>6</sub>), (closo-1,1-(Et<sub>3</sub>P)<sub>2</sub>-2,3-Me<sub>2</sub>-1,2,3-PtC<sub>2</sub>B<sub>4</sub>H<sub>4</sub>) and (RuH(Bu<sup>t</sup>NC)<sub>5</sub>)<sup>+</sup> (nido-2,3-Me<sub>2</sub>-2,3-C<sub>2</sub>B<sub>4</sub>H<sub>5</sub>)<sup>-</sup>, 169-71

Fluxional cyclopentadienylboranes, 242

Insertion of selenium, tellurium, or arsenic atoms into borane cage compounds using element oxide reagents, 349-50

New method of access to selenoacetal chemistry: use of tris(phenylseleno)borane, 356

Cleavage of  $\alpha$ -(phenylthio)alkylboron compounds to monothioacetals and acetals, 357-8

Electronic structure of B<sub>4</sub>H<sub>8</sub>Fe(CO)<sub>3</sub>. Comparison of SCF-X $\alpha$ -SW molecular orbital theory with the ultraviolet photoelectron spectrum, 385-6

Protonolysis of alkenylboranes under neutral conditions by treatment with catalytic amounts of palladium diacetate, 702-3

Structural consequences of electron 'deficiencies' in metallaheteroboranes; hyperpolyhedral metal-metal bonding,

858-9

Bistriphenylphosphinecuprapentaborane, an unusual copper-borane, 866-7

**BORANE CARBA**

The first hypho carbaborane Me<sub>3</sub>N-CB<sub>5</sub>H<sub>11</sub>, 287

**BORANE CARBA PALLADA**

Structural consequences of ligand and metal substitution in metallacarbaboranes; the crystal and molecular structures of 3-(C<sub>2</sub>H<sub>4</sub>(NMe<sub>2</sub>)<sub>2</sub>)-3,1,2-PdC<sub>2</sub>B<sub>9</sub>H<sub>11</sub> and 3,3-(PMe<sub>3</sub>)<sub>2</sub>-3,1,2-PdC<sub>2</sub>B<sub>9</sub>H<sub>11</sub>, 322-4

**BORAPHENALENE**

Preparation of trans,trans,trans- and cis,cis,trans-perhydrophenalen-9-ols by application of the three-migration cyanoborate process to isomeric perhydro-9b-boraphenalenenes: differences between the cyanoborate and carbonylation reactions, 805-6

**BORATE**

Copper(I) ethylenediamine carbonyl complexes: 'models' for carbon monoxide activation. X-ray structure of the ion-pair carbonylthylenediaminetetraphenylboratocopper, 921-2

**BOROXYDRIDE**

Efficiently monitored reduction of carboxylic acids into alcohols or aldehydes via 2-thiazoline-2-thiol esters by sodium borohydride or diisobutylaluminium hydride, 330

Metal-assisted borohydride reduction of acid chlorides to aldehydes 354-5

Introduction of sulphur into organic molecules via lithium triethylborohydride reduction of S<sub>8</sub>, 838-9

Asymmetric reduction of aromatic ketones by sodium borohydride in the presence of bovine serum albumin, 926-7

**BORON**

Detection of the new reactive molecule methyl(sulphido)boron, MeBS, by microwave spectroscopy, 19-20

Novel salts of graphite and a boron nitride salt, 200-1

Selective synthesis of the nonachloronoborate clusters nonachloronoboron and nonachloronoborate dianion, 462-3

Boron complexes as control synthons in photocyclizations: an improved phenanthridine synthesis, 884-5

**BORON PHOSPHATE**

A relation between the product distribution from the dehydration of dimethylbutan-2-ols and catalytic acidity, 801-2

**BORON TRIFLUORIDE**

Regiospecific boron trifluoride catalysed fluorine addition to fluoro-substituted benzene derivatives using xenon difluoride, 969-70

**BORREVERINE**

Biomimetic synthesis of borreverine and isoborreverine, 826-8

**BOVINE**

Asymmetric reduction of aromatic ketones by sodium borohydride in the presence of bovine serum albumin, 926-7

**BREFELDIN A**

Homoconjugate addition of Grignard reagents spiroactivated cyclopropanes. An approach to the total synthesis of ( $\pm$ )-brefeldin A, 754-6

**BROADENING**

(Cr(oxalate)<sub>3</sub>)<sup>3-</sup> as a broadening agent in nitroxyl spin probe studies, 944-5

**BROENSTED**

Broensted acidity of rutile developed during alcohol dehydration as shown by simultaneous alkene isomerization: microwave spectroscopic analyses, 835-6

**BROENSTED ACID**

Direct evidence of neighbouring group participation in the gas phase, 213-14

**BROENSTED BASICITY**

Gas phase Broensted basicity of ( $\eta^5$ -MeC<sub>5</sub>H<sub>4</sub>)Mn(CO)<sub>3</sub>, 126-7

**BROMAL**

Formation of abnormal products in the aluminium chloride-catalysed ene additions of chloral and bromal to mono- and 1,2-dialkyl ethylenes, 655-6

**BROMINATION**

$\beta$ -Silylketones as masked  $\alpha\beta$ -unsaturated ketones, 176-7

Spiro(5.5)undecane sesquiterpene analogues. Bridging vinyl ether and vinyl acetal formation via intramolecular attack by an enol during bromination, 425-6

Radical chain bromination of hydrocarbons using bis(trimethylsilyl)bromamine, 752-3

**BROMINE**

Bromide catalysis in the preparation of benzylidene trichlorides via photochlorination, 105-6

**BROMO**

Phase-transfer catalysis using chiral catalysts. Synthesis of optically active 2-phthalimido-esters, 742-3

**BROMOALKANECARBOXYLATE**

Electrochemical reductive cyclization of dimethyl 2, ( $\omega$ -1)-dibromoalkanedioates, 481-2

**BROMOBENZENE**

Catalysis and solvent participation in organometallic oxidative additions (platinum(0)  $\rightarrow$  platinum(II) and tin(II)  $\rightarrow$  tin(IV)), 192-3

**BROMOETHANE**

Catalysis and solvent participation in organometallic oxidative additions (platinum(0)  $\rightarrow$  platinum(II) and tin(II)  $\rightarrow$  tin(IV)), 192-3

**BROMOFLUOROPHOSPHINOMETHYLAMINODICOBALT**

Retention of the cobalt-cobalt bond in (MeN(PF<sub>2</sub>)<sub>2</sub>)<sub>3</sub>Co<sub>2</sub>(CO)<sub>2</sub> upon halogenation: the X-ray crystal structure of (MeN(PF<sub>2</sub>)<sub>2</sub>)<sub>3</sub>Co<sub>2</sub>Br<sub>4</sub>, 514-15

**BROMOGLUCOPYRANOSE**

Introduction, substitution, and elimination of bromine at C-5 of aldopyranose peresters, 1019-20

**BROMIODONAPHTHACENOBISDITHIOLE**

Highly conducting organic alloys (NBDT)<sub>2</sub>I<sub>x</sub>Br<sub>3-x</sub> (NBDT = naphthaceno(5,6-cd:1,1,12-c'd')bis(1,2)dithiole), 974-5

**BROMOLACTONE**

Applications of bromolactones in synthesis. Stereospecific syntheses of cis-2-hydroxy-1-methylcyclohex-5-ene-1-carboxylic acid and related compounds, 961-2

**BROMOPENTANONE**

Reduction of  $\alpha,\alpha'$ -dibromoketones by ultrasonically dispersed mercury in some aliphatic ketone solvents. A convenient synthesis of 4-isopropylidene-1,3-dioxolans, 1040-1

**BROMOSTYRENE**

Selective cyanation of bromostyrenes by pentacyanocobaltate(II) and nuclear magnetic resonance evidence for the formation of intermediate  $\sigma$ -styryl-cobalt(III) and  $\eta$ -cinnamionitrile-cobalt(I) cyano-complexes, 1059-61

**BUELLIA**

New metabolites of the lichen *Buellia canescens* (Dicks.) De Not: novel phthalide catabolites of depsidones, 1041-2

**BUELLOLIDE**

New metabolites of the lichen *Buellia canescens* (Dicks.) De Not: novel phthalide catabolites of depsidones, 1041-2

**BUTADIENE**

Diels-Alder reaction of *o*-benzoquinones with acyclic dienes, 397  
New syntheses of 1- and 2-phenylthiobutadienes, 657  
An easy vinylcyclobutane-cyclohexane rearrangement, 931-2

**BUTANOL**

Direct evidence of neighbouring group participation in the gas phase, 213-14  
Ipso-attack in the cyclization of 4-( $\alpha$ -naphthyl)butan-1-ol to 1,2,3,4-tetrahydrophenanthrene, 734-5  
A relation between the product distribution from the dehydration of dimethylbutan-2-ols and catalytic acidity, 801-2

**BUTENAL**

New syntheses of 1- and 2-phenylthiobutadienes, 657

**BUTENE**

Hydrogenolysis of unsaturated alcohols; hydrocyanation and hydrogenation of acetylenes catalysed by pentacyanocobaltate(II) 63-5

**BUTENOLIDE**

General route to  $\gamma$ -alkylidene butenolides, 30  
A mild, regiospecific but-2-enolide synthesis and a convenient preparation of acylated dienes, 311-12  
Rearrangement of 4-ylidenebutenolides to cyclopentene-1,3-diones: synthesis of calythrone and related compounds, 880-2

**BUTENYL**

Rearrangement of cyclopropylmethyl and but-3-enyl cobaloximes, 954-6

**BUTENYL CATIONIC COMPLEX**

Metallacycloalkane chemistry: synthesis of the first palladacyclopentane derivative and its transformation into a  $\eta^3$ -butenyl cationic complex, 735-6

**BUTENYLPHENOL**

Palladium(II)-catalysed asymmetric cyclization of 2-allylphenols by the use of optically active  $\beta$ -pinene, 687-8

**BUTYL BROMIDE**

Unusual reactivity of the 2H-thiopyran anion in alkylation with tert-butyl bromide and cyclohexyl bromide, 596-7

**BUTYLCYANOKETENE**

Stereochemistry of the adduct from tert-butylcyanoketene and 2-methylbut-2-ene; X-ray crystal and molecular structure of 2-cyano-3,3,4-trimethyl-2-tert-butylcyclobutyl p-chlorobenzoate, 10-11

Additions of tert-butylcyanoketene to activated olefins. Structure and mechanism, 237-8

Unusual incorporation of the cyano group of tert-butylcyanoketene into a cycloadduct. X-ray structure of the pyrimido(1,6-e)(1,3-s) dioxazine formed, 820-1

**BUTYLIUM**

Gas-phase condensation of tert-butyl cations with Lewis bases, 938-40

**BUTYLMAGNESIUM**

Substitution of allylic sulphides of benzothiazole-2-thiol with organomagnesium compounds in the presence of copper(I) iodide. A regioselective synthesis of olefins, 1085-6

**BUTYLSPIROBIINDAN**

Circular dichroism of diastereomeric 3,3'-di-tert-butyl-1,1'-spirobiindans, 810-12

**BUTYNE**

Synthesis and molecular structure of (Os<sub>6</sub>(CO)<sub>16</sub>(CMe)<sub>2</sub>) and (Os<sub>6</sub>(CO)<sub>16</sub>(MeC:CMe)C), derivatives of ethylene and hexaosmium octadecacarbonyl, 421-3

**BUTYROLACTONE**

Synthesis of ( $\pm$ )-podorhizone via intermediate  $\alpha$ -hydroxyalkylation of a  $\beta$ -benzyl  $\gamma$ -butyrolactone, 556-7

Cyclization of acetylenecarboxylic acids; a novel route to  $\gamma$ -methylenebutyrolactones, 649-50

Formation of allenes or  $\gamma$ -ketoesters from reactions of oxyallyls with acetylenes or 1,1-dimethoxyethene, 1006-7

**CADMIUM**

Metal-assisted borohydride reduction of acid chlorides to aldehydes 354-5

Mechanism of the cadmium sulphide sensitized photooxidation of Leuco Crystal Violet in nonaqueous solution, 417-18

**CAESIUM**

Synthesis of 'crown ether' macrocyclic bislactones using caesium carboxylates of pyridine and of benzene dicarboxylic acids, 383-4

ESCA study of compounds of gold in the oxidation state-1, 905-6

**CAGE**

Insertion of selenium, tellurium, or arsenic atoms into borane cage compounds using element oxide reagents, 349-50

**CALCIUM**

Alkaline earth metal complexes of pyridinyl containing Schiff base macrocycles: X-ray crystal and molecular structures of the calcium and strontium complexes, 279-80

**CALYTHRONE**

Rearrangement of 4-ylidenebutenolides to cyclopentene-1,3-diones: synthesis of calythrone and related compounds, 880-2

**CANELLAL**

X-ray crystal structure of canellal, a novel antimicrobial sesquiterpene from *Canella winterana*, 75-6

**CANESOLIDE**

New metabolites of the lichen *Buellia canescens* (Dicks.) De Not: novel phthalide catabolites of depsidones, 1041-2

**CANNELLEL**

X-ray crystal structure of canellal, a novel antimicrobial sesquiterpene from *Canella winterana*, 75-6

**CARBABORANE**

Reaction of bis(triethylphosphine)platinum and pentakis(tert-butyl isocyanide)ruthenium with dicarba-nido-hexaboranes(8): molecular structures of (nido- $\mu_4$ , $\mu_5$ -(trans-(Et<sub>3</sub>P)<sub>2</sub>Pt(H))- $\mu_5$ , $\mu_6$ -H-2,3-C<sub>2</sub>B<sub>4</sub>H<sub>6</sub>), (closo-1,1-(Et<sub>3</sub>P)<sub>2</sub>-2,3-Me<sub>2</sub>-1,2,3-PtC<sub>2</sub>B<sub>4</sub>H<sub>4</sub>) and (RuH(Bu<sup>t</sup>NC)<sub>5</sub>)<sup>+</sup> (nido-2,3-Me<sub>2</sub>-2,3-C<sub>2</sub>B<sub>4</sub>H<sub>5</sub>)<sup>-</sup>, 169-71  
The first hypho carbaborane Me<sub>3</sub>N-CB<sub>5</sub>H<sub>11</sub>, 287

Structural consequences of ligand and metal substitution in metallacarboranes; the crystal and molecular structures of 3-(C<sub>2</sub>H<sub>4</sub>(NMe<sub>2</sub>)<sub>2</sub>)-3,1,2-PdC<sub>2</sub>B<sub>9</sub>H<sub>11</sub> and 3,3-(PMe<sub>3</sub>)<sub>2</sub>-3,1,2-PdC<sub>2</sub>B<sub>9</sub>H<sub>11</sub>, 322-4

**CARBAMATE**

Conversion of alkyl carbamates into amines via treatment with trimethylsilyl iodide, 315-16

Bis(organodiazenido)-complexes of molybdenum, 352-3

Cyclofunctionalization of olefinic urethanes with benzeneselenenyl reagents: a new general synthesis of nitrogen heterocycles, 379-80

**CARBAMATO**

Preparation of urethanes from carbon dioxide via a copper(I) carbamate complex, 815-16

**CARBANION**

Ion pairing in triphenylmethyl and diphenylmethyl carbanions from spectrophotometric studies, 758-9

Orientation in elimination from carbanions, 975-6

$\beta$ -Diphenylphosphinoyl ketones ( $\text{Ph}_2\text{POCH}_2\text{CH}_2\text{COR}$ ): stable reagents for  $\beta$ -ketocarbanions, 988-9

**CARBAZOLE**

Heteroatom directed photoarylation; an approach to the synthesis of *Aspidosperma* alkaloids, 29

Intramolecular photochemical arylation of *N*-substituted enamines: application to synthesis of heterocyclic compounds, 766-7

**CARBAZOLE PYRIDAZO**

Synthesis of pyridazo(4,5-*b*)carbazoles, 309-10

**CARBENE**

Olefin metathesis: preparation of a carbene-olefin-metal complex, 26-7

Carbene photocycloelimination from a vinyl-cyclopropane, 558-9

Interception of alkylchlorocarbenes, 775-6

Insertion of the carbene  $:\text{CH}_2$  into Ni-R bonds of mono- and di-alkylnickel(II) complexes, 1003-4

Carbon-carbon bond-making by trapping of a nucleophilic carbene (from an electron-rich olefin) by a  $\sigma$ - $\pi$ -acetylido(hexacarbonyl) di-iron complex; X-ray crystal and molecular structure, 1017-19

Reaction of isopropylidencarbene with isonitriles. Evidence for the formation of alkadienylideneamine, 1057-8

**CARBENE COMPLEX**

Aspects of the coordination chemistry of some electron-rich polyorganosulphur compounds; bis(ethylthio)carbene complexes ( $\text{M}(\text{CO})_5(\text{C}(\text{SET})_2)$ ) ( $\text{M} = \text{Cr}$  or  $\text{W}$ ) from  $\text{Na}(\text{TosNNC}(\text{SET})_2)$  ( $\text{Tos} = p\text{-MeC}_6\text{H}_4\text{SO}_2$ ), 146-7

**CARBENE INSERTION**

Insertion of the carbene  $:\text{CH}_2$  into Ni-R bonds of mono- and di-alkylnickel(II) complexes, 1003-4

**CARBIDE**

X-ray crystal structures of two products formed in the reaction of dicobalt octacarbonyl with carbon disulphide: dodecacarbonylcarbido-hexacobalt disulphide,  $\text{Co}_6\text{C}(\text{CO})_{12}\text{S}_2$ , and bis(enneacarbonyltrico-baltcarbon) disulphide,  $(\text{CO})_9\text{Co}_3\text{CSSCCo}_3(\text{CO})_9$ , 841-3

**CARBOHYDRATE**

Conversion of thiocarbonyl compounds into their corresponding oxo derivatives using benzeneseleninic anhydride, 393-4

**CARBON**

Catalytic synthesis of ethanol from carbon monoxide and hydrogen under atmospheric pressure over pyrolyzed rhodium carbonyl clusters on titanium dioxide, zirconium dioxide, and dilanthanum trioxide, 566-7

Carbon-carbon coupling in (90%  $^{13}\text{C}$ -2)histidine, 1070-1

**CARBON COORDINATION GEOMETRY**

Evidence for an almost 'T-shaped' coordination geometry for carbon in the bis(alkylidene) complex  $\text{Ta}(\text{CHCMe}_3)_2(2,4,6\text{-Me}_3\text{C}_6\text{H}_2)(\text{PMe}_3)_2$ ; X-ray crystal structure, 1048-9

**CARBON DIOXIDE**

Aromatic hydroxylation by  $\text{O}(^3\text{P})$  atoms on  $\gamma$ -radiolysis of liquid carbon dioxide solutions of alkylbenzenes, 16-18

Stoichiometric reduction of carbon monoxide and carbon dioxide to methanol: evidence for carbon monoxide insertion into zirconium-hydrogen bond, 269-70

Preparation of urethanes from carbon dioxide via a copper(I) carbamate complex, 815-16

**CARBON DISULFIDE**

X-ray crystal structures of two products formed in the reaction of dicobalt octacarbonyl with carbon disulphide: dodecacarbonylcarbido-hexacobalt disulphide,  $\text{Co}_6\text{C}(\text{CO})_{12}\text{S}_2$ , and bis(enneacarbonyltrico-baltcarbon) disulphide,  $(\text{CO})_9\text{Co}_3\text{CSSCCo}_3(\text{CO})_9$ , 841-3

**CARBON MONOXIDE**

Stoichiometric reduction of carbon monoxide and carbon dioxide to methanol: evidence for carbon monoxide insertion into zirconium-hydrogen bond, 269-70

A mild, regio-specific but-2-enolide synthesis and a convenient preparation of acylated dienes, 311-12

Formation of an acyl species from hept-1-ene and carbon monoxide on an evaporated nickel surface, 617-18

Copper(I) ethylenediamine carbonyl complexes: 'models' for carbon

monoxide activation. X-ray structure of the ion-pair carbonyl ethylenediaminetetraphenylboratocopper, 921-2

**CARBON TETRACHLORIDE**

Carbon-13-labelling study of the reaction between 2-(methylthio) ethanol and carbon tetrachloride-phosphines, 208-9

**CARBONIUM**

Nonconcerted unimolecular reactions of ions in the gas phase: isomerization of weakly coordinated carbonium ions, 24-6

**CARBONYL**

New palladium carbonyl clusters: X-ray crystal structure of  $(\text{Pd}_4(\text{CO})_4(\text{OAc})_4)(\text{AcOH})_2$ , 27-8

Infrared lasers: a new tool for studying the diazotization of matrix isolated tetracarbonyliron(0), 36-8

Phosphorus-31 nuclear magnetic resonance and infrared spectroscopic evidence for coordinatively unsaturated zerovalent tungsten generated by interaction of  $\text{W}(\text{CO})_5\text{L}$  ( $\text{L} = \text{PPh}_3$  or  $\text{PBu}^n_3$ ) with aluminium tribromide, 38-9

Gas phase Brønsted basicity of  $(\eta^5\text{-MeC}_5\text{H}_4)\text{Mn}(\text{CO})_3$ , 126-7

Mixed rhodium-platinum carbonyl clusters: synthesis and X-ray crystallographic characterization of  $(\text{Rh}_3\text{Pt}(\text{CO})_{15})^+(\text{Ph}_3\text{P})_2\text{N}^-$ , 195-6

Acetylene linkage at a di-metal centre: X-ray crystal structures of  $(\text{Cr}_2(\text{CO})(\eta\text{-C}_3\text{H}_3)_2(\text{PhC}_2\text{Ph})_2)$  and  $(\text{Mo}_2(\eta\text{-C}_5\text{H}_5)_2(\text{MeO}_2\text{CC}_2\text{CO}_2\text{Me})(\text{HC}_2\text{H})(\text{MeO}_2\text{CC}_2\text{CO}_2\text{Me})_2)$ , 221-3

Reactions of nitrogen oxides with di(cyclopentadienyl)titanium complexes, 234-5

Carbonylation of the  $\eta^3$ -vinylcarbene ligand. Synthesis and X-ray crystal and molecular structure of an ( $\eta^4$ -vinylketene) iron complex, 252-3

Synthesis of cluster compounds via nucleophilic metal complexes; X-ray crystal structures of  $(\text{Os}_3\text{Pt}(\mu\text{-H})_2(\text{CO})_{10})(\text{C}_6\text{H}_{11}\text{P})$  and  $(\text{Os}_2\text{Pt}_2(\mu\text{-H})_2(\text{CO})_8(\text{Ph}_3\text{P})_2)$ , 260-2

Spin trapping experiments on NADH analogues and the role of radicals in carbonyl reductions, 300-1

$(\text{Ir}_4(\text{CO})_8((\text{MeCO})_2\text{C}_2)_4)$ : a rectangular cluster, 340-1

Unusual stereoselectivities in olefin metathesis, 341-2

Preparation and X-ray structure determination of the mixed cluster  $(\text{H}_3\text{CoOs}_3(\text{CO})_{12})$ , 343-4

Electronic structure of  $\text{B}_4\text{H}_8\text{Fe}(\text{CO})_3$ . Comparison of SCF-X $\alpha$ -SW molecular orbital theory with the ultraviolet photoelectron spectrum, 385-6

( $\eta^4$ -Cyclobutadiene)( $\eta^5$ -cyclopentadienyl)dicarbonylvanadium, 401-2

Synthesis and molecular structure of  $(\text{Os}_6(\text{CO})_{16}(\text{CMe})_2)$  and  $(\text{Os}_6(\text{CO})_{16}(\text{MeC:CMe})\text{C})$ , derivatives of ethylene and hexa-osmium octadecacarbonyl, 421-3

Use of triorganogermyllithium compounds in transition metal chemistry. Application to the synthesis of optically active anions containing a transition metal-germanium bond, 435-6

X-ray structure of  $(\eta^5\text{-C}_5\text{H}_5)\text{W}(\text{CO})_2\text{C}_{15}\text{H}_{15}$ : a compound containing three unusually bonded five-membered rings, 451-2

Synthesis and molecular structures of chloro(trimethylphosphine)tris(trimethylsilylmethyl)molybdenum(IV) and di- $\mu$ -chloro-bis( $\eta^2$ -trimethylsilylmethylcarbonyl)bis(carbonyl)trimethylphosphinemolybdenum(II), 465-6

A new and versatile chelating dithio ligand: X-ray crystal structure of  $(\text{Ru}(\text{CO})(\text{SC}_6\text{H}_3\text{Me}-o\text{-SC}_6\text{H}_4\text{Me})(\eta\text{-C}_5\text{H}_5))$ , 486-8

Synthesis and molecular geometry of novel di- and tri-nuclear iron complexes resulting from the interaction of  $(\text{Fe}_2(\text{CO})_9)$  with  $\text{R-N}=\text{S}=\text{N-R}$  ( $\text{R} = \text{tert-butyl}$  or  $p\text{-tolyl}$ ); X-ray crystal structures of  $(\text{Fe}_2(\text{CO})_6(\text{RNC}(\text{O})\text{S}))$  and  $(\text{Fe}_3(\text{CO})_9(\text{RNS})\text{S})$ , 506-7

New mixed-metal clusters via metal hydride coupling. Synthesis and crystal structures of  $(\mu_2\text{-H})\text{Os}_3\text{W}(\text{CO})_{12}(\eta^5\text{-C}_5\text{H}_5)$  and  $(\mu_2\text{-H})_3\text{Os}_3\text{W}(\text{CO})_{11}(\eta^5\text{-C}_5\text{H}_5)$ , 534-5

Polymer-bound tetranuclear iridium carbonyl catalyst, 540-1

$(\text{Os}_3(\text{CO})_9\text{H}(\text{SR}))$ , a highly reactive molecule. The X-ray structure of a  $\pi$ -bound ethylene adduct  $(\text{Os}_3(\text{CO})_9\text{H}(\text{C}_2\text{H}_4)(\text{SMe}))$ , 551-2

Electrochemical reduction of a heterodienetricarbonyliron(0) complex as a route to novel tricarbonyliron anions, 552-3

Catalytic synthesis of ethanol from carbon monoxide and hydrogen under atmospheric pressure over pyrolyzed rhodium carbonyl clusters on titanium dioxide, zirconium dioxide, and dilanthanum trioxide, 566-7

Bridging hydrides in  $(\text{H}_2\text{Os}_3(\text{CO})_{10})$  and  $((\text{C}_2\text{H}_3)\text{HOs}_3(\text{CO})_{10})$ : a combined X-ray-neutron diffraction study, 723-4

Bond strengths in metal carbonyl clusters, 765-6

X-ray crystal structures of two products formed in the reaction of dicobalt octacarbonyl with carbon disulphide: dodecacarbonylcarbido-hexacobalt disulphide,  $\text{Co}_6\text{C}(\text{CO})_{12}\text{S}_2$ ,

- and bis(enneacarbonyltricobaltcarbon) disulphide, (CO)<sub>9</sub>Co<sub>3</sub>CSSCCo<sub>3</sub>(CO)<sub>9</sub>, 841-3
- Effect of cation on the quantum efficiency and the photoreaction paths of (W(CO)<sub>5</sub>X)<sup>-</sup> anions, 863-4
- Syntheses and reactivity of cofacial, dimeric metal-metal bonded ruthenium(II) mixed valence ruthenium(II/III), and ruthenium(III) complexes of (C<sub>22</sub>H<sub>22</sub>N<sub>4</sub>)<sup>2-</sup>, a dibenzo-tetra-aza(14)annulene ligand, 909-10
- (H<sub>3</sub>Ru<sub>4</sub>(CO)<sub>12</sub>): the X-ray crystallographic determination of two structural isomers, 920-1
- Organometallic photochemistry with circularly polarized light. Synthesis of optically active tropone-iron tricarbonyl complex by asymmetric destruction, 983-4
- Recovery of the chromium tricarbonyl unit in the removal of organic ligands from their chromium carbonyl complexes, 989-90
- Novel type of transformation of a 2H-azirine in the presence of Fe<sub>2</sub>(CO)<sub>9</sub>, 998-9
- Synthesis and molecular structure of (Os<sub>5</sub>(CO)<sub>15</sub>POMe), 1015-16
- New mode of bonding of a vinyl ligand to an osmium cluster: the X-ray crystal structure of (HO<sub>3</sub>(CO)<sub>10</sub>(CF<sub>3</sub>CCHCF<sub>3</sub>)), 1035-6
- Thionitrosyl ligand; X-ray molecular structure of dicarbonyl(η<sup>5</sup>-cyclopentadienyl)thionitrosylchromium, 1036-7
- Organometallic compounds in organic synthesis: nucleophilic substitution reactions of N-methylindoletricarbonylchromium(0) 1076-7
- Interconversion of μ<sub>2</sub>-phenolato and μ<sub>3</sub>-oxodienediyl ligands in triosmium clusters: X-ray crystal structure of 1,1,1,2,2,2,3,3,3-nonacarbonyl-1,2,2,3-di-μ-hydrido-(μ<sub>3</sub>-3-benzyl-2-oxocyclohexa-3,5-diene-1,1-diyl-1,2-C<sup>1</sup>-3-O)-triangulo-triosmium(3Os-Os), 1086-8
- CARBONYL COMPD**
- Oxidation of alcohols using benzeneseleninic anhydride, 952-4
- β-Diphenylphosphinoyl ketones (Ph<sub>2</sub>POCH<sub>2</sub>CH<sub>2</sub>COR): stable reagents for β-ketocarbanions, 988-9
- CARBONYL GROUP**
- New 1,2-transpositions and alkylative 1,2-transpositions of a carbonyl group, 414-15
- CARBONYL INSERTION**
- Carbonyl insertion at chloro(alkyl- or -aryl) (methyl)diphenylphosphine)carbonylplatinum: critical effects of stereochemistry and the nature of the alkyl or aryl group, 819-20
- CARBONYLATION**
- A mild, regioselective but-2-enolide synthesis and a convenient preparation of acylated dienes, 311-12
- Double carbonylation of substituted benzyl chlorides with cobalt carbonyl anion by phase transfer catalysis to give arylpyruvic acids, 1090-1
- CARBONYLCOPPER**
- Copper(I) ethylenediamine carbonyl complexes: 'models' for carbon monoxide activation. X-ray structure of the ion-pair carbonyl ethylenediamine tetraphenylboratocopper, 921-2
- CARBONYLCYCLOPENTADIENYL RHODIUM**
- Formation and molecular structure of (η<sup>5</sup>-cyclopentadienyl)-(η<sup>4</sup>-cyclobuta(l)phenanthrene)rhodium: a cyclobutadiene-metal complex derived from the intramolecular cyclodimerization of an acyclic diacetylene, 187-8
- CARBONYLCYCLOPENTADIENYLTHIONITROSYLCHROMIUM**
- Thionitrosyl ligand; X-ray molecular structure of dicarbonyl(η<sup>5</sup>-cyclopentadienyl)thionitrosylchromium, 1036-7
- CARBONYLIRON**
- Infrared lasers: a new tool for studying the diazotization of matrix isolated tetracarbonyliron(0), 36-8
- CARBONYLOSMIUM**
- Anchoring of osmium clusters to silica, 1063-4
- CARBONYLPLATINUM**
- Platinum(IV) complexes with π-acceptor ligands, 1056-7
- CARBONYLRHODIUM**
- Opening of the phosphorus-nitrogen bond of bicyclic phosphoranes
- Synthesis and X-ray crystal and molecular structure of rhodium complexes of perhydro-1,3,6,2-dioxazaphosphocine, 1022-4
- CARBONYLSILYLPHOSPHINERUTHENIUM**
- 'Capped' tri-ruthenium carbonyl cluster: X-ray crystal structure of (Ru<sub>3</sub>(CO)<sub>9</sub>(MeSi(PBu<sub>2</sub>)<sub>3</sub>)), 1005-6
- CARBOPROSTACYCLIN**
- Total synthesis of carboprostacyclin, a stable and biologically active analogue of prostacyclin (PGI<sub>2</sub>), 1067-8
- CARBOXONIUM ION**
- Ortho ester hydrolysis: rate determining addition of water to a carboxonium ion intermediate, 678-9
- CARBOXY MIGRATION**
- Carboxyl-migration facilitated by bacterial hydroxylation of 4-hydroxybenzoate, 731-2
- CARBOXYALKYLATION**
- Alkylrhodium(III) porphyrins from rhodium(III) porphyrins and diazoalkanes, 937-8
- CARBOXYLATE**
- New palladium carbonyl clusters: X-ray crystal structure of (Pd<sub>4</sub>(CO)<sub>4</sub>(OAc)<sub>4</sub>).(AcOH)<sub>2</sub>, 27-8
- Increase in reaction rate consequent on the use of a polymer-supported reagent. Evidence for interaction between a high proportion of the groups of a polymer-supported reagent, 813-15
- Novel method for dealkylation of esters, ethers, and acetals by chlorotrimethylsilane-sodium iodide, 874-5
- CARBOXYLATE PARTICIPATION**
- Neighbouring carboxylate group participation in ester aminolysis in nonhydroxylic solvents. The n-butylaminolysis of aspirin in acetonitrile, 886-8
- CARBOXYMETHOXYBENZYLIDENE**
- Solvolysis of substituted benzylidene chlorides in dioxane-water; an unusual role for a distant carboxy-group in a carbonium ion reaction, 98-9
- CAROTANE SESQUITERPENE**
- Aspterric acid, a new sesquiterpenoid of the carotane group, a metabolite from *Aspergillus terreus* IFO-6123. X-ray crystal and molecular structure of its p-bromobenzoate, 160-1
- CAROTENOID**
- Electrochemical reductive acylation of astacene; a route to the carotenoid astaxanthin, 387-8
- CARRAGEENAN**
- Dynamics of the salt-induced random coil to helix transition in segmented l-carrageenan, 515-16
- CARVONE**
- Reduction of natural enones in the presence of cerium trichloride, 601-2
- CARYOLANE ACETATE**
- Metal-amine reduction of sterically hindered esters to alkanes, a new method for the deoxygenation of hindered alcohols, 68-9
- CATABOLITE**
- New metabolites of the lichen *Buellia canescens* (Dicks.) De Not: novel phthalide catabolites of depsidones, 1041-2
- CATALYSIS**
- Versatile deuterium exchange and isomerization of hydrocarbons via phase transfer catalysis, 155-6
- Stereochemical course of dehydration catalysed by the yeast fatty acid synthetase, 193-4
- Polymeric sulphur nitride electrode: an example of electrocatalysis by surface chemical modification, 244-5
- A mild, regioselective but-2-enolide synthesis and a convenient preparation of acylated dienes, 311-12
- Mechanism of asymmetric hydrogenation catalysed by rhodium(I) trans-4,5-bis(diphenylphosphinomethyl)-2,2-dimethyldioxolan (DIOP) complexes, 321-2
- Electrocatalytic formation of superoxides in the presence of cobalt chelates, 339-40
- Redox-photosensitized cleavage of indene dimers using aromatic hydrocarbon-dicyanobenzene systems; catalysis by the cation radical of aromatic hydrocarbons, 490-1
- Broensted acidity of rutile developed during alcohol dehydration as shown by simultaneous alkene isomerization: microwave spectroscopic analyses, 835-6
- Double carbonylation of substituted benzyl chlorides with cobalt carbonyl anion by phase transfer catalysis to give arylpyruvic acids, 1090-1
- Stereochemistry of 1,4-addition of molecular deuterium to 2-methylbuta-1,3-diene over thorium dioxide, magnesium oxide, and dilanthanum trioxide, 1091-2
- Mechanism of acid catalysed opening of the cyclopropane ring in the thujols, 1096-7
- CATALYSIS BASE**
- Base catalysed and thermal rearrangements of grisadienediones to depsidones, 1043-4
- CATALYST**
- Hydrometallation of alkenes and alkynes with magnesium hydride, 30-1
- Phosphorus-31 nuclear magnetic resonance and infrared spectroscopic evidence for coordinatively unsaturated zerovalent

- tungsten generated by interaction of  $W(CO)_5L$  ( $L = PPh_3$  or  $PBu^*_3$ ) with aluminium tribromide, 38-9
- Changes in surface composition of a cobalt-molybdenum binary oxide catalyst during various treatments studied by X-ray photoelectron spectroscopy, 47-8
- Selective hydrogenation of the internal double bond of penta-1,3-diene on a zinc oxide catalyst, 53-4
- Hydrogenolysis of unsaturated alcohols; hydrocyanation and hydrogenation of acetylenes catalysed by pentacyanocobaltate(II) 63-5
- Metal ion-catalysed oxidation of linoleic acid. Lipooxygenase-like regioselectivity of oxygenation, 82-3
- Rhodium(II)-catalysed addition of dimethyl diazomalonate to thiophene: a simple synthesis of thiophenium bismethoxycarbonylmethylides and crystal and molecular structure of the unsubstituted methylide, 83-4
- Photoinduced synthesis of binuclear molybdenocene and tungstenocene derivatives: catalytic deoxygenation of epoxides by metallocenes, 99-100
- Bromide catalysis in the preparation of benzyldiynic trichlorides via photochlorination, 105-6
- Stereochemistry of hydrogenation of cyclonona-1,2-diene with supported platinum metals and soluble rhodium complexes as evidence for allylic intermediates, 114-15
- High catalytic activity of calcined iron sulphates for the polycondensation of benzyl chloride, 121-2
- Catalytic sites in the hydrogenolysis of cyclopropane on platinum, 127-8
- Catalytic conversion of nitric oxide into nitrogen and dinitrogen oxide by dinitrobis(ethylenediamine)cobalt(III) cation, 175-6
- Catalysis and solvent participation in organometallic oxidative additions (platinum(0)  $\rightarrow$  platinum(II) and tin(II)  $\rightarrow$  tin(IV)), 192-3
- Asymmetric induction in the base-catalysed Michael addition of nitromethane to chalcone, 238-9
- Acetyl exchange between acetylmethylene and acetyl chloride under Friedel-Crafts conditions, 271-2
- Kinetics of the esterification of potassium p-nitrobenzoate by benzyl bromide using dicyclohexyl-18-crown-6 as phase transfer agent, 282-3
- Unusual stereoselectivities in olefin metathesis, 341-2
- Metal-assisted borohydride reduction of acid chlorides to aldehydes 354-5
- Selective acylation of amines using 18-crown-6, 471-2
- Polymer-bound tetranuclear iridium carbonyl catalyst, 540-1
- Activation and transfer of molecular oxygen. Oxidation of terminal olefins to methyl ketones by rhodium dioxygen complexes, 559-60
- Homogeneous catalytic oxidation of amines and secondary alcohols by molecular oxygen, 562
- Catalytic synthesis of ethanol from carbon monoxide and hydrogen under atmospheric pressure over pyrolyzed rhodium carbonyl clusters on titanium dioxide, zirconium dioxide, and dilanthanum trioxide, 566-7
- An arene hydrido complex of ruthenium(II) as catalyst for the homogeneous hydrogenation of benzene and olefins, 582-3
- Reduction of natural enones in the presence of cerium trichloride, 601-2
- Ring opening polymerization of norbornene catalysed by ethyl aluminium dichloride; olefin metathesis in the absence of a transition metal, 603-4
- Mechanism for the stereospecific polymerization of olefins by Ziegler-Natta catalysts, 604-6
- Copper-catalysed 1,6-addition of a benzyl Grignard reagent to a dienone: a new synthesis of ring C aromatic diterpenoids, 614-15
- Stereochemistry of the organocuprate reactions of two cis-trans isomeric allylic ethers, 621-3
- Selective homo Diels-Alder addition of acetylenic hydrocarbons to norbornadiene catalysed by a cobalt complex, 636-8
- Stereoselective cobalt-catalysed (2+2+2) cross-addition of norbornadiene and norbornene, 638-9
- Cyclization of acetylenecarboxylic acids; a novel route to  $\gamma$ -methylenebutyrolactones, 649-50
- Formation of abnormal products in the aluminium chloride-catalysed ene additions of chloral and bromal to mono- and 1,2-dialkyl ethylenes, 655-6
- Palladium(II)-catalysed asymmetric cyclization of 2-allylphenols by the use of optically active  $\beta$ -pinene, 687-8
- Isomerization of allyl ethers catalysed by the cationic iridium complex  $(Ir(\text{cyclo-octa-1,5-diene})(PMePh_2)_2)PF_6$ . A highly stereoselective route to trans-propenyl ethers, 694-5
- Protonolysis of alkenylboranes under neutral conditions by treatment with catalytic amounts of palladium diacetate, 702-3
- Rapid formation of N-nitrosamines from nitric oxide in the presence of silver(I) salts, 707-8
- Regio-selective synthesis of 2- and 3-alkyl-5-hydroxyquinizarins, 712-13
- Phase-transfer catalysis using chiral catalysts. Synthesis of optically active 2-phthalimido-esters, 742-3
- Evidence for a dissociative  $S_N1(P)$  mechanism of phosphoryl transfer by rabbit muscle pyruvate kinase, 783-5
- Drifluor reagents: non-hygroscopic sources of the fluoride ion, 789-91
- A relation between the product distribution from the dehydration of dimethylbutan-2-ols and catalytic acidity, 801-2
- Evidence for the ready insertion of rhodium into a carbon-hydrogen bond of ethylene; crystal and molecular structure of  $\mu$ -but-2-ene- $\mu$ -ethylenebis-( $\eta^5$ -1-methylindenyl)dirhodium, 839-41
- Oxidation of cyclic ketones by hydrogen peroxide catalysed by Group 6 metal peroxo complexes, 888-9
- Continuous hydrogenation of ethene using spilt-over hydrogen, 891-2
- Palladium-promoted vinylic hydrogen substitution of alkenes by Grignard reagents. Stoichiometric and catalytic reactions, 918-19
- Solvent transfer hydrogenation of  $\alpha\beta$ -unsaturated aldehydes to the unsaturated alcohols catalysed by hydrido-iridium sulphoxide complexes, 929-30
- Ready conversion of 1,1-diphenylethylene into benzophenone and 1,1-diphenylethane over a synthetic hectorite, 930-1
- Molecular catalysis: enhanced rates of thiolysis with high structural and chiral recognition in complexes of a reactive macrocyclic receptor molecule, 949-51
- Amino acid-catalysed alkylation of hydroxyanthraquinones with 2-hydroxytetrahydropyrans, 951-2
- Regiospecific boron trifluoride catalysed fluorine addition to fluoro-substituted benzene derivatives using xenon difluoride, 969-70
- Efficient synthesis of acetals catalysed by rare earth chlorides, 976-7
- Very active hydrogenation catalyst composed of extremely dispersed palladium on vitreous supports, 979-80
- Convenient preparation of esters of testosterone and 19-norethisterone with hindered acids, 980-1
- Stereoselective reaction of p-nitrophenyl N-acyl-phenylalanines with N-acyl-L-histidine in mixed micelles, 984-5
- Alkyl bridged complexes of the group 3A and lanthanoid metals as homogeneous ethylene polymerization catalysts, 994-5
- Synthesis, X-ray crystal structure, and properties of a tetranuclear complex formed by oxidation of copper(I) chloride with molecular dioxygen in N-methylpyrrolidin-2-one. Isolation of a catalyst for the oxidative coupling of phenols by dioxygen, 1045-6
- Activity of copper(II)-exchanged Y-type zeolites in the catalytic decomposition of nitrogen monoxide, 1058-9
- Selective cyanation of bromostyrenes by pentacyanocobaltate(II) and nuclear magnetic resonance evidence for the formation of intermediate  $\sigma$ -styryl-cobalt(III) and  $\eta$ -cinnamitrile-cobalt(II) cyano-complexes, 1059-61
- Synthesis of some medium- and large-ring cycloalk-2-ene-1,4-diones by intramolecular coupling of  $\omega$ -bis-diazoketones, 1069-70
- Ready hydrogenation of nitrobenzene and benzonitrile with a polymer-bound palladium catalyst, 1074-5
- Ammonia synthesis from methane, water, and nitrogen over silica-supported ruthenium, 1105-6
- CATALYST SUPPORTED**  
Polymer-supported phase transfer catalysts in solid-liquid reactions 541-3
- CATALYSTS**  
Macrocyclic enzyme model system: catalysis of ester degradation by a (20)paracyclophane bearing nucleophilic and metal-binding sites, 494-6
- CATALYTIC**  
Photo-enhanced production of hydrogen by liquid-phase catalytic dehydrogenation of propan-2-ol with rhodium-tin chloride complexes, 348-9



## CATECHIN

- X-ray structure, conformation, and absolute configuration of 8-bromotetra-O-methyl-(+)-catechin, 695-6  
 Condensed tannins: determination of the point of linkage in 'terminal' (+)-catechin units and degradative bromination of 4-flavanylflavan-3,4-diols, 696-8  
 Condensed tannins: direct synthesis, structure, and absolute configuration of four biflavonoids from black wattle bark ('mimosa') extract, 700-2

## CATECHOLAMINES

- Proton nuclear magnetic resonance study of the deprotonation of the catecholamines in solution: the microconstants for the deuteriation of L-dopa in D<sub>2</sub>O, 768-9

## CATHA

- Structures of cathedulin alkaloids from *Catha edulis* (khat) of Kenyan and Ethiopian origin, 107-8

## CATHARANTHUS

- Antitumour alkaloids of the vinblastine-type: is leurosine an artefact, 102-3  
 Indirect involvement of geissoschizine in the biosynthesis of ajmalicine and related alkaloids, 1097-9

## CATHEDULIN

- Structures of cathedulin alkaloids from *Catha edulis* (khat) of Kenyan and Ethiopian origin, 107-8

## CATION

- 'Methoxy cation' and protonated formaldehyde: high barriers to isomerization, 190-1  
 Redox-photosensitized cleavage of indene dimers using aromatic hydrocarbon-dicyanobenzene systems; catalysis by the cation radical of aromatic hydrocarbons, 490-1  
 Gas-phase condensation of tert-butyl cations with Lewis bases, 938-40  
 Identification of the species (Te<sub>n</sub>Se<sub>4-n</sub>)<sup>2+</sup> by high resolution tellurium-125 and tellurium-123 Fourier transform NMR spectroscopy, 956-7  
 125-Tellurium and 77-selenium multinuclear magnetic resonance studies of Te<sub>6</sub><sup>4+</sup>, Te<sub>4-n</sub>Se<sub>n</sub><sup>2+</sup>, Te<sub>2</sub>Se<sub>4</sub><sup>2+</sup>, and Te<sub>3</sub>Se<sub>3</sub><sup>2+</sup> polyatomic cations, 957-60

## CATION EFFECT

- Effect of cation on the quantum efficiency and the photoreaction paths of (W(CO)<sub>5</sub>X)<sup>-</sup> anions, 863-4

## CATION EXCHANGER

- Luminescence from (Ru(bipyridyl)<sub>3</sub>)<sup>2+</sup> ions adsorbed on ion exchange surfaces. Dynamic quenching reactions between adsorbed cations, 408-9

## CATION RADICAL

- Nitration of mesitylene: comparison with reactions of the cation-radical C<sub>6</sub>H<sub>3</sub>Me<sub>3</sub><sup>•+</sup>, 445-6

## CATIONIC COMPLEX

- A new approach to cationic transition metal alkyls: (M(η-C<sub>5</sub>H<sub>5</sub>)<sub>2</sub>(CH<sub>2</sub>SiMe<sub>3</sub>)<sub>2</sub>)(Y) (M = Nb or Ta, Y = BF<sub>4</sub> or SbF<sub>6</sub>) and their conversion into the alkylidene complexes (M(η-C<sub>5</sub>H<sub>5</sub>)<sub>2</sub>(CHSiMe<sub>3</sub>)(CH<sub>2</sub>SiMe<sub>3</sub>)), 925-6

## CEFOXITIN

- Cleavage of the amino adipoyl side chain of cephamycin C to the (6R,7S)-7-amino-7-methoxy derivative, 517-18

## CEMBRENE

- Alternative synthetic route to the cembrene skeleton, 359-60

## CEPHAELINE

- Deacetylisoipecoside: the key intermediate in the biosynthesis of the alkaloids cephaeline and emetine, 896-8

## CEPHAELIS

- Deacetylisoipecoside: the key intermediate in the biosynthesis of the alkaloids cephaeline and emetine, 896-8

## CEPHAM

- Concentration-dependent photoreaction of benzothiazolyldithioazetidiones: novel photochemical formation of penam derivatives, 836-8

## CEPHAMYCIN C

- Cleavage of the amino adipoyl side chain of cephamycin C to the (6R,7S)-7-amino-7-methoxy derivative, 517-18

## CERIUM

- Reduction of natural enones in the presence of cerium trichloride, 601-2

## CHAIN END

- Chain ends as supports for α-helical structures in oligopeptides, 692-3

## CHALCONE

- Asymmetric induction in the base-catalysed Michael addition of nitromethane to chalcone, 238-9  
 Solvent effects in homogeneous asymmetric catalysis, 427-8  
 Organosilicon chemistry in synthesis: silylcyclopropanation, 714-16  
 Drifluor reagents: non-hygroscopic sources of the fluoride ion, 789-91

## CHANNAINE

- X-ray crystal and molecular structure of channaine, an unusual alkaloid, probably an artefact from *Sceletium strictum*, 1078-9

## CHARGE TRANSFER

- Tetrathio-derivatives of quinodimethane. Synthesis and ion-radical complex formation of cyclohexa-2,5-diene-1,4-diylidenebis-1,3-benzodithiole derivative, 74-5  
 Evidence of electronic interaction between classically nonconjugated aromatic systems, 100-1  
 Acid salts of graphite: large or small fractional ionization, 544-5  
 Photoluminescence from copper(I) complexes with low-lying metal-to-ligand charge transfer excited states, 759-61  
 Solution properties of ((CO)<sub>5</sub>Mo(pz)) and (((CO)<sub>5</sub>Mo)<sub>2</sub>(pz)): organometallic analogues of ((NH<sub>3</sub>)<sub>5</sub>Ru(pz))<sup>2+</sup> and (((NH<sub>3</sub>)<sub>5</sub>Ru)<sub>2</sub>(pz))<sup>4+</sup> (pz = pyrazine), 859-61  
 Combined use of M.c.d. and resonance Raman spectra for the detection of different electronic transitions in a charge-transfer band of (Mo(CO)<sub>4</sub>L) (L = 2-iminomethylpyridine), 1016-17

## CHELATING DRUG

- Synthesis and characterization of iron complexes of rhodotorulic acid: a novel dihydroxamate siderophore and potential chelating drug, 501-2

## CHELATION

- Steric effects on chelation in carbon-13 nuclear magnetic resonance spectra of β-diketone enolates, 965-7

## CHEMILUMINESCENCE

- 2-(1-Methylindol-3-yl)-3-phenyldihydro-1,4-dioxin 2,3-epidioxide, a dioxetan resulting in efficient ultraviolet chemiluminescence, 781-2

## CHEMISORBED

- Formation of an acyl species from hept-1-ene and carbon monoxide on an evaporated nickel surface, 617-18

## CHEMISORPTION

- Raman spectra of molecules adsorbed on heavy metal oxides. Propylene on zinc oxide: the anionic nature of the adsorbed allyl species, 868-9

## CHIRAL

- An enantioconvergent approach to prostanooids, 436-8  
 Asymmetric synthesis of aziridine-2-carboxylic acid and the formation of chiral serine, 522-3  
 Stereoselectivities in competing (1,2) and (1,3) rearrangements, 672-3  
 General method for determining enantiomeric purities of chiral lactones, 722  
 Phase-transfer catalysis using chiral catalysts. Synthesis of optically active 2-phthalimido-esters, 742-3  
 Molecular catalysis: enhanced rates of thiolysis with high structural and chiral recognition in complexes of a reactive macrocyclic receptor molecule, 949-51  
 Stereospecific synthesis of chiral acetic acid from glycine, 967-8  
 Asymmetric cis-trans photoisomerization of cyclo-octene sensitized by chiral aromatic esters, 1024-5

## CHLORAL

- Formation of abnormal products in the aluminium chloride-catalysed ene additions of chloral and bromal to mono- and 1,2-dialkyl ethylenes, 655-6

## CHLORIDE

- Selective esterification of sucrose using pivaloyl chloride, 664-5

## CHLORINATION

- Bromide catalysis in the preparation of benzylidene trichlorides via photochlorination, 105-6  
 Carbon-13-labelling study of the reaction between 2-(methylthio) ethanol and carbon tetrachloride-phosphines, 208-9  
 Increase in reaction rate consequent on the use of a polymer-supported reagent. Evidence for interaction between a high proportion of the groups of a polymer-supported reagent, 813-15  
 Action of chlorine on a 2-substituted benzotriazole, 932-3  
 Multiple chlorinations of the cyclometallated ring in iridium triaryl phosphite complexes: the crystal and molecular structure of (IrCl<sub>2</sub>(P(OC<sub>6</sub>Cl<sub>3</sub>Me-o)(OC<sub>6</sub>H<sub>4</sub>Me-o)<sub>2</sub>)(pyridine)(PMe<sub>3</sub>)), 973-4

## CHLORINE

Pulsed laser photolysis of chlorocopper(II) complexes in acetonitrile: evidence for chlororadical formation, 207-8

## CHLORO

A novel chain structure in the  $(\text{Pb}_2\text{Cl}_9)_n^{5n-}$  anion; crystal and molecular structure of  $(\text{Co}(\text{NH}_2\text{CH}_2\text{CH}_2\text{NH}_2)_3)_2(\text{Pb}_2\text{Cl}_9)\text{Cl}\cdot 3\text{H}_2\text{O}$ , 347-8

Study of the distribution of metals on the surface of polymer-bound palladium(II) complexes by X-ray photoelectron spectroscopy, 650-1

## CHLORO KETONE

Convenient 'one-flask' synthesis of olefins. Reaction of  $\alpha$ -chloroketones with Grignard reagents and lithium, 847

## CHLOROACETATE

Novel synthesis of benzotrihalides: the pyrolysis of phenyl trihalogenoacetates, 714

## CHLOROALKENE

Conversion of aldehydes and ketones into chloroolefins and acetylenes using chloriodomethane as a chloromethylene source, 446-7

## CHLOROBENZOATE

Stereochemistry of the  $\text{S}_{\text{N}}2'$  reaction with acyclic allylic esters, 454-5

## CHLOROCOPPER

Synthesis, X-ray crystal structure, and properties of a tetranuclear complex formed by oxidation of copper(I) chloride with molecular dioxygen in N-methylpyrrolidin-2-one. Isolation of a catalyst for the oxidative coupling of phenols by dioxygen, 1045-6

## CHLOROCRUOROPORPHYRIN

New syntheses of chlorocruoro- and isochlorocruoro-porphyrins from protoporphyrin-IX, 645

## CHLOROFUORINATION

Fluorinated dichloro hexa- and penta-coordinated sulphur(VI) compounds, 154-5

## CHLOROMETHYLENATION

Conversion of aldehydes and ketones into chloroolefins and acetylenes using chloriodomethane as a chloromethylene source, 446-7

## CHLOROMETHYLSILANE

Novel method for dealkylation of esters, ethers, and acetals by chlorotrimethylsilane-sodium iodide, 874-5

## CHLOROPALLADATION

Mechanism of formation of 4-6 $\eta$ -3-oxo steroid-PdCl complexes, 15-16

## CHLOROPIPERAZINE

Unusual population of the axial-equatorial conformation in NN'-dichloropiperazine, 58-9

## CHLOROPLUMBATE

A novel chain structure in the  $(\text{Pb}_2\text{Cl}_9)_n^{5n-}$  anion; crystal and molecular structure of  $(\text{Co}(\text{NH}_2\text{CH}_2\text{CH}_2\text{NH}_2)_3)_2(\text{Pb}_2\text{Cl}_9)\text{Cl}\cdot 3\text{H}_2\text{O}$ , 347-8

## CHLOROSUCCINIMIDE

New syntheses of 1,4,2,4-benzothiadiazines, 1049-50

## CHLOROURANIUM

Uranium(IV)-crown-ether complexes and cryptates. Proton nuclear magnetic resonance study, and X-ray crystal and molecular structure of tetrachloro(2,5,8,15,18,21-hexaoxatricyclo(20.4.0.0<sup>9,14</sup>)hexacosane)uranium(IV), 90-2

## CHLOROVINYL

Phenyl trans-2-chlorovinyl sulphone, a vinyl cation equivalent, 914-15

## CHOLESTADIENONE

Oxidation of alcohols using benzeneseleninic anhydride, 952-4

## CHOLESTANE

Metal-amine reduction of sterically hindered esters to alkanes, a new method for the deoxygenation of hindered alcohols, 68-9

## CHOLESTANOL

Trifluoroacetylation of alcohols: a newly detected reaction of trifluoroacetic acid, 248

## CHOLESTANONE

New method for reduction of ketones and primary alcohols to hydrocarbons: reaction of the derived selenides with tin hydrides, 41-2

Electrochemical removal of 1,3-dithiane protecting groups, 255-6

New method of access to selenoacetal chemistry: use of tris(phenylseleno)borane, 356

Novel carbon-carbon bond cleavage of  $\alpha$ -azido steroidal ketones, 409-10

## CHOLESTANYL

Reduction of alkyl esters to alkanes by sodium in hexamethylphosphoric triamide. A new method for the deoxygenation of alcohols, 567-8

## CHOLESTENE

Steric mechanism of formation of the PdCl  $\pi$ -allyl derivative from (6 $\beta$ -2H)cholest-4-ene, 747-8

## CHOLESTENOL

$\mu$ -Oxo-bis(chlorotriphenylbismuth): a mild reagent for the oxidation of the hydroxy group, especially in allylic alcohols, 1099-100

## CHOLESTENONE

Mechanism of formation of 4-6 $\eta$ -3-oxo steroid-PdCl complexes, 15-16

Dehydrogenation of steroidal ketones using benzeneseleninic anhydride, 130-1

A silicon-based protecting group for the  $\alpha\beta$ -unsaturation of  $\alpha\beta$ -unsaturated ketones, 177-8

## CHOLESTEROL

Investigations on the ring contraction step in the biosynthesis of A-nor-stanols by the marine sponge *Axinella verrucosa*, 524-5

## CHROMAN

The acid-sensitive proton nuclear magnetic resonance spectra of tocopherols and other derivatives of 6-hydroxychroman, 265-6

## CHROMATE

Correlation of magnetic and optical properties in the organic-intercalated two-dimensional ionic ferromagnet bis(monomethylammonium) tetrachlorochromate(II), 511-12

## CHROMATOGRAPHY

Binaphthyl-2,2'-diyl hydrogen phosphate. A new chiral atropisomeric selector for the resolution of helicenes using high performance liquid chromatography, 173-5

Trimethylgermyl derivatives for the study of silicate structures, 560-1

## CHROMENYLATION

Chromenylation of 2-naphthol and alkylhydroquinones: short syntheses of (2RS,4'R,8'R)- $\alpha$ -tocopherol (vitamin E) and (2RS,4'R,8'R)- $\beta$ -tocopherol, 59-60

## CHROMIUM

Aspects of the coordination chemistry of some electron-rich polyorganosulphur compounds; bis(ethylthio)carbene complexes  $(\text{M}(\text{CO})_5\text{C}(\text{SEt})_2)$  (M = Cr or W) from  $\text{Na}(\text{TosNNC}(\text{SEt})_2)$  (Tos = p-MeC<sub>6</sub>H<sub>4</sub>SO<sub>2</sub>), 146-7

Acetylene linkage at a di-metal centre: X-ray crystal structures of  $(\text{Cr}_2(\text{CO})(\eta\text{-C}_5\text{H}_5)_2(\text{PhC}_2\text{Ph})_2)$  and  $(\text{Mo}_2(\eta\text{-C}_5\text{H}_5)_2(\text{MeO}_2\text{CC}_2\text{CO}_2\text{Me})(\text{HC}_2\text{H})(\text{MeO}_2\text{CC}_2\text{CO}_2\text{Me}))$ , 221-3

The role of stress in nucleus development during dehydration of certain alums, 273-4

Evidence for a second photoactive excited state in a tris( $\beta$ -diketonate)chromium(III) complex, 363-4

Preparation of diarene-metal complexes by potassium atom reduction, 730-1

Synthesis and x-ray crystal and molecular structure of tetrakis(2,2-dimethyl-1-phenylethenyl)chromium(IV), the first structurally-characterized homoleptic alkenyl compound of a transition metal 899-900

$(\text{Cr}(\text{oxalate})_3)^{3-}$  as a broadening agent in nitroxyl spin probe studies, 944-5

Recovery of the chromium tricarbonyl unit in the removal of organic ligands from their chromium carbonyl complexes, 989-90

Thionitrosyl ligand; X-ray molecular structure of dicarbonyl( $\eta^5$ -cyclopentadienyl)thionitrosylchromium, 1036-7

Organometallic compounds in organic synthesis: nucleophilic substitution reactions of N-methylindoletricarbonylchromium(0) 1076-7

## CHROMONE

Structure of conyzorigun, a new chromone from *Ageratum conyzoides*, 152

## CHRYSENE DIOLEPOXIDE

Synthesis of the chrysene bay region anti-diolepoxide from chrysene 585-6

## CHRYSOPHANOL

Synthetic approaches to aclacinomycin and pyrromycin antitumour antibiotics via Diels-Alder reactions of 6-alkoxy-2-pyrones: total synthesis of chrysophanol, helminthosporin and pachybasin, 95-6

## CHRYSOTILE

Investigation of structure composition relationships in the serpentine minerals by combined X-ray K-emission spectrometry

- and high-resolution electron microscopy, 986-7
- CIDNP**  
Anodic functionalization of 1H-perfluoroalkanes. Observation of fluorine-19 chemically induced dynamic nuclear polarization, 118-19
- CINCHONA**  
Stereoconservative transformation of secologanin into meroquinone and its derivatives, 725-6
- CINCHONIDINIUM**  
Phase-transfer catalysis using chiral catalysts. Synthesis of optically active 2-phthalimido-esters, 742-3
- CINE SUBSTITUTION**  
Unusual conditions for cine-substitution in the pyrrole ring: isolation of a pyrroline as an intermediate, 564-5
- CINNAMATE**  
Mechanism of asymmetric hydrogenation catalysed by rhodium(I) trans-4,5-bis(diphenylphosphinomethyl)-2,2-dimethyldioxolan (DIOP) complexes, 321-2  
Treatment of cinnamic acids with polyphosphoric acid, 355  
Correlation between selectivity in photochemical cross-cycloaddition and ionization potential of the reacting olefins, 786-8
- CINNAMONITRILE**  
Selective cyanation of bromostyrenes by pentacyanocobaltate(II) and nuclear magnetic resonance evidence for the formation of intermediate  $\sigma$ -styryl-cobalt(III) and  $\eta$ -cinnamionitrile-cobalt(I) cyano-complexes, 1059-61
- CINNAMOYLOXYALKYL**  
Synthesis of macrocyclic rings by internal photocycloaddition of  $\alpha$ ,  $\omega$ -dicinnamates, 400-1
- CINNAMYL**  
 $\mu$ -Oxo-bis(chlorotriphenylbismuth): a mild reagent for the oxidation of the hydroxy group, especially in allylic alcohols, 1099-100
- CLAISEN REARRANGEMENT**  
A new synthesis of conjugated dienones, 608  
Elimination of an allyloxy-group during the Claisen rearrangement of 1,2-diallyloxyanthraquinone, 900-1
- CLATHRATE**  
A novel tunnel structure containing enclathrated hydrogen peroxide:  $4\text{Na}_2\text{SO}_4 \cdot 2\text{H}_2\text{O}_2 \cdot \text{NaCl}$ , 288-9
- CLAUSENA**  
Clausmarins A and B: two novel spasmolytic terpenoid coumarins from *Clausena pentaphylla* (Roxb.) DC, 281-2
- CLAUSMARIN**  
Clausmarins A and B: two novel spasmolytic terpenoid coumarins from *Clausena pentaphylla* (Roxb.) DC, 281-2
- CLAVANULANATE**  
Reactions of sulphur nucleophiles with activated derivatives of clavulanic acid, 467-8
- CLAVULANATE**  
Total synthesis of clavulanic acid analogues from 7-oxo-3-vinyl-4-oxa-1-azabicyclo(3.2.0)heptanes, 439-41  
Reactions of sulphur nucleophiles with activated derivatives of clavulanic acid, 467-8  
Preparation of the 7-oxo-4-oxa-1-azabicyclo(3.2.0)hept-2-ene system and the reversible cleavage of its oxazoline ring, 469-70  
Total synthesis of methyl (2RS,5RS)-3-methylene-7-oxo-4-oxa-1-azabicyclo(3.2.0)heptane-2-carboxylate, a novel clavulanic acid analogue, 518-19
- CLEAVAGE**  
Novel carbon-carbon reductive cleavage of terphenyls with alkali metal-hexamethylphosphoric triamide, 153-4
- CLUSTER**  
New palladium carbonyl clusters: X-ray crystal structure of  $(\text{Pd}_4(\text{CO})_4(\text{OAc})_4)(\text{AcOH})_2$ , 27-8  
Preparation, crystal structure, and magnetic properties of a trinuclear mixed-valence manganese carboxylate, 62-3  
X-ray crystal structure of  $\text{Sn}_6\text{O}_4(\text{OME})_4$ : an intermediate in the hydrolysis of tin(II) dimethoxide, 112-13  
Mixed rhodium-platinum carbonyl clusters: synthesis and X-ray crystallographic characterization of  $(\text{Rh}_5\text{Pt}(\text{CO})_{15})^-(\text{Ph}_3\text{P})_2\text{N}^+$ , 195-6  
Synthesis of cluster compounds via nucleophilic metal complexes; X-ray crystal structures of  $(\text{Os}_3\text{Pt}(\mu\text{-H})_2(\text{CO})_{10}(\text{C}_6\text{H}_{11}_3\text{P}))$  and  $(\text{Os}_2\text{Pt}_2(\mu\text{-H})_2(\text{CO})_8(\text{Ph}_3\text{P})_2)$ , 260-2  
Preparation and X-ray structure determination of the mixed cluster  $(\text{H}_3\text{CoOs}_3(\text{CO})_{12})$ , 343-4  
Synthesis and molecular structure of  $(\text{Os}_6(\text{CO})_{16}(\text{CMe})_2)$  and  $(\text{Os}_6(\text{CO})_{16}(\text{MeC:CMe})\text{C})$ , derivatives of ethylene and hexaosmium octadecacarbonyl, 421-3  
Selective synthesis of the nonachlorononaborate clusters nonachlorononaboron and nonachlorononaborate dianion, 462-3  
New mixed-metal clusters via metal hydride coupling. Synthesis and crystal structures of  $((\mu_2\text{-H})\text{Os}_3\text{W}(\text{CO})_{12}(\eta^5\text{-C}_5\text{H}_5))$  and  $((\mu_2\text{-H})_3\text{Os}_3\text{W}(\text{CO})_{11}(\eta^5\text{-C}_5\text{H}_5))$ , 534-5  
Polymer-bound tetranuclear iridium carbonyl catalyst, 540-1  
 $(\text{Os}_3(\text{CO})_9\text{H}(\text{SR}))$ , a highly reactive molecule. The X-ray structure of a  $\pi$ -bound ethylene adduct  $(\text{Os}_3(\text{CO})_9\text{H}(\text{C}_2\text{H}_4)(\text{SMe}))$ , 551-2  
Catalytic synthesis of ethanol from carbon monoxide and hydrogen under atmospheric pressure over pyrolyzed rhodium carbonyl clusters on titanium dioxide, zirconium dioxide, and dilanthanum trioxide, 566-7  
Solvation as the determining factor for the redox potential of  $\text{Fe}_4\text{S}_4(\text{S}(\text{CH}_2)_n\text{CO}_2)_6^-$  cluster ions, 703-4  
Bridging hydrides in  $(\text{H}_2\text{Os}_3(\text{CO})_{10})$  and  $((\text{C}_2\text{H}_3)\text{HOs}_3(\text{CO})_{10})$ : a combined X-ray-neutron diffraction study, 723-4  
X-ray crystal and molecular structure of  $(\text{W}_2\text{S}_8\text{Ag}_4(\text{PPh}_3)_4)$ , a compound having a novel metal-sulphur cage fused by two connected six-membered  $\text{WS}_3\text{Ag}_2$  rings, 739  
Crystal structure of tris(tetra-n-butylammonium) tri- $\mu$ -benzenethiolatobis(tri- $\mu$ -sulphido- $(\mu_3$ -sulphido-tris(benzenethiolatoiron))molybdenum)  $(\text{Bu}_4\text{N})_3((\text{PhSFe})_3\text{MoS}_4)_2(\text{SPh})_3$ ; an  $\text{Fe}_3\text{MoS}_4$  cubic cluster dimer, 740-1  
Bond strengths in metal carbonyl clusters, 765-6  
Reactions of gold-phosphine cluster compounds, 907-9  
 $(\text{H}_3\text{Ru}_4(\text{CO})_{12})^-$ : the X-ray crystallographic determination of two structural isomers, 920-1  
Identification of the species  $(\text{Te}_n\text{Se}_{4-n})^{2+}$  by high resolution tellurium-125 and tellurium-123 Fourier transform NMR spectroscopy, 956-7  
125-Tellurium and 77-selenium multinuclear magnetic resonance studies of  $\text{Te}_6^{4+}$ ,  $\text{Te}_{4-n}\text{Se}_n^{2+}$ ,  $\text{Te}_2\text{Se}_4^{2+}$ , and  $\text{Te}_3\text{Se}_3^{2+}$  polyatomic cations, 957-60  
Synthesis and molecular structure of  $(\text{Os}_5(\text{CO})_{15}\text{POMe})$ , 1015-16  
New mode of bonding of a vinyl ligand to an osmium cluster: the X-ray crystal structure of  $(\text{HOs}_3(\text{CO})_{10}(\text{CF}_3\text{CCHCF}_3))$ , 1035-6  
Synthesis, X-ray crystal structure, and properties of a tetranuclear complex formed by oxidation of copper(I) chloride with molecular dioxygen in N-methylpyrrolidin-2-one. Isolation of a catalyst for the oxidative coupling of phenols by dioxygen, 1045-6  
Anchoring of osmium clusters to silica, 1063-4  
Interconversion of  $\mu_2$ -phenolato and  $\mu_3$ -oxodienediyl ligands in triosmium clusters: X-ray crystal structure of 1,1,1,2,2,2,3,3,3-nonacarbonyl-1,2,2,3-di- $\mu$ -hydrido- $(\mu_3$ -3-benzyl-2-oxocyclohexa-3,5-diene-1,1-diyl-1,2-C<sup>-1</sup>-3-O)-triangulo-triosmium(3Os-Os), 1086-8
- COATING**  
Visible light-assisted electrochemical reduction of oxygen at a platinum electrode coated with surface active cobalt(II) and manganese(III) porphyrins, 1106-7
- COBALAMIN**  
Nonenzymic model of the dioldehydratase reaction. Initiation of conversion of ethylene glycol into acetaldehyde on anaerobic photolysis of organocobalamins in the presence of mercapto compounds, 592-3  
Light-induced conversion of ethane-1,2-diol or 2-aminoethanol into acetaldehyde in the presence of 8-methoxy-5'-deoxy-5'-adenosylcobalamin or a simpler cobalt(III) alkyl, 643-4
- COBALOXIME**  
Rearrangement of cyclopropylmethyl and but-3-enyl cobaloximes, 954-6
- COBALT**  
Stereochemistry of the nucleophilic cleavage of cobalt-carbon bonds in organocobalt(IV) compounds, 44-6  
Changes in surface composition of a cobalt-molybdenum binary oxide catalyst during various treatments studied by X-ray photoelectron spectroscopy, 47-8  
Hydrogenolysis of unsaturated alcohols: hydrocyanation and hydrogenation of acetylenes catalysed by pentacyanocobaltate(II) 63-5  
Catalytic conversion of nitric oxide into nitrogen and dinitrogen oxide by dinitrobis(ethylenediamine)cobalt(III) cation, 175-6  
Formation and molecular structure of  $(\eta^5\text{-cyclopentadienyl})(\eta^4\text{-cyclobutyl})\text{phenanthrene}$ rhodium: a cyclobutadiene-metal

- complex derived from the intramolecular cyclodimerization of an acyclic diacetylene, 187-8
- X-ray crystal and molecular structure, absolute configuration, and stereoselectivity of  $(-)_435$ -L-isoleucinato-NN'-ethylenebis( $\alpha$ -methylsalicylideneaminato)cobalt(III), 266-7
- Inter- and intramolecular condensations of cyanide and amide ions with coordinated acetonitrile: an amido acid synthesis. X-ray crystal structure of  $((\text{NH}_3)_3\text{Co}(\text{Me})\text{C}(\text{NH}_2)(\text{NH}_2\cdot\text{CNH}_2)_2)\text{Br}_3\cdot 2/3\text{H}_2\text{O}$ , 289-90
- A mild, regioselective but-2-enolide synthesis and a convenient preparation of acylated dienes, 311-12
- Preparation and X-ray structure determination of the mixed cluster  $(\text{H}_3\text{CoOs}_3(\text{CO})_{12})_2$ , 343-4
- A novel chain structure in the  $(\text{Pb}_2\text{Cl}_6)_n^{5n-}$  anion; crystal and molecular structure of  $(\text{Co}(\text{NH}_2\text{CH}_2\text{CH}_2\text{NH}_2)_3)_2(\text{Pb}_2\text{Cl}_6)_n\text{Cl}\cdot 3\text{H}_2\text{O}$ , 347-8
- Determination of the absolute configuration of bis(dipeptidato)cobaltate(III) complexes by proton nuclear magnetic resonance spectroscopy, 428-9
- Retention of the cobalt-cobalt bond in  $(\text{MeN}(\text{PF}_2)_2)_3\text{Co}_2(\text{CO})_2$  upon halogenation: the X-ray crystal structure of  $(\text{MeN}(\text{PF}_2)_2)_3\text{Co}_2\text{Br}_4$ , 514-15
- Dehydration sequence of cobalt exchanged synthetic A zeolite: evidence for 3-, 4-, 5-, and 6-fold coordination, 548-9
- Selective homo Diels-Alder addition of acetylenic hydrocarbons to norbornadiene catalysed by a cobalt complex, 636-8
- Stereoselective cobalt-catalysed (2+2+2) cross-addition of norbornadiene and norbornene, 638-9
- Stereoselective chelate and amino acid synthesis with chelated 2-iminopropionate; crystal and molecular structures of  $\alpha$ -(N<sup>2</sup>-2-aminoethylamidino)alaninato-ONN''N'''-(ethylenediamine)cobalt(III) and  $\alpha$ -(N<sup>2</sup>-2-aminoethylamidino)alanine-NN''N'''-(chloro)ethylenediaminecobalt(III) tetrachlorozincates, 647-9
- X-ray crystal structures of two products formed in the reaction of dicobalt octacarbonyl with carbon disulphide: dodecacarbonylcarbidohexacobalt disulphide,  $\text{Co}_6\text{C}(\text{CO})_{12}\text{S}_2$ , and bis(enneacarbonyltricobaltcarbon) disulphide,  $(\text{CO})_9\text{Co}_3\text{CSSCCo}_3(\text{CO})_9$ , 841-3
- Absence of common five-coordinate intermediates in the induced reactions of some cobalt(III)-acido complexes, 892-4
- Ferromagnetic coupling and electron transfer in  $\text{CoCu}(\text{ben})_3\cdot 3\text{H}_2\text{O}$  ( $\text{H}_4\text{ben} = \text{NN}'\text{-bis}(2\text{-hydroxy-3-carboxybenzylidene)-1,2\text{-diaminoethane}$ ), 1012-13
- Selective cyanation of bromostyrenes by pentacyanocobaltate(II) and nuclear magnetic resonance evidence for the formation of intermediate  $\sigma$ -styryl-cobalt(III) and  $\eta$ -cinnamonitrile-cobalt(I) cyano-complexes, 1059-61
- Double carbonylation of substituted benzyl chlorides with cobalt carbonyl anion by phase transfer catalysis to give arylpyruvic acids, 1090-1
- Existence of specific binding sites in 1:1 oxidations of reduced parsley 2-iron ferredoxin with inorganic complexes, 1102-3
- Visible light-assisted electrochemical reduction of oxygen at a platinum electrode coated with surface active cobalt(II) and manganese(III) porphyrins, 1106-7
- COBALT CHELATE**  
Electrocatalytic formation of superoxides in the presence of cobalt chelates, 339-40
- COBYRINIC ACID**  
Biosynthesis of vitamin B<sub>12</sub>: proof of A-B structure for sirohydrochlorin by its specific incorporation into cobyric acid, 150-1
- COCHLIOQUINONE**  
Biosynthesis of cochlioquinones, 679-80
- COCONDENSATION**  
Arene-tungsten chemistry: bis(arene)tungsten hydride derivatives; co-condensation of tungsten atoms from an electron gun source with aromatic hydrocarbons, 72-3
- COMPARTMENT**  
Decay of locus populations in a compartmentalized free radical polymerization reaction upon removal of radical source, 381
- COMPLEX**  
X-ray crystal and molecular structure, absolute configuration, and stereoselectivity of  $(-)_435$ -L-isoleucinato-NN'-ethylenebis( $\alpha$ -methylsalicylideneaminato)cobalt(III), 266-7
- New mixed-metal clusters via metal hydride coupling. Synthesis and crystal structures of  $((\mu_2\text{-H})\text{Os}_3\text{W}(\text{CO})_{12}(\eta^5\text{-C}_5\text{H}_5))$  and  $((\mu_2\text{-H})_3\text{Os}_3\text{W}(\text{CO})_{11}(\eta^5\text{-C}_5\text{H}_5))$ , 534-5
- $(\text{Os}_3(\text{CO})_9\text{H}(\text{SR}))$ , a highly reactive molecule. The X-ray structure of a  $\pi$ -bound ethylene adduct  $(\text{Os}_3(\text{CO})_9\text{H}(\text{C}_2\text{H}_4)(\text{SMe}))$ , 551-2
- Inorganic optical activity, 936-7
- Anchoring of osmium clusters to silica, 1063-4
- COMPLEXATION**  
Thermodynamics of formation of 18-crown-6 complexes with arenediazonium and anilinium salts in methanol at 25°C, 386-7
- Isotope effects in molecular complexes of naphthalene, 455-6
- Formation of a novel complex between pyridinium bis(alkoxycarbonyl)methylides and diphenylcyclopropenone; trapping of pyridinium bis(alkoxycarbonyl)methylide cation radicals, 817-19
- COND**  
'Organic metals': alkylthio substitution effects in tetrathiafulvalene-tetracyanoquinodimethane charge-transfer complexes, 18-19
- Comments on the preparation of the one-dimensional conductor N-methylphenazinium 7,7,8,8-tetracyanoquinodimethane, 331-2
- Organic metals: a new class of conducting ion-radical salts based on 7,7,8,8-tetracyanoquinodimethane and iodine, 337-8
- Highly conducting transition metal derivatives of polyacetylene, 489-90
- CONDENSATION**  
Synthesis of zerovalent bis-areneniobium compounds using niobium vapour, 431
- Some metal complexes of macrocyclic ligands incorporating the 1,10-phenanthroline group. X-ray crystal structure of the manganese(II) complex, 476-8
- Preparation of diarenemetal complexes by potassium atom reduction, 730-1
- Preparative applications of metal vapours obtained by evaporation of metal powders from coated filaments: a new preparation of dibenzeneruthenium and observation of its limiting NMR spectrum, 898-9
- Gas-phase condensation of tert-butyl cations with Lewis bases, 938-40
- CONFIGURATION**  
Absolute configuration and biosynthesis of tiliacorine and tilacorine, 226-8
- Structure of infinite polyenes. Ab initio quantum chemical study, 575-6
- Microbial stereo-differentiating reduction of carbonyl compounds; proposed quadrant rule, 668-7
- CONFORMATION**  
Unusual population of the axial-equatorial conformation in NN'-dichloropiperazine, 58-9
- New conformational effect: predominance of the axial conformation in spiro(5.2)octan-4-ol derivatives, 147-8
- Absence of stereoelectronic control in the hydrolysis of a conformationally locked acetal, 171-2
- Microwave spectrum and conformation of glycine, 547-8
- An electron spin resonance study of the cyclobutylhydroxymethyl radical: its conformation, and its ring opening followed by 1,6-transfer of enolic hydrogen, 569-71
- Structure of infinite polyenes. Ab initio quantum chemical study, 575-6
- Circular dichroism of the isotopically dissymmetric molecules (1R,2S)-(1-<sup>2</sup>H)- and (1R,2S)-(1-<sup>18</sup>O)-1,2-dihydroxy-1,2-diphenylethane, 850-2
- Homolytic addition to N-methylene-tert-butylamine: a new route to aminyl radicals, 960-1
- Steric effects on chelation in carbon-13 nuclear magnetic resonance spectra of  $\beta$ -diketone enolates, 965-7
- Bulky alkyls and a hydridoalkyl of zirconium(IV): influence of steric constraints upon (i) conformation and the zirconium-carbon rotational barrier and (ii) the zirconium-carbon bond length. X-ray crystal and molecular structure of  $(\text{Zr}(\eta\text{-C}_5\text{H}_5)_2(\text{CH}(\text{SiMe}_3)_2)\text{Ph})$ , 1081-3
- CONFORMATIONAL**  
Ring inversion in the cyclohexenyl radical, 394-5
- CONJUGATION**  
Evidence of electronic interaction between classically nonconjugated aromatic systems, 100-1
- CONYZORIGUN**  
Structure of conyzorigun, a new chromone from Ageratum conyzoides, 152
- COPE REARRANGEMENT**  
Preparation and chemoselective thermolysis of potential azatricyclic synthons containing an eight-membered nucleus, 915-16

## COPPER

- Adsorption of nitric oxide on copper(100) surfaces; an electron spectroscopic study, 40-1
- Copper derivatives of tetrathiafulvalene, 69-70
- Crystal and molecular structure of  $(\text{Cu}(\text{NO}_3)_2(\text{C}_8\text{H}_{12}\text{N}_2\text{O}_2)_2)_2\text{H}_2\text{O}$  a structure containing an unusual zwitterion of pyridoxamine and a symmetric nitrate-oxygen bridge, 97-8
- Preparation of bis(cis-diacetyltetracarbonylrhenium)copper, 183-4
- Structural barriers to the rates of electron transfer of copper complexes. Oxidation of cytochrome c (II) by copper(II) complexes, 370-2
- Luminescence from  $(\text{Ru}(\text{bipyridyl})_3)_2^+$  ions adsorbed on ion exchange surfaces. Dynamic quenching reactions between adsorbed cations, 408-9
- Cytochrome oxidase models: a binuclear iron-copper site with a bipyrimidine bridge, 483-5
- Macrocyclic enzyme model system: catalysis of ester degradation by a (20)paracyclophane bearing nucleophilic and metal-binding sites, 494-6
- Effects of structural distortion on the ligand exchange reactions of copper(II) Schiff base complexes, 583-4
- Copper-catalysed 1,6-addition of a benzyl Grignard reagent to a dienone: a new synthesis of ring c aromatic diterpenoids, 614-15
- Stereochemistry of the organocuprate reactions of two cis-trans isomeric allylic ethers, 621-3
- A haemocyanin model: a synthetic copper(I) complex having imidazole ligands and reversible dioxygen activity, 634-6
- Novel synthesis of prostaglandin  $\text{E}_2$  involving regioselective ring opening of a 2,3-endo-epoxybicyclo(3.2.0)heptan-6-one acetal with a mixed organocuprate reagent, 662-4
- Photoluminescence from copper(I) complexes with low-lying metal-to-ligand charge transfer excited states, 759-61
- Preparation of urethanes from carbon dioxide via a copper(I) carbamate complex, 815-16
- Enthalpy of formation of copper(II) complexes with 14-membered tetraaza macrocycles, 833-4
- Bistriphenylphosphinecuprapentaborane, an unusual copper-borane, 866-7
- Copper(I) ethylenediamine carbonyl complexes: 'models' for carbon monoxide activation. X-ray structure of the ion-pair carbonylethylenediaminetetraphenylboratocopper, 921-2
- Ferromagnetic coupling and electron transfer in  $\text{CoCu}(\text{ben})_3\text{H}_2\text{O}$  ( $\text{H}_4\text{ben} = \text{NN}'\text{-bis}(2\text{-hydroxy-3-carboxybenzylidene})\text{-1,2-diaminoethane}$ ), 1012-13
- Lithium phenylthio(trimethylstannyl)cuprate, a new reagent for conjugate addition of the trimethylstannyl group. The synthesis of  $\beta$ -trimethylstannyl- $\alpha\beta$ -unsaturated ketones, 1033-4
- Synthesis, X-ray crystal structure, and properties of a tetranuclear complex formed by oxidation of copper(I) chloride with molecular dioxygen in N-methylpyrrolidin-2-one. Isolation of a catalyst for the oxidative coupling of phenols by dioxygen, 1045-6
- X-ray crystal structure of the ternary complex  $(\text{Cu}(3'\text{-GMP})(\text{phen})(\text{H}_2\text{O}))_2 \cdot 7\text{H}_2\text{O}$  (GMP = guanosine monophosphate, phen = 1, 10-phenanthroline): unusual absence of M-N(7) bonding in a metal-GMP complex, 1053-5
- Synthesis of some medium- and large-ring cycloalk-2-ene-1,4-diones by intramolecular coupling of  $\alpha\omega$ -bis-diazoketones, 1069-70
- COPPER BROMIDE**
- Bromodemetalation of  $\beta$ -methoxyphenethylthallium(III) diacetate and  $\beta$ -methoxyphenethylmercury(II) acetate with copper-(I) and -(II) bromide, direct evidence for alkyl radicals in bromodethallation by the spin trapping technique, 65-6
- COPPER CHLORIDE**
- Pulsed laser photolysis of chlorocopper(II) complexes in acetonitrile: evidence for chlororadical formation, 207-8
- COPPER IODIDE**
- Copper(I) ethylenediamine carbonyl complexes: 'models' for carbon monoxide activation. X-ray structure of the ion-pair carbonylethylenediaminetetraphenylboratocopper, 921-2
- Substitution of allylic sulphides of benzothiazole-2-thiol with organomagnesium compounds in the presence of copper(I) iodide. A regioselective synthesis of olefins, 1085-6
- COROMANDALIN**
- Curassavine, an alkaloid from *Heliotropium curassavicum* Linn. with a  $\text{C}_8$  neric acid skeleton, 423-4
- CORPUS**
- Juvenile hormone biosynthesis: homomevalonate and mevalonate

synthesis by insect corpus allatum enzymes, 290-2

## CORPUS ALLATUM

- Juvenile hormone biosynthesis: homomevalonate and mevalonate synthesis by insect corpus allatum enzymes, 290-2
- CORRELATION MAP**
- Experimental chemical shift correlation maps in nuclear magnetic resonance spectroscopy, 684-6
- CORYNEBACTERIUM**
- Microbial epoxidation of long-chain terminal olefins, 849-50
- COSOLVENT EFFECT**
- Mechanisms of aqueous solvolyses, 418-20
- COUMARIN**
- Clausmarins A and B: two novel spasmolytic terpenoid coumarins from *Clausena pentaphylla* (Roxb.)DC, 281-2
- COUPLING**
- Anodically induced decomposition of some arylnickel(II) phosphine complexes, 66-8
- Radical coupling products derived from ammonium ylides. Competing (1,2), (1,3), and (1,4) anionic rearrangements, 670-1
- Ferromagnetic coupling and electron transfer in  $\text{CoCu}(\text{ben})_3\text{H}_2\text{O}$  ( $\text{H}_4\text{ben} = \text{NN}'\text{-bis}(2\text{-hydroxy-3-carboxybenzylidene})\text{-1,2-diaminoethane}$ ), 1012-13
- CRAFT**
- Acetyl exchange between acetylmesitylene and acetyl chloride under Friedel-Crafts conditions, 271-2
- CRESOL**
- 'One-pot' conversion of Mannich bases via quaternary ammonium salts into the corresponding methyl compounds with sodium cyanoborohydride in hexamethylphosphoramide, 1089-90
- CROTONYLACETYLCYSTEAMINE**
- Stereochemical course of dehydration catalysed by the yeast fatty acid synthetase, 193-4
- CROTYL**
- $\mu$ -Oxo-bis(chlorotriphenylbismuth): a mild reagent for the oxidation of the hydroxy group, especially in allylic alcohols, 1099-100
- CROWN**
- Selective acylation of amines using 18-crown-6, 471-2
- CROWN ETHER**
- Uranium(IV)-crown-ether complexes and cryptates. Proton nuclear magnetic resonance study, and X-ray crystal and molecular structure of tetrachloro(2,5,8,15,18,21-hexaoxatricyclo(20.4.0.0<sup>9,14</sup>)hexacosane)uranium(IV), 90-2
- Kinetics of the esterification of potassium p-nitrobenzoate by benzyl bromide using dicyclohexyl-18-crown-6 as phase transfer agent, 282-3
- Synthesis of 'crown ether' macrocyclic bislactones using caesium carboxylates of pyridine and of benzene dicarboxylic acids, 383-4
- Thermodynamics of formation of 18-crown-6 complexes with arenediazonium and anilinium salts in methanol at 25°C, 386-7
- Cation complexing photochromic materials involving bisanthracenes linked by a polyether chain. Preparation of a crown-ether by photocycloisomerization, 403-4
- General synthesis of substituted and unsubstituted crown ethers, 504-5
- Crown ether acetals: detection of cation binding by kinetic measurements, 507-8
- Coordination chemistry of macrocyclic polyethers. An unusual conformation of complexed 18-crown-6; X-ray crystal and molecular structure of a 1:2 host-guest complex of 18-crown-6 with benzenesulphonamide, 595-6
- X-ray crystal structure of a 1,4-dihydropyridine-crown ether-sodium perchlorate complex crystallized with a molecule of acetone, 923-4
- CRYPTAND**
- Syntheses of some lanthanoid complexes with 4,7,13,16,21,24-hexaoxa-1,10-diazabicyclo(8.8.8)hexacosane. Crystal structure of a europium(III) perchlorate derivative, 788-9
- CRYPTATE**
- X-ray crystal structure of a cryptate complex of lanthanum nitrate, 549-50
- CRYPTOPLEURINE**
- An economical synthesis of the alkaloids, 3,4-dimethoxy- $\omega$ -(2-piperidyl)acetophenone, julandine, and cryptopleurine, 794-5
- CRYSTAL**
- An octahedral rhenium(III) cluster: X-ray crystal structure of  $\text{Na}_4\text{Re}_6\text{S}_{10}(\text{S}_2)$ , 879-80
- CRYSTAL STRUCTURE**
- Stereochemistry of the adduct from tert-butylcyanoketene and 2-

methylbut-2-ene; X-ray crystal and molecular structure of 2-cyano-3,3,4-trimethyl-2-tert-butylcyclobutyl p-chlorobenzoate, 10-11

New palladium carbonyl clusters: X-ray crystal structure of  $(\text{Pd}_4(\text{CO})_4(\text{OAc})_4)(\text{AcOH})_2$ , 27-8

X-ray crystal and molecular structure of 1,19-diethoxycarbonyl-2,3,7,8,12,13,17,18-octamethylbilatriene-abc hydrobromide, 33-4

Synthesis of the dilithium salt of cyanamide in liquid lithium; X-ray crystal structure of  $\text{Li}_2\text{NCN}$ , 52-3

Preparation, crystal structure, and magnetic properties of a trinuclear mixed-valence manganese carboxylate, 62-3

X-ray crystal structure of canella, a novel antimicrobial sesquiterpene from *Canella winterana*, 75-6

New alkaloids from *Aristolotelia chilensis* (Mol.) Stunz, 79-80

Rhodium(II)-catalysed addition of dimethyl diazomalonate to thiophene: a simple synthesis of thiophene bismethoxycarbonylmethylides and crystal and molecular structure of the unsubstituted methylide, 83-4

Uranium(IV)-crown-ether complexes and cryptates. Proton nuclear magnetic resonance study, and X-ray crystal and molecular structure of tetrachloro(2,5,8,15,18,21-hexaoxatricyclo(20.4.0.0<sup>9,14</sup>hexacosane)uranium(IV), 90-2

Crystal and molecular structure of  $(\text{Cu}(\text{NO}_3)_2(\text{C}_8\text{H}_{12}\text{N}_2\text{O}_2)_2)_2\text{H}_2\text{O}$  a structure containing an unusual zwitterion of pyridoxamine and a symmetric nitrate-oxygen bridge, 97-8

1,3-Dipolar cycloaddition reactions of imines of  $\alpha$ -amino acid esters: X-ray crystal and molecular structure of methyl 4-(2-furyl)-2,7-diphenyl-6,8-dioxo-3,7-diazabicyclo(3.3.0)octane-2-carboxylate, 109-11

Novel reaction of 2-aryl-3,3-dimethylbicyclo(2.2.1)heptan-2-yl cations; X-ray crystal and molecular structure of 11-fluorosulphonyl-7,8,12-trimethyltetracyclo(7.4.0.0<sup>2,7</sup>.0<sup>4,8</sup>)trideca-1(9),10,12-triene, 111-12

X-ray crystal structure of  $\text{Sn}_6\text{O}_4(\text{OME})_4$ : an intermediate in the hydrolysis of tin(II) dimethoxide, 112-13

1-Isopropyl-4,6-dimethyl-6-phospha(V)bicyclo(3.1.1)hept-3-ene 6-oxide: a distorted phosphatane synthesized from  $\alpha$ -pinene and the methylphosphonous dichloride-aluminium chloride complex; X-ray crystal and molecular structure, 125-6

A new phase of crystalline anthracene: its importance in solid-state photodimerization, 134-5

Neutral and anionic silylmethyl complexes of Group\*IIIa and lanthanoid metals; the X-ray crystal and molecular structure of  $(\text{Li}(\text{thf})_4)(\text{Yb}(\text{CH}(\text{SiMe}_3)_2)_2\text{Cl})$  (thf = tetrahydrofuran), 140-2

Synthesis and X-ray structure of an  $\eta^3$  phenalenyl-platinum complex, 142-3

Asperic acid, a new sesquiterpenoid of the carotane group, a metabolite from *Aspergillus terreus* IFO-6123. X-ray crystal and molecular structure of its p-bromobenzoate, 160-1

Reaction of bis(triethylphosphine)platinum and pentakis(tert-butyl isocyanide)ruthenium with dicarba-nido-hexaboranes(8): molecular structures of (nido- $\mu_{4,5}$ -(trans-(Et<sub>3</sub>P)<sub>2</sub>Pt(H))- $\mu_{5,6}$ -H-2,3-C<sub>2</sub>B<sub>4</sub>H<sub>6</sub>), (closo-1,1-(Et<sub>3</sub>P)<sub>2</sub>-2,3-Me<sub>2</sub>-1,2,3-PtC<sub>2</sub>B<sub>4</sub>H<sub>4</sub>) and  $(\text{RuH}(\text{Bu}^t\text{NC})_5)^+$  (nido-2,3-Me<sub>2</sub>-2,3-C<sub>2</sub>B<sub>4</sub>H<sub>5</sub>)<sup>-</sup>, 169-71

Formation and molecular structure of  $(\eta^5\text{-cyclopentadienyl})-(\eta^4\text{-cyclobuta(1)phenanthrene})\text{rhodium}$ : a cyclobutadiene-metal complex derived from the intramolecular cyclodimerization of an acyclic diacetylene, 187-8

Cycloguanil hydrochloride: X-ray crystal structure of the antifolate drug, 188-90

Mixed rhodium-platinum carbonyl clusters: synthesis and X-ray crystallographic characterization of  $(\text{Rh}_3\text{Pt}(\text{CO})_{15})^-(\text{Ph}_3\text{P})_2\text{N}^+$ , 195-6

X-ray crystal structures of a thiabenzene 1-oxide and its 2-azathia-analogues, 197-8

Novel salts of graphite and a boron nitride salt, 200-1

Structure of the compound purported to be NN-bis(chloromethyl)dimethylsilylacetamide: X-ray crystal structure analysis of the novel five-membered oxygen-, silicon-, and nitrogen-containing heterocycle (O-Si)-chloro(N-chlorodimethylsilylacetamido)methyl)dimethylsilane, 209-10

X-ray photoelectron diffraction: a novel method of structural analysis in complex monocrystalline solids, 210-11

A bicyclic sulphur-nitrogen cation: the synthesis and crystal structure of  $\text{S}_4\text{N}_5\text{Cl}$ , 212-13

Acetylene linkage at a di-metal centre: X-ray crystal structures of  $(\text{Cr}_2(\text{CO})(\eta\text{-C}_5\text{H}_5)_2(\text{PhC}_2\text{Ph})_2)$  and  $(\text{Mo}_2(\eta\text{-C}_5\text{H}_5)_2(\text{MeO}_2\text{CC}_2\text{CO}_2\text{Me})(\text{HC}_2\text{H})(\text{MeO}_2\text{CC}_2\text{CO}_2\text{Me})_2)$ , 221-3

X-ray crystal structure of  $(\text{AsPh}_4)^+(\text{NSF}_2\text{NSO}_2\text{F})^-$ : three

different types of sulphur-nitrogen bonds in the anion, 226  
Unusual reaction of uranyl nitrate with 2,6-diacetylpyridine bis(2-pyridylhydrazine): X-ray structure of nitrate(2,6-diacetylpyridine-bis(2-pyridylhydrazine)-N<sub>4</sub>)uranyl tetranitratodioxouranium, 235-6

An unusually stable thionitrite from N-acetyl-D,L-penicillamine; X-ray crystal and molecular structure of 2-(acetylamino)-2-carboxy-1,1-dimethylethyl thionitrite, 249-50

A novel type of platinum-carbon interaction and a model for the final stage in reductive elimination processes involving carbon-carbon coupling at platinum; synthesis and molecular geometry of (1,N,N'- $\eta$ -2,6-bis((dimethylamino)methyl)toluene)iodoplatinum(II) tetrafluoroborate, 250-2

Carbonylation of the  $\eta^3$ -vinylcarbene ligand. Synthesis and X-ray crystal and molecular structure of an ( $\eta^4$ -vinylketene) iron complex, 252-3

Synthesis of cluster compounds via nucleophilic metal complexes; X-ray crystal structures of  $(\text{Os}_3\text{Pt}(\mu\text{-H})_2(\text{CO})_{10}(\text{C}_6\text{H}_{11})_3\text{P})$  and  $(\text{Os}_2\text{Pt}_2(\mu\text{-H})_2(\text{CO})_8(\text{Ph}_3\text{P})_2)$ , 260-2

Alkaline earth metal complexes of pyridinyl containing Schiff base macrocycles: X-ray crystal and molecular structures of the calcium and strontium complexes, 279-80

Inter- and intramolecular condensations of cyanide and amide ions with coordinated acetonitrile: an amido acid synthesis. X-ray crystal structure of  $((\text{NH}_3)_3\text{Co}(\text{Me})\text{C}(\text{NH}_2)(\text{NH}_2:\text{CNH}_2)_2)\text{Br}_3 \cdot 2/3\text{H}_2\text{O}$ , 289-90

X-ray structure of the antibiotic rutamycin, 318-19

Structural consequences of ligand and metal substitution in metallocarboranes; the crystal and molecular structures of 3-(C<sub>2</sub>H<sub>4</sub>(NMe<sub>2</sub>)<sub>2</sub>)-3,1,2-PdC<sub>2</sub>B<sub>9</sub>H<sub>11</sub> and 3,3-(PMe<sub>3</sub>)<sub>2</sub>-3,1,2-PdC<sub>2</sub>B<sub>9</sub>H<sub>11</sub>, 322-4

$(\text{Ir}_4(\text{CO})_8((\text{MeCO}_2)_2\text{C}_2)_4)$ : a rectangular cluster, 340-1

Preparation and X-ray structure determination of the mixed cluster  $(\text{H}_3\text{CoOs}_3(\text{CO})_{12})$ , 343-4

A novel chain structure in the  $(\text{Pb}_2\text{Cl}_9)_n^{5n-}$  anion; crystal and molecular structure of  $(\text{Co}(\text{NH}_2\text{CH}_2\text{CH}_2\text{NH}_2)_3)_2(\text{Pb}_2\text{Cl}_9)\text{Cl} \cdot 3\text{H}_2\text{O}$ , 347-8

X-ray analysis of the triterpene papyriogenin G, 364-5

Structures and properties of isomeric cyclodiphosph(III)azanes; X-ray crystal and molecular structure of 2,4-dipiperidino-1,3-ditert-butylcyclodiphosph(III)azane, 372-3

Synthesis of a sym-oxepin oxide with restricted conformational mobility and altered reactivity. X-ray crystal and molecular structure of 4,7-dibromo-3a,7a,5,6-diepoxyperhydroindene, 377-9

A planar, cyclic sulphur-nitrogen anion: the X-ray crystal and molecular structure of  $(\text{Bu}_4\text{N})^+(\text{S}_3\text{N}_3)^-$ , 391-2

Template synthesis of a bimetallic complex of a 30-membered decadentate macrocyclic ligand: the crystal and molecular structure of a lead(II) complex, 415-16

Modhephene: a sesquiterpenoid carbocyclic (3.3.3)propellane. X-ray crystal structure of the corresponding diol, 420-1

Synthesis and molecular structure of  $(\text{Os}_6(\text{CO})_{16}(\text{CMe}_2)_2)$  and  $(\text{Os}_6(\text{CO})_{16}(\text{MeC}:\text{CMe})\text{C})$ , derivatives of ethylene and hexaosmium octadecacarbonyl, 421-3

X-ray structure of  $(\eta^5\text{-C}_5\text{H}_5)\text{W}(\text{CO})_2\text{C}_{15}\text{H}_{15}$ : a compound containing three unusually bonded five-membered rings, 451-2

X-ray molecular structure and reactions of bis(styrene) bis(triphenylphosphine)ruthenium(0); the first sixteen-electron ruthenium(0) species, 463-4

Synthesis and molecular structures of chloro(trimethylphosphine)tris(trimethylsilylmethyl)molybdenum(IV) and di- $\mu$ -chloro-bis( $\eta^2$ -trimethylsilylmethylcarbonyl)bis(carbonyl)trimethylphosphinemolybdenum(II), 465-6

Some metal complexes of macrocyclic ligands incorporating the 1,10-phenanthroline group. X-ray crystal structure of the manganese(II) complex, 476-8

A new and versatile chelating dithio ligand: X-ray crystal structure of  $(\text{Ru}(\text{CO})(\text{SC}_6\text{H}_3\text{Me}-\text{o}-\text{SC}_6\text{H}_4\text{Me})(\eta\text{-C}_5\text{H}_5))$ , 486-8

Location of superage sodium ions and water molecules in hydrated NaX zeolite, 493-4

Preparation and molecular structure of  $(\text{Ta}(\text{H}_2\text{Al}(\text{OC}_2\text{H}_4\text{OME})_2)(\text{Me}_2\text{PC}_2\text{H}_4\text{PMe}_2)_2)_2$ , a coordinatively unsaturated aluminohydride adduct of tantalum(I), 500-1

Synthesis and molecular geometry of novel di- and tri-nuclear iron complexes resulting from the interaction of  $(\text{Fe}_2(\text{CO})_9)$  with  $\text{R}-\text{N}=\text{S}=\text{N}-\text{R}$  (R = tert-butyl or p-tolyl); X-ray crystal structures of  $(\text{Fe}_2(\text{CO})_6(\text{RNC}(\text{O})\text{S}))$  and  $(\text{Fe}_3(\text{CO})_9(\text{RNS})\text{S})$ , 506-7

Reaction of o-hydroxyacetophenone with dichlorophenylphosphine

- X-ray crystal and molecular structure of an unusual tricyclic tetraoxaphospha-undecane, 510-11
- Retention of the cobalt-cobalt bond in  $(\text{MeN}(\text{PF}_2)_2)_3\text{Co}_2(\text{CO})_2$  upon halogenation: the X-ray crystal structure of  $(\text{MeN}(\text{PF}_2)_2)_3\text{Co}_2\text{Br}_4$ , 514-15
- Andilesin, a  $\text{C}_{25}$  polyisoprenoid from *Aspergillus* sp. X-ray crystallographic and spectroscopic determination of the structure, 533-4
- New mixed-metal clusters via metal hydride coupling. Synthesis and crystal structures of  $(\mu_2\text{-H})\text{Os}_3\text{W}(\text{CO})_{12}(\eta^5\text{-C}_5\text{H}_5)$  and  $(\mu_2\text{-H})_3\text{Os}_3\text{W}(\text{CO})_{11}(\eta^5\text{-C}_5\text{H}_5)$ , 534-5
- X-ray crystal structure of a cryptate complex of lanthanum nitrate, 549-50
- $(\text{Os}_3(\text{CO})_9\text{H}(\text{SR}))$ , a highly reactive molecule. The X-ray structure of a  $\pi$ -bound ethylene adduct  $(\text{Os}_3(\text{CO})_9\text{H}(\text{C}_2\text{H}_4)(\text{SMe}))$ , 551-2
- X-ray crystal and molecular structure of a dispirothian: 1,1,3,3,7,7,9,9-octamethyl-2,8-dioxo-11-thiadispiro(4.0.4.1)undecane-4,10-dione, 555-6
- Solanasone: a novel sesquiterpene ketone from *Nicotiana tabacum* X-ray structure determination of the corresponding oxime, 563-4
- 1:2 Metalloporphyrin nitroaromatic sandwich complexes: X-ray crystal structure of one such complex, 571-2
- Structure and reactivity in the group 5B tert-butylimido complexes  $(\text{Me}_2\text{N})_3\text{M}=\text{NCMe}_3$ ; X-ray crystal and molecular structure of N-tert-butylimidotris(dimethylamido)tantalum, 579-80
- Novel coordination numbers in scandium(III) and yttrium(III) nitrate complexes. X-ray crystal structures of  $\text{Sc}(\text{NO}_3)_3 \cdot 2\text{N}_2\text{O}_4$  and  $\text{Y}(\text{NO}_3)_3 \cdot 2\text{N}_2\text{O}_4$ , 580-1
- Coordination chemistry of macrocyclic polyethers. An unusual conformation of complexed 18-crown-6; X-ray crystal and molecular structure of a 1:2 host-guest complex of 18-crown-6 with benzenesulphonamide, 595-6
- First case of an eleven coordinated trivalent lanthanoid: X-ray crystal structure of penta-aquatri(nitrato)lanthanum(III) monohydrate, 616-17
- Preparation and crystal structure of a new sulphur nitride,  $\text{S}_5\text{N}_6$ ; a molecular basket, 642-3
- Stereoselective chelate and amino acid synthesis with chelated 2-iminopropionate; crystal and molecular structures of  $\alpha$ -(N<sup>2</sup>-2-aminoethylamidino)alaninato-ONN<sup>+</sup>N<sup>+</sup>-(ethylenediamine)cobalt(III) and  $\alpha$ -(N<sup>2</sup>-2-aminoethylamidino)alanine-NN<sup>+</sup>N<sup>+</sup>-(chloro)ethylenediaminecobalt(III) tetrachlorozincates, 647-9
- The constitution of Hector's base; X-ray crystal and molecular structure of 5-imino-4-phenyl-3-phenylamino-4H-1,2,4-thiadiazoline, 652-4
- X-ray crystal structure of 13,14,15-trithiapentacyclo(9.5.1.1<sup>3,9</sup>.0<sup>4,8</sup>.0<sup>12,16</sup>)octadec-5-ene, 658
- Striatin A, B, and C: novel diterpenoid antibiotics from *Cyathus striatus* X-ray crystal structure of striatin A, 665-6
- X-ray determination of the structure of the polyether antibiotic K-41, 682-3
- Synthesis, epimerization, X-ray structure, and absolute configuration of an optically active molybdenum complex having five independent ligands, 691-2
- X-ray structure, conformation, and absolute configuration of 8-bromotetra-O-methyl-(+)-catechin, 695-6
- X-ray crystal structure of sodium bis(N-methylhydantoinato) gold(I) tetrahydrate; a linear, planar complex of pharmacological interest stabilized by two nitrogen ligands, 711-12
- New stereoselective synthesis of 9-methyl-cis-decalin derivatives by double Michael reaction of 3,5-dimethyl-4-methylenecyclohex-2-enone and dimethyl 3-oxoglutarate; X-ray crystal and molecular structure of two of the products, 717-18
- Bridging hydrides in  $(\text{H}_2\text{Os}_3(\text{CO})_{10})$  and  $(\text{C}_2\text{H}_3)\text{HOs}_3(\text{CO})_{10}$ : a combined X-ray-neutron diffraction study, 723-4
- X-ray crystal structure of an ozonide: 4-(4-nitrophenylmethyl)-1-phenyl-1,4-epoxy-1H-2,3-benzodioxepin-5(4H)one, 729-30
- X-ray crystal and molecular structure of  $(\text{W}_2\text{S}_8\text{Ag}_4(\text{PPh}_3)_4)$ , a compound having a novel metal-sulphur cage fused by two connected six-membered  $\text{WS}_3\text{Ag}_2$  rings, 739
- Crystal structure of tris(tetra-n-butylammonium) tri- $\mu$ -benzenethiolatobis(tri- $\mu$ -sulphido- $(\mu_3$ -sulphido-tris(benzenethiolatoiron))molybdenum)  $(\text{Bu}^n_4\text{N})_3((\text{PhSF}_e)_3\text{MoS}_4)_2(\text{SPh})_3$ ; an  $\text{Fe}_3\text{MoS}_4$  cubic cluster dimer, 740-1
- Reactions of dimethyl 3-oxoglutarate with zerovalent compounds of palladium and platinum. Preparation of 1-metallacyclobutan-3-one complexes and the X-ray crystal structure of 2,4-bis(methoxycarbonyl)-1,1-bis(triphenylphosphine)platinacyclobutan-3-one, 744-5
- Syntheses of some lanthanoid complexes with 4,7,13,16,21,24-hexaoxa-1,10-diazabicyclo(8.8.8)hexacosane. Crystal structure of a europium(III) perchlorate derivative, 788-9
- Formation and X-ray crystal structure of 1,1,6,6-tetraphenyl-1,6-distannacyclodecane, 791-2
- X-ray structure of staurosporine: a new alkaloid from a *Streptomyces* strain, 800-1
- Crystal and molecular structure of 3,3'-thiobis(2-methyl-1-phenylimidazo-(1,5-a)pyridinium) bistetrafluoroborate; a potent new sulphur containing curariform agent, 816-17
- Unusual incorporation of the cyano group of tert-butylcyanoketene into a cycloadduct. X-ray structure of the pyrimido(1,6-e)(1,3-s)dioxazine formed, 820-1
- A rhenium polyphenyl complex: X-ray diffraction analysis of tris( $\eta^1$ -phenyl)bis(diethylphenylphosphine)rhenium, 825-6
- X-ray crystal structure of a planar, high-spin iron(II) complex of a pentadentate unsaturated macrocycle formed by reaction of 2,9-di(1-methylhydrazino)-1,10-phenanthroline monohydrochloride with 2,6-diacetylpyridine, 828-9
- Evidence for the ready insertion of rhodium into a carbon-hydrogen bond of ethylene; crystal and molecular structure of  $\mu$ -but-2-ene- $\mu$ -ethylenebis- $(\eta^5$ -1-methylindenyl)dirhodium, 839-41
- X-ray crystal structures of two products formed in the reaction of dicobalt octacarbonyl with carbon disulphide: dodecacarbonylcarbido-hexacobalt disulphide,  $\text{Co}_6\text{C}(\text{CO})_{12}\text{S}_2$ , and bis(enneacarbonyltribaltcarbon) disulphide,  $(\text{CO})_9\text{Co}_3\text{CSSCCO}_3(\text{CO})_9$ , 841-3
- X-ray molecular structure of the asymmetrically bridged ester complex di- $\mu$ -oxobis(cyclohexane-1,2-diolato)oxo(quinuclidine)osmium(VI),  $(\text{OsO}_2(\text{O}_2\text{C}_6\text{H}_{10})(\text{C}_7\text{H}_{13}\text{N})_2)$ , 853-4
- Photolysis of imidazole N(3)-oxides. Formation of unsymmetrical benzil di-imines; X-ray crystal structure of one such di-imine, 857-8
- Formation of platinum(II) compounds containing isomeric  $\sigma$ -vinylic and  $\sigma$ -allylic six-membered chelate rings by deprotonation of the coordinated isopropenyl group: X-ray structure of the  $\sigma$ -vinylic complex di- $\mu$ -acetato-bis(o-isopropenylphenyl(diphenyl)arsineplatinum(II)), 861-3
- X-ray crystal structure of the thallium salt of antibiotic-6016, a new polyether ionophore, 875-6
- Sulphur inversion in dimolybdenum complexes: X-ray crystal structure of  $(\text{Mo}_2(\text{CO})_2(\text{P}(\text{OMe})_3)(\mu_2\text{-SCMe}_3)_3(\eta^7\text{-C}_7\text{H}_7))$ , 878-9
- Synthesis and x-ray crystal and molecular structure of tetrakis(2,2-dimethyl-1-phenylethenyl)chromium(IV), the first structurally-characterized homoleptic alkenyl compound of a transition metal 899-900
- $(\text{H}_3\text{Ru}_4(\text{CO})_{12})$ : the X-ray crystallographic determination of two structural isomers, 920-1
- Copper(I) ethylenediamine carbonyl complexes: 'models' for carbon monoxide activation. X-ray structure of the ion-pair carbonyl ethylenediamine tetraphenylborate copper, 921-2
- X-ray crystal structure of a 1,4-dihydropyridine-crown ether-sodium perchlorate complex crystallized with a molecule of acetone, 923-4
- Graphite lamellar compounds. A new route to transition metal intercalates, 927-8
- Preparation and X-ray crystal structure of diphenylbenzoyldifluorophosphorane, 946-7
- Multiple chlorinations of the cyclometallated ring in iridium triaryl phosphite complexes: the crystal and molecular structure of  $(\text{IrCl}_2(\text{P}(\text{OC}_6\text{Cl}_3\text{Me-o})(\text{OC}_6\text{H}_4\text{Me-o})_2)(\text{pyridine})(\text{PMe}_3))$ , 973-4
- Isolation of intermediates in the acid hydrolysis of  $(\text{Pt}(\text{PPh}_3)_2(\text{O}_2))$ ; the X-ray structure of  $(\text{Pt}_2(\text{O}_2)(\text{OH})(\text{PPh}_3)_4)(\text{ClO}_4) \cdot 2\text{C}_6\text{H}_6$ , 991-2
- The  $3_{10}$  helical conformation of a pentapeptide containing  $\alpha$ -aminoisobutyric acid (Aib): X-ray crystal structure of tos-(Aib)<sub>5</sub>-OMe, 996-7
- Formation of nona(ethyl isocyanide)diiron from penta(ethyl isocyanide)iron and reaction of penta(tert-butyl isocyanide)iron with diphenylacetylene; X-ray crystal structures of nona(ethyl isocyanide)diiron and tris(tert-butyl isocyanide)(1,4-bis-(tert-butylimino)-2,3-diphenylbuta-1,3-diene)iron, 1000-1
- X-ray crystal structures of anhydrous sodium and potassium complexes of an open chain polyether diol, 1001-3
- 'Capped' tri-ruthenium carbonyl cluster: X-ray crystal structure of



- (Ru<sub>3</sub>(CO)<sub>9</sub>(MeSi(PBu<sub>3</sub>))<sub>3</sub>), 1005-6  
 Synthesis, X-ray crystal structure, and chemistry of the cation (( $\eta$ -MePh)Mo( $\mu$ -SMe)<sub>4</sub>Mo( $\eta$ -MePh))<sup>2+</sup>; easy D<sub>2</sub>O-NaOD catalysed hydrogen-deuterium exchange of the methyl hydrogens of a  $\eta$ -bonded toluene ligand, 1009-11  
 Synthesis and molecular structure of (Os<sub>5</sub>(CO)<sub>15</sub>POMe), 1015-16  
 Carbon-carbon bond-making by trapping of a nucleophilic carbene (from an electron-rich olefin) by a  $\sigma$ - $\pi$ -acetylido(hexacarbonyl) di-iron complex; X-ray crystal and molecular structure, 1017-19  
 Opening of the phosphorus-nitrogen bond of bicyclic phosphoranes  
 Synthesis and X-ray crystal and molecular structure of rhodium complexes of perhydro-1,3,6,2-dioxazaphosphocine, 1022-4  
 New mode of bonding of a vinyl ligand to an osmium cluster: the X-ray crystal structure of (HOs<sub>3</sub>(CO)<sub>10</sub>(CF<sub>3</sub>CCHCF<sub>3</sub>)), 1035-6  
 Thionitrosyl ligand; X-ray molecular structure of dicarbonyl( $\eta^5$ -cyclopentadienyl)thionitrosylchromium, 1036-7  
 Synthesis, X-ray crystal structure, and properties of a tetranuclear complex formed by oxidation of copper(I) chloride with molecular dioxygen in N-methylpyrrolidin-2-one. Isolation of a catalyst for the oxidative coupling of phenols by dioxygen, 1045-6  
 Evidence for an almost 'T-shaped' coordination geometry for carbon in the bis(alkylidene) complex Ta(CHCMe<sub>3</sub>)<sub>2</sub>(2,4,6-Me<sub>3</sub>C<sub>6</sub>H<sub>2</sub>)(PMe<sub>3</sub>)<sub>2</sub>; X-ray crystal structure, 1048-9  
 X-ray crystal structure of the ternary complex (Cu(3'-GMP)(phen)(H<sub>2</sub>O))<sub>2</sub>·7H<sub>2</sub>O (GMP = guanosine monophosphate, phen = 1,10-phenanthroline); unusual absence of M-N(7) bonding in a metal-GMP complex, 1053-5  
 Palladation of dimethylhydrazones, oximes, and oxime O-allyl ethers: crystal structure of (Pd<sub>3</sub>(ON=CPrPh)<sub>6</sub>), 1061-2  
 X-ray crystal and molecular structure of channaine, an unusual alkaloid, probably an artefact from *Sceletium strictum*, 1078-9  
 Bulky alkyls and a hydridoalkyl of zirconium(IV): influence of steric constraints upon (i) conformation and the zirconium-carbon rotational barrier and (ii) the zirconium-carbon bond length. X-ray crystal and molecular structure of (Zr( $\eta$ -C<sub>5</sub>H<sub>5</sub>)<sub>2</sub>(CH(SiMe<sub>3</sub>)<sub>2</sub>)Ph), 1081-3  
 Interconversion of  $\mu_2$ -phenolato and  $\mu_3$ -oxodienediyl ligands in trisium clusters: X-ray crystal structure of 1,1,1,2,2,2,3,3,3-nonacarbonyl-1,2,2,3-di- $\mu$ -hydrido-( $\mu_3$ -3-benzyl-2-oxocyclohexa-3,5-diene-1,1-diyl-1,2-C<sup>1</sup>-3-O)-triangulo-trisium(3Os-Os), 1086-8
- CRYSTALLINITY**  
 Pulsed proton nuclear magnetic resonance studies of molecular motion and plastic crystallinity in dodecamethylcyclohexasilane, 1093-4
- CUCURBITACIN**  
 Novel direct rearrangement of a 9 $\beta$ ,11 $\beta$ -epoxylanostan-7-one into a  $\beta$ -homo-derivative with incorporation of the C-10 angular methyl group, 411-12
- CUPRAPENTABORANE**  
 Bistriphenylphosphinecuprapentaborane, an unusual copper-borane, 866-7
- CUPRATE**  
 Direct displacement and coupling of prop-2-ynyl acetates with organocuprates, 876-7  
 Lithium phenylthio(trimethylstannyl)cuprate, a new reagent for conjugate addition of the trimethylstannyl group. The synthesis of  $\beta$ -trimethylstannyl- $\alpha$  $\beta$ -unsaturated ketones, 1033-4
- CURARIFORM**  
 Crystal and molecular structure of 3,3'-thiobis(2-methyl-1-phenylimidazo-(1,5-a)pyridinium) bistetrafluoroborate; a potent new sulphur containing curariform agent, 816-17
- CURVULARIA**  
 Microbial stereo-differentiating reduction of the carbonyl groups located on the C<sub>2</sub> axes of gyrochiral molecules, 667-8  
 Microbial stereo-differentiating reduction of carbonyl compounds; proposed quadrant rule, 668-7
- CYANAMIDE**  
 Synthesis of the dilithium salt of cyanamide in liquid lithium; X-ray crystal structure of Li<sub>2</sub>NCN, 52-3
- CYANATION**  
 Selective cyanation of bromostyrenes by pentacyanocobaltate(II) and nuclear magnetic resonance evidence for the formation of intermediate  $\sigma$ -styryl-cobalt(III) and  $\eta$ -cinnamionitrile-cobalt(I) cyano-complexes, 1059-61  
 Photosensitized electron transfer and anodic cyanation reactions of nitrogen heterocycles, 1108-9
- CYANIDE INSERTION**  
 Inter- and intramolecular condensations of cyanide and amide ions with coordinated acetonitrile: an amido acid synthesis. X-ray crystal structure of ((NH<sub>3</sub>)<sub>3</sub>Co(Me)C(NH<sub>2</sub>)(NH<sub>2</sub>:CNH<sub>2</sub>)<sub>2</sub>)Br<sub>3</sub>·2/3H<sub>2</sub>O, 289-90
- CYANNO GROUP**  
 Unusual incorporation of the cyano group of tert-butylcyanoketene into a cycloadduct. X-ray structure of the pyrimido(1,6-e)(1,3-s) dioxazine formed, 820-1
- CYANO**  
 Phototransposition of 2-cyanopyrroles: evidence for the intermediacy of 5-azabicyclo(2.1.0)pent-2-enes, 131-3  
 Selective cyanation of bromostyrenes by pentacyanocobaltate(II) and nuclear magnetic resonance evidence for the formation of intermediate  $\sigma$ -styryl-cobalt(III) and  $\eta$ -cinnamionitrile-cobalt(I) cyano-complexes, 1059-61
- CYANOBENZENE**  
 Redox-photosensitized cleavage of indene dimers using aromatic hydrocarbon-dicyanobenzene systems; catalysis by the cation radical of aromatic hydrocarbons, 490-1
- CYANOBIPIRIDYLIRON**  
 Initial state and transition state solvation in the peroxodisulphate oxidation of dicyanobis(2,2'-bipyridyl)iron(II), 963-4
- CYANOBORATE**  
 Preparation of trans,trans,trans- and cis,cis,trans-perhydrophenalen-9-ols by application of the three-migration cyanoborate process to isomeric perhydro-9b-boraphenalenenes: differences between the cyanoborate and carbonylation reactions, 805-6
- CYANOBOROHYDRIDE**  
 Cyanoborohydride supported on an anion exchange resin as a selective reducing agent, 1088-9  
 'One-pot' conversion of Mannich bases via quaternary ammonium salts into the corresponding methyl compounds with sodium cyanoborohydride in hexamethylphosphoramide, 1089-90
- CYANOCOBALTATE**  
 Hydrogenolysis of unsaturated alcohols; hydrocyanation and hydrogenation of acetylenes catalysed by pentacyanocobaltate(II) 63-5
- CYANOETHYLENE**  
 An easy vinylcyclobutane-cyclohexane rearrangement, 931-2
- CYANOMETHOXYLATION**  
 Stereochemical control of anodic cyanomethoxylation, 20-2
- CYANOMETHYL**  
 Reactions of substituted 3,3-diphenyl- and 3,3-dimethyl-1-oxaspiro(3,5)nona-5,8-diene-2,7-diones with nucleophiles, 312-13
- CYANOMETHYLBUTYLCYCLOBUTYL CHLOROBEZOATE**  
 Stereochemistry of the adduct from tert-butylcyanoketene and 2-methylbut-2-ene; X-ray crystal and molecular structure of 2-cyano-3,3,4-trimethyl-2-tert-butylcyclobutyl p-chlorobenzoate, 10-11
- CYANOMETHYLENE**  
 1:2 Metalloporphyrin nitroaromatic sandwich complexes: X-ray crystal structure of one such complex, 571-2
- CYANOSULPHONIUM**  
 Evidence for the participation of a nitrile group in (2,3) sigmatropic rearrangements of sulphonium ylides, 274-5
- CYANOTRIPHENYLBORATE**  
 Magnetic isomers. cis-Bis(cyanotriphenylborato) bisphenanthrolineiron(II), 497-9
- CYATHUS**  
 Striatin A, B, and C: novel diterpenoid antibiotics from *Cyathus striatus* X-ray crystal structure of striatin A, 665-6
- CYCLITOL**  
 Synthesis of  $\alpha$ -linked 3'-deoxy-cyclitol and -aminocyclitol glycosides, 771-3
- CYCLIZATION**  
 Nonoxidative cyclization of squalene by *Tetrahymena pyriformis*. The incorporation of a  $\beta$ -hydrogen (deuterium) atom into tetrahymanol, 333-4  
 Synthesis of macrocyclic rings by internal photocycloaddition of  $\alpha$ , $\omega$ -dicinnamates, 400-1  
 Spiro(5.5)undecane sesquiterpene analogues. Bridging vinyl ether and vinyl acetal formation via intramolecular attack by an enol during bromination, 425-6  
 Perfluorinated derivatives of furan via novel cyclization reactions of perfluoro-olefins, 431-2  
 A new use of cyclofunctionalization with selenenyl reagents: an



- example of carbon-carbon bond formation, 441-2
- Electrochemical reductive cyclization of dimethyl 2, $\omega$ -1-dibromoalkanedioates, 481-2
- Some epoxy-olefin cyclizations, 526-8
- Some epoxy-acetylene cyclizations, 528-9
- An unexpected cyclization of an olefinic epoxy-ketone, 529-30
- Asymmetric synthesis and absolute stereochemistry of the alkaloids araliopsine, isoplatydesmine, and ribalinine. Dual mechanism for a dihydrofuroquinolone-dihydropyranoquinolone rearrangement 624-6
- Palladium(II)-catalysed asymmetric cyclization of 2-allylphenols by the use of optically active  $\beta$ -pinene, 687-8
- Ipsso-attack in the cyclization of 4-( $\alpha$ -naphthyl)butan-1-ol to 1,2,3,4-tetrahydrophenanthrene, 734-5
- General synthesis of oxiranes, 785-6
- Nucleophilic attack by amine nitrogen on the ionized carboxy group, 807-8
- Use of deuterium as a tracer with carbon-13 nuclear magnetic resonance spectroscopy in following deuteride migration in terpenoid biosynthesis: mechanism of geranylgeranyl pyrophosphate cyclization in fusicoccin biosynthesis, 843-5
- Inverse substituent effect in an imidoyl azide to tetrazole cyclization limited by nitrogen inversion, 871-3
- Synthesis of some medium- and large-ring cycloalk-2-ene-1,4-diones by intramolecular coupling of  $\alpha\omega$ -bis-diazoketones, 1069-70
- cis-BC ring fusion upon (E)-polyene cyclizations, 1103-5
- CYCLOADDN**
- (2+2) Cycloadducts from isocyanates and azaphospholes, 470-1
- A triplet state path for adduct formation between benz(a)anthracene and the penta-1,3-dienes, 588-9
- Unambiguous proof for preferred 4+4 cycloaddition in the dimerization of photoexcited N-methyl-2-pyridone, 620-1
- 1,7-Cycloadditions of dichlorodicyano-p-benzoquinone and tetracyanoethylene to a dienylcyclopropane, 633-4
- Selective homo Diels-Alder addition of acetylenic hydrocarbons to norbornadiene catalysed by a cobalt complex, 636-8
- Stereoselective cobalt-catalysed (2+2+2) cross-addition of norbornadiene and norbornene, 638-9
- Retro-1,4-cycloaddition of adducts derived from steroidal 5,7-dienes and 4-phenyl-1,2,4-triazoline-3,5-dione, 727-8
- Interception of alkylchlorocarbenes, 775-6
- Correlation between selectivity in photochemical cross-cycloaddition and ionization potential of the reacting olefins, 786-8
- Unusual incorporation of the cyano group of tert-butylcyanoketene into a cycloadduct. X-ray structure of the pyrimido(1,6-e)(1,3-s)dioxazine formed, 820-1
- Addition of 3-nitrosobut-3-en-2-one to olefins and to electron-rich heterocycles, 847-9
- Observation of a three-membered ring containing phosphorane, 854-5
- Cycloaddition of sterically hindered 1,2-dicyclopropylethylenes with tetracyanoquinodimethane; one-step formation of (10)paracyclophadienes, 864-5
- An easy vinylcyclobutane-cyclohexane rearrangement, 931-2
- Role of exciplex in the photocycloaddition of 2,5-dimethylhexa-2,4-diene to anthracene, 978
- CYCLOALKADIENE**
- 4a,9a-Epoxy-4a,9a-dihydroanthracene-1,4,9,10-tetrone: a versatile synthon in anthracyclinone synthesis, 997-8
- CYCLOALKANECARBOXYLATE**
- Electrochemical reductive cyclization of dimethyl 2, $\omega$ -1-dibromoalkanedioates, 481-2
- CYCLOALKANONE**
- Synthesis of  $\alpha$ -alkoxycarbonylcycloalkanones by electrolysis of 1-trimethylsilyloxybicyclo(n.1.0)alkanes, 293-4
- New 1,2-transpositions and alkylative 1,2-transpositions of a carbonyl group, 414-15
- Microbial stereo-differentiating reduction of carbonyl compounds; proposed quadrant rule, 668-7
- Oxidation of cyclic ketones by hydrogen peroxide catalysed by Group 6 metal peroxo complexes, 888-9
- CYCLOALKENE**
- Formation of abnormal products in the aluminium chloride-catalysed ene additions of chloral and bromal to mono- and 1,2-dialkyl ethylenes, 655-6
- CYCLOALKENEDIONE**
- Synthesis of some medium- and large-ring cycloalk-2-ene-1,4-diones by intramolecular coupling of  $\alpha\omega$ -bis-diazoketones, 1069-70
- CYCLOALKYL**
- Reduction of alkyl esters to alkanes by sodium in hexamethylphosphoric triamide. A new method for the deoxygenation of alcohols, 567-8
- Introduction of sulphur into organic molecules via lithium triethylborohydride reduction of S<sub>8</sub>, 838-9
- CYCLOBUTADIENE**
- ( $\eta^4$ -Cyclobutadiene)( $\eta^5$ -cyclopentadienyl)dicarbonylvandium, 401-2
- CYCLOBUTANE**
- Thermal rearrangement of alkoxy-cyclobutanes, 392-3
- CYCLOBUTANONE**
- New synthesis of  $\alpha$ -methylenecyclobutanones and  $\alpha$ -methylenazetid-2-one derivatives, 12-13
- CYCLOBUTAPHENANTHRENE**
- Formation and molecular structure of ( $\eta^5$ -cyclopentadienyl)-( $\eta^4$ -cyclobuta(l)phenanthrene)rhodium: a cyclobutadiene-metal complex derived from the intramolecular cyclodimerization of an acyclic diacetylene, 187-8
- CYCLOBUTATROPOLONE**
- Small ring-annulated nonbenzenoid aromatic compounds: 1,2-dihydrocyclobuta(e)tropolone, 215
- CYCLOBUTENE**
- Novel derivatives of perfluorocyclobutene, 433
- CYCLOBUTYL CHLOROBENZOATE**
- Stereochemistry of the adduct from tert-butylcyanoketene and 2-methylbut-2-ene; X-ray crystal and molecular structure of 2-cyano-3,3,4-trimethyl-2-tert-butylcyclobutyl p-chlorobenzoate, 10-11
- CYCLOBUTYLHYDROXYMETHYL**
- An electron spin resonance study of the cyclobutylhydroxymethyl radical: its conformation, and its ring opening followed by 1,6-transfer of enolic hydrogen, 569-71
- CYCLOCONDENSATION**
- Pyranosultone: a novel binuclear heterocyclic system, 325-6
- Partial asymmetric synthesis of substituted trans-2,3-diaryloxiranes using optically active arsonium ylides, 346-7
- Intramolecular photochemical arylation of N-substituted enamines: application to synthesis of heterocyclic compounds, 766-7
- Boron complexes as control synthons in photocyclizations: an improved phenanthridine synthesis, 884-5
- CYCLODECANONE**
- Long-range deuterium-induced carbon-13 nuclear magnetic resonance isotope shifts for single assignment and determination of deuteration site in cyclodecanone isotopomers, 302-3
- CYCLODECYLIUM**
- The 1,6-dimethylcyclodecyl cation. Nuclear magnetic resonance evidence for a 1,6- $\mu$ -hydrido structure, 769-70
- CYCLODIMERIZATION**
- Electrochemical formation of a tetrathiane ring, 809-10
- CYCLODIPHOSPHAZINE**
- Structures and properties of isomeric cyclo(diphosph(III)azanes); X-ray crystal and molecular structure of 2,4-dipiperidino-1,3-di-tert-butylcyclo(diphosph(III)azane), 372-3
- CYCLODODECANONE**
- Regioselective oxidation of unactivated methylene and methine groups by dry ozonation: similarity to microbiological oxidation, 413-14
- CYCLOELIMINATION**
- Carbene photocycloelimination from a vinyl-cyclopropane, 558-9
- CYCLOGUANIL HYDROCHLORIDE**
- Cycloguanil hydrochloride: X-ray crystal structure of the antifolate drug, 188-90
- CYCLOHEPTATRIENE**
- Regiospecific carbon-2-addition of thiolates to methoxytropylium ion. The first practical entry to the monocyclic 1,7-difunctionalized cycloheptatriene series, 710
- Regiospecific synthesis of 1,7-dialkylthiocycloheptatrienes. A case of rapid (1,7) sigmatropic migration of unhindered alkylthio-groups, 945-6
- CYCLOHEXADIENE**
- Novel carbon-carbon reductive cleavage of terphenyls with alkali metal-hexamethylphosphoric triamide, 153-4
- A mild, regioselective but-2-enolide synthesis and a convenient preparation of acylated dienes, 311-12
- 1:2 Metalloporphyrin nitroaromatic sandwich complexes: X-ray

- crystal structure of one such complex, 571-2
- Regiospecific boron trifluoride catalysed fluorine addition to fluoro-substituted benzene derivatives using xenon difluoride, 969-70
- CYCLOHEXADIENEDIYLIDENEBENZODITHIOLE**  
Tetrathio-derivatives of quinodimethane. Synthesis and ion-radical complex formation of cyclohexa-2,5-diene-1,4-diylidenebis-1,3-benzodithiole derivative, 74-5
- CYCLOHEXADIENYLIDENE**  
Electrochemical formation of a tetrathiane ring, 809-10
- CYCLOHEXADIONE**  
1-Nitro-1-phenylthiopropene, a new reagent for 3-methylfuran synthesis, 362-3
- CYCLOHEXANEDIOLATOOSMIUM**  
X-ray molecular structure of the asymmetrically bridged ester complex di- $\mu$ -oxobis(cyclohexane-1,2-diolato)oxo(quinuclidine)osmium(VI), (OsO<sub>2</sub>(O<sub>2</sub>C<sub>6</sub>H<sub>10</sub>)(C<sub>7</sub>H<sub>13</sub>N))<sub>2</sub>, 853-4
- CYCLOHEXANEDIONE**  
Intramolecular photochemical arylation of N-substituted enamines: application to synthesis of heterocyclic compounds, 766-7  
Novel  $\beta$ -triketones from Lepidoptera, 1075-6
- CYCLOHEXANOL**  
Hydrogenolysis of unsaturated alcohols; hydrocyanation and hydrogenation of acetylenes catalysed by pentacyanocobaltate(II) 63-5  
Oxidative displacement of iodine from vicinal iodocarboxylates and alkyl iodides, 919
- CYCLOHEXANONE**  
Novel synthesis of  $\gamma$ -hydroxy- $\alpha$ -nitro-olefins, 350-1  
Some epoxy-olefin cyclizations, 526-8  
Silyl nitronates: improved nitro-aldol reactions and reductive routes to 2-aminoalcohols, 689-91  
Novel synthesis of phenyltrimethylsilyldiazene and generation of the phenyl anion synthon therefrom, 990  
Formation of allenyl or  $\gamma$ -ketoesters from reactions of oxyallyls with acetylenes or 1,1-dimethoxyethene, 1006-7
- CYCLOHEXASILANE**  
One-step synthesis of dodecamethylcyclohexasilane, 272  
Pulsed proton nuclear magnetic resonance studies of molecular motion and plastic crystallinity in dodecamethylcyclohexasilane, 1093-4
- CYCLOHEXENE**  
Convenient 'one-flask' synthesis of olefins. Reaction of  $\alpha$ -chloroketones with Grignard reagents and lithium, 847  
An easy vinylcyclobutane-cyclohexane rearrangement, 931-2  
Substitution of allylic sulphides of benzothiazole-2-thiol with organomagnesium compounds in the presence of copper(I) iodide A regioselective synthesis of olefins, 1085-6
- CYCLOHEXENECARBOXYLATE HYDROXY METHYL**  
Applications of bromolactones in synthesis. Stereospecific syntheses of cis-2-hydroxy-1-methylcyclohex-5-ene-1-carboxylic acid and related compounds, 961-2
- CYCLOHEXENECARBOXYLATEOXO**  
Regioselectivity in the Diels-Alder reactions of 3- and 4-substituted 1-trimethylsilylbutadienes, 178-80
- CYCLOHEXENOL**  
Trifluoroacetylation of alcohols: a newly detected reaction of trifluoroacetic acid, 248  
Novel synthesis of  $\gamma$ -hydroxy- $\alpha$ -nitro-olefins, 350-1  
Copper-catalysed 1,6-addition of a benzyl Grignard reagent to a dienone: a new synthesis of ring C aromatic diterpenoids, 614-15
- CYCLOHEXENONE**  
New stereoselective synthesis of 9-methyl-cis-decalin derivatives by double Michael reaction of 3,5-dimethyl-4-methylenecyclohex-2-enone and dimethyl 3-oxoglutarate; X-ray crystal and molecular structure of two of the products, 717-18  
Synthesis of 2-alkenyl-3-methylcyclohex-2-en-1-ones, 852-3
- CYCLOHEXENYL**  
Ring inversion in the cyclohexenyl radical, 394-5
- CYCLOHEXENYLMETHANOL**  
1,3-Transposition of primary allylic alcohols: a new application of selenoxide chemistry, 770-1
- CYCLOHEXENYLPROPYNOL**  
Solvent-assisted acetylenic oxy-Cope rearrangement: a novel synthesis of ionone and its analogues, 651-2
- CYCLOHEXENYLVINYL**  
New synthesis of conjugated ketones from 2-phenylthioallyl and -allenyl alcohols, 821-2
- CYCLOHEXYL BROMIDE**  
Unusual reactivity of the 2H-thiopyran anion in alkylation with tert-butyl bromide and cyclohexyl bromide, 596-7
- CYCLOHEXYLPHENOL**  
Experimental chemical shift correlation maps in nuclear magnetic resonance spectroscopy, 684-6
- CYCLOISOMERIZATION**  
Cation complexing photochromic materials involving bisanthracenes linked by a polyether chain. Preparation of a crown-ether by photocycloisomerization, 403-4
- CYCLOMETALLATED**  
Multiple chlorinations of the cyclometallated ring in iridium triaryl phosphite complexes: the crystal and molecular structure of (IrCl<sub>2</sub>(P(OC<sub>6</sub>Cl<sub>3</sub>Me-o)(OC<sub>6</sub>H<sub>4</sub>Me-o)<sub>2</sub>(pyridine)(PMe<sub>3</sub>))), 973-4
- CYCLOMETALLATION**  
Novel type of metallation reaction: cyclometallation of heterocyclic amines by dicyclopentadienylmethyltitanium, 659-60  
Reactions of dimethyl 3-oxoglutarate with zerovalent compounds of palladium and platinum. Preparation of 1-metallacyclobutan-3-one complexes and the X-ray crystal structure of 2,4-bis(methoxycarbonyl)-1,1-bis(triphenylphosphine)platinacyclobutan-3-one, 744-5  
Kinetics and mechanism of cyclo- and decyclometallation of some iridium triaryl phosphite complexes. Evidence for the electrophilic displacement mechanism, 1007-8
- CYCLONADIENE**  
Stereochemistry of hydrogenation of cyclonona-1,2-diene with supported platinum metals and soluble rhodium complexes as evidence for allylic intermediates, 114-15  
A new use of cyclofunctionalization with selenenyl reagents: an example of carbon-carbon bond formation, 441-2
- CYCLONUCLEOSIDE**  
Reactions of methylhydrazine and hydrazine with 8-bromo-2'-O-toluene-p-sulphonyl adenosine, 86-7
- CYCLOOCTANE**  
Preparation and chemoselective thermolysis of potential azatricyclic synthons containing an eight-membered nucleus, 915-16
- CYCLOOCTANONE**  
Cyanoborohydride supported on an anion exchange resin as a selective reducing agent, 1088-9
- CYCLOOCTENE**  
Asymmetric cis-trans photoisomerization of cyclo-octene sensitized by chiral aromatic esters, 1024-5
- CYCLOOLIQOMERIZATION**  
Medium-ring cyclosilanes from the reaction of dimethyldichlorosilane with lithium, 1092-3
- CYCLOPENTADIENE**  
( $\eta^4$ -Cyclobutadiene)( $\eta^5$ -cyclopentadienyl)dicarbonylvandium, 401-2  
X-ray structure of (( $\eta^5$ -C<sub>5</sub>H<sub>5</sub>)W(CO)<sub>2</sub>C<sub>15</sub>H<sub>15</sub>): a compound containing three unusually bonded five-membered rings, 451-2  
Deuteriated cyclopentadienyls of thallium and other metals, 709
- CYCLOPENTADIENYL**  
Photoinduced synthesis of binuclear molybdenocene and tungstenocene derivatives: catalytic deoxygenation of epoxides by metallocenes, 99-100  
Reactions of nitrogen oxides with di(cyclopentadienyl)titanium complexes, 234-5  
Fluxional cyclopentadienylboranes, 242  
Photolysis of cyclopentadienyltin compounds: a new source of tin-centred radicals, 353-4  
New mixed-metal clusters via metal hydride coupling. Synthesis and crystal structures of (( $\mu_2$ -H)Os<sub>3</sub>W(CO)<sub>12</sub>( $\eta^5$ -C<sub>5</sub>H<sub>5</sub>)) and (( $\mu_2$ -H)<sub>3</sub>Os<sub>3</sub>W(CO)<sub>11</sub>( $\eta^5$ -C<sub>5</sub>H<sub>5</sub>)), 534-5  
Deuteriated cyclopentadienyls of thallium and other metals, 709  
Heat of formation of bis( $\eta$ -cyclopentadienyl)dimethyltungsten and bis( $\eta$ -cyclopentadienyl)dimethylmolybdenum, 737  
A new approach to cationic transition metal alkyls: (M( $\eta$ -C<sub>5</sub>H<sub>5</sub>)<sub>2</sub>(CH<sub>2</sub>SiMe<sub>3</sub>)<sub>2</sub>)(Y) (M = Nb or Ta, Y = BF<sub>4</sub> or SbF<sub>6</sub>) and their conversion into the alkylidene complexes (M( $\eta$ -C<sub>5</sub>H<sub>5</sub>)<sub>2</sub>(CHSiMe<sub>3</sub>)(CH<sub>2</sub>SiMe<sub>3</sub>)), 925-6  
Thionitrosyl ligand; X-ray molecular structure of dicarbonyl( $\eta^5$ -cyclopentadienyl)thionitrosylchromium, 1036-7
- CYCLOPENTADIENYLMETHYLTITANIUM**  
Novel type of metallation reaction: cyclometallation of heterocyclic amines by dicyclopentadienylmethyltitanium, 659-60

- CYCLOPENTENE**  
An arene hydrido complex of ruthenium(II) as catalyst for the homogeneous hydrogenation of benzene and olefins, 582-3
- CYCLOPENTENEDIENE**  
Rearrangement of 4-ylidenebutenolides to cyclopentene-1,3-diones: synthesis of calythrone and related compounds, 880-2
- CYCLOPENTENIUM**  
Mechanism of acid catalysed opening of the cyclopropane ring in the thujols, 1096-7
- CYCLOPENTENOL**  
cis-BC ring fusion upon (E)-polyene cyclizations, 1103-5
- CYCLOPENTENONE**  
Intramolecular photochemical cycloadditions involving enolized cyclopentane-1,3-diones. A new approach to the bicyclo(3.2.1) octane ring system, 138-40  
Formation of alkyl phosphenites from alkyl phosphinates, 324-5
- CYCLOPENTENYLMETHANE**  
Photocyclization of dicyclopent-1-enyl methanes to tricyclo(6.3.0.0<sup>2,6</sup>)undecanes: a synthesis of the hirsutane carbon skeleton, 5-6
- CYCLOPENTENYLPHENOL**  
Palladium(II)-catalysed asymmetric cyclization of 2-allylphenols by the use of optically active  $\beta$ -pinene, 687-8
- CYCLOPENTYLETHYLENE**  
Ring opening polymerization of norbornene catalysed by ethyl aluminium dichloride; olefin metathesis in the absence of a transition metal, 603-4
- CYCLOPHANE**  
Macrocyclic enzyme model system: catalysis of ester degradation by a (20)paracyclophane bearing nucleophilic and metal-binding sites, 494-6
- CYCLOPROPABENZOXEPIN**  
A new mechanism for the formation of cyclopropane derivatives in the thermolysis of pyrazolines, 461-2
- CYCLOPROPANATION**  
Organosilicon chemistry in synthesis: silylcyclopropanation, 714-16
- CYCLOPROPANE**  
Evidence of electronic interaction between classically nonconjugated aromatic systems, 100-1  
Catalytic sites in the hydrogenolysis of cyclopropane on platinum, 127-8  
Microwave spectrum, dipole moment, and quadrupole coupling constants of trans-nitrosocyclopropane, 388-9  
Carbene photocycloelimination from a vinyl-cyclopropane, 558-9  
1,7-Cycloadditions of dichlorodicyano-p-benzoquinone and tetracyanoethylene to a dienylcyclopropane, 633-4  
Homoconjugate addition of Grignard reagents spiroactivated cyclopropanes. An approach to the total synthesis of ( $\pm$ )-brefeldin A, 754-6
- CYCLOPROPENE**  
Electronic excited states of small ring compounds. Substituent effects on the photochemical ring cleavage of 3,3-dimethyl-1,2-diarylcyclopropenes, 743-4
- CYCLOPROPENONE**  
Formation of a novel complex between pyridinium bis(alkoxycarbonyl)methylides and diphenylcyclopropenone; trapping of pyridinium bis(alkoxycarbonyl)methylide cation radicals, 817-19
- CYCLOPROPYL ALC**  
Cyclopropylidene insertion. Evidence for bicyclo(1.1.0)butan-2-olate formation, 128-9
- CYCLOPROPYLBUTADIENE**  
An easy vinylcyclobutane-cyclohexane rearrangement, 931-2
- CYCLOPROPYLETHENE**  
Cycloaddition of sterically hindered 1,2-dicyclopropylethylenes with tetracyanoquinodimethane; one-step formation of (10)paracyclophadienes, 864-5
- CYCLOPROPYLIDENE INSERTION**  
Cyclopropylidene insertion. Evidence for bicyclo(1.1.0)butan-2-olate formation, 128-9
- CYCLOPROPYLMETHYL**  
Rearrangement of cyclopropylmethyl and but-3-enyl cobaloximes, 954-6
- CYCLOSILANE**  
Medium-ring cyclosilanes from the reaction of dimethyldichlorosilane with lithium, 1092-3
- CYCLOTRIMERIZATION**  
Evidence for the ready insertion of rhodium into a carbon-hydrogen bond of ethylene; crystal and molecular structure of  $\mu$ -but-2-ene- $\mu$ -ethylenebis-( $\eta^2$ -1-methylindenyl)dirhodium, 839-41
- CYCLOTRON RESONANCE**  
Experimental proof of the existence of a fourth stable gas phase C<sub>2</sub>H<sub>4</sub>O<sup>+</sup> isomer: the open ethylene oxide ion, 724-5
- CYCLOVITAMIN D<sub>3</sub>**  
Stereoselective conversion of vitamin D<sub>3</sub> into its 3 $\beta$ -halogenated derivatives. The synthesis of a 1 $\alpha$ -hydroxy-3 $\beta$ -fluorovitamin D<sub>3</sub> analogue, 554-5
- CYSTEINE**  
Conversion of penicillins into biosynthetically significant peptides, 609-10
- CYSTEINYL**  
Molecular catalysis: enhanced rates of thiolysis with high structural and chiral recognition in complexes of a reactive macrocyclic receptor molecule, 949-51
- CYTOCHALASIN B**  
Approaches to cytochalasin synthesis: macrocycle formation using an intramolecular Diels-Alder reaction, 474-5
- CYTOCHROME**  
Cytochrome oxidase models: a binuclear iron-copper site with a bipyrimidine bridge, 483-5
- CYTOCHROME C**  
Structural barriers to the rates of electron transfer of copper complexes. Oxidation of cytochrome c (II) by copper(II) complexes, 370-2
- DDQ**  
Tetrathio-derivatives of quinodimethane. Synthesis and ion-radical complex formation of cyclohexa-2,5-diene-1,4-diylidenebis-1,3-benzodithiole derivative, 74-5  
1,7-Cycloadditions of dichlorodicyano-p-benzoquinone and tetracyanoethylene to a dienylcyclopropane, 633-4
- DEACETYLIISOPECOSIDE**  
Deacetyliisopecoside: the key intermediate in the biosynthesis of the alkaloids cephaeline and emetine, 896-8
- DEACYLATION**  
Stereoselective reaction of p-nitrophenyl N-acyl-phenylalanines with N-acyl-L-histidine in mixed micelles, 984-5
- DEALKYLATION**  
Specific dealkylation of phosphonate esters using iodotrimethylsilane, 870-1  
Novel method for dealkylation of esters, ethers, and acetals by chlorotrimethylsilane-sodium iodide, 874-5
- DEAZAFLAVIN**  
Oxidation-reduction in hydrolysis of pyrimido(4,5-b)quinoline-2(3H),4(10H)-diones (5-deazaflavins), 398-9  
Novel synthesis of pyrimido(4,5-b)quinoline-2(3H),4(10H)-diones (5-deazaflavins), 764
- DEBENZYLATION**  
Treatment of cinnamic acids with polyphosphoric acid, 355
- DEBLOCKING**  
Polymeric de-blocking agents for the fluoren-9-ylmethoxycarbonyl (Fmoc) amino-protecting group, 450-1
- DECADIENOATE**  
Synthesis of the butterfly compound (E,E)-10-hydroxy-3,7-dimethyldeca-2,6-dienoic acid, 985-6
- DECALIN**  
Some epoxy-acetylene cyclizations, 528-9
- DECALINONE**  
New stereoselective synthesis of 9-methyl-cis-decalin derivatives by double Michael reaction of 3,5-dimethyl-4-methylenecyclohex-2-enone and dimethyl 3-oxoglutarate; X-ray crystal and molecular structure of two of the products, 717-18
- DECALONE**  
Stereo-electronic control of  $\alpha$  proton abstraction from iminium ions, 49-50  
Some epoxy-olefin cyclizations, 526-8
- DECARBOXYLATION**  
Dramatic acceleration of a concerted reaction by a methoxy group, 1025-6
- DECHLORINATION**  
Stereochemistry of the transition state of hydrogen abstraction by vinyl radicals, 574-5
- DECHLORO**  
New metabolites of the lichen *Buellia canescens* (Dicks.) De Not: novel phthalide catabolites of depsidones, 1041-2
- DECOMPEN**  
Activity of copper(II)-exchanged Y-type zeolites in the catalytic decomposition of nitrogen monoxide, 1058-9

**DEFLUORINATION**

Perfluorinated derivatives of furan via novel cyclization reactions of perfluoro-olefins, 431-2  
 Synthesis of fluorinated dienes and cyclobutenes, 475-6

**DEFLUOROALKYLATION**

Synthesis of fluorinated dienes and cyclobutenes, 475-6

**DEHYDRATION**

Stereochemical course of dehydration catalysed by the yeast fatty acid synthetase, 193-4

The role of stress in nucleus development during dehydration of certain alums, 273-4

Dehydration sequence of cobalt exchanged synthetic A zeolite: evidence for 3-, 4-, 5-, and 6-fold coordination, 548-9

Nonenzymic model of the dioldehydratase reaction. Initiation of conversion of ethylene glycol into acetaldehyde on anaerobic photolysis of organocobalamins in the presence of mercapto compounds, 592-3

A relation between the product distribution from the dehydration of dimethylbutan-2-ols and catalytic acidity, 801-2

Broensted acidity of rutile developed during alcohol dehydration as shown by simultaneous alkene isomerization: microwave spectroscopic analyses, 835-6

**DEHYDROGENATION**

9,12-Dithia-trans-bicyclo(6.4.0)dodeca-2,4,6,10-tetraene system, an example of a trans-fused cycloocta-1,3,5-triene, 57-8

Dehydrogenation of steroidal ketones using benzeneseleninic anhydride, 130-1

Photo-enhanced production of hydrogen by liquid-phase catalytic dehydrogenation of propan-2-ol with rhodium-tin chloride complexes, 348-9

Oxidation of alcohols using benzeneseleninic anhydride, 952-4

**DELTACYCLENE**

Selective homo Diels-Alder addition of acetylenic hydrocarbons to norbornadiene catalysed by a cobalt complex, 636-8

**DEMETALLATION**

Bromodemetalation of  $\beta$ -methoxyphenethylthallium(III) diacetate and  $\beta$ -methoxyphenethylmercury(II) acetate with copper-(I) and -(II) bromide, direct evidence for alkyl radicals in bromodemetalation by the spin trapping technique, 65-6

**DEOXYAMINOCYCLITOL**

Synthesis of  $\alpha$ -linked 3'-deoxy-pseudo-di- and -tri-saccharides related to aminocyclitol-glycoside antibiotics, 773-4

**DEOXYGENATION**

Photoinduced synthesis of binuclear molybdenocene and tungstenocene derivatives: catalytic deoxygenation of epoxides by metallocenes, 99-100

**DEOXYHEXOFURANOSE**

Stereoselective reduction of 3-O-hexofuranosyl S-methyl dithiocarbonates with tributyltin deuteride, 449-50

**DEOXPENTENOFURANOSYL**

New synthesis of 4',5'-unsaturated nucleosides, 1084-5

**DEOXPSEUDOURIDINE**

Pseudouridine transformations. Formation of 2'- and 3'-deoxypseudouridines via halogen intermediates using  $\alpha$ -acetoxisobutyryl chloride, 677-8

**DEOXSCHIZANDRIN**

Synthesis of the lignan ( $\pm$ )-deoxyschizandrin, 491-2

**DEPROTECTION**

Electrochemical removal of 1,3-dithiane protecting groups, 255-6

**DEPROTONATION**

Detection of organic dianions by carbon-13 nuclear magnetic resonance spectroscopy, 172-3

Proton nuclear magnetic resonance study of the deprotonation of the catecholamines in solution: the microconstants for the deuteriation of L-dopa in D<sub>2</sub>O, 768-9

Formation of platinum(II) compounds containing isomeric  $\sigma$ -vinylic and  $\sigma$ -allylic six-membered chelate rings by deprotonation of the coordinated isopropenyl group: X-ray structure of the  $\sigma$ -vinylic complex di- $\mu$ -acetato-bis(o-isopropenylphenyl)(diphenyl)arsineplatinum(II), 861-3

**DEPSIDONE**

New metabolites of the lichen *Buellia canescens* (Dicks.) De Not: novel phthalide catabolites of depsidones, 1041-2

Base catalysed and thermal rearrangements of grisadiendiones to depsidones, 1043-4

**DESILYLBROMINATION**

$\beta$ -Silylketones as masked  $\alpha\beta$ -unsaturated ketones, 176-7

**DESORPTION**

Hydrogen absorption in YNi<sub>4</sub>Mn, an alloy with the cubic UNi<sub>5</sub>

structure, 581-2

**DETRITIATION**

1,2-Hydrogen shifts during acid-catalyzed hydrogen exchange, 586-7

**DEUTERATION**

Versatile deuterium exchange and isomerization of hydrocarbons via phase transfer catalysis, 155-6

Stereochemistry of 1,4-addition of molecular deuterium to 2-methylbuta-1,3-diene over thorium dioxide, magnesium oxide, and dilanthanum trioxide, 1091-2

**DEUTERIATED**

Deuteriated cyclopentadienyls of thallium and other metals, 709

**DEUTERIATION**

Long-range deuterium-induced carbon-13 nuclear magnetic resonance isotope shifts for single assignment and determination of deuteration site in cyclodecanone isotopomers, 302-3

**DEUTERIO**

Raman optical activity due to isotopic substitution: (1S)-4,4-dideuterioadamantan-2-one, 259-60

**DEUTERIUM**

Deuterium nuclear magnetic resonance studies on biosynthesis: stereochemistry of the 5'-hydrogen atoms of griseofulvin derived from griseophenone B and 4-demethyldehydrogriseofulvin, 135-6

Isotope effects in molecular complexes of naphthalene, 455-6

Stereoelectronic control of acetal hydrolysis, 803-4

Equilibrium constant for protium-deuterium exchange between methanol and water, 1037-8

**DEUTERIUM EXCHANGE**

Deuteriated cyclopentadienyls of thallium and other metals, 709

Synthesis, X-ray crystal structure, and chemistry of the cation (( $\eta$ -MePh)Mo( $\mu$ -SMe)<sub>4</sub>Mo( $\eta$ -MePh))<sup>2+</sup>; easy D<sub>2</sub>O-NaOD catalysed hydrogen-deuterium exchange of the methyl hydrogens of a  $\eta$ -bonded toluene ligand, 1009-11

**DEUTERIUM LABELLED**

Synthesis of (5'R)-(2H<sub>1</sub>)adenosine, 294-5

**DEUTERIUM SHIFT**

The NIH shift of deuterium during the oxidation of aromatic compounds by iron perchlorate and hydrogen peroxide in acetonitrile, 704-5

**DEUTERIUM TRACER**

Use of deuterium as a tracer with carbon-13 nuclear magnetic resonance spectroscopy in following deuteride migration in terpenoid biosynthesis: mechanism of geranylgeranyl pyrophosphate cyclization in fusicoccin biosynthesis, 843-5

**DEWAR PYRROLE**

Synthesis of the N-unsubstituted Dewar pyrrole 1,2,3,4-tetrakis(trifluoromethyl)-5-azabicyclo(2.1.0)pent-2-ene, 509

**DI PI METHANE**

Regioselectivity in the di- $\pi$ -methane rearrangement; alternative processes in the photochemistry of halogeno-1,4-dienes, 101-2

Differing substituent effects on rates and regioselectivities in the di- $\pi$ -methane rearrangement. New photochemical theory: excitation distribution (the  $\Delta P$  matrix), reaction inhibition by vertical excited state stabilization, ground Vs. excited state control, 228-30

**DIANION**

A simple route to  $\alpha$ -aminoketones and related derivatives by dianion acylation reactions; an improved preparation of  $\delta$ -aminolevulinic acid, 753-4

**DIAZA**

Reversible photochemical valence isomerization between  $\alpha$ -diazoketones and a  $\alpha$ -keto-diazirines, 442-3

**DIAZABICYCLOHEPTANECARBOXYLATE**

Conversion of alkyl carbamates into amines via treatment with trimethylsilyl iodide, 315-16

**DIAZABICYCLOOCTANECARBOXYLATE**

1,3-Dipolar cycloaddition reactions of imines of  $\alpha$ -amino acid esters: X-ray crystal and molecular structure of methyl 4-(2-furyl)-2,7-diphenyl-6,8-dioxo-3,7-diazabicyclo(3.3.0)octane-2-carboxylate, 109-11

**DIAZACYCLOHEPTANE**

Conversion of alkyl carbamates into amines via treatment with trimethylsilyl iodide, 315-16

**DIAZENE**

Novel synthesis of phenyltrimethylsilyldiazene and generation of the phenyl anion synthon therefrom, 990

**DIAZENIDO**

Bis(organodiazenido)-complexes of molybdenum, 352-3

**DIAZEPINIUM**

Surprising electrochemical reduction product from a dihydrodiazepinium salt, 499

**DIAZO ESTER**

Alkylrhodium(III) porphyrins from rhodium(III) porphyrins and diazoalkanes, 937-8

**DIAZOALKANEDIONE**

Synthesis of some medium- and large-ring cycloalk-2-ene-1,4-diones by intramolecular coupling of  $\alpha\omega$ -bis-diazoketones, 1069-70

**DIAZOMALONATE**

Rhodium(II)-catalysed addition of dimethyl diazomalonate to thiophene: a simple synthesis of thiophenium bismethoxycarbonylmethylides and crystal and molecular structure of the unsubstituted methylide, 83-4

**DIAZONIUM**

Thermodynamics of formation of 18-crown-6 complexes with arenediazonium and anilinium salts in methanol at 25°C, 386-7

**DIAZOXYPROPYLPYRIDOINDOLE**

New synthetic routes to synthons for the synthesis of functionalized *Aspidosperma* alkaloids, 943-4

**DIAZOTIZATION**

Infrared lasers: a new tool for studying the diazotization of matrix isolated tetracarbyliron(0), 36-8

**DIBENZAZECINONE**

New route to the protohanes, 812-13

**DIBENZAZEPINE**

Intramolecular photochemical arylation of N-substituted enamines: application to synthesis of heterocyclic compounds, 766-7

**DIBENZOAZAANNULENE**

Syntheses and reactivity of cofacial, dimeric metal-metal bonded ruthenium(II) mixed valence ruthenium(II/III), and ruthenium(III) complexes of  $(C_{22}H_{22}N_4)^{2-}$ , a dibenzo-tetra-aza(14)annulene ligand, 909-10

**DIBENZOFURAN**

Photochemical conversion of grisadiendiones into dibenzofurans, 1044-5

**DIBENZOTHIOPHENE**

Intramolecular homolytic aromatic ipso substitution in halogenobenzenes by aryl radicals, 530-1

**DIELDRIN**

Stereochemistry of the transition state of hydrogen abstraction by vinyl radicals, 574-5

**DIELEC CONST**

Solvent effects in homogeneous asymmetric catalysis, 427-8

**DIELS**

Novel conversion of a 3-oxidopyridinium into a 4-oxidoisoquinolinium, 316-18

**DIELS ALDER**

Synthetic approaches to aclacinomycin and pyrromycin antitumour antibiotics via Diels-Alder reactions of 6-alkoxy-2-pyrones: total synthesis of chrysophanol, helminthosporin and pachybasin, 95-6

Regioselectivity in the Diels-Alder reactions of 3- and 4-substituted 1-trimethylsilylbutadienes, 178-80

Carbonium ion rearrangements in the norbornyl series controlled by a silyl group, 245-7

Novel conversion of a 3-oxidopyridinium into a 4-oxidoisoquinolinium, 316-18

Diels-Alder reaction of o-benzoquinones with acyclic dienes, 397

Approaches to cytochalasan synthesis: macrocycle formation using an intramolecular Diels-Alder reaction, 474-5

Preparation and characterization of 6,6-dimethylenefulvene, 496-7

Synthesis of the N-unsubstituted Dewar pyrrole 1,2,3,4-tetrakis(trifluoromethyl)-5-azabicyclo(2.1.0)pent-2-ene, 509

Selective homo Diels-Alder addition of acetylenic hydrocarbons to norbornadiene catalysed by a cobalt complex, 636-8

Synthesis of the insect dyestuff kermesic acid and related anthraquinones, 688-9

4a,9a-Epoxy-4a,9a-dihydroanthracene-1,4,9,10-tetrone: a versatile synthon in anthracyclinone synthesis, 997-8

**DIELS ALDER RETRO**

Detection by microwave spectroscopy of nitroxyl produced by a retro-Diels-Alder reaction, 275-6

**DIENONE**

Copper-catalysed 1,6-addition of a benzyl Grignard reagent to a dienone: a new synthesis of ring C aromatic diterpenoids, 614-15

**DIENYL**

1,7-Cycloadditions of dichlorodicyano-p-benzoquinone and tetracyanoethylene to a dienylcyclopropane, 633-4

**DIFERRACARBABORANE**

Structural consequences of electron 'deficiencies' in metallaheteroboranes; hyperpolyhedral metal-metal bonding, 858-9

**DIFFRACTION**

X-ray photoelectron diffraction: a novel method of structural analysis in complex monocrystalline solids, 210-11

**DIGITOPURPONE**

Regiospecific syntheses of islandicin and digitopurpone monomethyl ethers, 242-4

**DIHYDROPYRIDINYL**

Enhanced rates of dihydropyridine to pyridinium hydrogen transfer in complexes of an active macrocyclic receptor molecule, 143-6

**DIKETONATE**

Evidence for a second photoactive excited state in a tris( $\beta$ -diketonate)chromium(III) complex, 363-4

**DIMERIZATION**

Novel derivatives of perfluorocyclobutene, 433

Unambiguous proof for preferred 4 + 4 cycloaddition in the dimerization of photoexcited N-methyl-2-pyridone, 620-1

Drifluor reagents: non-hygroscopic sources of the fluoride ion, 789-91

**DIMETHANOBENZINDAN**

Regioselective oxidation of unactivated methylene and methine groups by dry ozonation: similarity to microbiological oxidation, 413-14

**DIMETHYLPHENYLETHENYLCHROMIUM**

Synthesis and x-ray crystal and molecular structure of tetrakis(2,2-dimethyl-1-phenylethenyl)chromium(IV), the first structurally-characterized homoleptic alkenyl compound of a transition metal 899-900

**DINITROGEN**

Organozirconium(III)-dinitrogen complexes: evidence for ( $\eta^2$ -N<sub>2</sub>)-metal bonding in  $(Zr(\eta-C_5H_5)_2(N_2)(R))$  (R = Me<sub>3</sub>Si<sub>2</sub>CH), 34-6

Photopolymerization of S<sub>2</sub>N<sub>2</sub> to (SN)<sub>x</sub>, 301-2

**DINITROGEN OXIDE**

Catalytic conversion of nitric oxide into nitrogen and dinitrogen oxide by dinitrobis(ethylenediamine)cobalt(III) cation, 175-6

**DINORPENICILLIN**

(±)-Dinorpenicillin-2-spirocycloalkane, 46-7

**DIOLDEHYDRATASE**

Nonenzymic model of the dioldehydratase reaction. Initiation of conversion of ethylene glycol into acetaldehyde on anaerobic photolysis of organocobalamins in the presence of mercapto compounds, 592-3

**DIOXAPHOSPHOLENE**

Generation of a pentacoordinated protonated oxyphosphorane in equilibrium with the isomeric enol phosphonium ion and unprotonated oxyphosphorane, 382-3

**DIOXATHIADISPIROUNDECANE**

X-ray crystal and molecular structure of a dispirothiiran: 1,1,3,3,7,7,9,9-octamethyl-2,8-dioxo-11-thiadispiro(4.0.4.1)undecane-4,10-dione, 555-6

**DIOXETANE**

Observation of a three-membered ring containing phosphorane, 854-5

**DIOXOLANE**

Reduction of  $\alpha,\alpha'$ -dibromoketones by ultrasonically dispersed mercury in some aliphatic ketone solvents. A convenient synthesis of 4-isopropylidene-1,3-dioxolans, 1040-1

**DIOXOLANYL**

Selectivity in the addition of organic radicals to the alkene bond, 438-9

**DIOXOLANYLACETYLENE**

Cyclization of acetylenecarboxylic acids; a novel route to  $\gamma$ -methylenebutyrolactones, 649-50

**DIOXOLANYLALKANOATE**

Electrochemical synthesis of 2-methoxy-1,4-dioxanes by anodic oxidation of  $\beta$ -oxocarboxylate ethylene acetals, 194-5

**DIOXYGEN**

New dioxygen complex of manganese phthalocyanine, 217-18

Electrocatalytic formation of superoxides in the presence of cobalt chelates, 339-40

Activation and transfer of molecular oxygen. Oxidation of terminal olefins to methyl ketones by rhodium dioxygen complexes,

- 559-60  
Homogeneous catalytic oxidation of amines and secondary alcohols by molecular oxygen, 562  
Synthesis, X-ray crystal structure, and properties of a tetranuclear complex formed by oxidation of copper(I) chloride with molecular dioxygen in N-methylpyrrolidin-2-one. Isolation of a catalyst for the oxidative coupling of phenols by dioxygen, 1045-6
- DIPEPTIDE**  
Molecular catalysis: enhanced rates of thiolysis with high structural and chiral recognition in complexes of a reactive macrocyclic receptor molecule, 949-51
- DIPLOICIN**  
New metabolites of the lichen *Buellia canescens* (Dicks.) De Not: novel phthalide catabolites of depsidones, 1041-2
- DIPOLAR CYCLOADDN**  
1,3-Dipolar cycloaddition of anhydro-4-hydroxy-1,3-oxazolium hydroxides with carbonyl compounds, 247-8
- DIPOLE MOMENT**  
Microwave spectrum, dipole moment, and quadrupole coupling constants of trans-nitrosocyclopropane, 388-9  
Microwave spectrum and conformation of glycine, 547-8
- DISILANE**  
Formation of a new silicon-containing ring system, 1,1,2,2,3,3-hexamethyl-4,5-diphenyl-1,2,3-trisilacyclopent-4-ene, 1029-30
- DISPIROADAMANTANE**  
Preparation of some S-methyl thiiranium salts of adamantylideneadamantane. Demethylation and desulphurization with nucleophiles, 630-1
- DISPIROTHIIRAN**  
X-ray crystal and molecular structure of a dispirothiiran: 1,1,3,3,7,7,9,9-octamethyl-2,8-dioxo-11-thiadispiro(4.0.4.1)undecane-4,10-dione, 555-6
- DISPORPORTIONATION**  
Ready conversion of 1,1-diphenylethylene into benzophenone and 1,1-diphenylethane over a synthetic hectorite, 930-1
- DISSOCN**  
Nonconcerted unimolecular reactions of ions in the gas phase: isomerization of weakly coordinated carbonium ions, 24-6  
Activity of copper(II)-exchanged Y-type zeolites in the catalytic decomposition of nitrogen monoxide, 1058-9
- DISSOCN CONST**  
Proton nuclear magnetic resonance study of the deprotonation of the catecholamines in solution: the microconstants for the deuteriation of L-dopa in D<sub>2</sub>O, 768-9
- DISTANNACYCLODECANE**  
Formation and X-ray crystal structure of 1,1,6,6-tetraphenyl-1,6-distannacyclodecane, 791-2
- DISULPHIDE**  
Photopolymerization of S<sub>2</sub>N<sub>2</sub> to (SN)<sub>x</sub>, 301-2  
A new and versatile chelating dithio ligand: X-ray crystal structure of (Ru(CO)(SC<sub>6</sub>H<sub>3</sub>Me-o-SC<sub>6</sub>H<sub>4</sub>Me)(η-C<sub>5</sub>H<sub>5</sub>)), 486-8
- DITERPENE**  
Alternative synthetic route to the cembrene skeleton, 359-60
- DITERPENOID**  
Structure of (-)-2,9-dihydroxyverrucosane, a novel carbon skeletal diterpenoid from the liverwort *Mylia verrucosa*, 198-200  
Striatin A, B, and C: novel diterpenoid antibiotics from *Cyathus striatus* X-ray crystal structure of striatin A, 665-6
- DITHIABICYCLODODECATETRAENE**  
9,12-Dithia-trans-bicyclo(6.4.0)dodeca-2,4,6,10-tetraene system, an example of a trans-fused cycloocta-1,3,5-triene, 57-8
- DITHIANE**  
Electrochemical removal of 1,3-dithiane protecting groups, 255-6
- DITHIETANE**  
Fluorinated dichloro hexa- and penta-coordinated sulphur(VI) compounds, 154-5
- DITHIOCARBONATE**  
Conversion of primary aliphatic amines into thiocyanates and thiocarbonate esters, 133-4  
Stereoselective reduction of 3-O-hexofuranosyl S-methyl dithiocarbonates with tributyltin deuteride, 449-50
- DITHIOLYLIDENE**  
Versatility of cycloaddition of electrophilic alkynes to η<sup>2</sup>-CS<sub>2</sub> metal complexes. Reversible isomerization of 1,3-dithiol 2-ylideneiron and heterometallic complexes, 573-4
- DIXENON CATION**  
Formation of the dixenon cation, Xe<sub>2</sub><sup>+</sup>, in fluoroantimonate(V) media by oxidation-reduction methods: spectroscopic properties of the ion, 502-4
- DMSO**  
Thiosulphonium ion intermediate in the oxidation of a thiol with dimethyl sulphoxide, 865-6
- DODECADIENE**  
Substitution of allylic sulphides of benzothiazole-2-thiol with organomagnesium compounds in the presence of copper(I) iodide. A regioselective synthesis of olefins, 1085-6
- DODECANOATE**  
Biphasic photochemistry: use of the Barton reaction to determine micelle microviscosity, 1110-11
- DODECENOL**  
1,3-Transposition of primary allylic alcohols: a new application of selenoxide chemistry, 770-1
- DODECYL**  
Regioselective oxidation of unactivated methylene and methine groups by dry ozonation: similarity to microbiological oxidation, 413-14
- DODECYL HALIDE**  
Cyanoborohydride supported on an anion exchange resin as a selective reducing agent, 1088-9
- DOPA**  
Proton nuclear magnetic resonance study of the deprotonation of the catecholamines in solution: the microconstants for the deuteriation of L-dopa in D<sub>2</sub>O, 768-9
- DOPED**  
A novel conducting polyacetylene derivative, 1066-7
- ELEC COND**  
Copper derivatives of tetrathiafulvalene, 69-70  
Highly conducting organic alloys (NBDT)<sub>2</sub>I<sub>x</sub>Br<sub>3-x</sub> (NBDT = naphthaceno(5,6-cd:11,12-c'd')bis(1,2)dithiole), 974-5  
'Organic metals' with asymmetric acceptors: the monofluorotetracyanoquinodimethane anion, 992-3  
A novel conducting polyacetylene derivative, 1066-7
- ELEC DISCHARGE**  
Production, in electrical discharges, of fluorine cyanide, fluoroacetylene, and related substances as monitored by microwave spectroscopy, 335
- ELEC POTENTIAL**  
Solvation as the determining factor for the redox potential of Fe<sub>4</sub>S<sub>4</sub>(S(CH<sub>2</sub>)<sub>n</sub>CO<sub>2</sub>)<sub>6</sub><sup>-</sup> cluster ions, 703-4
- ELEC RESISTIVITY**  
Tetrathio-derivatives of quinodimethane. Synthesis and ion-radical complex formation of cyclohexa-2,5-diene-1,4-diylidenebis-1,3-benzodithiole derivative, 74-5
- ELECTRO CATALYSIS**  
Polymeric sulphur nitride electrode: an example of electrocatalysis by surface chemical modification, 244-5
- ELECTROADDN**  
Stereochemical control of anodic cyanomethoxylation, 20-2
- ELECTROCATALYTIC**  
Electrocatalytic formation of superoxides in the presence of cobalt chelates, 339-40
- ELECTROCHEM**  
Stereochemical control of anodic cyanomethoxylation, 20-2  
Anodically induced decomposition of some arylnickel(II) phosphine complexes, 66-8  
Electrochemical removal of 1,3-dithiane protecting groups, 255-6  
Synthesis of α-alkoxycarbonylcycloalkanes by electrolysis of 1-trimethylsilyloxybicyclo(n.1.0)alkanes, 293-4  
Electrocatalytic formation of superoxides in the presence of cobalt chelates, 339-40  
Electrochemical reductive acylation of astacene; a route to the carotenoid astaxanthin, 387-8  
Regiospecific anodic pyridination of 2-hydroxy-3-methoxy-5-methylbenzaldehyde Schiff bases, 407-8  
Electrochemical reductive cyclization of dimethyl 2,(ω-1)-dibromoalkanedioates, 481-2  
Surprising electrochemical reduction product from a dihydrodiazepinium salt, 499  
Electrochemical reduction of a heterodienetricarbonyliron(0) complex as a route to novel tricarbonyliron anions, 552-3  
Use of ion exchange resins to trap electrogenerated intermediates: acetamidation of hydrocarbons, 738  
Production, detection, and characterization of transient hexavalent technetium in aqueous alkaline media by pulse radiolysis and very fast scan cyclic voltammetry, 1038-40  
Visible light-assisted electrochemical reduction of oxygen at a platinum electrode coated with surface active cobalt(II) and

- manganese(III) porphyrins, 1106-7
- ELECTROCHEM OXIDN**  
Anodic functionalization of 1H-perfluoroalkanes. Observation of fluorine-19 chemically induced dynamic nuclear polarization, 118-19  
Electrochemical synthesis of 2-methoxy-1,4-dioxanes by anodic oxidation of  $\beta$ -oxocarboxylate ethylene acetals, 194-5  
Electrochemical formation of a tetrathiane ring, 809-10
- ELECTROCHEM REDN**  
Phenaleno(1,9-cd)dithioly: the first example of a monomeric, coplanar, carbon-based free radical, 429-30
- ELECTRODE**  
Polymeric sulphur nitride electrode: an example of electrocatalysis by surface chemical modification, 244-5  
Visible light-assisted electrochemical reduction of oxygen at a platinum electrode coated with surface active cobalt(II) and manganese(III) porphyrins, 1106-7
- ELECTROLYSIS**  
Electrochemical removal of 1,3-dithiane protecting groups, 255-6
- ELECTRON**  
Resolved nitrogen-14 hyperfine coupling for surface electrons on magnesium oxide in the presence of ammonia and amines, 71-2
- ELECTRON ACCEPTOR**  
Addition of furans to electron rich olefins through photo-induced electron transfer in the presence of electron acceptors, 594-5
- ELECTRON AFFINITY**  
'Organic metals' with asymmetric acceptors: the monofluorotetracyanoquinodimethane anion, 992-3
- ELECTRON CAPTURE**  
 $\sigma^*$ -electron addition to 5-halogenouracils in neutral glasses, 313-14
- ELECTRON MICROSCOPY**  
Investigation of structure composition relationships in the serpentine minerals by combined X-ray K-emission spectrometry and high-resolution electron microscopy, 986-7  
Mapping organic molecules in biological space by high resolution NMR spectroscopy and electron microscopy, 1030-2
- ELECTRON TRANSFER**  
Electron-transfer reactions between the semiquinone anion radical and metallo-tetraphenylporphyrins, 361
- ELECTRON TRANSFER**  
Electron-transfer reactions between the semiquinone anion radical and metallo-tetraphenylporphyrins, 361  
Structural barriers to the rates of electron transfer of copper complexes. Oxidation of cytochrome c (II) by copper(II) complexes, 370-2  
Mechanism of the cadmium sulphide sensitized photooxidation of Leuco Crystal Violet in nonaqueous solution, 417-18  
Addition of furans to electron rich olefins through photo-induced electron transfer in the presence of electron acceptors, 594-5
- ELEMENOLIDE**  
Structure and total synthesis of temisin, 76-8
- ELIMINATION**  
Conformational control in eliminations with the  $(E_1cB)_R$  mechanism, 43-4  
Stereo-electronic control of  $\alpha$  proton abstraction from iminium ions, 49-50  
The kinetic effect of ring strain in an elimination reaction, 338-9  
Synthesis of fluorinated dienes and cyclobutenes, 475-6  
Elimination of an allyloxy-group during the Claisen rearrangement of 1,2-diallyloxanthraquinone, 900-1  
Orientation in elimination from carbanions, 975-6
- EMETINE**  
Deacetylisopecoside: the key intermediate in the biosynthesis of the alkaloids cephaeline and emetine, 896-8
- EMISSION SPECTRUM**  
Direct evidence for the quadruple metal-metal bond in the octachlorodimolybdenum(II) ion,  $(Mo_2Cl_8)^{4-}$ , using X-ray emission spectroscopy, 262-3
- ENAMINE**  
Intramolecular photochemical arylation of N-substituted enamines: application to synthesis of heterocyclic compounds, 766-7
- ENAMINONE**  
Intramolecular photochemical arylation of N-substituted enamines: application to synthesis of heterocyclic compounds, 766-7
- ENANTIOMERIC PURITY**  
General method for determining enantiomeric purities of chiral lactones, 722
- ENDORPHIN**  
Application of polyamide resins to polypeptide synthesis: an improved synthesis of  $\beta$ -endorphin using fluorenylmethoxycarbonylamino-acids, 539-40
- ENERGY**  
Bond strengths in metal carbonyl clusters, 765-6
- ENOL**  
1,3-Transposition of primary allylic alcohols: a new application of selenoxide chemistry, 770-1
- ENOL ETHER**  
Ready formation of enol ethers in steroidal 20 $\beta$ -hydroxy-18-methyl-18-ketones, 241  
Efficient method for the preparation of trimethylsilyl enol ethers of acyltrimethylsilanes, 478-9  
A new synthesis of conjugated dienones, 608
- ENOLATE**  
Steric effects on chelation in carbon-13 nuclear magnetic resonance spectra of  $\beta$ -diketone enolates, 965-7
- ENOLIZATION**  
Difluor reagents: non-hygroscopic sources of the fluoride ion, 789-91
- ENONE**  
A silicon-based protecting group for the  $\alpha\beta$ -unsaturation of  $\alpha\beta$ -unsaturated ketones, 177-8  
Reduction of natural enones in the presence of cerium trichloride, 601-2  
Lithium phenylthio(trimethylstannyl)cuprate, a new reagent for conjugate addition of the trimethylstannyl group. The synthesis of  $\beta$ -trimethylstannyl- $\alpha\beta$ -unsaturated ketones, 1033-4
- ENOPHILE**  
Ene reactions of  $\beta$ -pinene at room temperature and 40 kbar pressure, 599-600
- ENTHALPY**  
Standard enthalpies of formation of cis- and trans-bicyclo(6.1.0)nonanes, 778-9  
Enthalpy of formation of copper(II) complexes with 14-membered tetraaza macrocycles, 833-4
- ENZYLE**  
Stereochemical course of dehydration catalysed by the yeast fatty acid synthetase, 193-4  
Biosynthesis of mycophenolic acid. Oxidation of 6-farnesyl-5,7-dihydroxy-4-methylphthalide in a cell-free preparation from *Penicillium brevicompactum*, 434  
Biosynthesis of natural porphyrins: enzymic experiments on isomeric bilanes, 1064-6
- ENZYLE MODEL**  
Macrocyclic enzyme model system: catalysis of ester degradation by a (20)paracyclophane bearing nucleophilic and metal-binding sites, 494-6
- ENZYMIC**  
Biosynthesis of type-III porphyrins: proof of intact enzymic conversion of the head-to-tail bilane into uro'gen-III by intramolecular rearrangement, 185-6  
Biosynthesis of natural porphyrins: enzymic experiments on isomeric bilanes, 1064-6
- EPIDIOXIDE**  
2-(1-Methylindol-3-yl)-3-phenyldihydro-1,4-dioxin 2,3-epidioxide, a dioxetan resulting in efficient ultraviolet chemiluminescence, 781-2
- EPIMERISATION**  
Synthesis, epimerization, X-ray structure, and absolute configuration of an optically active molybdenum complex having five independent ligands, 691-2
- EPIMERIZATION**  
Analogies between the dynamic stereochemistry at silicon and phosphorus. Kinetic study of solvent-induced epimerization of menthyl chloro(phenyl)phosphonate, 104-5
- EPISULPHIDATION**  
Synthesis of sulphur-containing prostacyclin  $PGI_1$  analogues, 6,9-epithio- $PGI_1$ , its S-oxide stereoisomers, and its SS-dioxide, 375-7
- EPITHIOPROSTACYCLIN**  
Synthesis of sulphur-containing prostacyclin  $PGI_1$  analogues, 6,9-epithio- $PGI_1$ , its S-oxide stereoisomers, and its SS-dioxide, 375-7
- EPOXIDE**  
Photoinduced synthesis of binuclear molybdenocene and tungstenocene derivatives: catalytic deoxygenation of epoxides by metallocenes, 99-100

## EPOXIDN

- Trifluoroacetylation of alcohols: a newly detected reaction of trifluoroacetic acid, 248
- Effect of substituents on the reactivity of a double bond towards ( $\pi_4s + \pi_2s$ ) and epoxidation reactions: a chemical manifestation of orbital interactions through space, 296-7
- Solvent effects in homogeneous asymmetric catalysis, 427-8
- Asymmetric synthesis and absolute stereochemistry of the alkaloids araliopsine, isoplatydesmine, and ribalinine. Dual mechanism for a dihydrofuroquinolone-dihydropyranoquinolone rearrangement, 624-6

## Microbial epoxidation of long-chain terminal olefins, 849-50

## EPOXY

- Novel synthesis of  $\gamma$ -hydroxy- $\alpha$ -nitro-olefins, 350-1
- Synthesis of a sym-oxepin oxide with restricted conformational mobility and altered reactivity. X-ray crystal and molecular structure of 4,7-dibromo-3a,7a:5,6-diepoxyperhydroindene, 377-9
- Some epoxy-olefin cyclizations, 526-8
- Some epoxy-acetylene cyclizations, 528-9
- An unexpected cyclization of an olefinic epoxy-ketone, 529-30

## EPOXYANTHRACENETETRON

- 4a,9a-Epoxy-4a,9a-dihydroanthracene-1,4,9,10-tetrone: a versatile synthon in anthracycline synthesis, 997-8

## EPOXYBENZODIOXEPINONE

- X-ray crystal structure of an ozonide: 4-(4-nitrophenylmethyl)-1-phenyl-1,4-epoxy-1H-2,3-benzodioxepin-5(4H)one, 729-30

## EPOXYBICYCLOHEPTANONE

- Photosynthetic routes to prostaglandins: conversion of 2,3-endo-epoxybicyclo(3.2.0)heptan-6-one into 6,7-endo-epoxy-3-alkoxy-2-oxabicyclo(3.3.0)octanes, 661-2
- Novel synthesis of prostaglandin  $E_2$  involving regioselective ring opening of a 2,3-endo-epoxybicyclo(3.2.0)heptan-6-one acetal with a mixed organocuprate reagent, 662-4

## EPOXYESTRANONE

- New approach to the aromatization of ring B in 19-norsteroids and to the synthesis of equilenin-type compounds, 916-18

## EPOXYGERANYL

- Transformation of the geraniol skeleton into the fragranol and grandisol skeletons, 519-20

## EPOXYIMINOANTHRACENE

- Detection by microwave spectroscopy of nitroxyl produced by a retro-Diels-Alder reaction, 275-6

## EPOXYLANOSTANONE

- Novel direct rearrangement of a  $9\beta,11\beta$ -epoxylanostan-7-one into a  $\beta$ -homo-derivative with incorporation of the C-10 angular methyl group, 411-12

## EQUIL

- Sugar equilibria. Observation of a septanose anomer, 1073-4

## EQUIL CONST

- Equilibrium constant for protium-deuterium exchange between methanol and water, 1037-8

## EQUILENIN

- New approach to the aromatization of ring B in 19-norsteroids and to the synthesis of equilenin-type compounds, 916-18

## ERBIUM

- Neutral and anionic silylmethyl complexes of Group\*IIIa and lanthanoid metals; the X-ray crystal and molecular structure of  $(Li(thf)_4)(Yb(CH(SiMe_3)_2)_3Cl)$  (thf = tetrahydrofuran), 140-2

## ERGOSTEROL

- Retro-1,4-cycloaddition of adducts derived from steroidal 5,7-dienes and 4-phenyl-1,2,4-triazoline-3,5-dione, 727-8

## ERGOSTERYL

- Conversion of thiocarbonyl compounds into their corresponding oxo derivatives using benzeneseleninic anhydride, 393-4

## ERYOTRAMIDINE

- Novel total synthesis of ( $\pm$ )-erysotramidine, an oxo-erythrinan alkaloid, 733-4

## ERYTHROCYTE

- Chemical synthesis of 2-O-( $\alpha$ -L-fucopyranosyl)-3-O-(2-acetamido-2-deoxy- $\alpha$ -D-galactopyranosyl)-D-galactose, the terminal structure in the blood-group A antigenic determinant, 535-7

## ESR

- Organozirconium(III)-dinitrogen complexes: evidence for ( $\eta^2$ -N<sub>2</sub>)-metal bonding in  $(Zr(\eta-C_5H_5)_2(N_2)(R))$  (R = Me<sub>3</sub>Si)<sub>2</sub>CH), 34-6
- Copper derivatives of tetrathiafulvalene, 69-70
- Resolved nitrogen-14 hyperfine coupling for surface electrons on

- magnesium oxide in the presence of ammonia and amines, 71-2
- Detection of aromatic sulphinyl (ArSO $\cdot$ ) radicals during the photolysis and thermolysis of S-aryl arenethiosulphonates and diaryl sulphoxides, 78-9
- Second-order effects observed in the electron spin resonance spectra of methyl radicals stabilized on silica at 77 K, 164-5
- Substituent effect on singlet-triplet splitting: diarylcarbene-diarylmethylene; electron spin resonance study. Merostabilization in diarylmethylenes, 181-2
- Preparation of bis(cis-diacetyltetracarbonylrhenium)copper, 183-4
- New dioxygen complex of manganese phthalocyanine, 217-18
- Spin trapping experiments on NADH analogues and the role of radicals in carbonyl reductions, 300-1
- Photolysis of cyclopentadienyltin compounds: a new source of tin-centred radicals, 353-4
- Ring inversion in the cyclohexenyl radical, 394-5
- meso- $\alpha,\alpha,\alpha,\alpha$ -Tetra(o-nicotinamidophenyl)porphyrin: a novel ligand for the preparation of unsymmetrical bis-metal complexes, 399-400
- Phenalenol(1,9-cd)dithioly: the first example of a monomeric, coplanar, carbon-based free radical, 429-30
- Cytochrome oxidase models: a binuclear iron-copper site with a bipyrimidine bridge, 483-5
- Formation of the dioxenon cation, Xe<sub>2</sub><sup>+</sup>, in fluoroantimonate(V) media by oxidation-reduction methods: spectroscopic properties of the ion, 502-4
- Generation and some reactions of the bis(trimethylsilyl)aminyl radical, 545-6
- An electron spin resonance study of the cyclobutylhydroxymethyl radical: its conformation, and its ring opening followed by 1,6-transfer of enolic hydrogen, 569-71
- Formation and electron spin resonance spectra of subphuranyl radicals of the type (CF<sub>3</sub>SSR<sub>2</sub>) $\cdot$ , 623-4
- Radical cation of 2,2,3,3-tetramethylbutane: an electron spin resonance study, 686-7
- Pyramidal geometry of the trivalent carbon atom of the norbornadien-7-yl radical; electron spin resonance study, 804
- Formation of a novel complex between pyridinium bis(alkoxycarbonyl)methylides and diphenylcyclopropanone; trapping of pyridinium bis(alkoxycarbonyl)methylide cation radicals, 817-19
- Electron spin resonance evidence for dimer formation in high spin iron(III)-octaethylporphyrin and iron(III)-meso-nitro-octaethylporphyrin in solution, 906-7
- (Cr(oxalate)<sub>3</sub>)<sup>3-</sup> as a broadening agent in nitroxyl spin probe studies, 944-5
- Homolytic addition to N-methylene-tert-butylamine: a new route to aminyl radicals, 960-1

## ESTER

- Metal-amine reduction of sterically hindered esters to alkanes, a new method for the deoxygenation of hindered alcohols, 68-9
- Reduction of alkyl esters to alkanes by sodium in hexamethylphosphoric triamide. A new method for the deoxygenation of alcohols, 567-8
- Oxidative displacement of iodine from vicinal iodocarboxylates and alkyl iodides, 919
- Molecular catalysis: enhanced rates of thiolysis with high structural and chiral recognition in complexes of a reactive macrocyclic receptor molecule, 949-51

## ESTER DEGRDN

- Macrocyclic enzyme model system: catalysis of ester degradation by a (20)paracyclophane bearing nucleophilic and metal-binding sites, 494-6

## ESTER UNSATD

- Synthesis of the butterfly compound (E,E)-10-hydroxy-3,7-dimethyldeca-2,6-dienoic acid, 985-6

## ESTERIFICATION

- Convenient preparation of esters of testosterone and 19-norethisterone with hindered acids, 980-1

## ESTRANONE

- New approach to the aromatization of ring B in 19-norsteroids and to the synthesis of equilenin-type compounds, 916-18

## ETHANE DIPHENYL

- Ready conversion of 1,1-diphenylethylene into benzophenone and 1,1-diphenylethane over a synthetic hectorite, 930-1

## ETHANEDIOL

- Light-induced conversion of ethane-1,2-diol or 2-aminoethanol into acetaldehyde in the presence of 8-methoxy-5'-deoxy-5'-adenosylcobalamin or a simpler cobalt(III) alkyl, 643-4



## ETHANEDIOL PHENYL

Circular dichroism of the isotopically dissymmetric molecules (1R,2S)-(1-<sup>2</sup>H)- and (1R,2S)-(1-<sup>18</sup>O)-1,2-dihydroxy-1,2-diphenylethane, 850-2

## ETHANOL

Direct evidence of neighbouring group participation in the gas phase, 213-14

Catalytic synthesis of ethanol from carbon monoxide and hydrogen under atmospheric pressure over pyrolyzed rhodium carbonyl clusters on titanium dioxide, zirconium dioxide, and dilanthanum trioxide, 566-7

## ETHANOL METHYLTHIO

Carbon-13-labelling study of the reaction between 2-(methylthio) ethanol and carbon tetrachloride-phosphines, 208-9

## ETHENE

Different behaviour of cis- and trans-aminodichloro( $\pi$ -ethene) platinum(II) complexes in their reaction with the free amine, 654-5

Continuous hydrogenation of ethene using spilt-over hydrogen, 891-2

Formation of allenes or  $\gamma$ -ketoesters from reactions of oxyallyls with acetylenes or 1,1-dimethoxyethene, 1006-7

## ETHER

Intramolecular photocycloaddition of phenethyl vinyl ether, 129-30

Isomerization of allyl ethers catalysed by the cationic iridium complex (Ir(cyclo-octa-1,5-diene)(PMePh<sub>2</sub>)<sub>2</sub>)PF<sub>6</sub>. A highly stereoselective route to trans-propenyl ethers, 694-5

Novel method for dealkylation of esters, ethers, and acetals by chlorotrimethylsilane-sodium iodide, 874-5

## ETHIDIUM BROMIDE

Synthesis of intercalating and carcinogenic nitroxide spin labels, 215-16

## ETHOXY

Experimental proof of the existence of a fourth stable gas phase C<sub>2</sub>H<sub>4</sub>O<sup>+</sup> isomer: the open ethylene oxide ion, 724-5

## ETHYLAMINE

A new group of nitroxide free radicals formed from aliphatic nitrosamines and thiols, 741-2

## ETHYLATION

Driflour reagents: non-hygrosopic sources of the fluoride ion, 789-91

## ETHYLENE

Synthesis and molecular structure of (Os<sub>6</sub>(CO)<sub>16</sub>(CMe)<sub>2</sub>) and (Os<sub>6</sub>(CO)<sub>16</sub>(MeC:CMe)C), derivatives of ethylene and hexaosmium octadecacarbonyl, 421-3

Polymer-bound tetranuclear iridium carbonyl catalyst, 540-1

Generation and some reactions of the bis(trimethylsilyl)aminyl radical, 545-6

(Os<sub>3</sub>(CO)<sub>9</sub>H(SR)), a highly reactive molecule. The X-ray structure of a  $\pi$ -bound ethylene adduct (Os<sub>3</sub>(CO)<sub>9</sub>H(C<sub>2</sub>H<sub>4</sub>)(SMe)), 551-2

Formation of abnormal products in the aluminium chloride-catalysed ene additions of chloral and bromal to mono- and 1,2-dialkyl ethylenes, 655-6

Evidence for the ready insertion of rhodium into a carbon-hydrogen bond of ethylene; crystal and molecular structure of  $\mu$ -but-2-ene- $\mu$ -ethylenebis-( $\eta^5$ -1-methylindenyl)dirhodium, 839-41

Alkyl bridged complexes of the group 3A and lanthanoid metals as homogeneous ethylene polymerization catalysts, 994-5

## ETHYLENE GLYCOL

Nonenzymic model of the dioldehydratase reaction. Initiation of conversion of ethylene glycol into acetaldehyde on anaerobic photolysis of organocobalamins in the presence of mercapto compounds, 592-3

## ETHYLENE OXIDE

Experimental proof of the existence of a fourth stable gas phase C<sub>2</sub>H<sub>4</sub>O<sup>+</sup> isomer: the open ethylene oxide ion, 724-5

## ETHYLENECHLORONIUM

Isomeric gaseous ethylenechloronium ions, 796-7

## ETHYLENEDIAMINE

A novel chain structure in the (Pb<sub>2</sub>Cl<sub>9</sub>)<sub>n</sub><sup>5n-</sup> anion; crystal and molecular structure of (Co(NH<sub>2</sub>CH<sub>2</sub>CH<sub>2</sub>NH<sub>2</sub>)<sub>3</sub>)<sub>2</sub>(Pb<sub>2</sub>Cl<sub>9</sub>)Cl. 3H<sub>2</sub>O, 347-8

Effects of structural distortion on the ligand exchange reactions of copper(II) Schiff base complexes, 583-4

Stereoselective chelate and amino acid synthesis with chelated 2-aminopropionate; crystal and molecular structures of  $\alpha$ -(N<sup>2</sup>-2-aminoethylamidino)alaninato-ONN''N'''-(ethylenediamine) cobalt(III) and  $\alpha$ -(N<sup>2</sup>-2-aminoethylamidino)alanine-NN''N'''

-(chloro)ethylenediaminecobalt(III) tetrachlorozincates, 647-9

Copper(I) ethylenediamine carbonyl complexes: 'models' for carbon monoxide activation. X-ray structure of the ion-pair carbonyl ethylenediaminetetraphenylboratocopper, 921-2

## ETHYLENEDIAMINECOBALT

Stereoselective chelate and amino acid synthesis with chelated 2-aminopropionate; crystal and molecular structures of  $\alpha$ -(N<sup>2</sup>-2-aminoethylamidino)alaninato-ONN''N'''-(ethylenediamine) cobalt(III) and  $\alpha$ -(N<sup>2</sup>-2-aminoethylamidino)alanine-NN''N'''-(chloro)ethylenediaminecobalt(III) tetrachlorozincates, 647-9

## ETHYLENEGLYCOL BROMIDE

Synthesis of 'crown ether' macrocyclic bislactones using caesium carboxylates of pyridine and of benzene dicarboxylic acids, 383-4

## ETHYLIDENE

Synthesis and molecular structure of (Os<sub>6</sub>(CO)<sub>16</sub>(CMe)<sub>2</sub>) and (Os<sub>6</sub>(CO)<sub>16</sub>(MeC:CMe)C), derivatives of ethylene and hexaosmium octadecacarbonyl, 421-3

## ETHYLTHIOCARBENE

Aspects of the coordination chemistry of some electron-rich polyorganosulphur compounds; bis(ethylthio)carbene complexes (M(CO)<sub>5</sub>(C(SET)<sub>2</sub>)) (M = Cr or W) from Na(TosNNC(SET)<sub>2</sub>) (Tos = p-MeC<sub>6</sub>H<sub>4</sub>SO<sub>2</sub>), 146-7

## EUROPIUM PERCHLORATE

Syntheses of some lanthanoid complexes with 4,7,13,16,21,24-hexaoxa-1,10-diazabicyclo(8.8.8)hexacosane. Crystal structure of a europium(III) perchlorate derivative, 788-9

## EVODONE

1-Nitro-1-phenylthiopropene, a new reagent for 3-methylfuran synthesis, 362-3

## EXCHANGE

Acetyl exchange between acetylmesitylene and acetyl chloride under Friedel-Crafts conditions, 271-2

Equilibrium constant for protium-deuterium exchange between methanol and water, 1037-8

## EXCIPLEX

The quenching of aromatic hydrocarbon fluorescence by  $\alpha,\omega$ -diaminoalkanes and the formation of excited ternary complexes, 911-13

Role of exciplex in the photocycloaddition of 2,5-dimethylhexa-2,4-diene to anthracene, 978

## EXCITATION

Photoluminescence from copper(I) complexes with low-lying metal-to-ligand charge transfer excited states, 759-61

## FARNESYL

Biosynthesis of mycophenolic acid. Oxidation of 6-farnesyl-5,7-dihydroxy-4-methylphthalide in a cell-free preparation from *Penicillium brevicompactum*, 434

## FARNESYLPHTHALIDE

Biosynthesis of mycophenolic acid. Oxidation of 6-farnesyl-5,7-dihydroxy-4-methylphthalide in a cell-free preparation from *Penicillium brevicompactum*, 434

## FERREDOXIN

Metal-metal interactions in 2-Fe ferredoxins; SCF-X $\alpha$ -SW calculations, 1027-9

Existence of specific binding sites in 1:1 oxidations of reduced parsley 2-iron ferredoxin with inorganic complexes, 1102-3

## FERROBORANE

Electronic structure of B<sub>4</sub>H<sub>8</sub>Fe(CO)<sub>3</sub>. Comparison of SCF-X $\alpha$ -SW molecular orbital theory with the ultraviolet photoelectron spectrum, 385-6

## FERROMAGNETIC

Ferromagnetic coupling and electron transfer in CoCu(ben).3H<sub>2</sub>O (H<sub>4</sub>ben = NN'-bis(2-hydroxy-3-carboxybenzylidene)-1,2-diaminoethane), 1012-13

## FERROMAGNETISM

Correlation of magnetic and optical properties in the organic-intercalated two-dimensional ionic ferromagnet bis(monomethylammonium) tetrachlorochromate(II), 511-12

## FLAVANOL

Condensed tannins. Circular dichroism method of assessing the absolute configuration at carbon-4 of 4-arylflavan-3-ols, and stereochemistry of their formation from flavan-3,4-diols, 698-700

## FLAVANYLFLAVANDIOL

Condensed tannins: determination of the point of linkage in 'terminal' (+)-catechin units and degradative bromination of 4-flavanylflavan-3,4-diols, 696-8

## FLAVANYLMETHOXYFLAVANOL

Condensed tannins: direct synthesis, structure, and absolute

- configuration of four biflavonoids from black wattle bark ('mimosa') extract, 700-2
- FLAVIN**  
Oxidation-reduction in hydrolysis of pyrimido(4,5-b)quinoline-2(3H),4(10H)-diones (5-deazaflavins), 398-9  
Synthesis and characterization of covalent flavin-papain complexes with sulphur in the sulphide and sulphone oxidation states, 457-9
- FLUORENE**  
Versatile deuterium exchange and isomerization of hydrocarbons via phase transfer catalysis, 155-6  
Substitution reactions of fluorinated triarylmethanols in formic acid 389-91
- FLUORENE ALKYLIDENE**  
Reactions of singlet oxygen. Formation of hydroxy ketones in the photooxygenation of fluorenylidene derivatives, 120-1
- FLUORENONE**  
Novel synthesis of phenyltrimethylsilyldiazene and generation of the phenyl anion synthon therefrom, 990
- FLUORENYLMETHOXYCARBONYL**  
Polymeric de-blocking agents for the fluorenyl-methoxycarbonyl (Fmoc) amino-protecting group, 450-1  
A mild procedure for solid phase peptide synthesis: use of fluorenylmethoxycarbonylamino-acids, 537-9  
Application of polyamide resins to polypeptide synthesis: an improved synthesis of  $\beta$ -endorphin using fluorenylmethoxycarbonylamino-acids, 539-40
- FLUORESCENCE**  
2-(1-Methylindol-3-yl)-3-phenyldihydro-1,4-dioxin 2,3-epidioxide, a dioxetan resulting in efficient ultraviolet chemiluminescence, 781-2  
The quenching of aromatic hydrocarbon fluorescence by  $\alpha,\omega$ -diaminoalkanes and the formation of excited ternary complexes, 911-13  
The quenching of excited singlet states of Rose Bengal by bifunctional compounds, 913-14
- FLUORIDE**  
Difluoride dioxides of molybdenum(VI) and tungsten(VI), 254-5  
Drifluor reagents: non-hygroscopic sources of the fluoride ion, 789-91
- FLUORIDE ASSISTED**  
Hydrogen bond assisted organic reactions: C- and O-alkylations, sulphenylations, and Michael additions aided by polymer immobilized fluoride ion, 466-7
- FLUORINATED**  
Analysis of ultra-thin fluorine-containing layers on polyethylene by  $^{19}\text{F}(p,\alpha\gamma)$  spectrometry, 1011-12
- FLUORINATION**  
Perfluoroaza- and -diazacyclohexadiene derivatives, 304-5
- FLUORINE**  
Analysis of ultra-thin fluorine-containing layers on polyethylene by  $^{19}\text{F}(p,\alpha\gamma)$  spectrometry, 1011-12
- FLUORINE ADDN**  
Regiospecific boron trifluoride catalysed fluorine addition to fluoro-substituted benzene derivatives using xenon difluoride, 969-70
- FLUORINE CYANIDE**  
Production, in electrical discharges, of fluorine cyanide, fluoroacetylene, and related substances as monitored by microwave spectroscopy, 335
- FLUORO**  
Novel salts of graphite and a boron nitride salt, 200-1  
Production, in electrical discharges, of fluorine cyanide, fluoroacetylene, and related substances as monitored by microwave spectroscopy, 335  
Novel derivatives of perfluorocyclobutene, 433  
Synthesis of fluorinated dienes and cyclobutenes, 475-6
- FLUOROACETONE**  
Reactions of dimethyl 3-oxoglutarate with zerovalent compounds of palladium and platinum. Preparation of 1-metallacyclobutan-3-one complexes and the X-ray crystal structure of 2,4-bis(methoxycarbonyl)-1,1-bis(triphenylphosphine)platinacyclobutan-3-one, 744-5
- FLUOROACETYLTATION**  
Trifluoroacetylation of alcohols: a newly detected reaction of trifluoroacetic acid, 248
- FLUORODIAZACYCLOHEXADIENE**  
Photochemical conversions of some fluorinated aza- and diazacyclohexadienes, 305-6
- FLUORODIENE**  
Regioselectivity in the di- $\pi$ -methane rearrangement; alternative processes in the photochemistry of halogeno-1,4-dienes, 101-2
- FLUORODITHIETANE**  
Fluorinated dichloro hexa- and penta-coordinated sulphur(VI) compounds, 154-5
- FLUOROETHANOL**  
Asymmetric reduction of trifluoromethyl ketones by actively fermenting yeast, 456-7
- FLUOROGIBBERELLIN**  
Microbiological production of 9 $\alpha$ -fluorogibberellin A<sub>4</sub>, 9 $\alpha$ -fluorogibberellin A<sub>14</sub>, and other fluoroterpenoids, 1013-15
- FLUOROHECTORITE**  
Ready conversion of 1,1-diphenylethylene into benzophenone and 1,1-diphenylethane over a synthetic hectorite, 930-1
- FLUROHEXANE**  
Anodic functionalization of 1H-perfluoroalkanes. Observation of fluorine-19 chemically induced dynamic nuclear polarization, 118-19
- FLUROHEXENE**  
Synthesis of fluorinated dienes and cyclobutenes, 475-6
- FLUOROMETHANESULPHONATE**  
Methyltriphenoxyphosphonium trifluoromethanesulphonate: a new versatile synthetic reagent, 424-5
- FLUOROMETHOXYHEXENE**  
Perfluorinated derivatives of furan via novel cyclization reactions of perfluoro-olefins, 431-2
- FLUOROMETHYL**  
Perfluorinated derivatives of furan via novel cyclization reactions of perfluoro-olefins, 431-2  
Asymmetric reduction of trifluoromethyl ketones by actively fermenting yeast, 456-7  
Synthesis of the N-unsubstituted Dewar pyrrole 1,2,3,4-tetrakis(trifluoromethyl)-5-azabicyclo(2.1.0)pent-2-ene, 509  
Formation and electron spin resonance spectra of subphuranyl radicals of the type (CF<sub>3</sub>SSR<sub>2</sub>)•, 623-4
- FLUOROPHENYL**  
Substitution reactions of fluorinated triarylmethanols in formic acid 389-91
- FLUOROPHOSPHINOMETHYLAMINO**  
Retention of the cobalt-cobalt bond in (MeN(PF<sub>2</sub>)<sub>2</sub>)<sub>3</sub>Co<sub>2</sub>(CO)<sub>2</sub> upon halogenation: the X-ray crystal structure of (MeN(PF<sub>2</sub>)<sub>2</sub>)<sub>3</sub>Co<sub>2</sub>Br<sub>4</sub>, 514-15
- FLUOROSULPHATE**  
Trimethylammoniosulphate esters, 48-9  
Anodic functionalization of 1H-perfluoroalkanes. Observation of fluorine-19 chemically induced dynamic nuclear polarization, 118-19  
Novel salts of graphite and a boron nitride salt, 200-1  
Acid salts of graphite: large or small fractional ionization, 544-5
- FLUOROSULPHONYL**  
X-ray crystal structure of (AsPh<sub>4</sub>)<sup>+</sup>(NSF<sub>2</sub>NSO<sub>2</sub>F)<sup>-</sup>: three different types of sulphur-nitrogen bonds in the anion, 226
- FLUOROSULPHURYL**  
A novel conducting polyacetylene derivative, 1066-7
- FLUOROTETRACYANOQUINODIMETHANE**  
'Organic metals' with asymmetric acceptors: the monofluorotetracyanoquinodimethane anion, 992-3
- FLUOROVINYL**  
New mode of bonding of a vinyl ligand to an osmium cluster: the X-ray crystal structure of (HOs<sub>3</sub>(CO)<sub>10</sub>(CF<sub>3</sub>CCHCF<sub>3</sub>)), 1035-6
- FLUROXENON**  
Formation of the dixenon cation, Xe<sub>2</sub><sup>+</sup>, in fluoroantimonate(V) media by oxidation-reduction methods: spectroscopic properties of the ion, 502-4
- FLUXIONALITY**  
Fluxional cyclopentadienylboranes, 242
- FORMAMIDE**  
Thermal fission and reformation of the carbon-nitrogen bond in formamide as studied by carbon-13-nitrogen-15 coupling, 485-6
- FORMATE**  
A new assignment of the metal ionizations in the photoelectron spectrum of dimolybdenum tetraformate, 204-5
- FORMYL**  
'Methoxy cation' and protonated formaldehyde: high barriers to isomerization, 190-1
- FOURIER TRANSFORM**  
Proton nuclear magnetic resonance study of the deprotonation of the catecholamines in solution: the microconstants for the de-

- deuteration of L-dopa in D<sub>2</sub>O, 768-9  
Two micromethods for determining the linkage of adducts formed between polyaromatic hydrocarbons and nucleic acid bases, 798-800
- FRAGMENTATION**  
Synthesis of fluorinated dienes and cyclobutenes, 475-6
- FRAGRANOL**  
Transformation of the geraniol skeleton into the fragranol and grandisol skeletons, 519-20
- FRIEDEL**  
Acetyl exchange between acetylmesitylene and acetyl chloride under Friedel-Crafts conditions, 271-2
- FRIEDEL CRAFTS**  
Acetylation of 2,3-dimethylbenzofuran. The first example of a non-conventional Friedel-Crafts reaction, 597-8
- FRIES REARRANGEMENT**  
Biphasic photochemistry: the photo-Fries rearrangement on silica gel, 1109-10
- FRONTALIN**  
A short synthesis of (R)-(+)-frontalin and Latia luciferin using new organosilicon reagents, 297-8
- FUCOPYRANOSYLGALACTOPYRANOSYL**  
Chemical synthesis of 2-O-( $\alpha$ -L-fucopyranosyl)-3-O-(2-acetamido-2-deoxy- $\alpha$ -D-galactopyranosyl)-D-galactose, the terminal structure in the blood-group A antigenic determinant, 535-7
- FULVENE**  
Preparation and characterization of 6,6-dimethylenefulvene, 496-7
- FUNCTIONALIZATION**  
Regioselective functionalization of triamantane, 306-8
- FUNGAL METABOLITE**  
Biomimetic syntheses of heptaketide metabolites: alternariol and a derivative of rubrofusarin, 406-7
- FURAN**  
Stereochemical control of anodic cyanomethoxylation, 20-2  
1-Nitro-1-phenylthiopropene, a new reagent for 3-methylfuran synthesis, 362-3  
Perfluorinated derivatives of furan via novel cyclization reactions of perfluoro-olefins, 431-2  
Synthesis of fluorinated dienes and cyclobutenes, 475-6  
Synthesis of the N-unsubstituted Dewar pyrrole 1,2,3,4-tetrakis(trifluoromethyl)-5-azabicyclo(2.1.0)pent-2-ene, 509  
Addition of furans to electron rich olefins through photo-induced electron transfer in the presence of electron acceptors, 594-5  
Addition of 3-nitrosobut-3-en-2-one to olefins and to electron-rich heterocycles, 847-9
- FURANYL**  
Selectivity in the addition of organic radicals to the alkene bond, 438-9
- FURAZAN OXIDE**  
Sulphur dioxide mediated conversion of strained furazan N-oxides into diisocyanates, 113-14
- FUROQUINOLONE**  
Asymmetric synthesis and absolute stereochemistry of the alkaloids araliopsine, isoplatydesmine, and ribalinine. Dual mechanism for a dihydrofuroquinolone-dihydropyranoquinolone rearrangement, 624-6
- FURYLPROPENOL**  
1,3-Transposition of primary allylic alcohols: a new application of selenoxide chemistry, 770-1
- FUSICOCCIN**  
Use of deuterium as a tracer with carbon-13 nuclear magnetic resonance spectroscopy in following deuteride migration in terpenoid biosynthesis: mechanism of geranylgeranyl pyrophosphate cyclization in fusicoccin biosynthesis, 843-5
- GALACTOSE**  
Chemical synthesis of 2-O-( $\alpha$ -L-fucopyranosyl)-3-O-(2-acetamido-2-deoxy- $\alpha$ -D-galactopyranosyl)-D-galactose, the terminal structure in the blood-group A antigenic determinant, 535-7
- GAS**  
Nonconcerted unimolecular reactions of ions in the gas phase: isomerization of weakly coordinated carbonium ions, 24-6  
Carbon-13 nuclear magnetic resonance chemical shifts of small hydrocarbons in the gas phase, 94-5  
Gas phase Brønsted basicity of (( $\eta^5$ -MeC<sub>5</sub>H<sub>4</sub>)Mn(CO)<sub>3</sub>), 126-7
- GAS PHASE**  
Direct evidence of neighbouring group participation in the gas phase, 213-14
- Experimental proof of the existence of a fourth stable gas phase C<sub>2</sub>H<sub>4</sub>O<sup>+</sup> isomer: the open ethylene oxide ion, 724-5  
Gas-phase condensation of tert-butyl cations with Lewis bases, 938-40
- GENTISIC ACID**  
Carboxyl-migration facilitated by bacterial hydroxylation of 4-hydroxybenzoate, 731-2
- GERANIOL**  
Transformation of the geraniol skeleton into the fragranol and grandisol skeletons, 519-20  
 $\mu$ -Oxo-bis(chlorotriphenylbismuth): a mild reagent for the oxidation of the hydroxy group, especially in allylic alcohols, 1099-100
- GERANYL**  
Alternative synthetic route to the cembrene skeleton, 359-60
- GERANYLGERANYL PYROPHOSPHATE**  
Use of deuterium as a tracer with carbon-13 nuclear magnetic resonance spectroscopy in following deuteride migration in terpenoid biosynthesis: mechanism of geranylgeranyl pyrophosphate cyclization in fusicoccin biosynthesis, 843-5
- GERMANIUM**  
Use of triorganogermyllithium compounds in transition metal chemistry. Application to the synthesis of optically active anions containing a transition metal-germanium bond, 435-6
- GERMYL**  
Use of triorganogermyllithium compounds in transition metal chemistry. Application to the synthesis of optically active anions containing a transition metal-germanium bond, 435-6  
Trimethylgermyl derivatives for the study of silicate structures, 560-1
- GIBBERELLIN**  
Microbiological production of 9 $\alpha$ -fluorogibberellin A<sub>4</sub>, 9 $\alpha$ -fluorogibberellin A<sub>14</sub>, and other fluoroterpenoids, 1013-15
- GLASS**  
Perturbation of the benzil ground and excited state geometries at low temperatures in hydrocarbon glasses, 116-17
- GLUCOSE**  
A new class of linkage between carbohydrates and lignin model compounds, 92-3
- GLUTAMATE**  
Juvenile hormone biosynthesis: identification of 3-hydroxy-3-ethylglutarate and 3-hydroxy-3-methylglutarate in cell-free extracts from *Manduca sexta* incubation with propionyl- and acetyl-CoA, 292-3
- GLYCINE**  
A tetrahedral intermediate in the aminolysis of benzylpenicillin, 374-5  
Microwave spectrum and conformation of glycine, 547-8  
Stereospecific synthesis of chiral acetic acid from glycine, 967-8
- GLYCINE CYCLOALKENYL**  
Synthesis of cycloalk-1-enylglycines, 270-1
- GLYCOL**  
General synthesis of substituted and unsubstituted crown ethers, 504-5
- GLYCOSIDE**  
Synthesis of  $\alpha$ -linked 3'-deoxy-cyclitol and -aminocyclitol glycosides, 771-3  
Synthesis of  $\alpha$ -linked 3'-deoxy-pseudo-di- and -tri-saccharides related to aminocyclitol-glycoside antibiotics, 773-4
- GLYOXYLATE**  
Chemical synthesis of 2-O-( $\alpha$ -L-fucopyranosyl)-3-O-(2-acetamido-2-deoxy- $\alpha$ -D-galactopyranosyl)-D-galactose, the terminal structure in the blood-group A antigenic determinant, 535-7
- GOLD**  
Synthesis of cluster compounds via nucleophilic metal complexes; X-ray crystal structures of (Os<sub>3</sub>Pt( $\mu$ -H)<sub>2</sub>(CO))<sub>10</sub>((C<sub>6</sub>H<sub>11</sub>)<sub>3</sub>P) and (Os<sub>2</sub>Pt<sub>2</sub>( $\mu$ -H)<sub>2</sub>(CO)<sub>8</sub>(Ph<sub>3</sub>P)<sub>2</sub>), 260-2  
Photoelectron spectra and reactivity of methyl(tertiary phosphine) platinum and -gold complexes, 444-5  
Experimental determination of the standard reduction potential of the gold(I) ion, 606-7  
X-ray crystal structure of sodium bis(N-methylhydantoinato) gold(I) tetrahydrate; a linear, planar complex of pharmacological interest stabilized by two nitrogen ligands, 711-12  
ESCA study of compounds of gold in the oxidation state-1, 905-6  
Reactions of gold-phosphine cluster compounds, 907-9
- GONENE**  
cis-BC ring fusion upon (E)-polyene cyclizations, 1103-5

**GONYAULAX**

Characterization of 11-hydroxysaxitoxin sulphate, a major toxin in scallops exposed to blooms of the poisonous dinoflagellate *Gonyaulax tamarensis*, 889-90

**GRANDISOL**

Transformation of the geraniol skeleton into the fragranol and grandisol skeletons, 519-20

**GRAPHITE**

Novel salts of graphite and a boron nitride salt, 200-1  
Acid salts of graphite: large or small fractional ionization, 544-5  
Graphite lamellar compounds. A new route to transition metal intercalates, 927-8

**GRIGNARD**

Stereochemistry of the organocuprate reactions of two *cis-trans* isomeric allylic ethers, 621-3  
Formation and X-ray crystal structure of 1,1,6,6-tetraphenyl-1,6-distannacyclodecane, 791-2  
Palladium-promoted vinylic hydrogen substitution of alkenes by Grignard reagents. Stoichiometric and catalytic reactions, 918-19

**GRIGNARD REAGENT**

Copper-catalysed 1,6-addition of a benzyl Grignard reagent to a dienone: a new synthesis of ring C aromatic diterpenoids, 614-15  
Homoconjugate addition of Grignard reagents spiroactivated cyclopropanes. An approach to the total synthesis of ( $\pm$ )-brefeldin A, 754-6  
Convenient 'one-flask' synthesis of olefins. Reaction of  $\alpha$ -chloroketones with Grignard reagents and lithium, 847  
Substitution of allylic sulphides of benzothiazole-2-thiol with organomagnesium compounds in the presence of copper(I) iodide. A regioselective synthesis of olefins, 1085-6

**GRISADIENEDIONE**

Base catalysed and thermal rearrangements of grisadienediones to depsidones, 1043-4  
Photochemical conversion of grisadienediones into dibenzofurans, 1044-5

**GRISEOPHENONE**

Deuterium nuclear magnetic resonance studies on biosynthesis: stereochemistry of the 5'-hydrogen atoms of griseofulvin derived from griseophenone B and 4-demethyldehydrogriseofulvin, 135-6

**GROUP VIB METAL**

Difluoride dioxides of molybdenum(VI) and tungsten(VI), 254-5

**GUANIDINIUM**

Anion receptor molecules. Synthesis and some anion binding properties of macrocyclic guanidinium salts, 934-6

**GUANOSINE**

Two micromethods for determining the linkage of adducts formed between polyaromatic hydrocarbons and nucleic acid bases, 798-800  
X-ray crystal structure of the ternary complex  $(\text{Cu}(3'-\text{GMP})(\text{phen})(\text{H}_2\text{O})_2 \cdot 7\text{H}_2\text{O}$  (GMP = guanosine monophosphate, phen = 1,10-phenanthroline): unusual absence of M-N(7) bonding in a metal-GMP complex, 1053-5

**GUETTARDA**

Stereochemical control in the biomimetic conversion of heteroyohimbine alkaloid precursors. Isolation of a novel key intermediate, 618-19

**GYROCHIRAL**

Microbial stereo-differentiating reduction of the carbonyl groups located on the  $C_2$  axes of gyrochiral molecules, 667-8

**HABER WEISS REACTION**

Study of the Haber-Weiss reaction using a sensitive method for detection of hydroxyl radicals, 970-1

**HAEMOCHROME**

Moessbauer spectroscopic studies of carbonyl haemochromes; correlations with reactivity, 746-7

**HAEMOCYANIN MODEL**

A haemocyanin model: a synthetic copper(I) complex having imidazole ligands and reversible dioxygen activity, 634-6

**HALIDE**

Evidence of halogen exchange between gaseous halogenated alkanes and solid alkali halides obtained by field desorption mass spectrometry, 612-13

**HALOBENZYL**

Intramolecular photochemical arylation of N-substituted enamines: application to synthesis of heterocyclic compounds, 766-7

**HALOGEN ACID**

Solvation of the halogen acids in N-methylpropionamide, 523-4

**HALOGENATION**

Stereochemistry and mechanisms of electrophilic cleavage reactions of *cis*-(threo-PhCHDCHD)Mn(CO)<sub>4</sub>PEt<sub>3</sub>, 11-12  
Retention of the cobalt-cobalt bond in (MeN(PF<sub>2</sub>)<sub>2</sub>)<sub>3</sub>Co<sub>2</sub>(CO)<sub>2</sub> upon halogenation: the X-ray crystal structure of (MeN(PF<sub>2</sub>)<sub>2</sub>)<sub>3</sub>Co<sub>2</sub>Br<sub>4</sub>, 514-15  
Stereoselective conversion of vitamin D<sub>3</sub> into its 3 $\beta$ -halogenated derivatives. The synthesis of a 1 $\alpha$ -hydroxy-3 $\beta$ -fluorovitamin D<sub>3</sub> analogue, 554-5

**HALOGENO**

$\sigma^*$ -electron addition to 5-halogenouracils in neutral glasses, 313-14

**HALOGENO ALC**

Direct evidence of neighbouring group participation in the gas phase, 213-14

**HALOGENOBENZENE**

Intramolecular homolytic aromatic ipso substitution in halogenobenzenes by aryl radicals, 530-1

**HEAT**

Standard enthalpies of formation of *cis*- and *trans*-bicyclo(6.1.0)nonanes, 778-9

**HEAT FORMATION**

Heat of formation of bis( $\eta$ -cyclopentadienyl)dimethyltungsten and bis( $\eta$ -cyclopentadienyl)dimethylmolybdenum, 737  
Enthalpy of formation of copper(II) complexes with 14-membered tetraaza macrocycles, 833-4

**HECTORITE**

Ready conversion of 1,1-diphenylethylene into benzophenone and 1,1-diphenylethane over a synthetic hectorite, 930-1

**HECTORS BASE**

The constitution of Hector's base; X-ray crystal and molecular structure of 5-imino-4-phenyl-3-phenylamino-4H-1,2,4-thiadiazoline, 652-4

**HELICAL**

Chain ends as supports for  $\alpha$ -helical structures in oligopeptides, 692-3

The 3<sub>10</sub> helical conformation of a pentapeptide containing  $\alpha$ -aminoisobutyric acid (Aib): X-ray crystal structure of tos-(Aib)<sub>5</sub>-OMe, 996-7

**HELICENE**

Binaphthyl-2,2'-diyl hydrogen phosphate. A new chiral atropisomeric selector for the resolution of helicenes using high performance liquid chromatography, 173-5

**HELIOTROPIUM**

Curassavine, an alkaloid from *Heliotropium curassavicum* Linn. with a C<sub>8</sub> necic acid skeleton, 423-4

**HELIOTROPIUM CURASSAVINE**

Curassavine, an alkaloid from *Heliotropium curassavicum* Linn. with a C<sub>8</sub> necic acid skeleton, 423-4

**HELIX**

Dynamics of the salt-induced random coil to helix transition in segmented *t*-carrageenan, 515-16

**HELMINTHOSPORIN**

Synthetic approaches to aclacinomycin and pyrromycin antitumour antibiotics via Diels-Alder reactions of 6-alkoxy-2-pyrones: total synthesis of chrysophanol, helminthosporin and pachybasin, 95-6

**HEMAGGLUTINATION INHIBITION**

Chemical synthesis of 2-O-( $\alpha$ -L-fucopyranosyl)-3-O-(2-acetamido-2-deoxy- $\alpha$ -D-galactopyranosyl)-D-galactose, the terminal structure in the blood-group A antigenic determinant, 535-7

**HEME PROTEIN**

Metal ion-catalysed oxidation of linoleic acid. Lipoygenase-like regioselectivity of oxygenation, 82-3

**HENTRIACONTANEDIONE**

Synthesis of hentriacontane-14,16-dione, a  $\beta$ -diketone found in plant waxes, 962-3

**HEPTACYCLOCTADECANE**

Regioselective functionalization of triamantane, 306-8

**HEPTENE**

Formation of an acyl species from hept-1-ene and carbon monoxide on an evaporated nickel surface, 617-18

**HETEROYOHIMBINE**

Stereochemical control in the biomimetic conversion of heteroyohimbine alkaloid precursors. Isolation of a novel key intermediate, 618-19

**HEXADECADIENOXYLOXYMALEIC ANHYDRIDE**

Approaches to cytochalasan synthesis: macrocycle formation using an intramolecular Diels-Alder reaction, 474-5

**HEXADIENE**

Role of exciplex in the photocycloaddition of 2,5-dimethylhexa-2,4-diene to anthracene, 978

**HEXANITRIDE**

Preparation and crystal structure of a new sulphur nitride, S<sub>5</sub>N<sub>6</sub>; a molecular basket, 642-3

**HEXATRIENE**

Structure of infinite polyenes. Ab initio quantum chemical study, 575-6

**HEXAVALENT**

Production, detection, and characterization of transient hexavalent technetium in aqueous alkaline media by pulse radiolysis and very fast scan cyclic voltammetry, 1038-40

**HEXOFURANOSYL**

Stereoselective reduction of 3-O-hexofuranosyl S-methyl dithiocarbonates with tributyltin deuteride, 449-50

**HIGH PRESSURE**

Ene reactions of  $\beta$ -pinene at room temperature and 40 kbar pressure, 599-600

**HIPPURATE**

A simple route to  $\alpha$ -aminoketones and related derivatives by dianion acylation reactions; an improved preparation of  $\delta$ -aminolevulinic acid, 753-4

**HIRSUTANE**

Photocyclization of dicyclopent-1-enyl methanes to tricyclo(6.3.0.0<sup>2,6</sup>)undecanes: a synthesis of the hirsutane carbon skeleton, 5-6

**HISTIDINE**

An approach to the prevention of racemization in the synthesis of histidine-containing peptides, 472-3

Stereoselective reaction of p-nitrophenyl N-acyl-phenylalanines with N-acyl-L-histidine in mixed micelles, 984-5

Carbon-carbon coupling in (90%<sup>-13</sup>C-2)histidine, 1070-1

**HOFMANN**

A relation between the product distribution from the dehydration of dimethylbutan-2-ols and catalytic acidity, 801-2

**HOMOENOLATE EQUIV**

$\beta$ -Diphenylphosphinoyl ketones (Ph<sub>2</sub>POCH<sub>2</sub>CH<sub>2</sub>COR): stable reagents for  $\beta$ -ketcocarbonions, 988-9

**HOMOLYSIS**

Reductant-induced homolysis of the thallium-carbon bond: novel oxygenation of alkylthallium(III) compounds with ascorbic acid, 716-17

**HOMOLYTIC**

Intramolecular homolytic aromatic ipso substitution in halogenobenzenes by aryl radicals, 530-1

Homolytic addition to N-methylene-tert-butylamine: a new route to aminyl radicals, 960-1

**HOMOMEVALONATE**

Juvenile hormone biosynthesis: homomevalonate and mevalonate synthesis by insect corpus allatun enzymes, 290-2

**HOMONORLANOSTENONE**

Novel direct rearrangement of a 9 $\beta$ ,11 $\beta$ -epoxyxylanostan-7-one into a  $\beta$ -homo-derivative with incorporation of the C-10 angular methyl group, 411-12

**HORNER WITTIG**

New syntheses of 1- and 2-phenylthiobutadienes, 657

**HYDANTOINATOGOLD**

X-ray crystal structure of sodium bis(N-methylhydantoinato) gold(I) tetrahydrate; a linear, planar complex of pharmacological interest stabilized by two nitrogen ligands, 711-12

**HYDRAZINE**

Reactions of methylhydrazine and hydrazine with 8-bromo-2'-O-toluene-p-sulphonyl adenosine, 86-7

Dehydrogenation of hydrazines and of 4-azacholestan-3-one with benzeneseleninic acid and benzeneseleninic anhydride, 278-9

Vacuum pyrolysis of salts of 1-acyl-2-arylsulphonylhydrazines; a general McFadyen-Stevens aldehyde synthesis, 793-4

X-ray crystal structure of a planar, high-spin iron(II) complex of a pentadentate unsaturated macrocycle formed by reaction of 2,9-di(1-methylhydrazino)-1,10-phenanthroline monohydrochloride with 2,6-diacetylpyridine, 828-9

**HYDRAZINOPHENANTHROLINE**

Some metal complexes of macrocyclic ligands incorporating the 1,10-phenanthroline group. X-ray crystal structure of the manganese(II) complex, 476-8

**HYDRAZONE**

Unusual reaction of uranyl nitrate with 2,6-diacetylpyridine bis(2-pyridylhydrazone): X-ray structure of nitrate(2,6-diacetylpyridine-bis(2-pyridylhydrazone)-NNNNN)uranyl tetranitratodioxouranium, 235-6

**HYDRAZONE OXIDN**

Oxidation of aldehyde hydrazones, hydrazo compounds, and hydroxylamines with benzeneseleninic anhydride, 276-7

**HYDRAZONES**

Palladation of dimethylhydrazones, oximes, and oxime O-allyl ethers: crystal structure of (Pd<sub>3</sub>(ON=CPrPh)<sub>6</sub>), 1061-2

**HYDRIDE**

New method for reduction of ketones and primary alcohols to hydrocarbons: reaction of the derived selenides with tin hydrides, 41-2

Preparation and X-ray structure determination of the mixed cluster (H<sub>3</sub>CoOs<sub>3</sub>(CO)<sub>12</sub>), 343-4

New mixed-metal clusters via metal hydride coupling. Synthesis and crystal structures of (( $\mu_2$ -H)Os<sub>3</sub>W(CO)<sub>12</sub>( $\eta^5$ -C<sub>5</sub>H<sub>5</sub>)) and (( $\mu_2$ -H)<sub>2</sub>Os<sub>3</sub>W(CO)<sub>11</sub>( $\eta^5$ -C<sub>5</sub>H<sub>5</sub>)), 534-5

(Os<sub>3</sub>(CO)<sub>9</sub>H(SR)), a highly reactive molecule. The X-ray structure of a  $\pi$ -bound ethylene adduct (Os<sub>3</sub>(CO)<sub>9</sub>H(C<sub>2</sub>H<sub>4</sub>)(SMe)), 551-2

Novel three-coordinate rhodium(I) hydrido compounds, (RhH(P(CMe<sub>3</sub>)<sub>2</sub>)) and (RhH(P(cyclohexyl)<sub>3</sub>)), 855-6

(H<sub>3</sub>Ru<sub>4</sub>(CO)<sub>12</sub>): the X-ray crystallographic determination of two structural isomers, 920-1

Solvent transfer hydrogenation of  $\alpha\beta$ -unsaturated aldehydes to the unsaturated alcohols catalysed by hydridoiron sulphoxide complexes, 929-30

**HYDRIDE BRIDGED**

Bridging hydrides in (H<sub>2</sub>Os<sub>3</sub>(CO)<sub>10</sub>) and ((C<sub>2</sub>H<sub>5</sub>)HOs<sub>3</sub>(CO)<sub>10</sub>): a combined X-ray-neutron diffraction study, 723-4

**HYDRINDANE**

Some epoxy-acetylene cyclizations, 528-9

**HYDROBENZON**

Circular dichroism of the isotopically dissymmetric molecules (1R, 2S)-(1-<sup>2</sup>H)- and (1R, 2S)-(1-<sup>18</sup>O)-1,2-dihydroxy-1,2-diphenylethane, 850-2

**HYDROBORATION**

Protonolysis of alkenylboranes under neutral conditions by treatment with catalytic amounts of palladium diacetate, 702-3

**HYDROCARBON**

Carbon-13 nuclear magnetic resonance chemical shifts of small hydrocarbons in the gas phase, 94-5

Perturbation of the benzil ground and excited state geometries at low temperatures in hydrocarbon glasses, 116-17

**HYDROCARBYL**

Bulky alkyls and a hydridoalkyl of zirconium(IV): influence of steric constraints upon (i) conformation and the zirconium-carbon rotational barrier and (ii) the zirconium-carbon bond length. X-ray crystal and molecular structure of (Zr( $\eta$ -C<sub>5</sub>H<sub>5</sub>)<sub>2</sub>(CH(SiMe<sub>3</sub>)<sub>2</sub>)Ph), 1081-3

**HYDROCYANATION**

Hydrogenolysis of unsaturated alcohols; hydrocyanation and hydrogenation of acetylenes catalysed by pentacyanocobaltate(II) 63-5

**HYDROGEN**

Unexpectedly strong hydrogen bonding in some tetrahydro-4,7-phenanthroline-1,10-dione-3,8-dicarboxylic acids, 369-70

Catalytic synthesis of ethanol from carbon monoxide and hydrogen under atmospheric pressure over pyrolyzed rhodium carbonyl clusters on titanium dioxide, zirconium dioxide, and dilanthanum trioxide, 566-7

Stereochemistry of the transition state of hydrogen abstraction by vinyl radicals, 574-5

Hydrogen absorption in YNi<sub>4</sub>Mn, an alloy with the cubic UNi<sub>3</sub> structure, 581-2

Continuous hydrogenation of ethene using spilt-over hydrogen, 891-2

Equilibrium constant for protium-deuterium exchange between methanol and water, 1037-8

**HYDROGEN ABSTRACTION**

Mechanism of the cadmium sulphide sensitized photooxidation of Leuco Crystal Violet in nonaqueous solution, 417-18

Generation and some reactions of the bis(trimethylsilyl)aminyl radical, 545-6

Stereochemistry of the transition state of hydrogen abstraction by vinyl radicals, 574-5

**HYDROGEN BOND**

X-ray crystal structure of sodium bis(*N*-methylhydantoinato) gold(I) tetrahydrate; a linear, planar complex of pharmacological interest stabilized by two nitrogen ligands, 711-12

**HYDROGEN INTERCHANGE**

Stereospecific double rearrangement of anti-1,5-bishomocycloheptatriene. A rebound path of thermal rearrangement involving intermediate geminal hydrogen interchange, 365-6

**HYDROGEN PEROXIDE**

Study of the Haber-Weiss reaction using a sensitive method for detection of hydroxyl radicals, 970-1

**HYDROGEN SHIFT**

Thermal and photochemical rearrangements of 3H-thieno-1,2-diazepines, 568-9

An electron spin resonance study of the cyclobutylhydroxymethyl radical: its conformation, and its ring opening followed by 1,6-transfer of enolic hydrogen, 569-71

1,2-Hydrogen shifts during acid-catalyzed hydrogen exchange, 586-7

**HYDROGEN TRANSFER**

Enhanced rates of dihydropyridine to pyridinium hydrogen transfer in complexes of an active macrocyclic receptor molecule, 143-6

**HYDROGENATION**

Selective hydrogenation of the internal double bond of penta-1,3-diene on a zinc oxide catalyst, 53-4

Hydrogenolysis of unsaturated alcohols; hydrocyanation and hydrogenation of acetylenes catalysed by pentacyanocobaltate(II) 63-5

Stereochemistry of hydrogenation of cyclonona-1,2-diene with supported platinum metals and soluble rhodium complexes as evidence for allylic intermediates, 114-15

Mechanism of asymmetric hydrogenation catalysed by rhodium(I) trans-4,5-bis(diphenylphosphinomethyl)-2,2-dimethyldioxolan (DIOP) complexes, 321-2

Polymer-bound tetranuclear iridium carbonyl catalyst, 540-1

An arene hydrido complex of ruthenium(II) as catalyst for the homogeneous hydrogenation of benzene and olefins, 582-3

Diversity of behaviour of bicyclo(2.2.1)heptadiene-bisphosphine-rhodium complexes on hydrogenation in methanol, 646-7

Continuous hydrogenation of ethene using spilt-over hydrogen, 891-2

Solvent transfer hydrogenation of  $\alpha\beta$ -unsaturated aldehydes to the unsaturated alcohols catalysed by hydrido-iridium sulphoxide complexes, 929-30

Synthesis of hentriacontane-14,16-dione, a  $\beta$ -diketone found in plant waxes, 962-3

Very active hydrogenation catalyst composed of extremely dispersed palladium on vitreous supports, 979-80

Ready hydrogenation of nitrobenzene and benzonitrile with a polymer-bound palladium catalyst, 1074-5

**HYDROGENOLYSIS**

Hydrogenolysis of unsaturated alcohols; hydrocyanation and hydrogenation of acetylenes catalysed by pentacyanocobaltate(II) 63-5

Catalytic sites in the hydrogenolysis of cyclopropane on platinum, 127-8

**HYDROLYSIS**

X-ray crystal structure of  $\text{Sn}_6\text{O}_4(\text{OME})_4$ : an intermediate in the hydrolysis of tin(II) dimethoxide, 112-13

Absence of stereoelectronic control in the hydrolysis of a conformationally locked acetal, 171-2

Mechanisms of aqueous solvolyses, 418-20

Crown ether acetals: detection of cation binding by kinetic measurements, 507-8

Intramolecular nucleophilic and general acid catalysis in the hydrolysis of an amide, 591-2

Ortho ester hydrolysis: rate determining addition of water to a carboxonium ion intermediate, 678-9

Stereoelectronic control of acetal hydrolysis, 803-4

Absence of common five-coordinate intermediates in the induced reactions of some cobalt(III)-acido complexes, 892-4

Isolation of intermediates in the acid hydrolysis of  $(\text{Pt}(\text{PPh}_3)_2(\text{O}_2))$ ; the X-ray structure of  $(\text{Pt}_2(\text{O}_2)(\text{OH})(\text{PPh}_3)_4)(\text{ClO}_4) \cdot 2\text{C}_6\text{H}_6$ , 991-2

**HYDROMETALLATION**

Hydrometallation of alkenes and alkynes with magnesium hydride, 30-1

**HYDROPEROXIDE**

Thermal isomerization of methyl linoleate hydroperoxides.

Evidence of molecular oxygen as a leaving group in a radical rearrangement, 756-7

**HYDROQUINONE**

Chromenylation of 2-naphthol and alkylhydroquinones: short syntheses of (2*RS*,4'*R*,8'*R*)- $\alpha$ -tocopherol (vitamin E) and (2*RS*,4'*R*,8'*R*)- $\beta$ -tocopherol, 59-60

**HYDROSULPHONYLATION**

Anti-Markownikoff 1,2-hydrosulphonylation of 1,3-dienes via  $\pi$ -allylpalladium complexes, 367-8

**HYDROTROXIDE**

Acetal hydrotrioxides, 122-4

**HYDROXAMATE**

Silylhydroxylamines as reagents for high-yield  $\text{RCOCl} \rightarrow \text{RNCO}$  conversions, 351-2

Synthesis and characterization of iron complexes of rhodotorulic acid: a novel dihydroxamate siderophore and potential chelating drug, 501-2

**HYDROXO**

Isolation of intermediates in the acid hydrolysis of  $(\text{Pt}(\text{PPh}_3)_2(\text{O}_2))$ ; the X-ray structure of  $(\text{Pt}_2(\text{O}_2)(\text{OH})(\text{PPh}_3)_4)(\text{ClO}_4) \cdot 2\text{C}_6\text{H}_6$ , 991-2

**HYDROXY**

Stereoelectronic control of  $\alpha$  proton abstraction from iminium ions, 49-50

The acid-sensitive proton nuclear magnetic resonance spectra of tocopherols and other derivatives of 6-hydroxychroman, 265-6

Oxidative displacement of iodine from vicinal iodicarboxylates and alkyl iodides, 919

**HYDROXYALKYLATION**

Synthesis of ( $\pm$ )-podorhizone via intermediate  $\alpha$ -hydroxyalkylation of a  $\beta$ -benzyl  $\gamma$ -butyrolactone, 556-7

**HYDROXYANTHRAQUINONE**

Amino acid-catalysed alkylation of hydroxyanthraquinones with 2-hydroxytetrahydropyrans, 951-2

**HYDROXYARALKYL**

General synthesis of oxiranes, 785-6

**HYDROXYBENZOATE**

Carboxyl-migration facilitated by bacterial hydroxylation of 4-hydroxybenzoate, 731-2

**HYDROXYBUTYRATE**

Stereochemical course of dehydration catalysed by the yeast fatty acid synthetase, 193-4

**HYDROXYDIMETHYLDECADIENOATE**

Synthesis of the butterfly compound (E,E)-10-hydroxy-3,7-dimethyldeca-2,6-dienoic acid, 985-6

**HYDROXYETHOXYPHENYLGLYCOL**

X-ray crystal structures of anhydrous sodium and potassium complexes of an open chain polyether diol, 1001-3

**HYDROXYETHYLGLUTARATE**

Juvenile hormone biosynthesis: identification of 3-hydroxy-3-ethylglutarate and 3-hydroxy-3-methylglutarate in cell-free extracts from *Manduca sexta* incubation with propionyl- and acetyl-CoA, 292-3

**HYDROXYFLUORENONE**

Reactions of singlet oxygen. Formation of hydroxy ketones in the photooxygenation of fluorenylidene derivatives, 120-1

**HYDROXYISOPROPYLBICYCLOHEPTANONE**

$\alpha$ -Ketol rearrangements involving small rings: the formation and rearrangement of 1-hydroxy-6-isopropylbicyclo(3.2.0)heptan-7-one, 87-8

**HYDROXYL**

Study of the Haber-Weiss reaction using a sensitive method for detection of hydroxyl radicals, 970-1

**HYDROXYL CONVERSION**

Novel synthesis of isothiocyanatophosphoranes and isothiocyanatophosphonium salts via ligand substitution.

Versatile reagents for converting hydroxy groups into thiocyanate and isothiocyanate functions, 940-1

**HYDROXYLAMINE**

Methyltriphenoxyphosphonium trifluoromethanesulphonate: a new versatile synthetic reagent, 424-5

**HYDROXYLATION**

Aromatic hydroxylation by O( $^3\text{P}$ ) atoms on  $\gamma$ -radiolysis of liquid carbon dioxide solutions of alkylbenzenes, 16-18

Substitution reactions of fluorinated triarylmethanols in formic acid 389-91

Regioselective oxidation of unactivated methylene and methine

- groups by dry ozonation: similarity to microbiological oxidation, 413-14
- HYDROXYMETHYLBIPHENYL**  
Reduction of the carboxyl-function in aromatic carboxylic acids by alkali metal-liquid ammonia solutions, 941-3
- HYDROXYMETHYLCYCLOHEXENECARBOXYLATE**  
Applications of bromolactones in synthesis. Stereospecific syntheses of cis-2-hydroxy-1-methylcyclohex-5-ene-1-carboxylic acid and related compounds, 961-2
- HYDROXYMETHYLGUTARATE**  
Juvenile hormone biosynthesis: identification of 3-hydroxy-3-ethylglutarate and 3-hydroxy-3-methylglutarate in cell-free extracts from *Manduca sexta* incubation with propionyl- and acetyl-CoA, 292-3
- HYDROXYQUINIZARIN**  
Regio-selective synthesis of 2- and 3-alkyl-5-hydroxyquinizarins, 712-13
- HYDROXSAXITOXIN SULPHATE**  
Characterization of 11-hydroxsaxitoxin sulphate, a major toxin in scallops exposed to blooms of the poisonous dinoflagellate *Gonyaulax tamarensis*, 889-90
- HYPERPOLYHEDRAL**  
Structural consequences of electron 'deficiencies' in metallaheteroboranes; hyperpolyhedral metal-metal bonding, 858-9
- HYPHO**  
The first hypohydrocarborane  $\text{Me}_3\text{N}-\text{CB}_5\text{H}_{11}$ , 287
- HYPOCHLORITE**  
Reaction of some arylacetic acids and related compounds with alkaline sodium hypochlorite solution, 459-60
- HYPOFLUOROUS ACID**  
Porphyrin N-oxides, 310-11
- HYPOTHALAMIC SUBSTANCE**  
The mesitylene-2-sulphonyl group, a acidolytically removable  $\text{N}^G$ -protecting group for arginine, 482-3
- IDOSE**  
Sugar equilibria. Observation of a septanose anomer, 1073-4
- ILLUDIN**  
Biosynthesis of illudin sesquiterpenoids from (1,2- $^{13}\text{C}_2$ )acetate, 303-4
- IMIDAZOLE**  
A haemocyanin model: a synthetic copper(I) complex having imidazole ligands and reversible dioxygen activity, 634-6  
Carbon-13 nuclear magnetic resonance spectroscopy of iron(III) porphyrin-imidazole complexes, 777-8  
Ribopyranosyldiaminomaleonitrile: a key intermediate for the synthesis of nucleosides, 1094-6
- IMIDAZOLE OXIDE**  
New synthesis of 2-formyl-4-methyl-1-phenylimidazole 3-oxide, 124  
Photolysis of imidazole N(3)-oxides. Formation of unsymmetrical benzil di-imines; X-ray crystal structure of one such di-imine, 857-8
- IMIDAZOLECARBOXYLATE**  
New synthesis of 1- $\beta$ -D-arabinofuranosyl-aminoimidazoles and of related purine nucleosides, 882-3
- IMIDAZOPYRIDINIUM THIO**  
Crystal and molecular structure of 3,3'-thiobis(2-methyl-1-phenylimidazo-(1,5-a)pyridinium) bistetrafluoroborate; a potent new sulphur containing curariform agent, 816-17
- IMIDOMETAL**  
Structure and reactivity in the group 5B tert-butylimido complexes ( $\text{Me}_2\text{N})_2\text{M}=\text{NCMe}_3$ ; X-ray crystal and molecular structure of N-tert-butylimidotris(dimethylamido)tantalum, 579-80
- IMIDOSULPHUR**  
Synthesis and molecular geometry of novel di- and tri-nuclear iron complexes resulting from the interaction of ( $\text{Fe}_2(\text{CO})_9$ ) with  $\text{R}-\text{N}=\text{S}=\text{N}-\text{R}$  ( $\text{R} = \text{tert-butyl}$  or  $p\text{-tolyl}$ ); X-ray crystal structures of ( $\text{Fe}_2(\text{CO})_9(\text{RNC}(\text{O})\text{S})$ ) and ( $\text{Fe}_3(\text{CO})_9(\text{RNS})\text{S}$ ), 506-7
- IMIDOYL**  
Inverse substituent effect in an imidoyl azide to tetrazole cyclization limited by nitrogen inversion, 871-3
- IMINE**  
New synthesis of  $\alpha$ -methylenecyclobutanones and  $\alpha$ -methylenazetid-2-one derivatives, 12-13  
1,3-Dipolar cycloaddition reactions of imines of  $\alpha$ -amino acid esters: X-ray crystal and molecular structure of methyl 4-(2-furyl)-2,7-diphenyl-6,8-dioxo-3,7-diazabicyclo(3.3.0)octane-2-carboxylate, 109-11
- Energy barrier for E-Z isomerization of N-sulphenylimines, 156-7  
Benzazetes as precursors for benzotriazepines, 396-7  
Homogeneous catalytic oxidation of amines and secondary alcohols by molecular oxygen, 562
- IMINOMETHYLPYRIDINE**  
Combined use of M.c.d. and resonance Raman spectra for the detection of different electronic transitions in a charge-transfer band of ( $\text{Mo}(\text{CO})_4\text{L}$ ) ( $\text{L} = 2\text{-iminomethylpyridine}$ ), 1016-17
- IMMOBILIZED**  
Hydrogen bond assisted organic reactions: C- and O-alkylations, sulphenylations, and Michael additions aided by polymer immobilized fluoride ion, 466-7
- INDANCARBOXYLATE**  
Asymmetric substituent effect on the reaction of (R)- and (S)-indan-1-carboxylic acids with (S)- $\alpha$ -phenylethylamine derivatives, 830
- INDANONE**  
Photolysis of  $\alpha$ -chloro- $\alpha$ -methylacetophenones, 61-2  
Detection of organic dianions by carbon-13 nuclear magnetic resonance spectroscopy, 172-3
- INDAZOLE**  
Auwers's 2-hydroxy-3-arylidazoles: a structure revision, 1052-3
- INDENE**  
Versatile deuterium exchange and isomerization of hydrocarbons via phase transfer catalysis, 155-6  
Synthesis of a sym-oxepin oxide with restricted conformational mobility and altered reactivity. X-ray crystal and molecular structure of 4,7-dibromo-3a,7a:5,6-diepoxyperhydroindene, 377-9
- INDENE DIMER**  
Redox-photosensitized cleavage of indene dimers using aromatic hydrocarbon-dicyanobenzene systems; catalysis by the cation radical of aromatic hydrocarbons, 490-1
- INDENOINDOLE**  
Heteroatom directed photoarylation; an approach to the synthesis of *Aspidosperma* alkaloids, 29
- INDENYL**  
Evidence for the ready insertion of rhodium into a carbon-hydrogen bond of ethylene; crystal and molecular structure of  $\mu$ -but-2-ene- $\mu$ -ethylenebis-( $\eta^5$ -1-methylindenyl)dirhodium, 839-41
- INDO**  
Carbon-carbon coupling in (90%- $^{13}\text{C}$ -2)histidine, 1070-1
- INDOLE**  
Some novel transformations in indole chemistry, 332-3  
Cyclofunctionalization of olefinic urethanes with benzeneselenenyl reagents: a new general synthesis of nitrogen heterocycles, 379-80  
Benzazetes as precursors for benzotriazepines, 396-7  
The acylation of 3-alkyl-indoles, 779-81  
Trifluoroacetylation of trialkylindoles, 845-6  
Addition of 3-nitrosobut-3-en-2-one to olefins and to electron-rich heterocycles, 847-9  
Organometallic compounds in organic synthesis: nucleophilic substitution reactions of N-methylindoletricarboxylchromium(0) 1076-7  
'One-pot' conversion of Mannich bases via quaternary ammonium salts into the corresponding methyl compounds with sodium cyanoborohydride in hexamethylphosphoramide, 1089-90  
Photosensitized electron transfer and anodic cyanation reactions of nitrogen heterocycles, 1108-9
- INDOLOINDOLONE**  
New synthetic routes to synthons for the synthesis of functionalized *Aspidosperma* alkaloids, 943-4
- INDOLONE**  
Intramolecular photochemical arylation of N-substituted enamines: application to synthesis of heterocyclic compounds, 766-7
- INDOLYLDIOXIN**  
2-(1-Methylindol-3-yl)-3-phenyldihydro-1,4-dioxin 2,3-epidioxide, a dioxetan resulting in efficient ultraviolet chemiluminescence, 781-2
- INDOLYLETHYLIMINOMETHYLENEMALONATE**  
New synthetic routes to synthons for the synthesis of functionalized *Aspidosperma* alkaloids, 943-4
- INDUCTION**  
Solvent effects in homogeneous asymmetric catalysis, 427-8
- INHIBITION**  
Preparation of the 7-oxo-4-oxa-1-azabicyclo(3.2.0)hept-2-ene system and the reversible cleavage of its oxazoline ring, 469-70

- Latent inhibition of liver alcohol dehydrogenase by a substituted allyl alcohol, 795-6
- INSECT DYESTUFF**  
Synthesis of the insect dyestuff kermesic acid and related anthraquinones, 688-9
- INSERTION**  
Oxidative-addition of tertiary phosphine-ruthenium complexes to allylic carbon-hydrogen bonds, 223-4
- INTERCALATE**  
Graphite lamellar compounds. A new route to transition metal intercalates, 927-8
- INTERCALATION**  
Correlation of magnetic and optical properties in the organic-intercalated two-dimensional ionic ferromagnet bis(monomethylammonium) tetrachlorochromate(II), 511-12
- INTERMEDIATE**  
Thiosulphonium ion intermediate in the oxidation of a thiol with dimethyl sulphoxide, 865-6
- INTERMETAL BOND**  
Structural consequences of electron 'deficiencies' in metallaheteroboranes; hyperpolyhedral metal-metal bonding, 858-9
- INTRAMOL**  
Intramolecular homolytic aromatic ipso substitution in halogenobenzenes by aryl radicals, 530-1
- INTRAMOL SUBSTITUTION**  
Linear free energy relations in intramolecular aromatic ipso-substitutions by substituted methyl radicals, 166-7
- INVERSION**  
Ring inversion in the cyclohexenyl radical, 394-5
- INVERSIONAL BARRIER**  
A new and versatile chelating dithio ligand: X-ray crystal structure of  $(\text{Ru}(\text{CO})(\text{SC}_6\text{H}_3\text{Me}-\text{o}-\text{SC}_6\text{H}_4\text{Me})(\eta\text{-C}_5\text{H}_5))$ , 486-8
- IODIDE**  
Organic metals: a new class of conducting ion-radical salts based on 7,7,8,8-tetracyanoquinodimethane and iodine, 337-8
- IODIDE OXIDN**  
Polymeric sulphur nitride electrode: an example of electrocatalysis by surface chemical modification, 244-5
- IODINE**  
Evidence of electronic interaction between classically nonconjugated aromatic systems, 100-1
- IODOCARBOXYLATE**  
Oxidative displacement of iodine from vicinal iodocarboxylates and alkyl iodides, 919
- IODOCYCLOALKENONE**  
Lithium phenylthio(trimethylstannyl)cuprate, a new reagent for conjugate addition of the trimethylstannyl group. The synthesis of  $\beta$ -trimethylstannyl- $\alpha\beta$ -unsaturated ketones, 1033-4
- IODOTRIMETHYLSILANE**  
Specific dealkylation of phosphonate esters using iodotrimethylsilane, 870-1
- ION**  
Relative solvent transport of ions in binary aqueous mixtures: an unambiguous assignment to ionic constituents, 218-19
- ION EXCHANGE**  
Use of ion exchange resins to trap electrogenerated intermediates: acetamidation of hydrocarbons, 738
- ION PAIRING**  
Ion pairing in triphenylmethyl and diphenylmethyl carbanions from spectrophotometric studies, 758-9
- IONIZATION**  
Acid salts of graphite: large or small fractional ionization, 544-5  
Determination of the basicity of nitric acid in concentrated sulphuric acid by Raman and ultraviolet spectroscopy, 873-4
- IONIZATION POTENTIAL**  
Photoelectron spectral assignments based on ab initio MO calculations for the bicyclic phosphorus compounds  $\text{P}(\text{OCH}_2)_3\text{CMe}$  and  $\text{P}(\text{CH}_2\text{O})_3\text{CMe}$ , 161-2  
Correlation between selectivity in photochemical cross-cycloaddition and ionization potential of the reacting olefins, 786-8
- IONONE**  
Solvent-assisted acetylenic oxy-Cope rearrangement: a novel synthesis of ionone and its analogues, 651-2  
Cyanoborohydride supported on an anion exchange resin as a selective reducing agent, 1088-9
- IPECOSIDE**  
Deacetyloisopecoside: the key intermediate in the biosynthesis of the alkaloids cephaeline and emetine, 896-8
- IPSO SUBSTITUTION**  
Radical alkydenitration. A synthetically useful example of homolytic aromatic ipso-substitution reactions, 93-4  
Linear free energy relations in intramolecular aromatic ipso-substitutions by substituted methyl radicals, 166-7  
Intramolecular homolytic aromatic ipso substitution in halogenobenzenes by aryl radicals, 530-1  
Ipso-attack in the cyclization of 4-( $\alpha$ -naphthyl)butan-1-ol to 1,2,3,4-tetrahydrophenanthrene, 734-5
- IR**  
Infrared lasers: a new tool for studying the diazotization of matrix isolated tetracarbonyliron(0), 36-8  
Phosphorus-31 nuclear magnetic resonance and infrared spectroscopic evidence for coordinatively unsaturated zerovalent tungsten generated by interaction of  $\text{W}(\text{CO})_5\text{L}$  (L  $\text{PPh}_3$  or  $\text{PBu}_3$ ) with aluminium tribromide, 38-9  
Preparation of bis(cis-diacetyltetracarbonylrhenium)copper, 183-4  
Synthesis of cluster compounds via nucleophilic metal complexes; X-ray crystal structures of  $(\text{Os}_3\text{Pt}(\mu\text{-H})_2(\text{CO})_{10}((\text{C}_6\text{H}_{11})_3\text{P}))$  and  $(\text{Os}_2\text{Pt}_2(\mu\text{-H})_2(\text{CO})_8(\text{Ph}_3\text{P})_2)$ , 260-2  
Far infrared spectra of nematic 4-cyano-4'-n-heptylbiphenyl aligned with electric fields, 267-8  
Unexpectedly strong hydrogen bonding in some tetrahydro-4,7-phenanthroline-1,10-dione-3,8-dicarboxylic acids, 369-70  
Formation of an acyl species from hept-1-ene and carbon monoxide on an evaporated nickel surface, 617-18  
Chain ends as supports for  $\alpha$ -helical structures in oligopeptides, 692-3  
Matrix photolysis of trimethylazidosilane: silicon-hydrogen bond formation, 762-3  
Two micromethods for determining the linkage of adducts formed between polyaromatic hydrocarbons and nucleic acid bases, 798-800  
Formation of a novel complex between pyridinium bis(alkoxycarbonyl)methylides and diphenylcyclopropenone; trapping of pyridinium bis(alkoxycarbonyl)methylide cation radicals, 817-19  
Raman spectra of molecules adsorbed on heavy metal oxides. Propylene on zinc oxide: the anionic nature of the adsorbed allyl species, 868-9  
Reactions of gold-phosphine cluster compounds, 907-9  
Syntheses and reactivity of cofacial, dimeric metal-metal bonded ruthenium(II) mixed valence ruthenium(II/III), and ruthenium(III) complexes of  $(\text{C}_{22}\text{H}_{22}\text{N}_4)^{2-}$ , a dibenzo-tetraaza(14)annulene ligand, 909-10  
'Organic metals' with asymmetric acceptors: the monofluorotetracyanoquinodimethane anion, 992-3  
Matrix isolated 1,2-oxathietan-4-one 2-oxide: a  $2\pi + 2\pi$  adduct of sulphur dioxide and ketene, 1020-22  
Anchoring of osmium clusters to silica, 1063-4
- IR SPECTRA**  
 $(\text{Ir}_4(\text{CO})_8((\text{MeCO}_2)_2\text{C}_2)_4)$ : a rectangular cluster, 340-1  
Preparation and X-ray structure determination of the mixed cluster  $(\text{H}_3\text{CoOs}_3(\text{CO})_{12})$ , 343-4
- IRIDIUM**  
 $(\text{Ir}_4(\text{CO})_8((\text{MeCO}_2)_2\text{C}_2)_4)$ : a rectangular cluster, 340-1  
Polymer-bound tetranuclear iridium carbonyl catalyst, 540-1  
Isomerization of allyl ethers catalysed by the cationic iridium complex  $(\text{Ir}(\text{cyclo-octa-1,5-diene})(\text{PMePh}_2)_2)\text{PF}_6$ . A highly stereoselective route to trans-propenyl ethers, 694-5  
Solvent transfer hydrogenation of  $\alpha\beta$ -unsaturated aldehydes to the unsaturated alcohols catalysed by hydrido-iridium sulphoxide complexes, 929-30  
Multiple chlorinations of the cyclometallated ring in iridium triaryl phosphite complexes: the crystal and molecular structure of  $(\text{IrCl}_2(\text{P}(\text{OC}_6\text{Cl}_3\text{Me}-\text{o})(\text{OC}_6\text{H}_4\text{Me}-\text{o})_2)(\text{pyridine})(\text{PMe}_3))$ , 973-4  
Kinetics and mechanism of cyclo- and decyclometallation of some iridium triaryl phosphite complexes. Evidence for the electrophilic displacement mechanism, 1007-8
- IRON**  
Infrared lasers: a new tool for studying the diazotization of matrix isolated tetracarbonyliron(0), 36-8  
Nitrogen-15 nuclear magnetic resonance studies of iron(II) low spin complexes of nitrogen-15 and iron-57 labelled porphyrin, 106-7  
Formation and molecular structure of  $(\eta^5\text{-cyclopentadienyl})(\eta^4\text{-cyclobuta(1)phenanthrene})\text{rhodium}$ : a cyclobutadiene-metal complex derived from the intramolecular cyclodimerization of an



- acyclic diacetylene, 187-8
- Carbonylation of the  $\eta^3$ -vinylcarbene ligand. Synthesis and X-ray crystal and molecular structure of an ( $\eta^4$ -vinylketene) iron complex, 252-3
- Formation of surface phosphate phases on metallic iron, 308-9
- Luminescence from (Ru(bipyridyl)<sub>3</sub>)<sup>2+</sup> ions adsorbed on ion exchange surfaces. Dynamic quenching reactions between adsorbed cations, 408-9
- Synthesis of fluorinated dienes and cyclobutenes, 475-6
- Cytochrome oxidase models: a binuclear iron-copper site with a bipyrimidine bridge, 483-5
- Magnetic isomers. *cis*-Bis(cyanotriphenylborato) bisphenanthrolineiron(II), 497-9
- Synthesis and characterization of iron complexes of rhodotorulic acid: a novel dihydroxamate siderophore and potential chelating drug, 501-2
- Synthesis and molecular geometry of novel di- and tri-nuclear iron complexes resulting from the interaction of (Fe<sub>2</sub>(CO)<sub>9</sub>) with R-N = S = N-R (R = *tert*-butyl or *p*-tolyl); X-ray crystal structures of (Fe<sub>2</sub>(CO)<sub>6</sub>(RNC(O)S)) and (Fe<sub>3</sub>(CO)<sub>9</sub>(RNS)S), 506-7
- Electrochemical reduction of a heterodienetricarbonyliron(0) complex as a route to novel tricarbonyliron anions, 552-3
- Versatility of cycloaddition of electrophilic alkynes to  $\eta^2$ -CS<sub>2</sub> metal complexes. Reversible isomerization of 1,3-dithiol 2-ylideneiron and heterometallic complexes, 573-4
- Solvation as the determining factor for the redox potential of Fe<sub>4</sub>S<sub>4</sub>(S(CH<sub>2</sub>)<sub>n</sub>CO<sub>2</sub>)<sub>6</sub><sup>-</sup> cluster ions, 703-4
- Iron porphyrins containing appended sulphur ligands, 705-7
- Deuterated cyclopentadienyls of thallium and other metals, 709
- Crystal structure of tris(tetra-*n*-butylammonium) tri- $\mu$ -benzenethiolatobis(tri- $\mu$ -sulphido- $\mu_3$ -sulphido-tris(benzenethiolatoiron)molybdenum) (Bu<sup>n</sup><sub>4</sub>N)<sub>3</sub>((PhSF)<sub>3</sub>MoS<sub>4</sub>)<sub>2</sub>(SPh)<sub>3</sub>; an Fe<sub>3</sub>MoS<sub>4</sub> cubic cluster dimer, 740-1
- Carbon-13 nuclear magnetic resonance spectroscopy of iron(III) porphyrin-imidazole complexes, 777-8
- X-ray crystal structure of a planar, high-spin iron(II) complex of a pentadentate unsaturated macrocycle formed by reaction of 2,9-di(1-methylhydrazino)-1,10-phenanthroline monohydrochloride with 2,6-diacetylpyridine, 828-9
- Electron spin resonance evidence for dimer formation in high spin iron(III)-octaethylporphyrin and iron(III)-meso-nitro-octaethylporphyrin in solution, 906-7
- Initial state and transition state solvation in the peroxodisulphate oxidation of dicyanobis(2,2'-bipyridyl)iron(II), 963-4
- Organometallic photochemistry with circularly polarized light. Synthesis of optically active tropone-iron tricarbonyl complex by asymmetric destruction, 983-4
- Novel type of transformation of a 2H-azirine in the presence of Fe<sub>2</sub>(CO)<sub>9</sub>, 998-9
- Formation of nona(ethyl isocyanide)diiron from penta(ethyl isocyanide)iron and reaction of penta(*tert*-butyl isocyanide)iron with diphenylacetylene; X-ray crystal structures of nona(ethyl isocyanide)diiron and tris(*tert*-butyl isocyanide)(1,4-bis-(*tert*-butylimino)-2,3-diphenylbuta-1,3-diene)iron, 1000-1
- Carbon-carbon bond-making by trapping of a nucleophilic carbene (from an electron-rich olefin) by a  $\sigma$ - $\pi$ -acetylido(hexacarbonyl) di-iron complex; X-ray crystal and molecular structure, 1017-19
- Metal-metal interactions in 2-Fe ferredoxins; SCF-X $\alpha$ -SW calculations, 1027-9
- IRON COMPLEX**  
Olefin metathesis: preparation of a carbene-olefin-metal complex, 26-7
- IRON PERCHLORATE**  
The NIH shift of deuterium during the oxidation of aromatic compounds by iron perchlorate and hydrogen peroxide in acetonitrile, 704-5
- IRON SULPHATE**  
High catalytic activity of calcined iron sulphates for the polycondensation of benzyl chloride, 121-2
- IRRADN**  
 $\sigma^*$ -electron addition to 5-halogenouracils in neutral glasses, 313-14
- ISLANDICIN**  
Regiospecific syntheses of islandicin and digitopurpone monomethyl ethers, 242-4
- ISOALLOXAZINE**  
Biosynthesis of 5,6-dimethylbenzimidazole from 6,7-dimethyl-10-(1-<sup>14</sup>C)formylmethylisoalloxazine, 22-3
- ISOBORREVERINE**  
Biomimetic synthesis of borreverine and isoborreverine, 826-8
- ISOBUTYRATE**  
Observation and interpretation of an apparent inverse secondary isotope effect on the electron impact-induced loss of a methyl radical from methyl isobutyrate, 521-2
- The <sub>310</sub> helical conformation of a pentapeptide containing  $\alpha$ -aminoisobutyric acid (Aib): X-ray crystal structure of tos-(Aib)<sub>5</sub>-OMe, 996-7
- ISOCHLOROCRUOROPORPHYRIN**  
New syntheses of chlorocruoro- and isochlorocruoro-porphyrins from protoporphyrin-IX, 645
- ISOCOMA**  
Modhephene: a sesquiterpenoid carbocyclic (3.3.3)propellane. X-ray crystal structure of the corresponding diol, 420-1
- ISOCYANATE**  
Sulphur dioxide mediated conversion of strained furazan N-oxides into diisocyanates, 113-14
- Silylhydroxylamines as reagents for high-yield RCOCl  $\rightarrow$  RNCO conversions, 351-2
- (2+2) Cycloadducts from isocyanates and azaphospholes, 470-1
- ISOCYANATOPENTALENE**  
Sulphur dioxide mediated conversion of strained furazan N-oxides into diisocyanates, 113-14
- ISOCYANIDE**  
Generation and some reactions of the bis(trimethylsilyl)aminyl radical, 545-6
- Reaction of isopropylidene carbene with isonitriles. Evidence for the formation of alkadienyldeneamine, 1057-8
- ISOCYANOIRON**  
Formation of nona(ethyl isocyanide)diiron from penta(ethyl isocyanide)iron and reaction of penta(*tert*-butyl isocyanide)iron with diphenylacetylene; X-ray crystal structures of nona(ethyl isocyanide)diiron and tris(*tert*-butyl isocyanide)(1,4-bis-(*tert*-butylimino)-2,3-diphenylbuta-1,3-diene)iron, 1000-1
- ISODON**  
Biosynthesis of  $\beta$ -sitosterol from (4-<sup>13</sup>C)mevalonic acid and sodium (1,2-<sup>13</sup>C)acetate in tissue cultures of *Isodon japonicus* hara, 319-20
- ISOFLAVAN**  
Novel isoflavan-pterocarpan interconversions: some structural requirements for cyclization, 224-5
- ISOINDOLINONE**  
Nucleophilic attack by amine nitrogen on the ionized carboxy group, 807-8
- ISOIPECOSIDE**  
Deacetylisoipecoside: the key intermediate in the biosynthesis of the alkaloids cephaeline and emetine, 896-8
- ISOLEUCINE**  
X-ray crystal and molecular structure, absolute configuration, and stereoselectivity of (-)-<sub>435</sub>-L-isoleucinato-NN'-ethylenebis( $\alpha$ -methylsilylidenamine)cobalt(III), 266-7
- ISOMERISM**  
Magnetic isomers. *cis*-Bis(cyanotriphenylborato) bisphenanthrolineiron(II), 497-9
- ISOMERIZATION**  
Nonconcerted unimolecular reactions of ions in the gas phase: isomerization of weakly coordinated carbonium ions, 24-6
- Energy barrier for E-Z isomerization of N-sulphenylimines, 156-7
- 'Methoxy cation' and protonated formaldehyde: high barriers to isomerization, 190-1
- Treatment of cinnamic acids with polyphosphoric acid, 355
- Thermal rearrangement of alkoxy cyclobutanes, 392-3
- Cation complexing photochromic materials involving bisanthracenes linked by a polyether chain. Preparation of a crown-ether by photocycloisomerization, 403-4
- Reversible photochemical valence isomerization between  $\alpha$ -diazo-ketones and a  $\alpha$ -keto-diazirines, 442-3
- (1.3) Shifts of potassium alkoxides: the bicyclo(3.2.0)heptene-norbornene transformation, 479-80
- Versatility of cycloaddition of electrophilic alkynes to  $\eta^2$ -CS<sub>2</sub> metal complexes. Reversible isomerization of 1,3-dithiol 2-ylideneiron and heterometallic complexes, 573-4
- Isomerization of allyl ethers catalysed by the cationic iridium complex (Ir(cyclo-octa-1,5-diene)(PMePh<sub>2</sub>)<sub>2</sub>)PF<sub>6</sub>. A highly stereoselective route to trans-propenyl ethers, 694-5
- Thermal isomerization of methyl linoleate hydroperoxides. Evidence of molecular oxygen as a leaving group in a radical rearrangement, 756-7
- Bronsted acidity of rutile developed during alcohol dehydration as shown by simultaneous alkene isomerization: microwave

- spectroscopic analyses, 835-6
- ISOPLATYDESMINE**  
Asymmetric synthesis and absolute stereochemistry of the alkaloids araliopsine, isoplatydesmine, and ribalinine. Dual mechanism for a dihydrofuroquinolone-dihydropyranoquinolone rearrangement 624-6
- ISOPRENE**  
4a,9a-Epoxy-4a,9a-dihydroanthracene-1,4,9,10-tetrone: a versatile synthon in anthracyclinone synthesis, 997-8
- ISOPROPENYLDIMETHYLOCTADIENOL**  
Effect of solvent on the oxy-Cope rearrangement of the 4-isopropenyl-3,7-dimethylocta-1,6-dien-3-ol diastereomeric system, 972-3
- ISOPROPYLETHYLENE**  
syn-anti-Zwitterion equilibration in the ozonolysis of di-isopropylethylene, 263-4
- ISOPROPYLIDENE**  
Reduction of  $\alpha,\alpha'$ -dibromoketones by ultrasonically dispersed mercury in some aliphatic ketone solvents. A convenient synthesis of 4-isopropylidene-1,3-dioxolans, 1040-1
- ISOPROPYLIDENECARBENE**  
Reaction of isopropylidenecarbene with isonitriles. Evidence for the formation of alkadienylideneamine, 1057-8
- ISOPROPYLIDENEDIOXOLANE**  
Reduction of  $\alpha,\alpha'$ -dibromoketones by ultrasonically dispersed mercury in some aliphatic ketone solvents. A convenient synthesis of 4-isopropylidene-1,3-dioxolans, 1040-1
- ISQUINOLINE**  
Absolute configuration and biosynthesis of tiliacorine and tiliacorimine, 226-8  
Cyclofunctionalization of olefinic urethanes with benzeneselenenyl reagents: a new general synthesis of nitrogen heterocycles, 379-80  
Studies in synthetic photochemistry. Photochemistry of  $\alpha$ -keto-imines: a novel synthesis of xylopinine, 885-6
- ISQUINOLINIUMPYRIDINIUM**  
Novel conversion of a 3-oxidopyridinium into a 4-oxidoisquinolinium, 316-18
- ISQUINOLINONE**  
Synthesis of 3-arylisquinolines by thermolysis of 3-aryl-1,2-dihydroisquinolin-4(3H)-one salts, 1026-7
- ISOTHIOCYANATE**  
Novel synthesis of isothiocyanatophosphoranes and isothiocyanatophosphonium salts via ligand substitution. Versatile reagents for converting hydroxy groups into thiocyanate and isothiocyanate functions, 940-1
- ISOTOPE**  
Synthesis and circular dichroism of methyl (R)-(16O,17O,18O) phosphate, 512-14
- ISOTOPE EFFECT**  
The kinetic effect of ring strain in an elimination reaction, 338-9  
Isotope effects in molecular complexes of naphthalene, 455-6  
Observation and interpretation of an apparent inverse secondary isotope effect on the electron impact-induced loss of a methyl radical from methyl isobutyrate, 521-2  
Stereochemical control of acetal hydrolysis, 803-4
- ISOTOPE SHIFT**  
Long-range deuterium-induced carbon-13 nuclear magnetic resonance isotope shifts for single assignment and determination of deuteration site in cyclodecanone isotopomers, 302-3  
Oxygen-18 isotope shifts on the phosphorus-31 nuclear magnetic resonance of adenosine-5'-phosphate and inorganic phosphate, 565-6
- ISOXAZOLE**  
Synthesis of hentriacontane-14,16-dione, a  $\beta$ -diketone found in plant waxes, 962-3
- JULANDINE**  
An economical synthesis of the alkaloids, 3,4-dimethoxy- $\omega$ -(2-piperidyl)acetophenone, julandine, and cryptopleurine, 794-5
- JUVENILE HORMONE**  
Juvenile hormone biosynthesis: homomevalonate and mevalonate synthesis by insect corpus allatum enzymes, 290-2  
Juvenile hormone biosynthesis: identification of 3-hydroxy-3-ethylglutarate and 3-hydroxy-3-methylglutarate in cell-free extracts from *Manduca sexta* incubation with propionyl- and acetyl-CoA, 292-3
- KAURENOATE**  
Microbiological production of 9 $\alpha$ -fluorogibberellin A<sub>4</sub>, 9 $\alpha$ -fluorogibberellin A<sub>14</sub>, and other fluoroterpenoids, 1013-15
- KERMESATE**  
Synthesis of the insect dyestuff kermesic acid and related anthraquinones, 688-9
- KETENE**  
Stereochemistry of the adduct from tert-butylcyanoketene and 2-methylbut-2-ene; X-ray crystal and molecular structure of 2-cyano-3,3,4-trimethyl-2-tert-butylcyclobutyl p-chlorobenzoate, 10-11  
New synthesis of  $\alpha$ -methylenecyclobutanones and  $\alpha$ -methylenazetidins-2-one derivatives, 12-13  
Additions of tert-butylcyanoketene to activated olefins. Structure and mechanism, 237-8  
Unusual incorporation of the cyano group of tert-butylcyanoketene into a cycloadduct. X-ray structure of the pyrimido(1,6-e)(1,3-s) dioxazine formed, 820-1  
Matrix isolated 1,2-oxathietan-4-one 2-oxide: a  $2\pi + 2\pi$  adduct of sulphur dioxide and ketene, 1020-22
- KETENIMINE**  
Evidence for the participation of a nitrile group in (2,3) sigmatropic rearrangements of sulphonium ylides, 274-5
- KETO ESTER**  
Formation of allenols or  $\gamma$ -ketoesters from reactions of oxyallyls with acetylenes or 1,1-dimethoxyethene, 1006-7
- KETONATE**  
Evidence for a second photoactive excited state in a tris( $\beta$ -diketonate)chromium(III) complex, 363-4
- KETONE**  
 $\beta$ -Silylketones as masked  $\alpha\beta$ -unsaturated ketones, 176-7  
Conversion of aldehydes and ketones into chloroolefins and acetylenes using chloriodomethane as a chloromethylene source, 446-7  
Asymmetric reduction of trifluoromethyl ketones by actively fermenting yeast, 456-7  
Activation and transfer of molecular oxygen. Oxidation of terminal olefins to methyl ketones by rhodium dioxygen complexes, 559-60  
Homogeneous catalytic oxidation of amines and secondary alcohols by molecular oxygen, 562  
Microbial stereo-differentiating reduction of the carbonyl groups located on the C<sub>2</sub> axes of gyrochiral molecules, 667-8  
New synthesis of conjugated ketones from 2-phenylthioallyl and -allenyl alcohols, 821-2  
Asymmetric reduction of aromatic ketones by sodium borohydride in the presence of bovine serum albumin, 926-7  
Reduction of  $\alpha,\alpha'$ -dibromoketones by ultrasonically dispersed mercury in some aliphatic ketone solvents. A convenient synthesis of 4-isopropylidene-1,3-dioxolans, 1040-1
- KETONE UNSATD**  
Convenient synthesis of allenyl sulphides; application to the synthesis of  $\alpha\beta$ -unsaturated ketones, 822-4  
Lithium phenylthio(trimethylstannyl)cuprate, a new reagent for conjugate addition of the trimethylstannyl group. The synthesis of  $\beta$ -trimethylstannyl- $\alpha\beta$ -unsaturated ketones, 1033-4
- KINASE**  
Evidence for a dissociative S<sub>N</sub>1(P) mechanism of phosphoryl transfer by rabbit muscle pyruvate kinase, 783-5
- KINETICS**  
Conformational control in eliminations with the (E<sub>1</sub>cB)<sub>R</sub> mechanism, 43-4  
Stereochemical control of  $\alpha$  proton abstraction from iminium ions, 49-50  
Extremely strong but sluggish amine bases, 89-90  
Solvolytic of substituted benzylidene chlorides in dioxane-water; an unusual role for a distant carboxy-group in a carbonium ion reaction, 98-9  
Analogies between the dynamic stereochemistry at silicon and phosphorus. Kinetic study of solvent-induced epimerization of menthyl chloro(phenyl)phosphonate, 104-5  
Acetal hydrotrioxides, 122-4  
Ligand exchange at octahedral nickel(II). Direct evidence for a dissociative transition state, 157-8  
Linear free energy relations in intramolecular aromatic ipso-substitutions by substituted methyl radicals, 166-7  
Absence of stereoelectronic control in the hydrolysis of a conformationally locked acetal, 171-2  
Catalysis and solvent participation in organometallic oxidative additions (platinum(0)  $\rightarrow$  platinum(II) and tin(II)  $\rightarrow$  tin(IV)), 192-3  
syn-anti-Zwitterion equilibration in the ozonolysis of di-

- isopropylethylene, 263-4
- Acetyl exchange between acetylmesitylene and acetyl chloride under Friedel-Crafts conditions, 271-2
- Kinetics of the esterification of potassium *p*-nitrobenzoate by benzyl bromide using dicyclohexyl-18-crown-6 as phase transfer agent, 282-3
- Effect of substituents on the reactivity of a double bond towards ( $\pi_4s + \pi_2s$ ) and epoxidation reactions: a chemical manifestation of orbital interactions through space, 296-7
- The reactivity of 2-bromo-1-phenylethanone (phenacyl bromide) toward nucleophilic species, 327-8
- Stabilizing influence of a strong acid medium on tertiary aminium radicals, 329-30
- Photo-enhanced production of hydrogen by liquid-phase catalytic dehydrogenation of propan-2-ol with rhodium-tin chloride complexes, 348-9
- Stereospecific double rearrangement of anti-1,5-bishomocycloheptatriene. A rebound path of thermal rearrangement involving intermediate geminal hydrogen interchange, 365-6
- A tetrahedral intermediate in the aminolysis of benzylpenicillin, 374-5
- Decay of locus populations in a compartmentalized free radical polymerization reaction upon removal of radical source, 381
- Thermal rearrangement of alkoxylobutanes, 392-3
- Crown ether acetals: detection of cation binding by kinetic measurements, 507-8
- Effects of structural distortion on the ligand exchange reactions of copper(II) Schiff base complexes, 583-4
- 1,2-Hydrogen shifts during acid-catalyzed hydrogen exchange, 586-7
- Intramolecular nucleophilic and general acid catalysis in the hydrolysis of an amide, 591-2
- Evidence of halogen exchange between gaseous halogenated alkanes and solid alkali halides obtained by field desorption mass spectrometry, 612-13
- Rate acceleration by steric inhibition to solvation of sulphur nucleophiles in acyl transfer processes. A comparison of steric effect in nucleophilic substitutions at carbonyl and aromatic carbon atoms, 613-14
- Ortho ester hydrolysis: rate determining addition of water to a carboxonium ion intermediate, 678-9
- Latent inhibition of liver alcohol dehydrogenase by a substituted allyl alcohol, 795-6
- Stereoelectronic control of acetal hydrolysis, 803-4
- Nucleophilic attack by amine nitrogen on the ionized carboxy group, 807-8
- Neighbouring carboxylate group participation in ester aminolysis in nonhydroxylic solvents. The *n*-butylaminolysis of aspirin in acetonitrile, 886-8
- Existence of specific binding sites in 1:1 oxidations of reduced parsley 2-iron ferredoxin with inorganic complexes, 1102-3
- LABEL**  
Carbon-13-labelling study of the reaction between 2-(methylthio) ethanol and carbon tetrachloride-phosphines, 208-9
- LABELLED**  
Synthesis and circular dichroism of methyl (R)-(16O,17O,18O) phosphate, 512-14
- Stereospecific synthesis of chiral acetic acid from glycine, 967-8
- LABELLING**  
Synthesis of (6-(4-3H)phenylalanine)-somatostatin of high specific radioactivity, 901-2
- LACCAIC ACID D**  
Synthesis of the insect dyestuff kermesic acid and related anthraquinones, 688-9
- LACTAM**  
Synthesis of  $\alpha$ -methylene- $\beta$ -lactams, 903-4
- LACTAMASE**  
Preparation of the 7-oxo-4-oxa-1-azabicyclo(3.2.0)hept-2-ene system and the reversible cleavage of its oxazoline ring, 469-70
- LACTONE**  
Approaches to cytochalasan synthesis: macrocycle formation using an intramolecular Diels-Alder reaction, 474-5
- General method for determining enantiomeric purities of chiral lactones, 722
- Oxidation of cyclic ketones by hydrogen peroxide catalysed by Group 6 metal peroxo complexes, 888-9
- LACTONE METHYLENE**  
Novel synthesis of  $\alpha$ -methylene- $\gamma$ -lactones, 1071-2
- LACTONIZATION**  
Synthesis of 'crown ether' macrocyclic bislactones using caesium carboxylates of pyridine and of benzene dicarboxylic acids, 383-4
- Cyclization of acetylenecarboxylic acids; a novel route to  $\gamma$ -methylenebutyrolactones, 649-50
- LAMELLAR**  
Graphite lamellar compounds. A new route to transition metal intercalates, 927-8
- LANOSTANONE**  
Novel direct rearrangement of a 9 $\beta$ ,11 $\beta$ -epoxylanostan-7-one into a  $\beta$ -homo-derivative with incorporation of the C-10 angular methyl group, 411-12
- LANOSTERYL**  
Conversion of thiocarbonyl compounds into their corresponding oxo derivatives using benzeneseleninic anhydride, 393-4
- LANTHANIDE**  
Neutral and anionic silylmethyl complexes of Group\*IIIa and lanthanoid metals; the X-ray crystal and molecular structure of (Li(thf)<sub>4</sub>)(Yb(CH(SiMe<sub>3</sub>)<sub>2</sub>)<sub>2</sub>Cl) (thf = tetrahydrofuran), 140-2
- LANTHANOID**  
Alkyl bridged complexes of the group 3A and lanthanoid metals as homogeneous ethylene polymerization catalysts, 994-5
- LANTHANOID CHLORIDE**  
Efficient synthesis of acetals catalysed by rare earth chlorides, 976-7
- LANTHANOID PERCHLORATE**  
Syntheses of some lanthanoid complexes with 4,7,13,16,21,24-hexaoxa-1,10-diazabicyclo(8.8.8)hexacosane. Crystal structure of a europium(III) perchlorate derivative, 788-9
- LANTHANUM**  
X-ray crystal structure of a cryptate complex of lanthanum nitrate, 549-50
- Catalytic synthesis of ethanol from carbon monoxide and hydrogen under atmospheric pressure over pyrolyzed rhodium carbonyl clusters on titanium dioxide, zirconium dioxide, and dilanthanum trioxide, 566-7
- First case of an eleven coordinated trivalent lanthanoid: X-ray crystal structure of penta-aqua(nitrate)lanthanum(III) monohydrate, 616-17
- LANTHANUM OXIDE**  
Stereochemistry of 1,4-addition of molecular deuterium to 2-methylbuta-1,3-diene over thorium dioxide, magnesium oxide, and dilanthanum trioxide, 1091-2
- LASER**  
Pulsed laser photolysis of chlorocopper(II) complexes in acetonitrile: evidence for chlororadical formation, 207-8
- LASER IRRADN**  
Infrared lasers: a new tool for studying the diazotization of matrix isolated tetracarbonyliron(0), 36-8
- LATIA**  
A short synthesis of (R)-(+)-frontalin and Latia luciferin using new organosilicon reagents, 297-8
- LEAD**  
A novel chain structure in the (Pb<sub>2</sub>Cl<sub>9</sub>)<sub>n</sub><sup>5n-</sup> anion; crystal and molecular structure of (Co(NH<sub>2</sub>CH<sub>2</sub>CH<sub>2</sub>NH<sub>2</sub>)<sub>2</sub>)(Pb<sub>2</sub>Cl<sub>9</sub>)Cl. 3H<sub>2</sub>O, 347-8
- Template synthesis of a bimetallic complex of a 30-membered decadentate macrocyclic ligand: the crystal and molecular structure of a lead(II) complex, 415-16
- LEUCOCRYSTAL**  
Mechanism of the cadmium sulphide sensitized photooxidation of Leuco Crystal Violet in nonaqueous solution, 417-18
- LEUCOCRYSTAL VIOLET**  
Mechanism of the cadmium sulphide sensitized photooxidation of Leuco Crystal Violet in nonaqueous solution, 417-18
- LEUROSINE**  
Antitumour alkaloids of the vinblastine-type: is leurosine an artefact, 102-3
- LEVULINATE AMINO**  
A simple route to  $\alpha$ -aminoketones and related derivatives by dianion acylation reactions; an improved preparation of  $\delta$ -aminolevulinic acid, 753-4
- LEWIS BASE**  
Gas-phase condensation of tert-butyl cations with Lewis bases, 938-40
- LFER**  
Linear free energy relations in intramolecular aromatic ipso-substitutions by substituted methyl radicals, 166-7
- Nitrogen-15 nuclear magnetic resonance studies of ligand binding

- to zinc tetraphenylporphyrin, 681-2
- LICHEN**  
New metabolites of the lichen *Buellia canescens* (Dicks.) De Not: novel phthalide catabolites of depsidones, 1041-2
- LIGAND**  
Iron porphyrins containing appended sulphur ligands, 705-7
- LIGAND EXCHANGE**  
Nuclear magnetic resonance study of ligand exchange on the hexakis(trimethyl phosphate)scandium(III) ion, 1047-8
- LIGNAN**  
Total synthesis of the lignan ( $\pm$ )-schizandrin, 480-1  
Synthesis of the lignan ( $\pm$ )-deoxyschizandrin, 491-2  
Synthesis of ( $\pm$ )-podorhizone via intermediate  $\alpha$ -hydroxyalkylation of a  $\beta$ -benzyl  $\gamma$ -butyrolactone, 556-7
- LIGNIN**  
A new class of linkage between carbohydrates and lignin model compounds, 92-3
- LINOLEATE**  
Thermal isomerization of methyl linoleate hydroperoxides. Evidence of molecular oxygen as a leaving group in a radical rearrangement, 756-7
- LINOLEIC ACID**  
Metal ion-catalysed oxidation of linoleic acid. Lipoxygenase-like regioselectivity of oxygenation, 82-3
- LITHIATION**  
Transformation of the geraniol skeleton into the fragranol and grandisol skeletons, 519-20
- LITHIOCYCLOHEXADIENE**  
Synthesis of 2-alkenyl-3-methylcyclohex-2-en-1-ones, 852-3
- LITHIUM**  
Synthesis of the dilithium salt of cyanamide in liquid lithium; X-ray crystal structure of  $\text{Li}_2\text{NCN}$ , 52-3  
Cyclopropylidene insertion. Evidence for bicyclo(1.1.0)butan-2-olate formation, 128-9  
Proposal for the mechanism of inversion of alkyl lithiums, 137-8  
Neutral and anionic silylmethyl complexes of Group IIIa and lanthanoid metals; the X-ray crystal and molecular structure of  $(\text{Li}(\text{thf})_4)(\text{Yb}(\text{CH}(\text{SiMe}_3)_2)_3\text{Cl})$  (thf = tetrahydrofuran), 140-2  
One-step synthesis of dodecamethylcyclohexasilane, 272  
Electrocatalytic formation of superoxides in the presence of cobalt chelates, 339-40  
Use of triorganogermyllithium compounds in transition metal chemistry. Application to the synthesis of optically active anions containing a transition metal-germanium bond, 435-6  
Unexpected regioselective nucleophilic addition to 3-(4,4-dimethyloxazolin-2-yl)pyridine: formation of stable 1,4-dihydropyridines, 615-16  
The chemistry of thioesters. Conversion into monothioacetals, ketones and vinyl sulfides, 719-20  
Introduction of sulphur into organic molecules via lithium triethylborohydride reduction of  $\text{S}_8$ , 838-9  
Convenient 'one-flask' synthesis of olefins. Reaction of  $\alpha$ -chloroketones with Grignard reagents and lithium, 847  
Steric effects on chelation in carbon-13 nuclear magnetic resonance spectra of  $\beta$ -diketone enolates, 965-7  
Medium-ring cyclosilanes from the reaction of dimethyldichlorosilane with lithium, 1092-3
- LIVER ALC DEHYDROGENASE**  
Latent inhibition of liver alcohol dehydrogenase by a substituted allyl alcohol, 795-6
- LIZARDITE**  
Investigation of structure composition relationships in the serpentine minerals by combined X-ray K-emission spectrometry and high-resolution electron microscopy, 986-7
- LUCIFERIN**  
A short synthesis of (R)-(+)-frontalin and *Latia luciferin* using new organosilicon reagents, 297-8
- LUMINESCENCE**  
Luminescence from  $(\text{Ru}(\text{bipyridyl})_3)^{2+}$  ions adsorbed on ion exchange surfaces. Dynamic quenching reactions between adsorbed cations, 408-9  
Photoluminescence from copper(I) complexes with low-lying metal-to-ligand charge transfer excited states, 759-61
- LYCORANE SYNTHON**  
Intramolecular photochemical arylation of N-substituted enamines: application to synthesis of heterocyclic compounds, 766-7
- MACROCYCLE**  
Enhanced rates of dihydropyridine to pyridinium hydrogen transfer in complexes of an active macrocyclic receptor molecule, 143-6  
Alkaline earth metal complexes of pyridinyl containing Schiff base macrocycles: X-ray crystal and molecular structures of the calcium and strontium complexes, 279-80  
Template synthesis of a bimetallic complex of a 30-membered decadentate macrocyclic ligand: the crystal and molecular structure of a lead(II) complex, 415-16  
Some metal complexes of macrocyclic ligands incorporating the 1,10-phenanthroline group. X-ray crystal structure of the manganese(II) complex, 476-8  
Macrocyclic enzyme model system: catalysis of ester degradation by a (20)paracyclophane bearing nucleophilic and metal-binding sites, 494-6  
X-ray crystal structure of a cryptate complex of lanthanum nitrate, 549-50  
Coordination chemistry of macrocyclic polyethers. An unusual conformation of complexed 18-crown-6; X-ray crystal and molecular structure of a 1:2 host-guest complex of 18-crown-6 with benzenesulphonamide, 595-6  
X-ray crystal structure of a planar, high-spin iron(II) complex of a pentadentate unsaturated macrocycle formed by reaction of 2,9-di(1-methylhydrazino)-1,10-phenanthroline monohydrochloride with 2,6-diacetylpyridine, 828-9  
Enthalpy of formation of copper(II) complexes with 14-membered tetraaza macrocycles, 833-4  
Anion receptor molecules. Synthesis and some anion binding properties of macrocyclic guanidinium salts, 934-6  
Molecular catalysis: enhanced rates of thiolysis with high structural and chiral recognition in complexes of a reactive macrocyclic receptor molecule, 949-51
- MACROCYCLIC**  
Synthesis of 'crown ether' macrocyclic bislactones using caesium carboxylates of pyridine and of benzene dicarboxylic acids, 383-4  
Synthesis of macrocyclic rings by internal photocycloaddition of  $\alpha$ ,  $\omega$ -dicinnamates, 400-1  
Template synthesis of a bimetallic complex of a 30-membered decadentate macrocyclic ligand: the crystal and molecular structure of a lead(II) complex, 415-16  
Approaches to cytochalasin synthesis: macrocycle formation using an intramolecular Diels-Alder reaction, 474-5  
Anion receptor molecules. Synthesis and some anion binding properties of macrocyclic guanidinium salts, 934-6
- MACROCYCLE**  
Crown ether acetals: detection of cation binding by kinetic measurements, 507-8
- MAGNESIUM**  
Hydrometallation of alkenes and alkynes with magnesium hydride, 30-1  
Resolved nitrogen-14 hyperfine coupling for surface electrons on magnesium oxide in the presence of ammonia and amines, 71-2  
Substitution of allylic sulphides of benzothiazole-2-thiol with organomagnesium compounds in the presence of copper(I) iodide. A regioselective synthesis of olefins, 1085-6
- MAGNESIUM OXIDE**  
Stereochemistry of 1,4-addition of molecular deuterium to 2-methylbuta-1,3-diene over thorium dioxide, magnesium oxide, and dilanthanum trioxide, 1091-2
- MAGNETIC**  
Magnetic isomers. *cis*-Bis(cyanotriphenylborato) bisphenanthrolineiron(II), 497-9  
Correlation of magnetic and optical properties in the organic-intercalated two-dimensional ionic ferromagnet bis(monomethylammonium) tetrachlorochromate(II), 511-12
- MAGNETIC MOMENT**  
Preparation, crystal structure, and magnetic properties of a trinuclear mixed-valence manganese carboxylate, 62-3  
Preparation of bis(*cis*-diacetyl)tetracarboxylrhenium)copper, 183-4  
Cytochrome oxidase models: a binuclear iron-copper site with a bipyrimidine bridge, 483-5  
Syntheses and reactivity of cofacial, dimeric metal-metal bonded ruthenium(II) mixed valence ruthenium(II/III), and ruthenium(III) complexes of  $(\text{C}_{22}\text{H}_{22}\text{N}_4)^{2-}$ , a dibenzo-tetra-aza(14)annulene ligand, 909-10
- MAGNETIC SUSCEPTIBILITY**  
Copper derivatives of tetrathiafulvalene, 69-70
- MAGNETISM**  
Ferromagnetic coupling and electron transfer in  $\text{CoCu}(\text{ben})_3\text{H}_2\text{O}$  ( $\text{H}_2\text{ben} = \text{NN}'\text{-bis}(2\text{-hydroxy-3-carboxybenzylidene})\text{-1,2-diaminoethane}$ ), 1012-13

**MALEIC ANHYDRIDE**

- Ene reactions of  $\beta$ -pinene at room temperature and 40 kbar pressure, 599-600  
 Maleic anhydride-benzene and maleic anhydride-acetone molecular complexes, 933-4

**MALEONITRILE**

- Ribopyranosyldiaminomaleonitrile: a key intermediate for the synthesis of nucleosides, 1094-6

**MALONIC ESTER**

- Thermal rearrangement of thiophenium bismethoxycarbonylmethylides: a novel synthesis of thiophene-2-malonic esters, 85-6

**MANDUCA**

- Juvenile hormone biosynthesis: homomevalonate and mevalonate synthesis by insect corpus allatum enzymes, 290-2  
 Juvenile hormone biosynthesis: identification of 3-hydroxy-3-ethylglutarate and 3-hydroxy-3-methylglutarate in cell-free extracts from *Manduca sexta* incubation with propionyl- and acetyl-CoA, 292-3

**MANGANESE**

- Stereochemistry and mechanisms of electrophilic cleavage reactions of cis-(threo-PhCHDCHD)Mn(CO)<sub>4</sub>PEt<sub>3</sub>, 11-12  
 Preparation, crystal structure, and magnetic properties of a trinuclear mixed-valence manganese carboxylate, 62-3  
 Gas phase Broensted basicity of ( $\eta^5$ -MeC<sub>5</sub>H<sub>4</sub>)Mn(CO)<sub>2</sub>, 126-7  
 New dioxygen complex of manganese phthalocyanine, 217-18  
 Some metal complexes of macrocyclic ligands incorporating the 1,10-phenanthroline group. X-ray crystal structure of the manganese(II) complex, 476-8  
 Hydrogen absorption in YNi<sub>4</sub>Mn, an alloy with the cubic UNi<sub>5</sub> structure, 581-2  
 Visible light-assisted electrochemical reduction of oxygen at a platinum electrode coated with surface active cobalt(II) and manganese(III) porphyrins, 1106-7

**MANNICH BASE**

- 'One-pot' conversion of Mannich bases via quaternary ammonium salts into the corresponding methyl compounds with sodium cyanoborohydride in hexamethylphosphoramide, 1089-90

**MAPPING**

- Mapping organic molecules in biological space by high resolution NMR spectroscopy and electron microscopy, 1030-2

**MARKOWNIKOFF ANTI**

- Anti-Markownikoff 1,2-hydrosulphonylation of 1,3-dienes via  $\pi$ -allylpalladium complexes, 367-8

**MASS SPECTRA**

- Nonconcerted unimolecular reactions of ions in the gas phase: isomerization of weakly coordinated carbonium ions, 24-6  
 Isomeric gaseous ethylenechloronium ions, 796-7  
 Syntheses and reactivity of cofacial, dimeric metal-metal bonded ruthenium(II) mixed valence ruthenium(II/III), and ruthenium(III) complexes of (C<sub>22</sub>H<sub>22</sub>N<sub>4</sub>)<sup>2-</sup>, a dibenzo-tetra-aza(14)annulene ligand, 909-10

**MASS SPECTRAL ANALYSIS**

- Secondary ion mass spectrometry: a tool for identification of matrix-isolated species, 751-2

**MASS SPECTROSCOPY**

- Field desorption mass spectrometry: a novel method for the characterization of cationic coordination complexes, 757-8

**MASS SPECTRUM**

- Observation and interpretation of an apparent inverse secondary isotope effect on the electron impact-induced loss of a methyl radical from methyl isobutyrate, 521-2  
 Evidence of halogen exchange between gaseous halogenated alkanes and solid alkali halides obtained by field desorption mass spectrometry, 612-13  
 Structure of the polyether antibiotic K-41 by mass and nuclear magnetic resonance spectrometry, 683-4

**MATRIX**

- Matrix photolysis of trimethylazidosilane: silicon-hydrogen bond formation, 762-3

**MATRIX ISOLATION**

- Secondary ion mass spectrometry: a tool for identification of matrix-isolated species, 751-2  
 Matrix isolated 1,2-oxathietan-4-one 2-oxide: a  $2\pi + 2\pi$  adduct of sulphur dioxide and ketene, 1020-22

**MCD**

- Combined use of M.c.d. and resonance Raman spectra for the detection of different electronic transitions in a charge-transfer band of (Mo(CO)<sub>4</sub>L) (L = 2-iminomethylpyridine), 1016-17

**MCFADYEN STEVENS**

- Vacuum pyrolysis of salts of 1-acyl-2-arylsulphonylhydrazines; a general McFadyen-Stevens aldehyde synthesis, 793-4

**MECHANISM**

- Mechanisms of aqueous solvolyses, 418-20  
 Mechanism for the stereospecific polymerization of olefins by Ziegler-Natta catalysts, 604-6

**MEDIUM LARGE RING**

- Synthesis of some medium- and large-ring cycloalk-2-ene-1,4-diones by intramolecular coupling of  $\alpha\omega$ -bis-diazoketones, 1069-70

**MEISENHEIMER COMPLEXES**

- Preparation of the first gem-dialkylthio-analogues of Meisenheimer complexes from troponoids, 167-8

**MENTHYL**

- Analogies between the dynamic stereochemistry at silicon and phosphorus. Kinetic study of solvent-induced epimerization of menthyl chloro(phenyl)phosphonate, 104-5  
 Chemical synthesis of 2-O-( $\alpha$ -L-fucopyranosyl)-3-O-(2-acetamido-2-deoxy- $\alpha$ -D-galactopyranosyl)-D-galactose, the terminal structure in the blood-group A antigenic determinant, 535-7

**MERCAPTO**

- Preparation of a penicillin-derived 4-mercaptoazetidino-2-one, 239-40

**MERCAPTOAZETIDINONE**

- Conversion of penicillins into biosynthetically significant peptides, 609-10

**MERCURATION**

- Stereochemistry and mechanisms of electrophilic cleavage reactions of cis-(threo-PhCHDCHD)Mn(CO)<sub>4</sub>PEt<sub>3</sub>, 11-12

**MERCURY**

- Bromodemetalation of  $\beta$ -methoxyphenethylthallium(III) diacetate and  $\beta$ -methoxyphenethylmercury(II) acetate with copper(I) and (II) bromide, direct evidence for alkyl radicals in bromodethallation by the spin trapping technique, 65-6  
 Reduction of  $\alpha,\alpha'$ -dibromoketones by ultrasonically dispersed mercury in some aliphatic ketone solvents. A convenient synthesis of 4-isopropylidene-1,3-dioxolans, 1040-1  
 Synthesis and solution stoichiometries and stabilities of mercury(II)-arene complexes, 1083-4

**MERCURY OXIDE**

- Cyclization of acetylenecarboxylic acids; a novel route to  $\gamma$ -methylenebutyrolactones, 649-50

**MEROQUINENATE**

- Stereoconservative transformation of secologanin into meroquinene and its derivatives, 725-6

**MEROSTABILIZATION**

- Substituent effect on singlet-triplet splitting: diarylcarbene-diarylmethylene; electron spin resonance study.  
 Merostabilization in diarylmethylenes, 181-2

**MERRIFIELD**

- A mild procedure for solid phase peptide synthesis: use of fluorenylmethoxycarbonylamino-acids, 537-9  
 Application of polyamide resins to polypeptide synthesis: an improved synthesis of  $\beta$ -endorphin using fluorenylmethoxycarbonylamino-acids, 539-40

**MESITYLENE**

- Arene-tungsten chemistry: bis(arene)tungsten hydride derivatives; co-condensation of tungsten atoms from an electron gun source with aromatic hydrocarbons, 72-3  
 Nitration of mesitylene: comparison with reactions of the cation-radical C<sub>6</sub>H<sub>3</sub>Me<sub>3</sub><sup>+</sup>, 445-6

**MESITYLENE ACETYL**

- Acetyl exchange between acetylmesitylene and acetyl chloride under Friedel-Crafts conditions, 271-2

**MESITYLENESULPHONYL**

- The mesitylene-2-sulphonyl group, a acidolytically removable NG-protecting group for arginine, 482-3

**METABOLITE**

- Biosynthesis of sclerin: incorporation studies with advanced precursors, 158-9  
 Aspterric acid, a new sesquiterpenoid of the carotane group, a metabolite from *Aspergillus terreus* IFO-6123. X-ray crystal and molecular structure of its p-bromobenzoate, 160-1  
 Biosynthesis of andibenin, a novel polyketide terpenoid metabolite of *Aspergillus varicolor*, 626-7  
 New metabolites of the lichen *Buellia canescens* (Dicks.) De Not: novel phthalide catabolites of depsidones, 1041-2

**METABOLITES**

Shikimate-derived metabolites. Total synthesis of nor-chorismic acid, 869-70

**METACYCLOPHANE**

Microbial stereo-differentiating reduction of carbonyl compounds; proposed quadrant rule, 668-7

**METAL**

Changes in surface composition of a cobalt-molybdenum binary oxide catalyst during various treatments studied by X-ray photoelectron spectroscopy, 47-8

Crystal structure of tris(tetra-*n*-butylammonium) tri- $\mu$ -benzenethiolatobis(tri- $\mu$ -sulphido-( $\mu_3$ -sulphido-tris(benzenethiolatoiron)molybdenum) (Bu<sup>n</sup><sub>4</sub>N)<sub>3</sub>((PhSFe)<sub>3</sub>MoS<sub>4</sub>)<sub>2</sub>(SPh)<sub>3</sub>); an Fe<sub>3</sub>MoS<sub>4</sub> cubic cluster dimer, 740-1

**METAL COMPLEX**

Synthesis and metal complexes of mono-N-substituted tetra-azamacrocycles, 14-15

**METAL ION**

Metal ion-catalysed oxidation of linoleic acid. Lipoxygenase-like regioselectivity of oxygenation, 82-3

**METAL OXIDE**

Continuous hydrogenation of ethene using spilt-over hydrogen, 891-2

Stereochemistry of 1,4-addition of molecular deuterium to 2-methylbuta-1,3-diene over thorium dioxide, magnesium oxide, and dilanthanum trioxide, 1091-2

**METAL VAPOUR**

Preparation of diarenemetal complexes by potassium atom reduction, 730-1

Preparative applications of metal vapours obtained by evaporation of metal powders from coated filaments: a new preparation of dibenzeneruthenium and observation of its limiting NMR spectrum, 898-9

**METALLAACETYLACETONE**

Preparation of bis(cis-diacetyltetracarbonylrhenium)copper, 183-4

**METALLATION**

Study of the distribution of metals on the surface of polymer-bound palladium(II) complexes by X-ray photoelectron spectroscopy, 650-1

**METALLOCENE**

Photoinduced synthesis of binuclear molybdenocene and tungstenocene derivatives: catalytic deoxygenation of epoxides by metallocenes, 99-100

**METALLOCYCLE**

Aspects of the coordination chemistry of some electron-rich polyorganosulphur compounds; bis(ethylthio)carbene complexes (M(CO)<sub>5</sub>(C(SEt)<sub>2</sub>)) (M = Cr or W) from Na(TosNNC(SEt)<sub>2</sub>) (Tos = *p*-MeC<sub>6</sub>H<sub>4</sub>SO<sub>2</sub>), 146-7

**METALLOPORPHYRIN**

Electron-transfer reactions between the semiquinone anion radical and metallo-tetraphenylporphyrins, 361

1:2 Metalloporphyrin nitroaromatic sandwich complexes: X-ray crystal structure of one such complex, 571-2

**METASTABLE**

A new phase of crystalline anthracene: its importance in solid-state photodimerization, 134-5

**METATHESIS**

Olefin metathesis: preparation of a carbene-olefin-metal complex, 26-7

Phosphorus-31 nuclear magnetic resonance and infrared spectroscopic evidence for coordinatively unsaturated zerovalent tungsten generated by interaction of W(CO)<sub>5</sub>L (L PPh<sub>3</sub> or PBu<sup>n</sup><sub>3</sub>) with aluminium tribromide, 38-9

Unusual stereoselectivities in olefin metathesis, 341-2

**METHANAMINIUM**

Pyranosultone: a novel binuclear heterocyclic system, 325-6

**METHANE**

Direct evidence of neighbouring group participation in the gas phase, 213-14

Ammonia synthesis from methane, water, and nitrogen over silica-supported ruthenium, 1105-6

**METHANETHIOLATOTOLUENEMOLYBDENUM**

Synthesis, X-ray crystal structure, and chemistry of the cation (( $\eta$ -MePh)Mo( $\mu$ -SMe)<sub>4</sub>Mo( $\eta$ -MePh))<sup>2+</sup>; easy D<sub>2</sub>O-NaOD catalysed hydrogen-deuterium exchange of the methyl hydrogens of a  $\eta$ -bonded toluene ligand, 1009-11

**METHANOL**

Substitution reactions of fluorinated triarylmethanols in formic acid 389-91

Equilibrium constant for protium-deuterium exchange between methanol and water, 1037-8

**METHANOLYSIS**

Photosensitized anti-Markovnikov addition of methanol to homoconjugated aryl olefins, 600-1

Applications of bromolactones in synthesis. Stereospecific syntheses of cis-2-hydroxy-1-methylcyclohex-5-ene-1-carboxylic acid and related compounds, 961-2

**METHANONAPHTHALENE**

Photosensitized anti-Markovnikov addition of methanol to homoconjugated aryl olefins, 600-1

**METHOXY**

'Methoxy cation' and protonated formaldehyde: high barriers to isomerization, 190-1

**METHOXY EFFECT**

Dramatic acceleration of a concerted reaction by a methoxy group, 1025-6

**METHOXYCARBONYLATION**

Preparation of urethanes from carbon dioxide via a copper(I) carbamate complex, 815-16

**METHOXYCARBONYLCARBENE**

2,5-Dichlorothiophenium bismethoxycarbonylmethylide: a bismethoxycarbonylcarbene equivalent, 641-2

**METHOXYCARBONYLMETHYLIDE**

Formation of a novel complex between pyridinium bis(alkoxycarbonyl)methylides and diphenylcyclopropenone; trapping of pyridinium bis(alkoxycarbonyl)methylide cation radicals, 817-19

**METHOXYCYANATION**

Stereochemical control of anodic cyanomethoxylation, 20-2

**METHOXYLATION**

Unusual conditions for cine-substitution in the pyrrole ring: isolation of a pyrrole as an intermediate, 564-5

**METHYLBUTADIENE**

Stereochemistry of 1,4-addition of molecular deuterium to 2-methylbuta-1,3-diene over thorium dioxide, magnesium oxide, and dilanthanum trioxide, 1091-2

**METHYLBUTANE**

Radical cation of 2,2,3,3-tetramethylbutane: an electron spin resonance study, 686-7

**METHYLBUTENE**

Stereochemistry of the adduct from tert-butylcyanoketene and 2-methylbut-2-ene; X-ray crystal and molecular structure of 2-cyano-3,3,4-trimethyl-2-tert-butylcyclobutyl *p*-chlorobenzoate, 10-11

**METHYLCHLOROCARBENIUM**

Isomeric gaseous ethylenechloronium ions, 796-7

**METHYLCHLOROSILANE**

Medium-ring cyclosilanes from the reaction of dimethyldichlorosilane with lithium, 1092-3

**METHYLCYCLOHEXASILANE**

Pulsed proton nuclear magnetic resonance studies of molecular motion and plastic crystallinity in dodecamethylcyclohexasilane, 1093-4

**METHYLCYCLOPENTADIENYL**

Gas phase Broensted basicity of (( $\eta^5$ -MeC<sub>5</sub>H<sub>5</sub>)Mn(CO)<sub>3</sub>), 126-7

**METHYLENE**

Photosensitized anti-Markovnikov addition of methanol to homoconjugated aryl olefins, 600-1

Synthesis of  $\alpha$ -methylene- $\beta$ -lactams, 903-4

**METHYLENE BRIDGED**

Synthesis of some diplatium complexes, including bis- $\mu$ -(bis(diphenylphosphino)methane)- $\mu$ -methylene-dichlorodiplatinum, (Pt<sub>2</sub>Cl<sub>2</sub>( $\mu$ -CH<sub>2</sub>)( $\mu$ -Ph<sub>2</sub>PCH<sub>2</sub>PPh<sub>2</sub>)<sub>2</sub>), from (Pt<sub>2</sub>Cl<sub>2</sub>( $\mu$ -Ph<sub>2</sub>PCH<sub>2</sub>PPh<sub>2</sub>)), 749-51

**METHYLENE DIARYL**

Substituent effect on singlet-triplet splitting: diarylcarbene-diarylmethylene; electron spin resonance study. Merostabilization in diarylmethylenes, 181-2

**METHYLENEBICYCLONADIENE**

3-Methylenebicyclo(3.2.2)nona-6,8-diene, 964-5

**METHYLENEBUTYLAMINE**

Homolytic addition to N-methylene-tert-butylamine: a new route to aminyl radicals, 960-1

**METHYLENECYCLOHEXANOL**

1,3-Transposition of primary allylic alcohols: a new application of selenoxide chemistry, 770-1

**METHYLENEFULVENE**

Preparation and characterization of 6,6-dimethylenefulvene, 496-7

**METHYLENEHEXANONE**

$\beta$ -Silylketones as masked  $\alpha\beta$ -unsaturated ketones, 176-7

**METHYLIDE**

Rhodium(II)-catalysed addition of dimethyl diazomalonate to thiophene: a simple synthesis of thiophenium bismethoxycarbonylmethylides and crystal and molecular structure of the unsubstituted methylide, 83-4

2,5-Dichlorothiophenium bismethoxycarbonylmethylide: a bismethoxycarbonylcarbene equivalent, 641-2

**METHYLINDOLE**

Organometallic compounds in organic synthesis: nucleophilic substitution reactions of N-methylindoletricarboxylchromium(0) 1076-7

**METHYLPHOSPHONOUS CHLORIDE**

1-Isopropyl-4,6-dimethyl-6-phospho(V)bicyclo(3.1.1)hept-3-ene 6-oxide: a distorted phosphetane synthesized from  $\alpha$ -pinene and the methylphosphonous dichloride-aluminium chloride complex; X-ray crystal and molecular structure, 125-6

**METHYLSTANNYLATION**

Lithium phenylthio(trimethylstannyl)cuprate, a new reagent for conjugate addition of the trimethylstannyl group. The synthesis of  $\beta$ -trimethylstannyl- $\alpha\beta$ -unsaturated ketones, 1033-4

**METHYLSULPHIDOBORON**

Detection of the new reactive molecule methyl(sulphido)boron, MeBS, by microwave spectroscopy, 19-20

**MEVALONATE**

Juvenile hormone biosynthesis: homeovalonate and mevalonate synthesis by insect corpus allatum enzymes, 290-2

**MEVALONIC ACID**

Biosynthesis of  $\beta$ -sitosterol from (4-<sup>13</sup>C)mevalonic acid and sodium (1,2-<sup>13</sup>C)acetate in tissue cultures of *Isodon japonicus* hara, 319-20

**MICELLE**

Photoredox reaction in micellar solutions sensitized by surfactant derivative of tris(2,2'-bipyridyl)ruthenium(II), 628-30

Stereoselective reaction of p-nitrophenyl N-acyl-phenylalanines with N-acyl-L-histidine in mixed micelles, 984-5

Biphasic photochemistry: use of the Barton reaction to determine micelle microviscosity, 1110-11

**MICHAEL ADDN**

Asymmetric induction in the base-catalysed Michael addition of nitromethane to chalcone, 238-9

Hydrogen bond assisted organic reactions: C- and O-alkylations, sulphenylations, and Michael additions aided by polymer immobilized fluoride ion, 466-7

**MICHAEL CONDENSATION**

1-Nitro-1-phenylthiopropene, a new reagent for 3-methylfuran synthesis, 362-3

New stereoselective synthesis of 9-methyl-cis-decalin derivatives by double Michael reaction of 3,5-dimethyl-4-methylenecyclohex-2-enone and dimethyl 3-oxoglutarate; X-ray crystal and molecular structure of two of the products, 717-18

**MICROBIAL EPOXIDN**

Microbial epoxidation of long-chain terminal olefins, 849-50

**MICROBIAL REDN**

Microbial stereo-differentiating reduction of the carbonyl groups located on the C<sub>2</sub> axes of gyrochiral molecules, 667-8

Microbial stereo-differentiating reduction of carbonyl compounds; proposed quadrant rule, 668-7

**MICROCOCCIN P**

The structures of the highly modified peptide antibiotics micrococcin P<sub>1</sub> and P<sub>2</sub>, 256-8

**MICROVISCOSITY**

Biphasic photochemistry: use of the Barton reaction to determine micelle microviscosity, 1110-11

**MICROWAVE SPECTRA**

Detection by microwave spectroscopy of nitroxyl produced by a retro-Diels-Alder reaction, 275-6

Production, in electrical discharges, of fluorine cyanide, fluoroacetylene, and related substances as monitored by microwave spectroscopy, 335

Microwave spectrum and conformation of glycine, 547-8

Bronsted acidity of rutile developed during alcohol dehydration as shown by simultaneous alkene isomerization: microwave spectroscopic analyses, 835-6

**MICROWAVE SPECTRUM**

Detection of the new reactive molecule methyl(sulphido)boron, MeBS, by microwave spectroscopy, 19-20

Microwave spectrum, dipole moment, and quadrupole coupling

constants of trans-nitrosocyclopropane, 388-9

**MIXED VALENCE**

Syntheses and reactivity of cofacial, dimeric metal-metal bonded ruthenium(II) mixed valence ruthenium(II/III), and ruthenium(III) complexes of (C<sub>22</sub>H<sub>22</sub>N<sub>4</sub>)<sup>2-</sup>, a dibenzo-tetraaza(14)annulene ligand, 909-10

**MLCT**

Photoluminescence from copper(I) complexes with low-lying metal-to-ligand charge transfer excited states, 759-61

**MO**

Proposal for the mechanism of inversion of alkyl lithiums, 137-8

Photoelectron spectral assignments based on ab initio MO calculations for the bicyclic phosphorus compounds P(OCH<sub>2</sub>)<sub>3</sub>Me and P(CH<sub>2</sub>O)<sub>3</sub>Me, 161-2

'Methoxy cation' and protonated formaldehyde: high barriers to isomerization, 190-1

A new assignment of the metal ionizations in the photoelectron spectrum of dimolybdenum tetraformate, 204-5

Selectivity in the addition of organic radicals to the alkene bond, 438-9

Structure of infinite polyenes. Ab initio quantum chemical study, 575-6

**MO CALCN**

Electronic structure of B<sub>4</sub>H<sub>8</sub>Fe(CO)<sub>3</sub>. Comparison of SCF-X $\alpha$ -SW molecular orbital theory with the ultraviolet photoelectron spectrum, 385-6

**MODHEPHENOL**

Modhephene: a sesquiterpenoid carbocyclic (3.3.3)propellane. X-ray crystal structure of the corresponding diol, 420-1

**MOESSBAUER**

Formation of surface phosphate phases on metallic iron, 308-9

Cytochrome oxidase models: a binuclear iron-copper site with a bipyrimidine bridge, 483-5

Reactions of gold-phosphine cluster compounds, 907-9

**MOESSBAUER SPECTRA**

Moessbauer spectroscopic studies of carbonyl haemochromes; correlations with reactivity, 746-7

**MOL MOTION**

Pulsed proton nuclear magnetic resonance studies of molecular motion and plastic crystallinity in dodecamethylcyclohexasilane, 1093-4

**MOL ROTATION**

Pulsed proton nuclear magnetic resonance studies of molecular motion and plastic crystallinity in dodecamethylcyclohexasilane, 1093-4

**MOLLISACACIDIN**

Condensed tannins: direct synthesis, structure, and absolute configuration of four biflavonoids from black wattle bark ('mimosa') extract, 700-2

**MOLYBDENOCENE**

Photoinduced synthesis of binuclear molybdenocene and tungstenocene derivatives: catalytic deoxygenation of epoxides by metallocenes, 99-100

**MOLYBDENUM**

Changes in surface composition of a cobalt-molybdenum binary oxide catalyst during various treatments studied by X-ray photoelectron spectroscopy, 47-8

Photoinduced synthesis of binuclear molybdenocene and tungstenocene derivatives: catalytic deoxygenation of epoxides by metallocenes, 99-100

A new assignment of the metal ionizations in the photoelectron spectrum of dimolybdenum tetraformate, 204-5

Acetylene linkage at a di-metal centre: X-ray crystal structures of (Cr<sub>2</sub>(CO)( $\eta$ -C<sub>5</sub>H<sub>5</sub>)<sub>2</sub>(PhC<sub>2</sub>Ph)<sub>2</sub>) and (Mo<sub>2</sub>( $\eta$ -C<sub>5</sub>H<sub>5</sub>)<sub>2</sub>((MeO<sub>2</sub>CC<sub>2</sub>CO<sub>2</sub>Me)(HC<sub>2</sub>H)(MeO<sub>2</sub>CC<sub>2</sub>CO<sub>2</sub>Me)<sub>2</sub>)), 221-3

Difluoride dioxides of molybdenum(VI) and tungsten(VI), 254-5

Direct evidence for the quadruple metal-metal bond in the octachlorodimolybdenum(II) ion, (Mo<sub>2</sub>Cl<sub>8</sub>)<sup>4-</sup>, using X-ray emission spectroscopy, 262-3

Bis(organodiazenido)-complexes of molybdenum, 352-3

Synthesis and molecular structures of chloro(trimethylphosphine)tris(trimethylsilylmethyl)molybdenum(IV) and di- $\mu$ -chloro-bis( $\eta$ <sub>2</sub>-trimethylsilylmethylcarbonylbis(carbonyl)trimethylphosphinemolybdenum(II)), 465-6

Synthesis, epimerization, X-ray structure, and absolute configuration of an optically active molybdenum complex having five independent ligands, 691-2

Preparation of diarenemetal complexes by potassium atom reduction, 730-1

- Heat of formation of bis( $\eta$ -cyclopentadienyl)dimethyltungsten and bis( $\eta$ -cyclopentadienyl)dimethylmolybdenum, 737
- Crystal structure of tris(tetra-*n*-butylammonium) tri- $\mu$ -benzenethiolatobis(tri- $\mu$ -sulphido- $\mu_3$ -sulphido-tris(benzenethiolatoiron)molybdenum) (Bu<sup>n</sup><sub>4</sub>N)<sub>3</sub>((PhSFe)<sub>3</sub>MoS<sub>4</sub>)<sub>2</sub>(SPH)<sub>3</sub>; an Fe<sub>3</sub>MoS<sub>4</sub> cubic cluster dimer, 740-1
- Solution properties of ((CO)<sub>5</sub>Mo(pz)) and (((CO)<sub>5</sub>Mo)<sub>2</sub>(pz)): organometallic analogues of ((NH<sub>3</sub>)<sub>5</sub>Ru(pz))<sup>2+</sup> and (((NH<sub>3</sub>)<sub>5</sub>Ru)<sub>2</sub>(pz))<sup>4+</sup> (pz = pyrazine), 859-61
- Sulphur inversion in dimolybdenum complexes: X-ray crystal structure of (Mo<sub>2</sub>(CO)<sub>2</sub>(P(OMe)<sub>3</sub>( $\mu_2$ -SCMe<sub>3</sub>)<sub>3</sub>( $\eta^7$ -C<sub>7</sub>H<sub>7</sub>))), 878-9
- Oxidation of cyclic ketones by hydrogen peroxide catalysed by Group 6 metal peroxo complexes, 888-9
- Synthesis, X-ray crystal structure, and chemistry of the cation (( $\eta$ -MePh)Mo( $\mu$ -SMe)<sub>4</sub>Mo( $\eta$ -MePh))<sup>2+</sup>; easy D<sub>2</sub>O-NaOD catalysed hydrogen-deuterium exchange of the methyl hydrogens of a  $\eta$ -bonded toluene ligand, 1009-11
- Combined use of M.c.d. and resonance Raman spectra for the detection of different electronic transitions in a charge-transfer band of (Mo(CO)<sub>4</sub>L) (L = 2-iminomethylpyridine), 1016-17
- MOLYBDENUM CHLORIDE**  
Direct evidence for the quadruple metal-metal bond in the octachlorodimolybdenum(II) ion, (Mo<sub>2</sub>Cl<sub>8</sub>)<sup>4-</sup>, using X-ray emission spectroscopy, 262-3
- MONOXIDE**  
Catalytic synthesis of ethanol from carbon monoxide and hydrogen under atmospheric pressure over pyrolyzed rhodium carbonyl clusters on titanium dioxide, zirconium dioxide, and dilanthanum trioxide, 566-7
- MORPHOLINE**  
Preparation of urethanes from carbon dioxide via a copper(I) carbamate complex, 815-16
- MULTICOLANATE**  
Total synthesis and stereostructure of methyl (E)-O-methylmulticolanate, a 4-ylidenetetronic acid from Penicillium multicolor, 60-1
- MYCAROSE**  
Stereospecific synthesis from noncarbohydrate precursors of the deoxy and methyl branched deoxy sugars L-amicetose, L-mycarose, and L-olivomycose, 299-300
- MYCOPHENOLATE**  
Biosynthesis of mycophenolic acid. Oxidation of 6-farnesyl-5,7-dihydroxy-4-methylphthalide in a cell-free preparation from Penicillium brevicompactum, 434
- MYLIA**  
Structure of (-)-2,9-dihydroxyverrucosane, a novel carbon skeletal diterpenoid from the liverwort Mylia verrucosa, 198-200
- MYRCENE**  
Anti-Markownikoff 1,2-hydrosulphonylation of 1,3-dienes via  $\pi$ -allylpalladium complexes, 367-8
- NADH**  
Spin trapping experiments on NADH analogues and the role of radicals in carbonyl reductions, 300-1
- NADPH MODEL**  
Asymmetric reduction of methyl benzoylformate with a chiral NAD(P)H model compound, 328-9
- NAPHTHACENE**  
Regio-selective synthesis of 2- and 3-alkyl-5-hydroxyquinizarins, 712-13
- NAPHTHACENOBISDITHIOLE**  
Highly conducting organic alloys (NBDT)<sub>2</sub>I<sub>x</sub>Br<sub>3-x</sub> (NBDT = naphthaceno(5,6-cd:11,12-c'd')bis(1,2)dithiole), 974-5
- NAPHTHALENE**  
Extremely strong but sluggish amine bases, 89-90  
Isotope effects in molecular complexes of naphthalene, 455-6  
Photochemical reactions of 1,8-diacetylnaphthalene and 1,3-dimethoxy-1,3-dimethyl-1H,3H-naphtho(1,8-cd)pyran, 589-90  
The NIH shift of deuterium during the oxidation of aromatic compounds by iron perchlorate and hydrogen peroxide in acetonitrile, 704-5  
Recovery of the chromium tricarbonyl unit in the removal of organic ligands from their chromium carbonyl complexes, 989-90
- NAPHTHALENONE**  
New 1,2-transpositions and alkylative 1,2-transpositions of a carbonyl group, 414-15
- NAPHTHOBENZODITHIOPHENE**  
Binaphthyl-2,2'-diyl hydrogen phosphate. A new chiral atropisomeric selector for the resolution of helicenes using high performance liquid chromatography, 173-5
- NAPHTHODIFURANTRIONE**  
Synthesis of tetrahydrosantonin derivatives functionalized at their angular methyl groups, 748-9
- NAPHTHOL**  
Chromenylation of 2-naphthol and alkyhydroquinones: short syntheses of (2RS,4'R,8'R)- $\alpha$ -tocopherol (vitamin E) and (2RS,4'R,8'R)- $\beta$ -tocopherol, 59-60  
A general route to substituted naphthols, 162-4  
'One-pot' conversion of Mannich bases via quaternary ammonium salts into the corresponding methyl compounds with sodium cyanoborohydride in hexamethylphosphoramide, 1089-90
- NAPHTHOPYRAN**  
Chromenylation of 2-naphthol and alkyhydroquinones: short syntheses of (2RS,4'R,8'R)- $\alpha$ -tocopherol (vitamin E) and (2RS,4'R,8'R)- $\beta$ -tocopherol, 59-60  
Photochemical reactions of 1,8-diacetylnaphthalene and 1,3-dimethoxy-1,3-dimethyl-1H,3H-naphtho(1,8-cd)pyran, 589-90
- NAPHTHOQUINONE**  
Synthetic approaches to aclacinomycin and pyrromycin antitumour antibiotics via Diels-Alder reactions of 6-alkoxy-2-pyrones: total synthesis of chrysophanol, helminthosporin and pachybasin, 95-6  
Synthesis of the insect dyestuff kermesic acid and related anthraquinones, 688-9
- NAPHTHYL**  
Ipso-attack in the cyclization of 4-( $\alpha$ -naphthyl)butan-1-ol to 1,2,3,4-tetrahydrophenanthrene, 734-5
- NAPHTHYLACETATE**  
Reaction of some arylic acids and related compounds with alkaline sodium hypochlorite solution, 459-60
- NAPHTHYLACETONITRILE**  
Reactions of substituted 3,3-diphenyl- and 3,3-dimethyl-1-oxaspiro(3,5)nona-5,8-diene-2,7-diones with nucleophiles, 312-13
- NAPHTHYLALKANE**  
The quenching of excited singlet states of Rose Bengal by bifunctional compounds, 913-14
- NAX**  
Location of supercage sodium ions and water molecules in hydrated NaX zeolite, 493-4
- NEIGHBOURING GROUP**  
Intramolecular nucleophilic and general acid catalysis in the hydrolysis of an amide, 591-2
- NEIGHBOURING GROUP PARTICIPATION**  
Direct evidence of neighbouring group participation in the gas phase, 213-14
- NEIGHBOURING PARTICIPATION**  
Neighbouring carboxylate group participation in ester aminolysis in nonhydroxylic solvents. The *n*-butylaminolysis of aspirin in acetonitrile, 886-8
- NEMATIC**  
Far infrared spectra of nematic 4-cyano-4'-*n*-heptylbiphenyl aligned with electric fields, 267-8
- NEOCEMBRENE**  
Alternative synthetic route to the cembrene skeleton, 359-60
- NEOLIGNAN**  
Hydrobenzofuranoid-bicyclo(3.2.1)octanoid neolignan rearrangement, 831-2
- NEUROTOXIN**  
Characterization of 11-hydroxysaxitoxin sulphate, a major toxin in scallops exposed to blooms of the poisonous dinoflagellate Gonyaulax tamarensis, 889-90
- NEUTRON DIFFRACTION**  
Bridging hydrides in (H<sub>2</sub>O<sub>3</sub>(CO)<sub>10</sub>) and ((C<sub>2</sub>H<sub>3</sub>)HO<sub>3</sub>(CO)<sub>10</sub>): a combined X-ray-neutron diffraction study, 723-4
- NICKEL**  
Anodically induced decomposition of some arylnickel(II) phosphine complexes, 66-8  
Ligand exchange at octahedral nickel(II). Direct evidence for a dissociative transition state, 157-8  
Synthesis of cluster compounds via nucleophilic metal complexes; X-ray crystal structures of (Os<sub>3</sub>Pt( $\mu$ -H)<sub>2</sub>(CO)<sub>10</sub>((C<sub>6</sub>H<sub>11</sub>)<sub>3</sub>P)) and (Os<sub>2</sub>Pt<sub>2</sub>( $\mu$ -H)<sub>2</sub>(CO)<sub>8</sub>(Ph<sub>3</sub>P)<sub>2</sub>), 260-2  
Hydrogen absorption in YNi<sub>4</sub>Mn, an alloy with the cubic UNi<sub>5</sub> structure, 581-2  
Formation of an acyl species from hept-1-ene and carbon monoxide on an evaporated nickel surface, 617-18  
Insertion of the carbene :CH<sub>2</sub> into Ni-R bonds of mono- and di-



- alkylnickel(II) complexes, 1003-4
- NICKELOPORPHYRIN**  
1:2 Metalloporphyrin nitroaromatic sandwich complexes: X-ray crystal structure of one such complex, 571-2
- NICOTIANA**  
Solanascone: a novel sesquiterpene ketone from *Nicotiana tabacum*  
X-ray structure determination of the corresponding oxime, 563-4  
Stereochemistry of the reduction of nicotinic acid when it serves as a precursor of anatabine, 610-11
- NICOTINAMIDOPHENYL**  
meso- $\alpha,\alpha,\alpha,\alpha$ -Tetra(o-nicotinamidophenyl)porphyrin: a novel ligand for the preparation of unsymmetrical bis-metal complexes, 399-400
- NICOTINATE**  
Stereochemistry of the reduction of nicotinic acid when it serves as a precursor of anatabine, 610-11
- NIH**  
The NIH shift of deuterium during the oxidation of aromatic compounds by iron perchlorate and hydrogen peroxide in acetonitrile, 704-5
- NIوبيUM**  
Synthesis of zerovalent bis-arene niobium compounds using niobium vapour, 431  
Structure and reactivity in the group 5B tert-butylimido complexes  $(Me_2N)_3M = NCM_2$ ; X-ray crystal and molecular structure of N-tert-butylimidotris(dimethylamido)tantalum, 579-80  
A new approach to cationic transition metal alkyls:  $(M(\eta-C_5H_5)_2(CH_2SiMe_3)_2)^+(Y)^-$  ( $M = Nb$  or  $Ta$ ,  $Y = BF_4$  or  $SbF_6$ ) and their conversion into the alkylidene complexes  $(M(\eta-C_5H_5)_2(CH_2SiMe_3)(CH_2SiMe_3))$ , 925-6
- NITRATE**  
X-ray crystal structure of a cryptate complex of lanthanum nitrate, 549-50  
Novel coordination numbers in scandium(III) and yttrium(III) nitrate complexes. X-ray crystal structures of  $Sc(NO_3)_3 \cdot 2N_2O_4$  and  $Y(NO_3)_3 \cdot 2N_2O_4$ , 580-1  
First case of an eleven coordinated trivalent lanthanoid: X-ray crystal structure of penta-aqua(nitrate)lanthanum(III) monohydrate, 616-17
- NITRATION**  
Mechanism of formation of 4-methyl- and 4-chloro-2-nitrophenol in the nitration of 4-methyl- and 4-chloro-anisole, respectively, in aqueous sulphuric acid, 180-1  
Nitration of mesitylene: comparison with reactions of the cation-radical  $C_6H_3Me_3^{+\cdot}$ , 445-6
- NITRIC ACID**  
Determination of the basicity of nitric acid in concentrated sulphuric acid by Raman and ultraviolet spectroscopy, 873-4
- NITRIC OXIDE**  
Adsorption of nitric oxide on copper(100) surfaces; an electron spectroscopic study, 40-1  
Catalytic conversion of nitric oxide into nitrogen and dinitrogen oxide by dinitrobis(ethylenediamine)cobalt(III) cation, 175-6  
Reactions of nitrogen oxides with di(cyclopentadienyl)titanium complexes, 234-5  
Rapid formation of N-nitrosamines from nitric oxide in the presence of silver(I) salts, 707-8
- NITRIDE**  
Synthesis of the dilithium salt of cyanamide in liquid lithium; X-ray crystal structure of  $Li_2NCN$ , 52-3  
Novel salts of graphite and a boron nitride salt, 200-1  
Polymeric sulphur nitride electrode: an example of electrocatalysis by surface chemical modification, 244-5  
Preparation and crystal structure of a new sulphur nitride,  $S_5N_6$ ; a molecular basket, 642-3
- NITRILE**  
Hydrogenolysis of unsaturated alcohols; hydrocyanation and hydrogenation of acetylenes catalysed by pentacyanocobaltate(II) 63-5  
Photochemical reactions of a silacyclopentene with nitriles leading to new organosilicon ring systems, 80-1  
Evidence for the participation of a nitrile group in (2,3) sigmatropic rearrangements of sulphonium ylides, 274-5  
Homogeneous catalytic oxidation of amines and secondary alcohols by molecular oxygen, 562
- NITRITE**  
Formation of a 1,2,4-oxadiazoline from an aziridine: mechanism of the reaction and photochemical conversion into a benzimidazole derivative, 356-7
- NITRITO**  
Biphasic photochemistry: use of the Barton reaction to determine micelle microviscosity, 1110-11
- NITRITODODECANOATE**  
Biphasic photochemistry: use of the Barton reaction to determine micelle microviscosity, 1110-11
- NITRO**  
Novel synthesis of  $\gamma$ -hydroxy- $\alpha$ -nitro-olefins, 350-1
- NITROBENZENE**  
Radical alkyldenitration. A synthetically useful example of homolytic aromatic ipso-substitution reactions, 93-4  
Ready hydrogenation of nitrobenzene and benzonitrile with a polymer-bound palladium catalyst, 1074-5
- NITROBENZOATE**  
Kinetics of the esterification of potassium p-nitrobenzoate by benzyl bromide using dicyclohexyl-18-crown-6 as phase transfer agent, 282-3
- NITROFLUORENE**  
1:2 Metalloporphyrin nitroaromatic sandwich complexes: X-ray crystal structure of one such complex, 571-2
- NITROFLUORENONE**  
1:2 Metalloporphyrin nitroaromatic sandwich complexes: X-ray crystal structure of one such complex, 571-2
- NITROGEN**  
Organozirconium(III)-dinitrogen complexes: evidence for  $(\eta^2-N_2)$ -metal bonding in  $(Zr(\eta-C_5H_5)_2(N_2)(R))$  ( $R = Me_3Si_2CH$ ), 34-6  
Structure of the compound purported to be NN-bis(chloromethyl)dimethylsilylacetamide: X-ray crystal structure analysis of the novel five-membered oxygen-, silicon-, and nitrogen-containing heterocycle (O-Si)-chloro((N-chlorodimethylsilylacetamido)methyl)dimethylsilane, 209-10  
A bicyclic sulphur-nitrogen cation: the synthesis and crystal structure of  $S_4N_5Cl$ , 212-13  
X-ray crystal structure of  $(AsPh_4)^+(NSF_2NSO_2F)^-$ : three different types of sulphur-nitrogen bonds in the anion, 226  
Photopolymerization of  $S_2N_2$  to  $(SN)_x$ , 301-2  
Cyclofunctionalization of olefinic urethanes with benzeneselenenyl reagents: a new general synthesis of nitrogen heterocycles, 379-80  
A planar, cyclic sulphur-nitrogen anion: the X-ray crystal and molecular structure of  $(Bu_4N)^+(S_3N_3)^-$ , 391-2  
Ammonia synthesis from methane, water, and nitrogen over silica-supported ruthenium, 1105-6
- NITROGEN EXTRUSION**  
A new mechanism for the formation of cyclopropane derivatives in the thermolysis of pyrazolines, 461-2
- NITROGEN MONOXIDE**  
Activity of copper(II)-exchanged Y-type zeolites in the catalytic decomposition of nitrogen monoxide, 1058-9
- NITROGEN OXIDE**  
Reactions of nitrogen oxides with di(cyclopentadienyl)titanium complexes, 234-5
- NITROHEXADECANE**  
Synthesis of hentriacontane-14,16-dione, a  $\beta$ -diketone found in plant waxes, 962-3
- NITROMETHANE**  
Asymmetric induction in the base-catalysed Michael addition of nitromethane to chalcone, 238-9
- NITROMETHYLATION**  
Difluor reagents: non-hygroscopic sources of the fluoride ion, 789-91
- NITRONATE**  
Silyl nitronates: improved nitro-aldol reactions and reductive routes to 2-aminoalcohols, 689-91
- NITRONE**  
Effect of ring size in cyclic phosphonates upon their reaction with nitrones, 6-7
- NITROPHENYLTHIOPROPENE**  
1-Nitro-1-phenylthiopropene, a new reagent for 3-methylfuran synthesis, 362-3
- NITROSAMINE**  
A new group of nitroxide free radicals formed from aliphatic nitrosamines and thiols, 741-2
- NITROSATION**  
An unusually stable thionitrite from N-acetyl-D,L-penicillamine; X-ray crystal and molecular structure of 2-(acetyl-amino)-2-carboxy-1,1-dimethylethyl thionitrite, 249-50  
Rapid formation of N-nitrosamines from nitric oxide in the presence of silver(I) salts, 707-8

## NITROSO

Microwave spectrum, dipole moment, and quadrupole coupling constants of trans-nitrosocyclopropane, 388-9

A new group of nitroxide free radicals formed from aliphatic nitrosamines and thiols, 741-2

## NITROSOBUTENONE

Addition of 3-nitrosobut-3-en-2-one to olefins and to electron-rich heterocycles, 847-9

## NITROTROPONE

Preparation of the first gem-dialkylthio-analogues of Meisenheimer complexes from troponoids, 167-8

## NITROXIDE

Synthesis of intercalating and carcinogenic nitroxide spin labels, 215-16

A new group of nitroxide free radicals formed from aliphatic nitrosamines and thiols, 741-2

## NITROXYL

Detection by microwave spectroscopy of nitroxyl produced by a retro-Diels-Alder reaction, 275-6

(Cr(oxalate)<sub>3</sub>)<sup>3-</sup> as a broadening agent in nitroxyl spin probe studies, 944-5

## NMR

Phosphorus-31 nuclear magnetic resonance and infrared spectroscopic evidence for coordinatively unsaturated zerovalent tungsten generated by interaction of W(CO)<sub>5</sub>L (L PPh<sub>3</sub> or PBu<sub>n</sub><sub>3</sub>) with aluminium tribromide, 38-9

Uranium(IV)-crown-ether complexes and cryptates. Proton nuclear magnetic resonance study, and X-ray crystal and molecular structure of tetrachloro(2,5,8,15,18,21-hexaoxatricyclo(20.4.0.0<sup>9,14</sup>)hexacosane)uranium(IV), 90-2

A new class of linkage between carbohydrates and lignin model compounds, 92-3

Carbon-13 nuclear magnetic resonance chemical shifts of small hydrocarbons in the gas phase, 94-5

Nitrogen-15 nuclear magnetic resonance studies of iron(II) low spin complexes of nitrogen-15 and iron-57 labelled porphyrin, 106-7

Anodic functionalization of 1H-perfluoroalkanes. Observation of fluorine-19 chemically induced dynamic nuclear polarization, 118-19

Acetal hydrotrioxides, 122-4

Deuterium nuclear magnetic resonance studies on biosynthesis: stereochemistry of the 5'-hydrogen atoms of griseofulvin derived from griseophenone B and 4-demethyldehydrogriseofulvin, 135-6

New conformational effect: predominance of the axial conformation in spiro(5.2)octan-4-ol derivatives, 147-8

Detection of organic dianions by carbon-13 nuclear magnetic resonance spectroscopy, 172-3

Mixed rhodium-platinum carbonyl clusters: synthesis and X-ray crystallographic characterization of (Rh<sub>3</sub>Pt(CO)<sub>15</sub>)<sup>-</sup> ((Ph<sub>3</sub>P)<sub>2</sub>N)<sup>+</sup>, 195-6

Cis-trans isomerism in bis(trihalogenoacetyl)polymethylbenzenes resulting from restricted rotation about carbonyl groups: proton nuclear magnetic resonance evidence, 201-2

Fluxional cyclopentadienylboranes, 242

Synthesis of cluster compounds via nucleophilic metal complexes; X-ray crystal structures of (Os<sub>3</sub>Pt(μ-H)<sub>2</sub>(CO)<sub>10</sub>((C<sub>6</sub>H<sub>11</sub>)<sub>3</sub>P)) and (Os<sub>2</sub>Pt<sub>2</sub>(μ-H)<sub>2</sub>(CO)<sub>8</sub>(Ph<sub>3</sub>P)<sub>2</sub>), 260-2

The acid-sensitive proton nuclear magnetic resonance spectra of tocopherols and other derivatives of 6-hydroxychroman, 265-6

Long-range deuterium-induced carbon-13 nuclear magnetic resonance isotope shifts for single assignment and determination of deuteration site in cyclodecanone isotopomers, 302-3

Mechanism of asymmetric hydrogenation catalysed by rhodium(I) trans-4,5-bis(diphenylphosphinomethyl)-2,2-dimethyldioxolan (DIOP) complexes, 321-2

Insertion of selenium, tellurium, or arsenic atoms into borane cage compounds using element oxide reagents, 349-50

Determination of the absolute configuration of bis(dipeptidato)cobaltate(III) complexes by proton nuclear magnetic resonance spectroscopy, 428-9

Thermal fission and reformation of the carbon-nitrogen bond in formamide as studied by carbon-13-nitrogen-15 coupling, 485-6

Reaction of o-hydroxyacetophenone with dichlorophenylphosphine X-ray crystal and molecular structure of an unusual tricyclic tetraoxaphospha-undecane, 510-11

Oxygen-17 nuclear magnetic resonance spectroscopy: spin coupling to phosphorus-31, 531-2

Oxygen-18 isotope shifts on the phosphorus-31 nuclear magnetic

resonance of adenosine-5'-phosphate and inorganic phosphate, 565-6

Natural abundance nitrogen-15 nuclear magnetic resonance spectroscopic evidence for the structural relation between the peptide antibiotics thiostrepton and siomycin-A, 577-8

Structure of xanthomegnin and related pigments: reinvestigation by carbon-13 nuclear magnetic resonance spectroscopy, 611-12

Biosynthesis of andibenin, a novel polyketide terpenoid metabolite of *Aspergillus varicolor*, 626-7

Use of long range proton-carbon-13 couplings in structure determination: stellatin, a novel dihydroisocoumarin from *Aspergillus varicolor*, 627-8

Nitrogen-15 nuclear magnetic resonance studies of ligand binding to zinc tetraphenylporphyrin, 681-2

Structure of the polyether antibiotic K-41 by mass and nuclear magnetic resonance spectrometry, 683-4

Experimental chemical shift correlation maps in nuclear magnetic resonance spectroscopy, 684-6

Condensed tannins: determination of the point of linkage in 'terminal' (+)-catechin units and degradative bromination of 4-flavanylflavan-3,4-diols, 696-8

Condensed tannins: direct synthesis, structure, and absolute configuration of four biflavonoids from black wattle bark ('mimosa') extract, 700-2

General method for determining enantiomeric purities of chiral lactones, 722

Proton nuclear magnetic resonance study of the deprotonation of the catecholamines in solution: the microconstants for the deuteriation of L-dopa in D<sub>2</sub>O, 768-9

The 1,6-dimethylcyclodecyl cation. Nuclear magnetic resonance evidence for a 1,6-μ-hydrido structure, 769-70

Carbon-13 nuclear magnetic resonance spectroscopy of iron(III) porphyrin-imidazole complexes, 777-8

Formation and X-ray crystal structure of 1,1,6,6-tetraphenyl-1,6-distannacyclodecane, 791-2

Use of deuterium as a tracer with carbon-13 nuclear magnetic resonance spectroscopy in following deuteride migration in terpenoid biosynthesis: mechanism of geranylgeranyl

pyrophosphate cyclization in fusicoccin biosynthesis, 843-5

Bistriphenylphosphinecuprapentaborane, an unusual copper-borane, 866-7

Sulphur inversion in dimolybdenum complexes: X-ray crystal structure of (Mo<sub>2</sub>(CO)<sub>2</sub>(P(OMe)<sub>3</sub>)<sub>2</sub>(μ<sub>2</sub>-SCMe<sub>3</sub>)<sub>3</sub>(η<sup>-1</sup>-C<sub>7</sub>H<sub>7</sub>)), 878-9

Preparative applications of metal vapours obtained by evaporation of metal powders from coated filaments: a new preparation of dibenzeneruthenium and observation of its limiting NMR spectrum, 898-9

Reactions of gold-phosphine cluster compounds, 907-9

Syntheses and reactivity of cofacial, dimeric metal-metal bonded ruthenium(II) mixed valence ruthenium(II/III), and ruthenium(III) complexes of (C<sub>2</sub>H<sub>2</sub>N<sub>4</sub>)<sub>2</sub><sup>2-</sup>, a dibenzo-tetra-aza(14)annulene ligand, 909-10

Identification of the species (Te<sub>n</sub>Se<sub>4-n</sub>)<sup>2+</sup> by high resolution tellurium-125 and tellurium-123 Fourier transform NMR spectroscopy, 956-7

125-Tellurium and 77-selenium multinuclear magnetic resonance studies of Te<sub>6</sub><sup>4+</sup>, Te<sub>4-n</sub>Se<sub>n</sub><sup>2+</sup>, Te<sub>2</sub>Se<sub>2</sub><sup>2+</sup>, and Te<sub>3</sub>Se<sub>3</sub><sup>2+</sup> polyatomic cations, 957-60

Steric effects on chelation in carbon-13 nuclear magnetic resonance spectra of β-diketone enolates, 965-7

Mapping organic molecules in biological space by high resolution NMR spectroscopy and electron microscopy, 1030-2

Nuclear magnetic resonance study of ligand exchange on the hexakis(trimethyl phosphate)scandium(III) ion, 1047-8

Platinum(IV) complexes with π-acceptor ligands, 1056-7

Carbon-carbon coupling in (90%<sup>-13</sup>C-2)histidine, 1070-1

Sugar equilibria. Observation of a septanose anomer, 1073-4

Pulsed proton nuclear magnetic resonance studies of molecular motion and plastic crystallinity in dodecamethylcyclohexasilane, 1093-4

## NOCARDICINOID

From the penicillin to the nocardicin skeleton: an alternative route, 1101-2

## NOCHORISMIC ACID

Shikimate-derived metabolites. Total synthesis of nor-chorismic acid, 869-70

**NONACHLORONONABORON**

Selective synthesis of the nonachlorononaborate clusters  
nonachlorononaboron and nonachlorononaborate dianion,  
462-3

**NORBORNADIENE**

Selective homo Diels-Alder addition of acetylenic hydrocarbons to  
norbornadiene catalysed by a cobalt complex, 636-8

Stereoselective cobalt-catalysed (2+2+2) cross-addition of  
norbornadiene and norbornene, 638-9

**NORBORNADIENYL**

Pyramidal geometry of the trivalent carbon atom of the  
norbornadien-7-yl radical; electron spin resonance study, 804

**NORBORNENE**

Ring opening polymerization of norbornene catalysed by ethyl  
aluminium dichloride; olefin metathesis in the absence of a  
transition metal, 603-4

**NORBORNENOL**

(1.3) Shifts of potassium alkoxides: the bicyclo(3.2.0)heptene-  
norbornene transformation, 479-80

**NORETHISTERONE**

Convenient preparation of esters of testosterone and 19-  
norethisterone with hindered acids, 980-1

**NORSTANOL**

Investigations on the ring contraction step in the biosynthesis of  $\alpha$ -  
nor-stanols by the marine sponge *Axinella verrucosa*, 524-5

**NUCLEATION**

The role of stress in nucleus development during dehydration of  
certain alums, 273-4

Dynamics of the salt-induced random coil to helix transition in  
segmented  $\epsilon$ -carrageenan, 515-16

**NUCLEIC ACID**

Two micromethods for determining the linkage of adducts formed  
between polyaromatic hydrocarbons and nucleic acid bases,  
798-800

**NUCLEOPHILE**

Carbon-carbon bond-making by trapping of a nucleophilic carbene  
(from an electron-rich olefin) by a  $\sigma$ - $\pi$ -acetylido(hexacarbonyl)  
di-iron complex; X-ray crystal and molecular structure, 1017-19

**NUCLEOPHILIC**

Stereochemistry of the nucleophilic cleavage of cobalt-carbon  
bonds in organocobalt(IV) compounds, 44-6

**NUCLEOPHILIC SUBSTITUTION**

Reactions of substituted 3,3-diphenyl- and 3,3-dimethyl-1-  
oxaspiro(3,5)nona-5,8-diene-2,7-diones with nucleophiles,  
312-13

The reactivity of 2-bromo-1-phenylethanol (phenacyl bromide)  
toward nucleophilic species, 327-8

Rate acceleration by steric inhibition to solvation of sulphur  
nucleophiles in acyl transfer processes. A comparison of steric  
effect in nucleophilic substitutions at carbonyl and aromatic  
carbon atoms, 613-14

**NUCLEOSIDE**

Synthesis of (5'R)-(2H<sub>1</sub>)adenosine, 294-5

The 9-phenylxanthen-9-yl protecting group, 639-40

A new ribooligonucleotide block synthesized by phosphorylation  
with *p*-chlorophenyl N-phenylchlorophosphoramidate, 824-5

New synthesis of 4',5'-unsaturated nucleosides, 1084-5

**NUCLEOSIDE CYCLO**

Reactions of methylhydrazine and hydrazine with 8-bromo-2'-O-  
toluene-*p*-sulphonyl adenosine, 86-7

**NUCLEOSIDES**

New synthesis of 1- $\beta$ -D-arabinofuranosyl-aminoimidazoles and of  
related purine nucleosides, 882-3

Ribopyranosyldiaminomaleonitrile: a key intermediate for the  
synthesis of nucleosides, 1094-6

**OCTADIENE**

Selectivity in the addition of organic radicals to the alkene bond,  
438-9

Synthesis of allenes via reduction of acetylenic *p*-  
tolylsulphonylhydrazones, 726-7

**OCTADIENOL**

Effect of solvent on the oxy-Cope rearrangement of the 4-  
isopropenyl-3,7-dimethylocta-1,6-dien-3-ol diastereomeric  
system, 972-3

**OCTAHEDRAL COMPLEX**

Ligand exchange at octahedral nickel(II). Direct evidence for a  
dissociative transition state, 157-8

**OCTENE**

Addition of 3-nitrosobut-3-en-2-one to olefins and to electron-  
rich heterocycles, 847-9

**OCTYNE**

Direct displacement and coupling of prop-2-ynyl acetates with  
organocuprates, 876-7

**OLEFIN**

Olefin metathesis: preparation of a carbene-olefin-metal complex,  
26-7

Oxidative-addition of tertiary phosphine-ruthenium complexes to  
allylic carbon-hydrogen bonds, 223-4

Additions of tert-butylcyanoketene to activated olefins. Structure  
and mechanism, 237-8

Unusual stereoselectivities in olefin metathesis, 341-2

Novel synthesis of  $\gamma$ -hydroxy- $\alpha$ -nitro-olefins, 350-1

Some epoxy-olefin cyclizations, 526-8

An unexpected cyclization of an olefinic epoxy-ketone, 529-30

An arene hydrido complex of ruthenium(II) as catalyst for the  
homogeneous hydrogenation of benzene and olefins, 582-3

Addition of furans to electron rich olefins through photo-induced  
electron transfer in the presence of electron acceptors, 594-5

Photosensitized anti-Markovnikov addition of methanol to  
homoconjugated aryl olefins, 600-1

Mechanism for the stereospecific polymerization of olefins by  
Ziegler-Natta catalysts, 604-6

Correlation between selectivity in photochemical cross-  
cycloaddition and ionization potential of the reacting olefins,  
786-8

Convenient 'one-flask' synthesis of olefins. Reaction of  $\alpha$ -  
chloroketones with Grignard reagents and lithium, 847

Addition of 3-nitrosobut-3-en-2-one to olefins and to electron-  
rich heterocycles, 847-9

**OLEFIN METATHESIS**

Ring opening polymerization of norbornene catalysed by ethyl  
aluminium dichloride; olefin metathesis in the absence of a  
transition metal, 603-4

**OLEOYL CYCLOHEXANEDIONE**

Novel  $\beta$ -triketones from Lepidoptera, 1075-6

**OLIGONUCLEOTIDE**

O-Aryl S-methyl phosphorochloridothioates: terminal  
phosphorylating agents in the phosphotriester approach to  
oligonucleotide synthesis, 1050-2

**OLIGOPEPTIDE**

Chain ends as supports for  $\alpha$ -helical structures in oligopeptides,  
692-3

**OLIGORIBONUCLEOTIDE BLOCK**

A new ribooligonucleotide block synthesized by phosphorylation  
with *p*-chlorophenyl N-phenylchlorophosphoramidate, 824-5

**OLIVOMYCOSE**

Stereospecific synthesis from noncarbohydrate precursors of the  
deoxy and methyl branched deoxy sugars L-amictose, L-  
mycarose, and L-olivomycose, 299-300

**OPTICAL ACTIVITY**

Raman optical activity due to isotopic substitution: (1S)-4,4-  
dideuterioadamantan-2-one, 259-60

Inorganic optical activity, 936-7

**OPTICALLY ACTIVE**

Synthesis of the first example of an optically active hexaorganoditin  
81-2

Use of triorganogermyllithium compounds in transition metal  
chemistry. Application to the synthesis of optically active anions  
containing a transition metal-germanium bond, 435-6

**ORG COMPD**

Tetrabutylammonium permanganate; an efficient oxidant for  
organic substrates, 253-4

**ORG METAL**

'Organic metals': alkylthio substitution effects in tetrathiafulvalene-  
tetracyanoquinodimethane charge-transfer complexes, 18-19

Highly conducting organic alloys (NBDT)<sub>2</sub>I<sub>x</sub>Br<sub>3-x</sub> (NBDT =  
naphthaceno(5,6-cd:11,12-c'd')bis(1,2)dithiole), 974-5

A novel conducting polyacetylene derivative, 1066-7

**ORG METALS**

Comments on the preparation of the one-dimensional conductor  
N-methylphenazinium 7,7,8,8-tetracyanoquinodimethane,  
331-2

Organic metals: a new class of conducting ion-radical salts based on  
7,7,8,8-tetracyanoquinodimethane and iodine, 337-8

'Organic metals' with asymmetric acceptors: the  
monofluorotetracyanoquinodimethane anion, 992-3

**ORG MOL**

Mapping organic molecules in biological space by high resolution

- NMR spectroscopy and electron microscopy, 1030–2
- ORGANOBORATION**  
Novel synthesis of substituted allenes via organoboration of alkynylstannanes, 402–3
- ORGANOCUPRATE**  
Stereochemistry of the organocuprate reactions of two cis–trans isomeric allylic ethers, 621–3
- ORGANODITIN**  
Synthesis of the first example of an optically active hexaorganoditin 81–2
- ORGANOLITHIUM**  
Unexpected regioselective nucleophilic addition to 3–(4,4–dimethylloxazolin–2–yl)pyridine: formation of stable 1,4–dihydropyridines, 615–16  
The chemistry of thioesters. Conversion into monothioacetals, ketones and vinyl sulfides, 719–20
- ORGANOSILICON**  
A short synthesis of (R)–(+)-frontalin and Latia luciferin using new organosilicon reagents, 297–8
- ORTHO ESTER**  
Ortho ester hydrolysis: rate determining addition of water to a carboxonium ion intermediate, 678–9
- OSMATE**  
Novel salts of graphite and a boron nitride salt, 200–1
- OSMIUM**  
Synthesis of cluster compounds via nucleophilic metal complexes; X–ray crystal structures of  $(\text{Os}_3\text{Pt}(\mu\text{-H})_2(\text{CO})_{10}(\text{C}_6\text{H}_{11})_3\text{P})$  and  $(\text{Os}_2\text{Pt}_2(\mu\text{-H})_2(\text{CO})_8(\text{Ph}_3\text{P})_2)$ , 260–2  
Preparation and X–ray structure determination of the mixed cluster  $(\text{H}_3\text{CoOs}_3(\text{CO})_{12})$ , 343–4  
Synthesis and molecular structure of  $(\text{Os}_6(\text{CO})_{16}(\text{CMe})_2)$  and  $(\text{Os}_6(\text{CO})_{16}(\text{MeC}:\text{CMe})\text{C})$ , derivatives of ethylene and hexaosmium octadecacarbonyl, 421–3  
New mixed–metal clusters via metal hydride coupling. Synthesis and crystal structures of  $(\mu_2\text{-H})\text{Os}_3\text{W}(\text{CO})_{12}(\eta^5\text{-C}_5\text{H}_5)$  and  $(\mu_2\text{-H})_3\text{Os}_3\text{W}(\text{CO})_{11}(\eta^5\text{-C}_5\text{H}_5)$ , 534–5  
 $(\text{Os}_3(\text{CO})_9\text{H}(\text{SR}))$ , a highly reactive molecule. The X–ray structure of a  $\pi$ –bound ethylene adduct  $(\text{Os}_3(\text{CO})_9\text{H}(\text{C}_2\text{H}_4)(\text{SMe}))$ , 551–2  
Bridging hydrides in  $(\text{H}_2\text{Os}_3(\text{CO})_{10})$  and  $(\text{C}_2\text{H}_3)\text{HOs}_3(\text{CO})_{10}$ : a combined X–ray–neutron diffraction study, 723–4  
X–ray molecular structure of the asymmetrically bridged ester complex di– $\mu$ –oxobis((cyclohexane–1,2–diolato)oxo(quinuclidine)osmium(VI)),  $(\text{OsO}_2(\text{O}_2\text{C}_6\text{H}_{10})(\text{C}_7\text{H}_{13}\text{N}))_2$ , 853–4  
Synthesis and molecular structure of  $(\text{Os}_5(\text{CO})_{15}\text{POMe})$ , 1015–16  
New mode of bonding of a vinyl ligand to an osmium cluster: the X–ray crystal structure of  $(\text{HOs}_3(\text{CO})_{10}(\text{CF}_3\text{CCHCF}_3))$ , 1035–6  
Anchoring of osmium clusters to silica, 1063–4  
Interconversion of  $\mu_2$ –phenolato and  $\mu_3$ –oxodienediyl ligands in triosmium clusters: X–ray crystal structure of 1,1,1,2,2,2,3,3,3–nonacarbonyl–1,2,2,3–di– $\mu$ –hydrido–( $\mu_3$ –3–benzyl–2–oxocyclohexa–3,5–diene–1,1–diyl–1,2–C<sup>1</sup>–3–O)–triangulo–triosmium( $3\text{Os}–\text{Os}$ ), 1086–8
- OSMIUM FLUORIDE**  
Acid salts of graphite: large or small fractional ionization, 544–5
- OXAAZABICYCLOHEPTANE**  
Total synthesis of clavulanic acid analogues from 7–oxo–3–vinyl–4–oxa–1–azabicyclo(3.2.0)heptanes, 439–41  
Total synthesis of methyl (2RS,5RS)–3–methylene–7–oxo–4–oxa–1–azabicyclo(3.2.0)heptane–2–carboxylate, a novel clavulanic acid analogue, 518–19
- OXAAZABICYCLOHEPTENE**  
Preparation of the 7–oxo–4–oxa–1–azabicyclo(3.2.0)hept–2–ene system and the reversible cleavage of its oxazoline ring, 469–70
- OXABICYCLOALKANE**  
General synthesis of oxiranes, 785–6
- OXABICYCLOOCTANE**  
Photosynthetic routes to prostaglandins: conversion of 2,3–endo–epoxybicyclo(3.2.0)heptan–6–one into 6,7–endo–epoxy–3–alkoxy–2–oxabicyclo(3.3.0)octanes, 661–2
- OXADECALIN**  
Absence of stereoelectronic control in the hydrolysis of a conformationally locked acetal, 171–2
- OXADIAZOLINE**  
Formation of a 1,2,4–oxadiazoline from an aziridine: mechanism of the reaction and photochemical conversion into a benzimidazole derivative, 356–7
- OXALATE**  
 $(\text{Cr}(\text{oxalate})_3)^{3-}$  as a broadening agent in nitroxyl spin probe studies, 944–5
- OXASELENOLE**  
Preparation of derivatives of a new heterocyclic system: 2–N–acylimino–1,3–oxaselenoles, 447–8
- OXASPIRONONENONE**  
Reactions of substituted 3,3–diphenyl– and 3,3–dimethyl–1–oxaspiro(3,5)nona–5,8–diene–2,7–diones with nucleophiles, 312–13
- OXATHIOLE**  
Preparation of derivatives of a new heterocyclic system: 2–N–acylimino–1,3–oxaselenoles, 447–8
- OXATRICYCLOUNDECADIENE**  
Intramolecular photocycloaddition of phenethyl vinyl ether, 129–30
- OXAZASILACYCLOPENTANE**  
Structure of the compound purported to be NN–bis(chloromethyldimethylsilyl)acetamide: X–ray crystal structure analysis of the novel five–membered oxygen–, silicon–, and nitrogen–containing heterocycle (O–Si)–chloro((N–chlorodimethylsilylacetamido)methyl)dimethylsilane, 209–10
- OXAZINE**  
Addition of 3–nitrosobut–3–en–2–one to olefins and to electron–rich heterocycles, 847–9
- OXAZINONE**  
Flash–vacuum pyrolysis of 1,3–oxazin–2– and –6–ones, 902–3
- OXAZOLECARBOXALDEHYDE**  
Vacuum pyrolysis of salts of 1–acyl–2–arylsulphonylhydrazines; a general McFadyen–Stevens aldehyde synthesis, 793–4
- OXAZOLINYL**  
Unexpected regioselective nucleophilic addition to 3–(4,4–dimethylloxazolin–2–yl)pyridine: formation of stable 1,4–dihydropyridines, 615–16
- OXAZOLIUM HYDROXIDE**  
1,3–Dipolar cycloaddition of anhydro–4–hydroxy–1,3–oxazolium hydroxides with carbonyl compounds, 247–8
- OXEPIN OXIDE**  
Synthesis of a sym–oxepin oxide with restricted conformational mobility and altered reactivity. X–ray crystal and molecular structure of 4,7–dibromo–3a,7a:5,6–diepoxyperhydroindene, 377–9
- OXETANE**  
Selectivity in the addition of organic radicals to the alkene bond, 438–9
- OXETHIETANONE OXIDE**  
Matrix isolated 1,2–oxathieta–4–one 2–oxide: a  $2\pi + 2\pi$  adduct of sulphur dioxide and ketene, 1020–22
- OXIDASE**  
Cytochrome oxidase models: a binuclear iron–copper site with a bipyrimidine bridge, 483–5
- OXIDATIVE**  
Oxidative displacement of iodine from vicinal iodocarboxylates and alkyl iodides, 919
- OXIDATIVE INSERTION**  
Evidence for the ready insertion of rhodium into a carbon–hydrogen bond of ethylene; crystal and molecular structure of  $\mu$ –but–2–ene– $\mu$ –ethylenebis–( $\eta^5$ –1–methylindenyl)dirhodium, 839–41
- OXIDE**  
Changes in surface composition of a cobalt–molybdenum binary oxide catalyst during various treatments studied by X–ray photoelectron spectroscopy, 47–8  
Selective hydrogenation of the internal double bond of penta–1,3–diene on a zinc oxide catalyst, 53–4  
Resolved nitrogen–14 hyperfine coupling for surface electrons on magnesium oxide in the presence of ammonia and amines, 71–2  
X–ray crystal structure of  $\text{Sn}_6\text{O}_4(\text{OME})_4$ : an intermediate in the hydrolysis of tin(II) dimethoxide, 112–13  
Difluoride dioxides of molybdenum(VI) and tungsten(VI), 254–5
- OXIDN**  
Metal ion–catalysed oxidation of linoleic acid. Lipoxygenase–like regioselectivity of oxygenation, 82–3  
Catalysis and solvent participation in organometallic oxidative additions (platinum(0)  $\rightarrow$  platinum(II) and tin(II)  $\rightarrow$  tin(IV)), 192–3  
Tetrabutylammonium permanganate; an efficient oxidant for organic substrates, 253–4  
Oxidation of aldehyde hydrazones, hydrazo compounds, and hydroxylamines with benzeneseleninic anhydride, 276–7  
Dehydrogenation of hydrazines and of 4–azacholestan–3–one with benzeneseleninic acid and benzeneseleninic anhydride, 278–9

- Structural barriers to the rates of electron transfer of copper complexes. Oxidation of cytochrome c (II) by copper(II) complexes, 370-2
- Conversion of thiocarbonyl compounds into their corresponding oxo derivatives using benzeneseleninic anhydride, 393-4
- Mechanism of the cadmium sulphide sensitized photooxidation of Leuco Crystal Violet in nonaqueous solution, 417-18
- Formation of the dixenon cation,  $Xe_2^+$ , in fluoroantimonate(V) media by oxidation-reduction methods: spectroscopic properties of the ion, 502-4
- Activation and transfer of molecular oxygen. Oxidation of terminal olefins to methyl ketones by rhodium dioxygen complexes, 559-60
- Homogeneous catalytic oxidation of amines and secondary alcohols by molecular oxygen, 562
- The NIH shift of deuterium during the oxidation of aromatic compounds by iron perchlorate and hydrogen peroxide in acetonitrile, 704-5
- Drifluor reagents: non-hygroscopic sources of the fluoride ion, 789-91
- Thiosulphonium ion intermediate in the oxidation of a thiol with dimethyl sulphoxide, 865-6
- Oxidation of cyclic ketones by hydrogen peroxide catalysed by Group 6 metal peroxo complexes, 888-9
- Photo-sensitized oxidation of sulphur and pyridinium ylides. Oxygen atom transfer to divalent sulphur, 894-5
- Oxidation of alcohols using benzeneseleninic anhydride, 952-4
- Initial state and transition state solvation in the peroxodisulphate oxidation of dicyanobis(2,2'-bipyridyl)iron(II), 963-4
- Reaction of ozone with vinyl sulphides. Reactions retaining hydrocarbon chains, 1032-3
- Synthesis. X-ray crystal structure, and properties of a tetranuclear complex formed by oxidation of copper(I) chloride with molecular dioxygen in N-methylpyrrolidin-2-one. Isolation of a catalyst for the oxidative coupling of phenols by dioxygen, 1045-6
- $\mu$ -Oxo-bis(chlorotriphenylbismuth): a mild reagent for the oxidation of the hydroxy group, especially in allylic alcohols, 1099-100
- Existence of specific binding sites in 1:1 oxidations of reduced parsley 2-iron ferredoxin with inorganic complexes, 1102-3
- OXIDN STATE**  
ESCA study of compounds of gold in the oxidation state-1, 905-6
- OXIDOISOQUINOLIUM**  
Novel conversion of a 3-oxidopyridinium into a 4-oxidoisoquinolinium, 316-18
- OXIME**  
Novel synthesis of  $\gamma$ -hydroxy- $\alpha$ -nitro-olefins, 350-1
- Palladation of dimethylhydrazones, oximes, and oxime O-allyl ethers: crystal structure of  $(Pd_3(ON=CPrPh)_6)$ , 1061-2
- OXIRANE**  
Partial asymmetric synthesis of substituted trans-2,3-diaryloxiranes using optically active arsonium ylides, 346-7
- Preparation of derivatives of a new heterocyclic system: 2-N-acylimino-1,3-oxaselenoles, 447-8
- General synthesis of oxiranes, 785-6
- OXIRANYLMETHYL**  
The kinetic effect of ring strain in an elimination reaction, 338-9
- OXO COMPLEX**  
X-ray molecular structure of the asymmetrically bridged ester complex di- $\mu$ -oxobis(cyclohexane-1,2-diolato)oxo(quinuclidine)osmium(VI),  $(OsO_2(O_2C_6H_{10})(C_7H_{13}N))_2$ , 853-4
- OXO STEROID**  
Dehydrogenation of steroidal ketones using benzeneseleninic anhydride, 130-1
- OXOCYCLOHEXADIENEDIYL**  
Interconversion of  $\mu_2$ -phenolato and  $\mu_3$ -oxodienediyl ligands in trisium clusters: X-ray crystal structure of 1,1,1,2,2,2,3,3,3-nonacarbonyl-1,2,2,3-di- $\mu$ -hydrido-( $\mu_3$ -3-benzyl-2-oxocyclohexa-3,5-diene-1,1-diyl-1,2-C-3-O)-triangulo-trisium( $3Os-Os$ ), 1086-8
- OXOGLUTARATE**  
New stereoselective synthesis of 9-methyl-cis-decalin derivatives by double Michael reaction of 3,5-dimethyl-4-methylenecyclohex-2-enone and dimethyl 3-oxoglutarate; X-ray crystal and molecular structure of two of the products, 717-18
- Reactions of dimethyl 3-oxoglutarate with zerovalent compounds of palladium and platinum. Preparation of 1-metallacyclobutan-3-one complexes and the X-ray crystal structure of 2,4-bis(methoxycarbonyl)-1,1-bis(triphenylphosphine)platinacyclobutan-3-one, 744-5
- OXONIUM**  
Nonconcerted unimolecular reactions of ions in the gas phase: isomerization of weakly coordinated carbonium ions, 24-6
- OXY COPE**  
Solvent-assisted acetylenic oxy-Cope rearrangement: a novel synthesis of ionone and its analogues, 651-2
- OXYALLYL**  
Formation of allenes or  $\gamma$ -ketoesters from reactions of oxyallyls with acetylenes or 1,1-dimethoxyethene, 1006-7
- OXYCHLORINATION**  
Selective synthesis of the nonachlorononaborate clusters nonachlorononaboron and nonachlorononaborate dianion, 462-3
- OXYCOPE REARRANGEMENT**  
Effect of solvent on the oxy-Cope rearrangement of the 4-isopropenyl-3,7-dimethylocta-1,6-dien-3-ol diastereomeric system, 972-3
- OXYGEN**  
Electrocatalytic formation of superoxides in the presence of cobalt chelates, 339-40
- Visible light-assisted electrochemical reduction of oxygen at a platinum electrode coated with surface active cobalt(II) and manganese(III) porphyrins, 1106-7
- OXYGEN BINDING**  
A haemocyanin model: a synthetic copper(I) complex having imidazole ligands and reversible dioxygen activity, 634-6
- OXYGEN SHIFT**  
Oxygen-18 isotope shifts on the phosphorus-31 nuclear magnetic resonance of adenosine-5'-phosphate and inorganic phosphate, 565-6
- OXYGENATION**  
Reactions of singlet oxygen. Formation of hydroxy ketones in the photooxygenation of fluorenylidene derivatives, 120-1
- Reductant-induced homolysis of the thallium-carbon bond: novel oxygenation of alkylthallium(III) compounds with ascorbic acid, 716-17
- 2-(1-Methylindol-3-yl)-3-phenyldihydro-1,4-dioxin 2,3-epidioxide, a dioxetan resulting in efficient ultraviolet chemiluminescence, 781-2
- OXYGENYL**  
Formation of the dixenon cation,  $Xe_2^+$ , in fluoroantimonate(V) media by oxidation-reduction methods: spectroscopic properties of the ion, 502-4
- OZONATION**  
Acetal hydrotrioxides, 122-4
- Regioselective oxidation of unactivated methylene and methine groups by dry ozonation: similarity to microbiological oxidation, 413-14
- OZONE**  
Reaction of ozone with vinyl sulphides. Reactions retaining hydrocarbon chains, 1032-3
- OZONIDE**  
X-ray crystal structure of an ozonide: 4-(4-nitrophenylmethyl)-1-phenyl-1,4-epoxy-1H-2,3-benzodioxepin-5(4H)one, 729-30
- OZONOLYSIS**  
syn-anti-Zwitterion equilibration in the ozonolysis of diisopropylethylene, 263-4
- PACHYBASIN**  
Synthetic approaches to aclacinomycin and pyrromycin antitumour antibiotics via Diels-Alder reactions of 6-alkoxy-2-pyrones: total synthesis of chrysophanol, helminthosporin and pachybasin, 95-6
- PALLADACYCLOBUTANE**  
Reactions of dimethyl 3-oxoglutarate with zerovalent compounds of palladium and platinum. Preparation of 1-metallacyclobutan-3-one complexes and the X-ray crystal structure of 2,4-bis(methoxycarbonyl)-1,1-bis(triphenylphosphine)platinacyclobutan-3-one, 744-5
- PALLADACYCLOPENTANE**  
Metallacycloalkane chemistry: synthesis of the first palladacyclopentane derivative and its transformation into a  $\eta^3$ -butenyl cationic complex, 735-6
- PALLADADICARBAUNDECABORANE**  
Structural consequences of ligand and metal substitution in metallacarboranes; the crystal and molecular structures of 3-( $C_2H_4(NMe_2)_2$ )-3,1,2-PdC<sub>9</sub>H<sub>11</sub> and 3,3-( $PMe_3$ )<sub>2</sub>-3,1,2-

- $\text{PdC}_2\text{B}_9\text{H}_{11}$ , 322-4
- PALLADATION**  
 Mechanism of formation of 4-6 $\eta$ -3-oxo steroid-PdCl complexes, 15-16  
 Palladation of 8-methylquinoline and related 2-substituted derivatives: evidence for in-plane metallation of methyl groups, 344-5  
 Steric mechanism of formation of the PdCl  $\pi$ -allyl derivative from (6 $\beta$ -2H)cholest-4-ene, 747-8  
 Palladation of dimethylhydrazones, oximes, and oxime O-allyl ethers: crystal structure of  $(\text{Pd}_3(\text{ON}=\text{CPr}^i\text{Ph})_6)$ , 1061-2
- PALLADIUM**  
 New palladium carbonyl clusters: X-ray crystal structure of  $(\text{Pd}_4(\text{CO})_4(\text{OAc})_4)(\text{AcOH})_2$ , 27-8  
 Anti-Markownikoff 1,2-hydrosulphonylation of 1,3-dienes via  $\pi$ -allylpalladium complexes, 367-8  
 Study of the distribution of metals on the surface of polymer-bound palladium(II) complexes by X-ray photoelectron spectroscopy, 650-1  
 Palladium(II)-catalysed asymmetric cyclization of 2-allylphenols by the use of optically active  $\beta$ -pinene, 687-8  
 Protonolysis of alkenylboranes under neutral conditions by treatment with catalytic amounts of palladium diacetate, 702-3  
 Deuterated cyclopentadienyls of thallium and other metals, 709  
 Metallacycloalkane chemistry: synthesis of the first palladacyclopentane derivative and its transformation into a  $\eta^3$ -butenyl cationic complex, 735-6  
 Reactions of dimethyl 3-oxoglutarate with zerovalent compounds of palladium and platinum. Preparation of 1-metallacyclobutan-3-one complexes and the X-ray crystal structure of 2,4-bis(methoxycarbonyl)-1,1-bis(triphenylphosphine)platinacyclobutan-3-one, 744-5  
 Palladium-promoted vinyl hydrogen substitution of alkenes by Grignard reagents. Stoichiometric and catalytic reactions, 918-19  
 Very active hydrogenation catalyst composed of extremely dispersed palladium on vitreous supports, 979-80  
 Ready hydrogenation of nitrobenzene and benzonitrile with a polymer-bound palladium catalyst, 1074-5
- PAPAIN**  
 Synthesis and characterization of covalent flavin-papain complexes with sulphur in the sulphide and sulphone oxidation states, 457-9
- PAPYRIOGENIN G**  
 X-ray analysis of the triterpene papyriogenin G, 364-5
- PARACYCLOPHADIENE**  
 Cycloaddition of sterically hindered 1,2-dicyclopropylethylenes with tetracyanoquinodimethane; one-step formation of (10) paracyclophadienes, 864-5
- PARAMAGNETIC**  
 Synthesis of zerovalent bis-arenenium compounds using niobium vapour, 431  
 Reduction of tris(triphenylphosphine)dichlororuthenium(II) in acetonitrile: reformulation of the nature of the product; detection of the first paramagnetic  $d^8$  complex, 883-4
- PARSLEY**  
 Existence of specific binding sites in 1:1 oxidations of reduced parsley 2-iron ferredoxin with inorganic complexes, 1102-3
- PARTICLE SIZE DISTRIBUTION**  
 Very active hydrogenation catalyst composed of extremely dispersed palladium on vitreous supports, 979-80
- PENAM**  
 Concentration-dependent photoreaction of benzothiazolyldithioazetidiones: novel photochemical formation of penam derivatives, 836-8
- PENICILLAMINE**  
 An unusually stable thionitrite from N-acetyl-D,L-penicillamine; X-ray crystal and molecular structure of 2-(acetylamino)-2-carboxy-1,1-dimethylethyl thionitrite, 249-50
- PENICILLIN**  
 ( $\pm$ )-Dinorpenicillin-2-spirocycloalkane, 46-7  
 Preparation of a penicillin-derived 4-mercaptoazetidin-2-one, 239-40  
 A tetrahedral intermediate in the aminolysis of benzylpenicillin, 374-5  
 Conversion of penicillins into biosynthetically significant peptides, 609-10
- PENICILLIN G**  
 From the penicillin to the nocardicin skeleton: an alternative route, 1101-2
- PENICILLIUM**  
 Total synthesis and stereostructure of methyl (E)-O-methylmulticolanate, a 4-ylidenetetronic acid from *Penicillium multicolor*, 60-1  
 Deuterium nuclear magnetic resonance studies on biosynthesis: stereochemistry of the 5'-hydrogen atoms of griseofulvin derived from griseophenone B and 4-demethyldehydrogriseofulvin, 135-6  
 Biosynthesis of mycophenolic acid. Oxidation of 6-farnesyl-5,7-dihydroxy-4-methylphthalide in a cell-free preparation from *Penicillium brevicompactum*, 434
- PENTADECYNE**  
 Synthesis of hentriacontane-14,16-dione, a  $\beta$ -diketone found in plant waxes, 962-3
- PENTADIENE**  
 Selective hydrogenation of the internal double bond of penta-1,3-diene on a zinc oxide catalyst, 53-4  
 A triplet state path for adduct formation between benz(a)anthracene and the penta-1,3-dienes, 588-9
- PENTADIENYL**  
 The thermal rearrangements of pentadienylammonium ylides. Competing (1,2), (3,2), and (5,2) rearrangements, 673-5
- PENTALENE**  
 Sulphur dioxide mediated conversion of strained furazan N-oxides into diisocyanates, 113-14
- PENTANEDIONE**  
 Steric effects on chelation in carbon-13 nuclear magnetic resonance spectra of  $\beta$ -diketone enolates, 965-7
- PENTANONE**  
 Reduction of  $\alpha,\alpha'$ -dibromoketones by ultrasonically dispersed mercury in some aliphatic ketone solvents. A convenient synthesis of 4-isopropylidene-1,3-dioxolans, 1040-1
- PENTAPEPTIDE**  
 The  $3_{10}$  helical conformation of a pentapeptide containing  $\alpha$ -aminoisobutyric acid (Aib): X-ray crystal structure of tos-(Aib) $_5$ -OMe, 996-7
- PENTASULPHUR**  
 Preparation and crystal structure of a new sulphur nitride,  $\text{S}_5\text{N}_6$ ; a molecular basket, 642-3
- PENTENOL**  
 Stereochemistry of the organocuprate reactions of two cis-trans isomeric allylic ethers, 621-3
- PENTENYNE**  
 Direct displacement and coupling of prop-2-ynyl acetates with organocuprates, 876-7
- PEPTIDATO**  
 Determination of the absolute configuration of bis(dipeptidato)cobaltate(III) complexes by proton nuclear magnetic resonance spectroscopy, 428-9
- PEPTIDE**  
 p-Tolylmethylsulphonyl: a new amino-protecting group in peptide synthesis, 220-1  
 An approach to the prevention of racemization in the synthesis of histidine-containing peptides, 472-3  
 A mild procedure for solid phase peptide synthesis: use of fluorenylmethoxycarbonylamino-acids, 537-9  
 Application of polyamide resins to polypeptide synthesis: an improved synthesis of  $\beta$ -endorphin using fluorenylmethoxycarbonylamino-acids, 539-40  
 Natural abundance nitrogen-15 nuclear magnetic resonance spectroscopic evidence for the structural relation between the peptide antibiotics thiostrepton and siomycin-A, 577-8  
 Conversion of penicillins into biosynthetically significant peptides, 609-10  
 Synthesis of (6-(4- $^3\text{H}$ ))phenylalanine)-somatostatin of high specific radioactivity, 901-2  
 The  $3_{10}$  helical conformation of a pentapeptide containing  $\alpha$ -aminoisobutyric acid (Aib): X-ray crystal structure of tos-(Aib) $_5$ -OMe, 996-7
- PEPTIDE ANTIBIOTIC**  
 The structures of the highly modified peptide antibiotics micrococin P<sub>1</sub> and P<sub>2</sub>, 256-8
- PERESTER**  
 Introduction, substitution, and elimination of bromine at C-5 of aldopyranose peresters, 1019-20
- PERFLUOROAZACYCLOHEXADIENE**  
 Perfluoroaza- and -diazacyclohexadiene derivatives, 304-5  
 Photochemical conversions of some fluorinated aza- and diazacyclohexadienes, 305-6

**PERHYDRODIOXAZAPHOSPHOCINE**

Opening of the phosphorus–nitrogen bond of bicyclic phosphoranes  
Synthesis and X-ray crystal and molecular structure of rhodium complexes of perhydro-1,3,6,2-dioxazaphosphocine, 1022–4

**PERMANGANATE**

Tetrabutylammonium permanganate; an efficient oxidant for organic substrates, 253–4

**PEROXIDE**

The NIH shift of deuterium during the oxidation of aromatic compounds by iron perchlorate and hydrogen peroxide in acetonitrile, 704–5

A novel conducting polyacetylene derivative, 1066–7

**PEROXIDE HYDROGEN**

A novel tunnel structure containing enclathrated hydrogen peroxide:  $4\text{Na}_2\text{SO}_4 \cdot 2\text{H}_2\text{O}_2 \cdot \text{NaCl}$ , 288–9

**PEROXO**

Isolation of intermediates in the acid hydrolysis of  $(\text{Pt}(\text{PPh}_3)_2(\text{O}_2))$ ; the X-ray structure of  $(\text{Pt}_2(\text{O}_2)(\text{OH})(\text{PPh}_3)_4)(\text{ClO}_4) \cdot 2\text{C}_6\text{H}_6$ , 991–2

**PEROXODISULPHATE**

Initial state and transition state solvation in the peroxodisulphate oxidation of dicyanobis(2,2'-bipyridyl)iron(II), 963–4

**PEROXOMOLYBDENUM**

Oxidation of cyclic ketones by hydrogen peroxide catalysed by Group 6 metal peroxo complexes, 888–9

**PERTECHNETATE**

Production, detection, and characterization of transient hexavalent technetium in aqueous alkaline media by pulse radiolysis and very fast scan cyclic voltammetry, 1038–40

**PHARMACOL**

X-ray crystal structure of sodium bis(N-methylhydantoinato) gold(I) tetrahydrate; a linear, planar complex of pharmacological interest stabilized by two nitrogen ligands, 711–12

**PHASE**

A new phase of crystalline anthracene: its importance in solid-state photodimerization, 134–5

An octahedral rhenium(III) cluster: X-ray crystal structure of  $\text{Na}_4\text{Re}_6\text{S}_{10}(\text{S}_2)$ , 879–80

**PHASE SOLID**

A mild procedure for solid phase peptide synthesis: use of fluorenylmethoxycarbonylamino-acids, 537–9

**PHASE TRANSFER**

Versatile deuterium exchange and isomerization of hydrocarbons via phase transfer catalysis, 155–6

Kinetics of the esterification of potassium p-nitrobenzoate by benzyl bromide using dicyclohexyl-18-crown-6 as phase transfer agent, 282–3

A mild, regiospecific but-2-enolide synthesis and a convenient preparation of acylated dienes, 311–12

Polymer-supported phase transfer catalysts in solid-liquid reactions 541–3

Phase-transfer catalysis using chiral catalysts. Synthesis of optically active 2-phthalimido-esters, 742–3

Double carbonylation of substituted benzyl chlorides with cobalt carbonyl anion by phase transfer catalysis to give arylpyruvic acids, 1090–1

**PHENACYL BROMIDE**

The reactivity of 2-bromo-1-phenylethanone (phenacyl bromide) toward nucleophilic species, 327–8

**PHENALENODITHIOLYL**

Phenaleno(1,9-cd)dithiolyl: the first example of a monomeric, coplanar, carbon-based free radical, 429–30

**PHENALENOL**

Preparation of trans,trans,trans- and cis,cis,trans-perhydrophenalen-9-ols by application of the three-migration cyanoborate process to isomeric perhydro-9b-boraphenalenes: differences between the cyanoborate and carbonylation reactions, 805–6

**PHENALENYL**

Synthesis and X-ray structure of an  $\eta^3$  phenalenyl-platinum complex, 142–3

**PHENANTHRENE**

Redox-photosensitized cleavage of indene dimers using aromatic hydrocarbon-dicyanobenzene systems; catalysis by the cation radical of aromatic hydrocarbons, 490–1

1,2-Hydrogen shifts during acid-catalyzed hydrogen exchange, 586–7

**PHENANTHRENEQUINONE**

Diels-Alder reaction of o-benzoquinones with acyclic dienes, 397

**PHENANTHRIDINE**

Intramolecular photochemical arylation of N-substituted enamines: application to synthesis of heterocyclic compounds, 766–7

Boron complexes as control synthons in photocyclizations: an improved phenanthridine synthesis, 884–5

**PHENANTHROCHRYSENE**

Binaphthyl-2,2'-diyl hydrogen phosphate. A new chiral atropisomeric selector for the resolution of helicenes using high performance liquid chromatography, 173–5

**PHENANTHROLINE**

Structural barriers to the rates of electron transfer of copper complexes. Oxidation of cytochrome c (II) by copper(II) complexes, 370–2

Some metal complexes of macrocyclic ligands incorporating the 1,10-phenanthroline group. X-ray crystal structure of the manganese(II) complex, 476–8

Magnetic isomers. cis-Bis(cyanotriphenylborato) bisphenanthrolineiron(II), 497–9

X-ray crystal structure of a planar, high-spin iron(II) complex of a pentadentate unsaturated macrocycle formed by reaction of 2,9-di(1-methylhydrazino)-1,10-phenanthroline monohydrochloride with 2,6-diacetylpyridine, 828–9

X-ray crystal structure of the ternary complex  $(\text{Cu}(3'\text{-GMP})(\text{phen})(\text{H}_2\text{O}))_2 \cdot 7\text{H}_2\text{O}$  (GMP = guanosine monophosphate, phen = 1,10-phenanthroline): unusual absence of M–N(7) bonding in a metal-GMP complex, 1053–5

**PHENANTHROLINECOPPER**

Structural barriers to the rates of electron transfer of copper complexes. Oxidation of cytochrome c (II) by copper(II) complexes, 370–2

**PHENANTHROLINONECARBOXYLATE**

Unexpectedly strong hydrogen bonding in some tetrahydro-4,7-phenanthroline-1,10-dione-3,8-dicarboxylic acids, 369–70

**PHENAZINIUM**

Comments on the preparation of the one-dimensional conductor N-methylphenazinium 7,7,8,8-tetracyanoquinodimethane, 331–2

**PHENETHYL**

Bromodemetalation of  $\beta$ -methoxyphenethylthallium(III) diacetate and  $\beta$ -methoxyphenethylmercury(II) acetate with copper(I) and (II) bromide, direct evidence for alkyl radicals in bromodethallation by the spin trapping technique, 65–6

Intramolecular photocycloaddition of phenethyl vinyl ether, 129–30

**PHENETHYLMERCURY**

Stereochemistry and mechanisms of electrophilic cleavage reactions of cis-(threo-PhCHDCHD)Mn(CO)<sub>4</sub>PEt<sub>3</sub>, 11–12

**PHENOL**

Aromatic hydroxylation by O(<sup>3</sup>P) atoms on  $\gamma$ -radiolysis of liquid carbon dioxide solutions of alkylbenzenes, 16–18

Mechanism of formation of 4-methyl- and 4-chloro-2-nitrophenol in the nitration of 4-methyl- and 4-chloro-anisole, respectively, in aqueous sulphuric acid, 180–1

Reactions of substituted 3,3-diphenyl- and 3,3-dimethyl-1-oxaspiro(3,5)nona-5,8-diene-2,7-diones with nucleophiles, 312–13

Palladium(II)-catalysed asymmetric cyclization of 2-allylphenols by the use of optically active  $\beta$ -pinene, 687–8

Novel method for dealkylation of esters, ethers, and acetals by chlorotrimethylsilane-sodium iodide, 874–5

**PHENOL COUPLING**

Synthesis, X-ray crystal structure, and properties of a tetranuclear complex formed by oxidation of copper(I) chloride with molecular dioxygen in N-methylpyrrolidin-2-one. Isolation of a catalyst for the oxidative coupling of phenols by dioxygen, 1045–6

**PHENOXYLATION**

Polymer-supported phase transfer catalysts in solid-liquid reactions 541–3

**PHENYL ANION SYNTHON**

Novel synthesis of phenyltrimethylsilyldiazene and generation of the phenyl anion synthon therefrom, 990

**PHENYL KETONE OXIME**

Palladation of dimethylhydrazones, oximes, and oxime O-allyl ethers: crystal structure of  $(\text{Pd}_3(\text{ON}=\text{CPr}^i\text{Ph})_6)$ , 1061–2

**PHENYLACETATE**

Reaction of some arylacetic acids and related compounds with alkaline sodium hypochlorite solution, 459–60

**PHENYLACETYLENE**

Formation of nona(ethyl isocyanide)diiron from penta(ethyl isocyanide)iron and reaction of penta(tert-butyl isocyanide)iron with diphenylacetylene; X-ray crystal structures of nona(ethyl isocyanide)diiron and tris(tert-butyl isocyanide)(1,4-bis-(tert-butylimino)-2,3-diphenylbuta-1,3-diene)iron, 1000-1

Formation of a new silicon-containing ring system, 1,1,2,2,3,3-hexamethyl-4,5-diphenyl-1,2,3-trisilacyclopent-4-ene, 1029-30

**PHENYLALANINE**

Amino acid-catalysed alkylation of hydroxyanthraquinones with 2-hydroxytetrahydropyrans, 951-2

**PHENYLALKYLAMINE**

Cyanoborohydride supported on an anion exchange resin as a selective reducing agent, 1088-9

**PHENYLAMINOPROPANONE OXIME**

New synthesis of 2-formyl-4-methyl-1-phenylimidazole 3-oxide, 124

**PHENYLBENZOHYDROXAMATE**

Boron complexes as control synthons in photocyclizations: an improved phenanthridine synthesis, 884-5

**PHENYLBUTENOATE**

Dramatic acceleration of a concerted reaction by a methoxy group, 1025-6

**PHENYLCHLOROBISMUTH**

$\mu$ -Oxo-bis(chlorotriphenylbismuth): a mild reagent for the oxidation of the hydroxy group, especially in allylic alcohols, 1099-100

**PHENYLCHLOROPHOSPHORAMIDATE**

A new ribooligonucleotide block synthesized by phosphorylation with p-chlorophenyl N-phenylchlorophosphoramidate, 824-5

**PHENYLCYCLOPENTENONE**

Formation of alkyl phosphenites from alkyl phosphinates, 324-5

**PHENYLENEDIAMINE**

Synthesis of bridged 1,5-benzodiazepines by condensation of o-phenylenediamines with 4,6-dimethylbicyclo(3.3.1)nona-3,6-diene-2,8-dione, 557-8

**PHENYLETHANE**

Orientation in elimination from carbanions, 975-6

**PHENYLETHYLENE**

Ready conversion of 1,1-diphenylethylene into benzophenone and 1,1-diphenylethane over a synthetic hectorite, 930-1

**PHENYLGLYCOL**

X-ray crystal structures of anhydrous sodium and potassium complexes of an open chain polyether diol, 1001-3

**PHENYLHEPTENE**

Substitution of allylic sulphides of benzothiazole-2-thiol with organomagnesium compounds in the presence of copper(I) iodide. A regioselective synthesis of olefins, 1085-6

**PHENYLMALEIMIDE**

1,3-Dipolar cycloaddition reactions of imines of  $\alpha$ -amino acid esters: X-ray crystal and molecular structure of methyl 4-(2-furyl)-2,7-diphenyl-6,8-dioxo-3,7-diazabicyclo(3.3.0)octane-2-carboxylate, 109-11

Novel conversion of a 3-oxidopyridinium into a 4-oxidoisoquinolinium, 316-18

**PHENYLMETHYL**

Ion pairing in triphenylmethyl and diphenylmethyl carbanions from spectrophotometric studies, 758-9

**PHENYLPHOSPHINOMETHYLDIOXOLANE**

Mechanism of asymmetric hydrogenation catalysed by rhodium(I) trans-4,5-bis(diphenylphosphinomethyl)-2,2-dimethyldioxolan (DIOP) complexes, 321-2

**PHENYLPHOSPHINOYLPROPANONE**

$\beta$ -Diphenylphosphinoyl ketones ( $\text{Ph}_2\text{POCH}_2\text{CH}_2\text{COR}$ ): stable reagents for  $\beta$ -ketoanions, 988-9

**PHENYLPROPENOL**

1,3-Transposition of primary allylic alcohols: a new application of selenoxide chemistry, 770-1

**PHENYLPYRIDYLCYCLOPROPANE**

Evidence of electronic interaction between classically nonconjugated aromatic systems, 100-1

**PHENYLPYRUVATE**

Double carbonylation of substituted benzyl chlorides with cobalt carbonyl anion by phase transfer catalysis to give arylpyruvic acids, 1090-1

**PHENYLSULPHINYLACETATE**

A new route to 5-substituted resorcinols, 118

**PHENYLTHIO**

New syntheses of 1- and 2-phenylthiobutadienes, 657

**PHENYLTHIOACETYLENE**

New synthesis of dienals, 924-5

**PHENYLTHIOCYCLOHEPTATRIENE**

Regiospecific synthesis of 1,7-dialkylthiocycloheptatrienes. A case of rapid (1,7) sigmatropic migration of unhindered alkylthio-groups, 945-6

**PHENYLTHIOTRIMETHYLSTANNYL CUPRATE**

Lithium phenylthio(trimethylstannyl)cuprate, a new reagent for conjugate addition of the trimethylstannyl group. The synthesis of  $\beta$ -trimethylstannyl- $\alpha\beta$ -unsaturated ketones, 1033-4

**PHENYLTRIMETHYLSILYLDIAZENE**

Novel synthesis of phenyltrimethylsilyldiazene and generation of the phenyl anion synthon therefrom, 990

**PHLOROGLUCINOL**

Condensed tannins. Circular dichroism method of assessing the absolute configuration at carbon-4 of 4-arylfavan-3-ols, and stereochemistry of their formation from flavan-3,4-diols, 698-700

**PHOSHITE**

Convenient synthesis of unesterified acylphosphonic acids, 285-6

**PHOSPHABICYCLOHEPTENE OXIDE**

1-Isopropyl-4,6-dimethyl-6-phospha(V)bicyclo(3.1.1)hept-3-ene 6-oxide: a distorted phosphetane synthesized from  $\alpha$ -pinene and the methylphosphonous dichloride-aluminium chloride complex; X-ray crystal and molecular structure, 125-6

**PHOSPHATE**

Binaphthyl-2,2'-diyl hydrogen phosphate. A new chiral atropisomeric selector for the resolution of helicenes using high performance liquid chromatography, 173-5

Formation of surface phosphate phases on metallic iron, 308-9

Synthesis and circular dichroism of methyl (R)-(16O,17O,18O) phosphate, 512-14

Oxygen-18 isotope shifts on the phosphorus-31 nuclear magnetic resonance of adenosine-5'-phosphate and inorganic phosphate, 565-6

2-Trimethylsilylprop-2-enyl, a new protecting group for phosphoric and related acids, 761-2

A relation between the product distribution from the dehydration of dimethylbutan-2-ols and catalytic acidity, 801-2

Anion receptor molecules. Synthesis and some anion binding properties of macrocyclic guanidinium salts, 934-6

Nuclear magnetic resonance study of ligand exchange on the hexakis(trimethyl phosphate)scandium(III) ion, 1047-8

O-Aryl S-methyl phosphorochloridothioates: terminal phosphorylating agents in the phosphotriester approach to oligonucleotide synthesis, 1050-2

X-ray crystal structure of the ternary complex (Cu(3'-GMP)(phen)(H<sub>2</sub>O))<sub>2</sub>·7H<sub>2</sub>O (GMP = guanosine monophosphate, phen = 1,10-phenanthroline): unusual absence of M-N(7) bonding in a metal-GMP complex, 1053-5

**PHOSPHAZANE**

Structures and properties of isomeric cyclodiphosph(III)azanes: X-ray crystal and molecular structure of 2,4-dipiperidino-1,3-ditert-butylcyclodiphosph(III)azane, 372-3

**PHOSPHINATE**

Transesterification of alkyl phosphinates, 54-5

Formation of alkyl phosphenites from alkyl phosphinates, 324-5

**PHOSPHINE**

Anodically induced decomposition of some arylnickel(II) phosphine complexes, 66-8

Carbon-13-labelling study of the reaction between 2-(methylthio)ethanol and carbon tetrachloride-phosphines, 208-9

Oxidative-addition of tertiary phosphine-ruthenium complexes to allylic carbon-hydrogen bonds, 223-4

Synthesis of cluster compounds via nucleophilic metal complexes; X-ray crystal structures of (Os<sub>3</sub>Pt( $\mu$ -H)<sub>2</sub>(CO)<sub>10</sub>((C<sub>6</sub>H<sub>11</sub>)<sub>3</sub>P)) and (Os<sub>2</sub>Pt<sub>2</sub>( $\mu$ -H)<sub>2</sub>(CO)<sub>8</sub>(Ph<sub>3</sub>P)<sub>2</sub>), 260-2

Photoelectron spectra and reactivity of methyl(tertiary phosphine) platinum and -gold complexes, 444-5

Synthesis and molecular structures of chloro(trimethylphosphine) tris(trimethylsilylmethyl)molybdenum(IV) and di- $\mu$ -chloro-bis( $\eta$ -2-trimethylsilylmethylcarbonylbis(carbonyl) trimethylphosphinemolybdenum(II)), 465-6

Retention of the cobalt-cobalt bond in (MeN(PF<sub>2</sub>)<sub>2</sub>)<sub>3</sub>Co<sub>2</sub>(CO)<sub>2</sub> upon halogenation: the X-ray crystal structure of (MeN(PF<sub>2</sub>)<sub>2</sub>)<sub>3</sub>Co<sub>2</sub>Br<sub>4</sub>, 514-15

Polymer-bound tetranuclear iridium carbonyl catalyst, 540-1

Diversity of behaviour of bicyclo(2.2.1)heptadiene-bisphosphine-rhodium complexes on hydrogenation in methanol, 646-7



- New syntheses of 1- and 2-phenylthiobutadienes, 657  
 Synthesis of some diplatinum complexes, including bis- $\mu$ -  
 (bis(diphenylphosphino)methane)- $\mu$ -methylene-  
 dichlorodiplatinum, (Pt<sub>2</sub>Cl<sub>2</sub>( $\mu$ -CH<sub>2</sub>)( $\mu$ -Ph<sub>2</sub>PCH<sub>2</sub>PPh<sub>2</sub>)<sub>2</sub>), from  
 (Pt<sub>2</sub>Cl<sub>2</sub>( $\mu$ -Ph<sub>2</sub>PCH<sub>2</sub>PPh<sub>2</sub>)), 749-51  
 Increase in reaction rate consequent on the use of a polymer-  
 supported reagent. Evidence for interaction between a high  
 proportion of the groups of a polymer-supported reagent,  
 813-15  
 Carbonyl insertion at chloro(alkyl- or -aryl)  
 (methyl)diphenylphosphine)carbonylplatinum: critical effects of  
 stereochemistry and the nature of the alkyl or aryl group, 819-20  
 A rhenium polyphenyl complex: X-ray diffraction analysis of  
 tris( $\eta^1$ -phenyl)bis(diethylphenylphosphine)rhenium, 825-6  
 Novel three-coordinate rhodium(I) hydrido compounds,  
 (RhH(P(CMe<sub>3</sub>)<sub>2</sub>)) and (RhH(P(cyclohexyl)<sub>3</sub>)), 855-6  
 Bistriphenylphosphinecuprapentaborane, an unusual copper-  
 borane, 866-7  
 Sulphur inversion in dimolybdenum complexes: X-ray crystal  
 structure of (Mo<sub>2</sub>(CO)<sub>2</sub>(P(OMe)<sub>3</sub>)( $\mu$ -SCMe<sub>3</sub>)( $\eta^7$ -C<sub>7</sub>H<sub>7</sub>)),  
 878-9  
 Reduction of tris(triphenylphosphine)dichlororuthenium(II) in  
 acetonitrile: reformulation of the nature of the product; detection  
 of the first paramagnetic d<sup>8</sup> complex, 883-4  
 Reactions of gold-phosphine cluster compounds, 907-9  
 Isolation of intermediates in the acid hydrolysis of (Pt(PPh<sub>3</sub>)<sub>2</sub>(O<sub>2</sub>));  
 the X-ray structure of (Pt<sub>2</sub>(O<sub>2</sub>)(OH)(PPh<sub>3</sub>)<sub>4</sub>(ClO<sub>4</sub>).2C<sub>6</sub>H<sub>6</sub>,  
 991-2  
 Evidence for an almost 'T-shaped' coordination geometry for  
 carbon in the bis(alkylidene) complex Ta(CHCMe<sub>3</sub>)<sub>2</sub>(2,4,6-  
 Me<sub>3</sub>C<sub>6</sub>H<sub>2</sub>)(PMe<sub>3</sub>)<sub>2</sub>: X-ray crystal structure, 1048-9  
 Platinum(IV) complexes with  $\pi$ -acceptor ligands, 1056-7  
**PHOSPHINE CHLORO**  
 Reaction of o-hydroxyacetophenone with dichlorophenylphosphine  
 X-ray crystal and molecular structure of an unusual tricyclic  
 tetraoxaphospho-undecane, 510-11  
**PHOSPHINITE**  
 Phosphorus-containing heterocycles from phosphorus(III) reagents  
 and ortho-azidoaromatic compounds: synthesis of 2,2-  
 di(dimethylamino)-1,3,2-benzoxazaphosphole and various 2,3-  
 dihydro-1,3,2-benzoxazaphosph(V)oles, 182-3  
**PHOSPHINOSILANE**  
 'Capped' tri-ruthenium carbonyl cluster: X-ray crystal structure of  
 (Ru<sub>3</sub>(CO)<sub>9</sub>(MeSi(PBu<sub>2</sub>)<sub>3</sub>)), 1005-6  
**PHOSPHINOYL KETONE**  
 $\beta$ -Diphenylphosphinoyl ketones (Ph<sub>2</sub>POCH<sub>2</sub>CH<sub>2</sub>COR): stable  
 reagents for  $\beta$ -ketcocarbocations, 988-9  
**PHOSPHIRANE**  
 Observation of a three-membered ring containing phosphorane,  
 854-5  
**PHOSPHITE**  
 Direct formation of trialkyl phosphites from elemental phosphorus,  
 7-9  
 Photoelectron spectral assignments based on ab initio MO  
 calculations for the bicyclic phosphorus compounds P(OCH<sub>2</sub>)<sub>2</sub>  
 CMe and P(CH<sub>2</sub>O)<sub>3</sub>CMe, 161-2  
 Oxygen-17 nuclear magnetic resonance spectroscopy: spin coupling  
 to phosphorus-31, 531-2  
 Generation and some reactions of the bis(trimethylsilyl)aminyl  
 radical, 545-6  
 Multiple chlorinations of the cyclometallated ring in iridium triaryl  
 phosphite complexes: the crystal and molecular structure of  
 (IrCl<sub>2</sub>(P(OC<sub>6</sub>Cl<sub>3</sub>Me-o)(OC<sub>6</sub>H<sub>4</sub>Me-o)<sub>2</sub>)(pyridine)(PMe<sub>3</sub>)),  
 973-4  
 Kinetics and mechanism of cyclo- and decyclometallation of some  
 iridium triaryl phosphite complexes. Evidence for the  
 electrophilic displacement mechanism, 1007-8  
 Synthesis and molecular structure of (Os<sub>5</sub>(CO)<sub>15</sub>(POMe)), 1015-16  
**PHOSPHOCINE**  
 Opening of the phosphorus-nitrogen bond of bicyclic phosphoranes  
 Synthesis and X-ray crystal and molecular structure of rhodium  
 complexes of perhydry-1,3,6,2-dioxazaphosphocine, 1022-4  
**PHOSPHOLE**  
 (2+2) Cycloadducts from isocyanates and azaphospholes, 470-1  
**PHOSPHONATE**  
 Effect of ring size in cyclic phosphonates upon their reaction with  
 nitriles, 6-7  
 Analogies between the dynamic stereochemistry at silicon and  
 phosphorus. Kinetic study of solvent-induced epimerization of  
 menthyl chloro(phenyl)phosphonate, 104-5  
 Specific dealkylation of phosphonate esters using  
 iodotrimethylsilane, 870-1  
**PHOSPHONIC ACID**  
 Convenient synthesis of unesterified acylphosphonic acids, 285-6  
**PHOSPHONITE**  
 Formation of alkyl phosphonites from alkyl phosphinates, 324-5  
**PHOSPHONIUM**  
 Generation of a pentacoordinated protonated oxyphosphorane in  
 equilibrium with the isomeric enol phosphonium ion and  
 unprotonated oxyphosphorane, 382-3  
 Methyltriphenoxyphosphonium trifluoromethanesulphonate: a new  
 versatile synthetic reagent, 424-5  
 Conversion of aldehydes and ketones into chloroolefins and  
 acetylenes using chloriodomethane as a chloromethylene source,  
 446-7  
 Novel synthesis of isothiocyanatophosphoranes and  
 isothiocyanatophosphonium salts via ligand substitution.  
 Versatile reagents for converting hydroxy groups into thiocyanate  
 and isothiocyanate functions, 940-1  
**PHOSPHORAMIDE HEXAMETHYL**  
 'One-pot' conversion of Mannich bases via quaternary ammonium  
 salts into the corresponding methyl compounds with sodium  
 cyanoborohydride in hexamethylphosphoramide, 1089-90  
**PHOSPHORANE**  
 Synthesis of salts of a pentaoxyspirophosphorane having a P-OH  
 bond, 219-20  
 Observation of a three-membered ring containing phosphorane,  
 854-5  
 Novel synthesis of isothiocyanatophosphoranes and  
 isothiocyanatophosphonium salts via ligand substitution.  
 Versatile reagents for converting hydroxy groups into thiocyanate  
 and isothiocyanate functions, 940-1  
 Opening of the phosphorus-nitrogen bond of bicyclic phosphoranes  
 Synthesis and X-ray crystal and molecular structure of rhodium  
 complexes of perhydry-1,3,6,2-dioxazaphosphocine, 1022-4  
**PHOSPHORESCENCE**  
 Perturbation of the benzil ground and excited state geometries at  
 low temperatures in hydrocarbon glasses, 116-17  
**PHOSPHOROCHLORIDOTHIOATE**  
 O-Aryl S-methyl phosphorochloridothioates: terminal  
 phosphorylating agents in the phosphotriester approach to  
 oligonucleotide synthesis, 1050-2  
**PHOSPHORUS**  
 Direct formation of trialkyl phosphites from elemental phosphorus,  
 7-9  
 Analogies between the dynamic stereochemistry at silicon and  
 phosphorus. Kinetic study of solvent-induced epimerization of  
 menthyl chloro(phenyl)phosphonate, 104-5  
 Phosphorus-containing heterocycles from phosphorus(III) reagents  
 and ortho-azidoaromatic compounds: synthesis of 2,2-  
 di(dimethylamino)-1,3,2-benzoxazaphosphole and various 2,3-  
 dihydro-1,3,2-benzoxazaphosph(V)oles, 182-3  
 Mechanism of asymmetric hydrogenation catalysed by rhodium(I)  
 trans-4,5-bis(diphenylphosphinomethyl)-2,2-dimethyldioxolan  
 (DIOP) complexes, 321-2  
 Oxygen-18 isotope shifts on the phosphorus-31 nuclear magnetic  
 resonance of adenosine-5'-phosphate and inorganic phosphate,  
 565-6  
**PHOSPHORYL**  
 Evidence for a dissociative S<sub>N</sub>1(P) mechanism of phosphoryl  
 transfer by rabbit muscle pyruvate kinase, 783-5  
**PHOSPHORYLATION**  
 A new ribooligonucleotide block synthesized by phosphorylation  
 with p-chlorophenyl N-phenylchlorophosphoramidate, 824-5  
**PHOTOADDN**  
 A triplet state path for adduct formation between benz(a)  
 anthracene and the penta-1,3-dienes, 588-9  
 Addition of furans to electron rich olefins through photo-induced  
 electron transfer in the presence of electron acceptors, 594-5  
**PHOTOARYLATION**  
 Heteroatom directed photoarylation; an approach to the synthesis  
 of Aspidosperma alkaloids, 29  
**PHOTOCHEM**  
 Photocyclization of dicyclopent-1-enyl methanes to tricyclo(6.3.0.  
 0<sup>2,6</sup>)undecanes: a synthesis of the hirsutane carbon skeleton, 5-6  
 Triplet state of protoporphyrin IX, 51-2  
 Photochemical reactions of a silacyclopentene with nitriles leading  
 to new organosilicon ring systems, 80-1

- Regioselectivity in the di- $\pi$ -methane rearrangement; alternative processes in the photochemistry of halogeno-1,4-dienes, 101-2
- Bromide catalysis in the preparation of benzylidene trichlorides via photochlorination, 105-6
- Reactions of singlet oxygen. Formation of hydroxy ketones in the photooxygenation of fluorenylidene derivatives, 120-1
- Phototransposition of 2-cyanopyrroles: evidence for the intermediacy of 5-azabicyclo(2.1.0)pent-2-enes, 131-3
- Intramolecular photochemical cycloadditions involving enolized cyclopentane-1,3-diones. A new approach to the bicyclo(3.2.1)octane ring system, 138-40
- Topology of the photochemical 'bicycle' reaction. Mechanistic and exploratory organic photochemistry, 232-4
- Photopolymerization of  $S_2N_2$  to  $(SN)_x$ , 301-2
- Photochemical conversions of some fluorinated aza- and diazacyclohexadienes, 305-6
- Photo-enhanced production of hydrogen by liquid-phase catalytic dehydrogenation of propan-2-ol with rhodium-tin chloride complexes, 348-9
- New photochemical reaction of 6-azido-1,3-dimethyluracil with acyl halides to give 5-acylamino-6-chloro-1,3-dimethyluracils, 367
- Synthesis of macrocyclic rings by internal photocycloaddition of  $\alpha$ ,  $\omega$ -dicinnamates, 400-1
- Cation complexing photochromic materials involving bisanthracenes linked by a polyether chain. Preparation of a crown-ether by photocycloisomerization, 403-4
- Preparation and thermal rearrangement of an azaanalogue of 4,5-homotropone (bicyclo(5.1.0)octa-3,5-dien-2-one), 404-5
- Mechanism of the cadmium sulphide sensitized photooxidation of Leuco Crystal Violet in nonaqueous solution, 417-18
- Selectivity in the addition of organic radicals to the alkene bond, 438-9
- Reversible photochemical valence isomerization between  $\alpha$ -diazo-ketones and  $\alpha$ -keto-diazirines, 442-3
- A new and versatile chelating dithio ligand: X-ray crystal structure of  $(Ru(CO)(SC_6H_3Me-o-SC_6H_4Me)(\eta-C_5H_5))$ , 486-8
- Carbene photocycloelimination from a vinyl-cyclopropane, 558-9
- Thermal and photochemical rearrangements of 3H-thieno-1,2-diazepines, 568-9
- Addition of furans to electron rich olefins through photo-induced electron transfer in the presence of electron acceptors, 594-5
- Photosensitized anti-Markovnikov addition of methanol to homoconjugated aryl olefins, 600-1
- Unambiguous proof for preferred 4 + 4 cycloaddition in the dimerization of photoexcited N-methyl-2-pyridone, 620-1
- Photosynthetic routes to prostaglandins: conversion of 2,3-endo-epoxybicyclo(3.2.0)heptan-6-one into 6,7-endo-epoxy-3-alkoxy-2-oxabicyclo(3.3.0)octanes, 661-2
- Electronic excited states of small ring compounds. Substituent effects on the photochemical ring cleavage of 3,3-dimethyl-1,2-diarylcyclopropenes, 743-4
- Intramolecular photochemical arylation of N-substituted enamines: application to synthesis of heterocyclic compounds, 766-7
- 2-(1-Methylindol-3-yl)-3-phenyldihydro-1,4-dioxin 2,3-epidioxide, a dioxetan resulting in efficient ultraviolet chemiluminescence, 781-2
- Correlation between selectivity in photochemical cross-cycloaddition and ionization potential of the reacting olefins, 786-8
- Ring expansion of azidoquinolines to benzo-1,4-diazepines, 806-7
- Boron complexes as control synthons in photocyclizations: an improved phenanthridine synthesis, 884-5
- Role of exciplex in the photocycloaddition of 2,5-dimethylhexa-2,4-diene to anthracene, 978
- Organometallic photochemistry with circularly polarized light. Synthesis of optically active tropone-iron tricarbonyl complex by asymmetric destruction, 983-4
- Photochemical conversion of grisadiendiones into dibenzofurans, 1044-5
- Biphasic photochemistry: the photo-Fries rearrangement on silica gel, 1109-10
- PHOTOCHEM BROMINATION**  
Introduction, substitution, and elimination of bromine at C-5 of aldopyranose peresters, 1019-20
- PHOTOCHEM CYCLIZATION**  
Photochemical reactions of 1,8-diacetylnaphthalene and 1,3-dimethoxy-1,3-dimethyl-1H,3H-naphtho(1,8-cd)pyran, 589-90
- Concentration-dependent photoreaction of benzothiazolyldithioazetidiones: novel photochemical formation of penam derivatives, 836-8
- Studies in synthetic photochemistry. Photochemistry of  $\alpha$ -keto-imines: a novel synthesis of xylopinine, 885-6
- PHOTOCHEM OXYGENATION**  
New route to the photopropanes, 812-13
- PHOTOCHEM SUBSTITUTION**  
Effect of cation on the quantum efficiency and the photoreaction paths of  $(W(CO)_5X)^-$  anions, 863-4
- PHOTOCHEM THEORY**  
Differing substituent effects on rates and regioselectivities in the di- $\pi$ -methane rearrangement. New photochemical theory: excitation distribution (the  $\Delta P$  matrix), reaction inhibition by vertical excited state stabilization, ground Vs. excited state control, 228-30
- A new theoretical approach in photochemistry. Minimization of excited state-ground state surface separation by selected molecular deformation. Vibrational dissipation of local contributions to excitation energies, 230-2
- PHOTOCHEMISTRY**  
Synthesis of a photoproduct from ultraviolet irradiation of bacterial spores: 5,6-dihydro-5-( $\alpha$ -thyminy)thymine, 284
- PHOTOCYCLIZATION**  
Photolysis of  $\alpha$ -chloro-o-methylacetophenones, 61-2
- Intramolecular photocycloaddition of phenethyl vinyl ether, 129-30
- Intramolecular photochemical arylation of N-substituted enamines: application to synthesis of heterocyclic compounds, 766-7
- PHOTODIMERIZATION**  
A new phase of crystalline anthracene: its importance in solid-state photodimerization, 134-5
- PHOTOELEC EMISSION**  
ESCA study of compounds of gold in the oxidation state-1, 905-6
- PHOTOELECTRON**  
Photoelectron spectral assignments based on ab initio MO calculations for the bicyclic phosphorus compounds  $P(OCH_2)_3CMe$  and  $P(CH_2O)_2CMe$ , 161-2
- X-ray photoelectron diffraction: a novel method of structural analysis in complex monocrystalline solids, 210-11
- PHOTOELECTRON SPECTRA**  
Adsorption of nitric oxide on copper(100) surfaces; an electron spectroscopic study, 40-1
- Changes in surface composition of a cobalt-molybdenum binary oxide catalyst during various treatments studied by X-ray photoelectron spectroscopy, 47-8
- A new assignment of the metal ionizations in the photoelectron spectrum of dimolybdenum tetraformate, 204-5
- Electronic structure of  $B_4H_8Fe(CO)_3$ . Comparison of SCF-X $\alpha$ -SW molecular orbital theory with the ultraviolet photoelectron spectrum, 385-6
- Photoelectron spectra and reactivity of methyl(tertiary phosphine) platinum and -gold complexes, 444-5
- Study of the distribution of metals on the surface of polymer-bound palladium(II) complexes by X-ray photoelectron spectroscopy, 650-1
- PHOTOISOMERIZATION**  
Stereochemistry of the transition state of hydrogen abstraction by vinyl radicals, 574-5
- Asymmetric cis-trans photoisomerization of cyclo-octene sensitized by chiral aromatic esters, 1024-5
- PHOTOLYSIS**  
Detection of aromatic sulphanyl ( $ArSO\cdot$ ) radicals during the photolysis and thermolysis of S-aryl arenethiosulphonates and diaryl sulphoxides, 78-9
- Photoinduced synthesis of binuclear molybdenocene and tungstenocene derivatives: catalytic deoxygenation of epoxides by metallocenes, 99-100
- Benzisoxazolo(2,3-a)pyridinium tetrafluoroborates. Possible generation of an aryloxenium ion, 149-50
- Photolysis of dihydrothiophen-3(2H)-ones, 205-6
- Pulsed laser photolysis of chlorocopper(II) complexes in acetonitrile: evidence for chlororadical formation, 207-8
- Novel isoflavan-ptero-carpan interconversions: some structural requirements for cyclization, 224-5
- Photochemistry of tris(2,2'-bipyridine)ruthenium(II) in chlorinated solvents, 285
- $\sigma^*$ -electron addition to 5-halogenouracils in neutral glasses, 313-14
- Photolysis of cyclopentadienyln compounds: a new source of tin-

- centred radicals, 353-4
- Formation of a 1,2,4-oxadiazoline from an aziridine: mechanism of the reaction and photochemical conversion into a benzimidazole derivative, 356-7
- Evidence for a second photoactive excited state in a tris( $\beta$ -diketonate)chromium(III) complex, 363-4
- Redox-photosensitized cleavage of indene dimers using aromatic hydrocarbon-dicyanobenzene systems; catalysis by the cation radical of aromatic hydrocarbons, 490-1
- Nonenzymic model of the dioldehydratase reaction. Initiation of conversion of ethylene glycol into acetaldehyde on anaerobic photolysis of organocobalamins in the presence of mercapto compounds, 592-3
- Light-induced conversion of ethane-1,2-diol or 2-aminoethanol into acetaldehyde in the presence of 8-methoxy-5'-deoxy-5'-adenosylcobalamin or a simpler cobalt(III) alkyl, 643-4
- Matrix photolysis of trimethylazidosilane: silicon-hydrogen bond formation, 762-3
- Photolysis of imidazole N(3)-oxides. Formation of unsymmetrical benzil di-imines; X-ray crystal structure of one such di-imine, 857-8
- Biphasic photochemistry: use of the Barton reaction to determine micelle microviscosity, 1110-11
- PHOTOOXIDN**  
Photo-sensitized oxidation of sulphur and pyridinium ylides. Oxygen atom transfer to divalent sulphur, 894-5
- PHOTOREDN**  
Photoredox reaction in micellar solutions sensitized by surfactant derivative of tris(2,2'-bipyridyl)ruthenium(II), 628-30
- PHOTOSENSITIZATION**  
Redox-photosensitized cleavage of indene dimers using aromatic hydrocarbon-dicyanobenzene systems; catalysis by the cation radical of aromatic hydrocarbons, 490-1
- Asymmetric cis-trans photoisomerization of cyclo-octene sensitized by chiral aromatic esters, 1024-5
- PHOTOSENSITIZED**  
Photosensitized electron transfer and anodic cyanation reactions of nitrogen heterocycles, 1108-9
- PHTHALIDE**  
A general route to substituted naphthols, 162-4
- Biosynthesis of mycophenolic acid. Oxidation of 6-farnesyl-5,7-dihydroxy-4-methylphthalide in a cell-free preparation from *Penicillium brevicompactum*, 434
- PHTHALIMIDE**  
Phase-transfer catalysis using chiral catalysts. Synthesis of optically active 2-phthalimido-esters, 742-3
- PHTHALOCYANINE**  
New dioxygen complex of manganese phthalocyanine, 217-18
- PICRATE**  
Isotope effects in molecular complexes of naphthalene, 455-6
- PICRYL AZIDE**  
New syntheses of chlorocruoro- and isochlorocruoro-porphyrins from protoporphyrin-IX, 645
- PINENE**  
1-Isopropyl-4,6-dimethyl-6-phospha(V)bicyclo(3.1.1)hept-3-ene 6-oxide: a distorted phosphetane synthesized from  $\alpha$ -pinene and the methylphosphonous dichloride-aluminium chloride complex; X-ray crystal and molecular structure, 125-6
- Ene reactions of  $\beta$ -pinene at room temperature and 40 kbar pressure, 599-600
- Palladium(II)-catalysed asymmetric cyclization of 2-allylphenols by the use of optically active  $\beta$ -pinene, 687-8
- PIPERAZINE**  
Unusual population of the axial-equatorial conformation in NN'-dichloropiperazine, 58-9
- PIPERIDINE**  
Linear free energy relations in intramolecular aromatic ipso-substitutions by substituted methyl radicals, 166-7
- Rapid formation of N-nitrosamines from nitric oxide in the presence of silver(I) salts, 707-8
- A new group of nitroxide free radicals formed from aliphatic nitrosamines and thiols, 741-2
- Preparation of urethanes from carbon dioxide via a copper(I) carbamate complex, 815-16
- PIPERIDINIUM**  
Regio-selective synthesis of 2- and 3-alkyl-5-hydroxyquinizarins, 712-13
- PIPERIDINO**  
A new group of nitroxide free radicals formed from aliphatic nitrosamines and thiols, 741-2
- PIPERIDINOBUTYL CYCLODIPHOSPHAZANE**  
Structures and properties of isomeric cyclodiphosph(III)azanes; X-ray crystal and molecular structure of 2,4-dipiperidino-1,3-ditert-butylcyclodiphosph(III)azane, 372-3
- PIPERIDYLACETOPHENONE**  
An economical synthesis of the alkaloids, 3,4-dimethoxy- $\omega$ -(2-piperidyl)acetophenone, julandine, and cryptopleurine, 794-5
- PIXYL**  
The 9-phenylxanthen-9-yl protecting group, 639-40
- PLANT WAX**  
Synthesis of hentriacontane-14,16-dione, a  $\beta$ -diketone found in plant waxes, 962-3
- PLASTIC CRYSTALLINITY**  
Pulsed proton nuclear magnetic resonance studies of molecular motion and plastic crystallinity in dodecamethylcyclohexasilane, 1093-4
- PLATINACARBORANE**  
Reaction of bis(triethylphosphine)platinum and pentakis(tert-butyl isocyanide)ruthenium with dicarba-nido-hexaboranes(8): molecular structures of (nido- $\mu_4$ ,5-(trans-(Et<sub>3</sub>P)<sub>2</sub>Pt(H))- $\mu_5$ ,6-H-2,3-C<sub>2</sub>B<sub>4</sub>H<sub>6</sub>), (closo-1,1-(Et<sub>3</sub>P)<sub>2</sub>-2,3-Me<sub>2</sub>-1,2,3-PtC<sub>2</sub>B<sub>4</sub>H<sub>4</sub>) and (RuH(Bu<sup>t</sup>NC)<sub>5</sub>)<sup>+</sup> (nido-2,3-Me<sub>2</sub>-2,3-C<sub>2</sub>B<sub>4</sub>H<sub>5</sub>)<sup>-</sup>, 169-71
- PLATINACYCLOBUTANONE**  
Reactions of dimethyl 3-oxoglutarate with zerovalent compounds of palladium and platinum. Preparation of 1-metallacyclobutan-3-one complexes and the X-ray crystal structure of 2,4-bis(methoxycarbonyl)-1,1-bis(triphenylphosphine)platinacyclobutan-3-one, 744-5
- PLATINADIOXAN**  
Reactions of dimethyl 3-oxoglutarate with zerovalent compounds of palladium and platinum. Preparation of 1-metallacyclobutan-3-one complexes and the X-ray crystal structure of 2,4-bis(methoxycarbonyl)-1,1-bis(triphenylphosphine)platinacyclobutan-3-one, 744-5
- PLATINUM**  
Stereochemistry of hydrogenation of cyclonona-1,2-diene with supported platinum metals and soluble rhodium complexes as evidence for allylic intermediates, 114-15
- Catalytic sites in the hydrogenolysis of cyclopropane on platinum, 127-8
- Synthesis and X-ray structure of an  $\eta^3$  phenalenyl-platinum complex, 142-3
- Reaction of bis(triethylphosphine)platinum and pentakis(tert-butyl isocyanide)ruthenium with dicarba-nido-hexaboranes(8): molecular structures of (nido- $\mu_4$ ,5-(trans-(Et<sub>3</sub>P)<sub>2</sub>Pt(H))- $\mu_5$ ,6-H-2,3-C<sub>2</sub>B<sub>4</sub>H<sub>6</sub>), (closo-1,1-(Et<sub>3</sub>P)<sub>2</sub>-2,3-Me<sub>2</sub>-1,2,3-PtC<sub>2</sub>B<sub>4</sub>H<sub>4</sub>) and (RuH(Bu<sup>t</sup>NC)<sub>5</sub>)<sup>+</sup> (nido-2,3-Me<sub>2</sub>-2,3-C<sub>2</sub>B<sub>4</sub>H<sub>5</sub>)<sup>-</sup>, 169-71
- Catalysis and solvent participation in organometallic oxidative additions (platinum(0)  $\rightarrow$  platinum(II) and tin(II)  $\rightarrow$  tin(IV)), 192-3
- Mixed rhodium-platinum carbonyl clusters: synthesis and X-ray crystallographic characterization of (Rh<sub>5</sub>Pt(CO)<sub>15</sub>)-(Ph<sub>3</sub>P)<sub>2</sub>N<sup>+</sup>, 195-6
- A novel type of platinum-carbon interaction and a model for the final stage in reductive elimination processes involving carbon-carbon coupling at platinum; synthesis and molecular geometry of (1,N,N'- $\eta$ -2,6-bis(dimethylamino)methyl)toluene iodoplatinum(II) tetrafluoroborate, 250-2
- Synthesis of cluster compounds via nucleophilic metal complexes; X-ray crystal structures of (Os<sub>3</sub>Pt( $\mu$ -H)<sub>2</sub>(CO)<sub>10</sub>((C<sub>6</sub>H<sub>11</sub>)<sub>3</sub>P)) and (Os<sub>2</sub>Pt<sub>2</sub>( $\mu$ -H)<sub>2</sub>(CO)<sub>8</sub>(Ph<sub>3</sub>P)<sub>2</sub>), 260-2
- Photoelectron spectra and reactivity of methyl(tertiary phosphine)platinum and -gold complexes, 444-5
- Synthesis of fluorinated dienes and cyclobutenes, 475-6
- Different behaviour of cis- and trans-aminodichloro( $\pi$ -ethene)platinum(II) complexes in their reaction with the free amine, 654-5
- Reactions of dimethyl 3-oxoglutarate with zerovalent compounds of palladium and platinum. Preparation of 1-metallacyclobutan-3-one complexes and the X-ray crystal structure of 2,4-bis(methoxycarbonyl)-1,1-bis(triphenylphosphine)platinacyclobutan-3-one, 744-5
- Synthesis of some diplatinum complexes, including bis- $\mu$ -(bis(diphenylphosphino)methane)- $\mu$ -methylene-dichlorodiplatinum, (Pt<sub>2</sub>Cl<sub>2</sub>( $\mu$ -CH<sub>2</sub>)( $\mu$ -Ph<sub>2</sub>PCH<sub>2</sub>PPh<sub>2</sub>)<sub>2</sub>), from (Pt<sub>2</sub>Cl<sub>2</sub>( $\mu$ -Ph<sub>2</sub>PCH<sub>2</sub>PPh<sub>2</sub>)<sub>2</sub>), 749-51
- Carbonyl insertion at chloro(alkyl- or -aryl)(methylphenylphosphine)carbonylplatinum: critical effects of

- stereochemistry and the nature of the alkyl or aryl group, 819–20
- Formation of platinum(II) compounds containing isomeric  $\sigma$ -vinyl and  $\sigma$ -allylic six-membered chelate rings by deprotonation of the coordinated isopropenyl group: X-ray structure of the  $\sigma$ -vinyl complex di- $\mu$ -acetato-bis(o-isopropenylphenyl)(diphenyl)arsineplatinum(II), 861–3
- Inorganic optical activity, 936–7
- Isolation of intermediates in the acid hydrolysis of (Pt(PPh<sub>3</sub>)<sub>2</sub>(O<sub>2</sub>)); the X-ray structure of (Pt<sub>2</sub>(O<sub>2</sub>)(OH)(PPh<sub>3</sub>)<sub>4</sub>)(ClO<sub>4</sub>).2C<sub>6</sub>H<sub>6</sub>, 991–2
- Platinum(IV) complexes with  $\pi$ -acceptor ligands, 1056–7
- Visible light-assisted electrochemical reduction of oxygen at a platinum electrode coated with surface active cobalt(II) and manganese(III) porphyrins, 1106–7
- PLUMBATE**
- A novel chain structure in the (Pb<sub>2</sub>Cl<sub>9</sub>)<sub>n</sub><sup>5n-</sup> anion; crystal and molecular structure of (Co(NH<sub>2</sub>CH<sub>2</sub>CH<sub>2</sub>NH<sub>2</sub>)<sub>3</sub>)<sub>2</sub>(Pb<sub>2</sub>Cl<sub>9</sub>)Cl.3H<sub>2</sub>O, 347–8
- PODOCARPENE**
- Copper-catalysed 1,6-addition of a benzyl Grignard reagent to a dienone: a new synthesis of ring c aromatic diterpenoids, 614–15
- PODORHIZONE**
- Synthesis of ( $\pm$ )-podorhizone via intermediate  $\alpha$ -hydroxyalkylation of a  $\beta$ -benzyl  $\gamma$ -butyrolactone, 556–7
- POLONOVSKI RING CONTRACTION**
- Laboratory model for the biosynthesis of vallesemine, apparicine, and related alkaloids, 947–8
- POLYACETYLENE**
- Highly conducting transition metal derivatives of polyacetylene, 489–90
- A novel conducting polyacetylene derivative, 1066–7
- POLYAMINOSTYRENE**
- Study of the distribution of metals on the surface of polymer-bound palladium(II) complexes by X-ray photoelectron spectroscopy, 650–1
- POLYATOMIC**
- Identification of the species (Te<sub>n</sub>Se<sub>4-n</sub>)<sup>2+</sup> by high resolution tellurium-125 and tellurium-123 Fourier transform NMR spectroscopy, 956–7
- 125-Tellurium and 77-selenium multinuclear magnetic resonance studies of Te<sub>6</sub><sup>4+</sup>, Te<sub>4-n</sub>Se<sub>n</sub><sup>2+</sup>, Te<sub>2</sub>Se<sub>2</sub><sup>2+</sup>, and Te<sub>3</sub>Se<sub>3</sub><sup>2+</sup> polyatomic cations, 957–60
- POLYENE**
- Structure of infinite polyenes. Ab initio quantum chemical study, 575–6
- cis-BC ring fusion upon (E)-polyene cyclizations, 1103–5
- POLYESTER**
- X-ray determination of the structure of the polyether antibiotic K-41, 682–3
- POLYETHER**
- Polymer-supported phase transfer catalysts in solid-liquid reactions 541–3
- Coordination chemistry of macrocyclic polyethers. An unusual conformation of complexed 18-crown-6; X-ray crystal and molecular structure of a 1:2 host-guest complex of 18-crown-6 with benzenesulphonamide, 595–6
- Structure of the polyether antibiotic K-41 by mass and nuclear magnetic resonance spectrometry, 683–4
- Molecular catalysis: enhanced rates of thiolysis with high structural and chiral recognition in complexes of a reactive macrocyclic receptor molecule, 949–51
- X-ray crystal structures of anhydrous sodium and potassium complexes of an open chain polyether diol, 1001–3
- POLYETHYLENE**
- General synthesis of substituted and unsubstituted crown ethers, 504–5
- Analysis of ultra-thin fluorine-containing layers on polyethylene by <sup>19</sup>F(p, $\alpha$ ) spectrometry, 1011–12
- POLYMER**
- Polymer-bound tetranuclear iridium carbonyl catalyst, 540–1
- POLYMER SUPPORTED**
- Increase in reaction rate consequent on the use of a polymer-supported reagent. Evidence for interaction between a high proportion of the groups of a polymer-supported reagent, 813–15
- POLYMERIC**
- Polymeric de-blocking agents for the fluoren-9-ylmethoxycarbonyl (FMOC) amino-protecting group, 450–1
- Synthesis and reactions of an insoluble polymeric yneamine, 1079–80
- POLYMETHYL**
- Cis-trans isomerism in bis(trihalogenoacetyl)polymethylbenzenes resulting from restricted rotation about carbonyl groups: proton nuclear magnetic resonance evidence, 201–2
- POLYMN**
- High catalytic activity of calcined iron sulphates for the polycondensation of benzyl chloride, 121–2
- Photopolymerization of S<sub>2</sub>N<sub>2</sub> to (SN)<sub>x</sub>, 301–2
- Decay of locus populations in a compartmentalized free radical polymerization reaction upon removal of radical source, 381
- Ring opening polymerization of norbornene catalysed by ethyl aluminium dichloride; olefin metathesis in the absence of a transition metal, 603–4
- Mechanism for the stereospecific polymerization of olefins by Ziegler-Natta catalysts, 604–6
- Vinyltetrathiafulvalene, 832–3
- Alkyl bridged complexes of the group 3A and lanthanoid metals as homogeneous ethylene polymerization catalysts, 994–5
- POLYMORPH**
- Investigation of structure composition relationships in the serpentine minerals by combined X-ray K-emission spectrometry and high-resolution electron microscopy, 986–7
- POLYPHOSPHATE**
- Treatment of cinnamic acids with polyphosphoric acid, 355
- POLYSTYRENE**
- Polymer-supported phase transfer catalysts in solid-liquid reactions 541–3
- Ready hydrogenation of nitrobenzene and benzonitrile with a polymer-bound palladium catalyst, 1074–5
- PORPHOBILINOGEN**
- Biosynthesis of type-III porphyrins: proof of intact enzymic conversion of the head-to-tail bilane into uro'gen-III by intramolecular rearrangement, 185–6
- PORPHYRIN**
- Cyclizations involving meso-substituents of crowded porphyrins, 73–4
- Nitrogen-15 nuclear magnetic resonance studies of iron(II) low spin complexes of nitrogen-15 and iron-57 labelled porphyrin, 106–7
- Biosynthesis of type-III porphyrins: proof of intact enzymic conversion of the head-to-tail bilane into uro'gen-III by intramolecular rearrangement, 185–6
- Porphyrin N-oxides, 310–11
- Electron-transfer reactions between the semiquinone anion radical and metallo-tetraphenylporphyrins, 361
- meso- $\alpha,\alpha,\alpha,\alpha$ -Tetra(o-nicotinamidophenyl)porphyrin: a novel ligand for the preparation of unsymmetrical bis-metal complexes, 399–400
- 1:2 Metalloporphyrin nitroaromatic sandwich complexes: X-ray crystal structure of one such complex, 571–2
- New syntheses of chlorocruoro- and isochlorocruoro-porphyrins from protoporphyrin-IX, 645
- Nitrogen-15 nuclear magnetic resonance studies of ligand binding to zinc tetraphenylporphyrin, 681–2
- Iron porphyrins containing appended sulphur ligands, 705–7
- Carbon-13 nuclear magnetic resonance spectroscopy of iron(III) porphyrin-imidazole complexes, 777–8
- Electron spin resonance evidence for dimer formation in high spin iron(III)-octaethylporphyrin and iron(III)-meso-nitro-octaethylporphyrin in solution, 906–7
- Alkylrhodium(III) porphyrins from rhodium(III) porphyrins and diazoalkanes, 937–8
- Biosynthesis of natural porphyrins: enzymic experiments on isomeric bilanes, 1064–6
- Visible light-assisted electrochemical reduction of oxygen at a platinum electrode coated with surface active cobalt(II) and manganese(III) porphyrins, 1106–7
- PORPHYRIN OXIDE**
- Porphyrin N-oxides, 310–11
- POTASSIUM**
- The role of stress in nucleus development during dehydration of certain alums, 273–4
- X-ray crystal structures of anhydrous sodium and potassium complexes of an open chain polyether diol, 1001–3
- POTASSIUM ALKOXIDES**
- (1.3) Shifts of potassium alkoxides: the bicyclo(3.2.0)heptene-norbornene transformation, 479–80

**POTASSIUM ATOM REDN**

Preparation of diarenemetal complexes by potassium atom reduction, 730-1

**POTENTIAL BARRIER**

Energy barrier for E-Z isomerization of N-sulphenylimines, 156-7  
Bulky alkyls and a hydridoalkyl of zirconium(IV): influence of steric constraints upon (i) conformation and the zirconium-carbon rotational barrier and (ii) the zirconium-carbon bond length. X-ray crystal and molecular structure of  $(Zr(\eta-C_5H_5)_2(CH(SiMe_3)_2Ph))$ , 1081-3

**PREGNENE**

Ready formation of enol ethers in steroidal 20 $\beta$ -hydroxy-18-methyl-18-ketones, 241

**PRENYL**

Asymmetric synthesis and absolute stereochemistry of the alkaloids araliopsine, isoplatydesmine, and ribalinine. Dual mechanism for a dihydrofuroquinolone-dihydropyranoquinolone rearrangement 624-6

**PROANTHOCYANIDIN**

Condensed tannins: direct synthesis, structure, and absolute configuration of four biflavonoids from black wattle bark ('mimosa') extract, 700-2

**PROLINE**

Amino acid-catalysed alkylation of hydroxyanthraquinones with 2-hydroxytetrahydropyrans, 951-2

**PROPANOL**

Photo-enhanced production of hydrogen by liquid-phase catalytic dehydrogenation of propan-2-ol with rhodium-tin chloride complexes, 348-9

**PROPENOL**

Latent inhibition of liver alcohol dehydrogenase by a substituted allyl alcohol, 795-6

**PROPENYL**

Isomerization of allyl ethers catalysed by the cationic iridium complex  $(Ir(cyclo-octa-1,5-diene)(PMePh_2)_2)PF_6$ . A highly stereoselective route to trans-propenyl ethers, 694-5

**PROPIOLATE**

Regioselectivity in the Diels-Alder reactions of 3- and 4-substituted 1-trimethylsilylbutadienes, 178-80

**PROPRIONAMIDE**

Solvation of the halogen acids in N-methylpropionamide, 523-4

**PROPIONIBACTERIUM**

Biosynthesis of 5,6-dimethylbenzimidazole from 6,7-dimethyl-10-(1<sup>4</sup>C)formylmethylisalloxazine, 22-3

Biosynthesis of vitamin B<sub>12</sub>: proof of A-B structure for sirohydrochlorin by its specific incorporation into cobyrinic acid, 150-1

**PROPYLENE**

Raman spectra of molecules adsorbed on heavy metal oxides.  
Propylene on zinc oxide: the anionic nature of the adsorbed allyl species, 868-9

**PROPYNOL**

Convenient synthesis of allenyl sulphides; application to the synthesis of  $\alpha\beta$ -unsaturated ketones, 822-4

**PROSTACYCLIN**

Synthesis of sulphur-containing prostacyclin PGI<sub>1</sub> analogues, 6,9-epithio-PGI<sub>1</sub>, its S-oxide stereoisomers, and its SS-dioxide, 375-7

Total synthesis of carboprostacyclin, a stable and biologically active analogue of prostacyclin (PGI<sub>2</sub>), 1067-8

**PROSTAGLANDIN**

Synthesis of sulphur-containing prostacyclin PGI<sub>1</sub> analogues, 6,9-epithio-PGI<sub>1</sub>, its S-oxide stereoisomers, and its SS-dioxide, 375-7

An enantioconvergent approach to prostanoids, 436-8

**PROSTAGLANDIN C<sub>2</sub>**

Synthesis of prostaglandin E<sub>2</sub> and prostaglandin C<sub>2</sub> from 5-endo, 7-anti-disubstituted bicyclo(2.2.1)heptan-2-ones, 660-1

**PROSTAGLANDIN E<sub>2</sub>**

Synthesis of prostaglandin E<sub>2</sub> and prostaglandin C<sub>2</sub> from 5-endo, 7-anti-disubstituted bicyclo(2.2.1)heptan-2-ones, 660-1

**PROSTAGLANDIN E<sub>2</sub> PRECURSOR**

Novel synthesis of prostaglandin E<sub>2</sub> involving regioselective ring opening of a 2,3-endo-epoxybicyclo(3.2.0)heptan-6-one acetal with a mixed organocuprate reagent, 662-4

**PROSTAGLANDIN F<sub>2</sub> PRECURSOR**

Photosynthetic routes to prostaglandins: conversion of 2,3-endo-epoxybicyclo(3.2.0)heptan-6-one into 6,7-endo-epoxy-3-alkoxy-2-oxabicyclo(3.3.0)octanes, 661-2

**PROSTANOID**

Reduction of natural enones in the presence of cerium trichloride, 601-2

Organosilicon chemistry in synthesis: silylcyclopropanation, 714-16

**PROTECTING GROUP**

A silicon-based protecting group for the  $\alpha\beta$ -unsaturation of  $\alpha\beta$ -unsaturated ketones, 177-8

p-Tolylmethylsulphonyl: a new amino-protecting group in peptide synthesis, 220-1

**PROTECTION**

Polymeric de-blocking agents for the fluoren-9-ylmethoxycarbonyl (Fmoc) amino-protecting group, 450-1

A mild procedure for solid phase peptide synthesis: use of fluorenylmethoxycarbonylamino-acids, 537-9

Application of polyamide resins to polypeptide synthesis: an improved synthesis of  $\beta$ -endorphin using fluorenylmethoxycarbonylamino-acids, 539-40

2-Trimethylsilylprop-2-enyl, a new protecting group for phosphoric and related acids, 761-2

**PROTECTIVE GROUP**

The  $\beta$ -(trimethylsilyl)ethoxycarbonyl amino-protecting group, 358-9

The mesitylene-2-sulphonyl group, a acidolytically removable NG-protecting group for arginine, 482-3

The 9-phenylxanthhen-9-yl protecting group, 639-40

Retro-1,4-cycloaddition of adducts derived from steroidal 5,7-dienes and 4-phenyl-1,2,4-triazoline-3,5-dione, 727-8

**PROTIUM**

Equilibrium constant for protium-deuterium exchange between methanol and water, 1037-8

**PROTON TRANSFER**

Extremely strong but sluggish amine bases, 89-90

**PROTONANEMONIN**

General route to  $\gamma$ -alkylidene butenolides, 30

**PROTONATION**

Generation of a pentacoordinated protonated oxyphosphorane in equilibrium with the isomeric enol phosphonium ion and unprotonated oxyphosphorane, 382-3

Kinetics and mechanism of cyclo- and decyclometallation of some iridium triaryl phosphite complexes. Evidence for the electrophilic displacement mechanism, 1007-8

**PROTONOLYSIS**

Protonolysis of alkenylboranes under neutral conditions by treatment with catalytic amounts of palladium diacetate, 702-3

**PROTOPINE SYNTHON**

New route to the protopanes, 812-13

**PROTOPORPHYRIN**

Triplet state of protoporphyrin IX, 51-2

New syntheses of chlorocruoro- and isochlorocruoro-porphyrins from protoporphyrin-IX, 645

**PSEUDOURIDINE**

Pseudouridine transformations. Formation of 2'- and 3'-deoxypseudouridines via halogen intermediates using  $\alpha$ -acetoxyisobutyryl chloride, 677-8

**PTEROCARPAN**

Novel isoflavan-pterocarpin interconversions: some structural requirements for cyclization, 224-5

**PURINE**

New synthesis of 1- $\beta$ -D-arabinofuranosyl-aminoimidazoles and of related purine nucleosides, 882-3

**PURPURIN**

Cyclizations involving meso-substituents of crowded porphyrins, 73-4

**PYRAN**

An enantioconvergent approach to prostanoids, 436-8

**PYRANO**

Pyranosultone: a novel binuclear heterocyclic system, 325-6

**PYRANOBENZOPYRAN**

Stereoelectronic control of acetal hydrolysis, 803-4

**PYRANONE**

Biomimetic syntheses of heptaketide metabolites: alternariol and a derivative of rubrofusarin, 406-7

**PYRANOQUINOLONE**

Asymmetric synthesis and absolute stereochemistry of the alkaloids araliopsine, isoplatydesmine, and ribalinine. Dual mechanism for a dihydrofuroquinolone-dihydropyranoquinolone rearrangement 624-6

**PYRANYLATION**

Amino acid-catalysed alkylation of hydroxyanthraquinones with 2-

- hydroxytetrahydropyrans, 951-2
- PYRAZINE**  
Perfluoroaza- and -diazacyclohexadiene derivatives, 304-5  
Solution properties of  $((\text{CO})_5\text{Mo}(\text{pz}))$  and  $((\text{CO})_5\text{Mo})_2(\text{pz})$ : organometallic analogues of  $((\text{NH}_3)_5\text{Ru}(\text{pz}))^{2+}$  and  $((\text{NH}_3)_5\text{Ru})_2(\text{pz})^{4+}$  (pz = pyrazine), 859-61
- PYRAZOLINE**  
A new mechanism for the formation of cyclopropane derivatives in the thermolysis of pyrazolines, 461-2
- PYRIDAZINE**  
Perfluoroaza- and -diazacyclohexadiene derivatives, 304-5
- PYRIDAZOCARBAZOLE**  
Synthesis of pyridazo(4,5-b)carbazoles, 309-10
- PYRIDINATION**  
Regiospecific anodic pyridination of 2-hydroxy-3-methoxy-5-methylbenzaldehyde Schiff bases, 407-8
- PYRIDINE**  
Nitrogen-15 nuclear magnetic resonance studies of iron(II) low spin complexes of nitrogen-15 and iron-57 labelled porphyrin, 106-7  
Enhanced rates of dihydropyridine to pyridinium hydrogen transfer in complexes of an active macrocyclic receptor molecule, 143-6  
Perfluoroaza- and -diazacyclohexadiene derivatives, 304-5  
Production, in electrical discharges, of fluorine cyanide, fluoroacetylene, and related substances as monitored by microwave spectroscopy, 335  
Novel derivatives of perfluorocyclobutene, 433  
High-pressure reaction of 2-halogenopyridines with dimethyl acetylenedicarboxylate, 543-4  
Unexpected regioselective nucleophilic addition to 3-(4,4-dimethylloxazolin-2-yl)pyridine: formation of stable 1,4-dihydropyridines, 615-16  
A haemocyanin model: a synthetic copper(I) complex having imidazole ligands and reversible dioxygen activity, 634-6  
Different behaviour of cis- and trans-aminodichloro( $\pi$ -ethene) platinum(II) complexes in their reaction with the free amine, 654-5  
Novel type of metallation reaction: cyclometallation of heterocyclic amines by dicyclopentadienylmethyltitanium, 659-60  
Nitrogen-15 nuclear magnetic resonance studies of ligand binding to zinc tetraphenylporphyrin, 681-2  
X-ray crystal structure of a planar, high-spin iron(II) complex of a pentadentate unsaturated macrocycle formed by reaction of 2,9-di(1-methylhydrazino)-1,10-phenanthroline monohydrochloride with 2,6-diacetylpyridine, 828-9  
X-ray crystal structure of a 1,4-dihydropyridine-crown ether-sodium perchlorate complex crystallized with a molecule of acetone, 923-4  
Multiple chlorinations of the cyclometallated ring in iridium triaryl phosphite complexes: the crystal and molecular structure of  $(\text{IrCl}_2(\text{P}(\text{OC}_6\text{Cl}_3\text{Me}-\text{o})(\text{OC}_6\text{H}_4\text{Me}-\text{o})_2)(\text{pyridine})(\text{PMe}_3))$ , 973-4  
Recovery of the chromium tricarbonyl unit in the removal of organic ligands from their chromium carbonyl complexes, 989-90  
Novel type of transformation of a 2H-azirine in the presence of  $\text{Fe}_2(\text{CO})_9$ , 998-9  
Combined use of M.c.d. and resonance Raman spectra for the detection of different electronic transitions in a charge-transfer band of  $(\text{Mo}(\text{CO})_4\text{L})$  (L = 2-iminomethylpyridine), 1016-17
- PYRIDINE ACETYL**  
Some metal complexes of macrocyclic ligands incorporating the 1,10-phenanthroline group. X-ray crystal structure of the manganese(II) complex, 476-8
- PYRIDINE DIHYDRO**  
Biomimetic synthesis of anatabine from 2,5-dihydropyridine produced in situ by the action of sodium hypochlorite on baikiain 1055-6
- PYRIDINECARBOXALDEHYDE**  
Alkaline earth metal complexes of pyridinyl containing Schiff base macrocycles: X-ray crystal and molecular structures of the calcium and strontium complexes, 279-80
- PYRIDINEDIAMINE DIACETYL**  
Template synthesis of a bimetallic complex of a 30-membered decadentate macrocyclic ligand: the crystal and molecular structure of a lead(II) complex, 415-16
- PYRIDINEDICARBOXYLATE**  
Synthesis of 'crown ether' macrocyclic bislactones using caesium carboxylates of pyridine and of benzene dicarboxylic acids, 383-4
- PYRIDINIUM**  
Conversion of primary aliphatic amines into thiocyanates and thiocarbonate esters, 133-4  
Novel conversion of a 3-oxidopyridinium into a 4-oxidoisoquinolinium, 316-18  
Crystal and molecular structure of 3,3'-thiobis(2-methyl-1-phenylimidazo-(1,5-a)pyridinium) bistetrafluoroborate; a potent new sulphur containing curariform agent, 816-17  
Formation of a novel complex between pyridinium bis(alkoxycarbonyl)methylides and diphenylcyclopropenone; trapping of pyridinium bis(alkoxycarbonyl)methylide cation radicals, 817-19  
Photo-sensitized oxidation of sulphur and pyridinium ylides. Oxygen atom transfer to divalent sulphur, 894-5  
Cyanoborohydride supported on an anion exchange resin as a selective reducing agent, 1088-9
- PYRIDOINDOLE**  
Some novel transformations in indole chemistry, 332-3
- PYRIDONE**  
Benzisoxazolo(2,3-a)pyridinium tetrafluoroborates. Possible generation of an aryloxonium ion, 149-50  
Unambiguous proof for preferred 4 + 4 cycloaddition in the dimerization of photoexcited N-methyl-2-pyridone, 620-1  
Thermal conversion of 2-ethoxypyridine into 2-pyridone; an analogue of ester pyrolysis, 732-3
- PYRIDOXAMINE**  
Crystal and molecular structure of  $(\text{Cu}(\text{NO}_3)_2(\text{C}_8\text{H}_{12}\text{N}_2\text{O}_2)_2)\text{H}_2\text{O}$  a structure containing an unusual zwitterion of pyridoxamine and a symmetric nitrate-oxygen bridge, 97-8
- PYRIDYL**  
Unusual reaction of uranyl nitrate with 2,6-diacetylpyridine bis(2-pyridylhydrazone): X-ray structure of nitrate(2,6-diacetylpyridine-bis(2-pyridylhydrazone)-NNNNN)uranyl tetraniatradioxouranium, 235-6
- PYRIMIDINE**  
Perfluoroaza- and -diazacyclohexadiene derivatives, 304-5
- PYRIMIDINYL**  
Novel conversion of a 3-oxidopyridinium into a 4-oxidoisoquinolinium, 316-18
- PYRIMIDODIOXAZINE**  
Unusual incorporation of the cyano group of tert-butylcyanoketene into a cycloadduct. X-ray structure of the pyrimido(1,6-e)(1,3-s)dioxazine formed, 820-1
- PYRIMIDOQUINOLINEDIONE**  
Novel synthesis of pyrimido(4,5-b)quinoline-2(3H),4(10H)-diones (5-deazaflavins), 764
- PYROLYSIS**  
Ring transpositions in the pyrolysis of benzisoxazoles and 2,3-benzoxazin-1-ones, 9-10  
Catalytic synthesis of ethanol from carbon monoxide and hydrogen under atmospheric pressure over pyrolyzed rhodium carbonyl clusters on titanium dioxide, zirconium dioxide, and dilanthanum trioxide, 566-7  
Novel synthesis of benzotrihalides: the pyrolysis of phenyl trihalogenoacetates, 714  
Thermal conversion of 2-ethoxypyridine into 2-pyridone; an analogue of ester pyrolysis, 732-3  
Vacuum pyrolysis of salts of 1-acyl-2-arylsulphonylhydrazines; a general McFadyen-Stevens aldehyde synthesis, 793-4  
Flash-vacuum pyrolysis of 1,3-oxazin-2- and -6-ones, 902-3
- PYRONE**  
Synthetic approaches to aclacinomycin and pyrromycin antitumour antibiotics via Diels-Alder reactions of 6-alkoxy-2-pyrones: total synthesis of chrysophanol, helminthosporin and pachybasin, 95-6
- PYRROLE**  
Phototransposition of 2-cyanopyrroles: evidence for the intermediacy of 5-azabicyclo(2.1.0)pent-2-enes, 131-3  
Novel ring transformation of a thiophene into a pyrrole, 453  
Surprising electrochemical reduction product from a dihydrodiazepinium salt, 499  
Unusual conditions for cine-substitution in the pyrrole ring: isolation of a pyrroline as an intermediate, 564-5  
2,5-Dichlorothiophenium bismethoxycarbonylmethylide: a bismethoxycarbonylcarbene equivalent, 641-2  
Photosensitized electron transfer and anodic cyanation reactions of nitrogen heterocycles, 1108-9
- PYRROLE DEWAR**  
Synthesis of the N-unsubstituted Dewar pyrrole 1,2,3,4-tetrakis(trifluoromethyl)-5-azabicyclo(2.1.0)pent-2-ene, 509

**PYRROLIDINE**

1,3-Dipolar cycloaddition reactions of imines of  $\alpha$ -amino acid esters: X-ray crystal and molecular structure of methyl 4-(2-furyl)-2,7-diphenyl-6,8-dioxo-3,7-diazabicyclo(3.3.0)octane-2-carboxylate, 109-11

Cyclofunctionalization of olefinic urethanes with benzeneselenenyl reagents: a new general synthesis of nitrogen heterocycles, 379-80

**PYRROLIDINIUM**

Limited rotational equilibration in reactions involving diradical intermediates, 675-6

**PYRROLIDINONE**

Synthesis, X-ray crystal structure, and properties of a tetranuclear complex formed by oxidation of copper(I) chloride with molecular dioxygen in N-methylpyrrolidin-2-one. Isolation of a catalyst for the oxidative coupling of phenols by dioxygen, 1045-6

**PYRROLINE OXIDE**

Effect of ring size in cyclic phosphonates upon their reaction with nitrones, 6-7

**PYRROLOCARBAZOLE**

Some novel transformations in indole chemistry, 332-3

**PYRROLOPHENANTHRIDINEDIONE**

Intramolecular photochemical arylation of N-substituted enamines: application to synthesis of heterocyclic compounds, 766-7

**PYRUVATE**

Evidence for a dissociative  $S_N1(P)$  mechanism of phosphoryl transfer by rabbit muscle pyruvate kinase, 783-5

Double carbonylation of substituted benzyl chlorides with cobalt carbonyl anion by phase transfer catalysis to give arylpyruvic acids, 1090-1

**PYRYLIUM**

Conversion of primary aliphatic amines into thiocyanates and thiocarbonate esters, 133-4

**QUADRANT RULE**

Microbial stereo-differentiating reduction of carbonyl compounds; proposed quadrant rule, 668-7

**QUADRUPLE BOND**

Direct evidence for the quadruple metal-metal bond in the octachlorodimolybdenum(II) ion,  $(Mo_2Cl_8)^{4-}$ , using X-ray emission spectroscopy, 262-3

**QUADRUPOLE COUPLING CONST**

Microwave spectrum, dipole moment, and quadrupole coupling constants of trans-nitrosocyclopropane, 388-9

**QUANTUM EFFICIENCY**

Effect of cation on the quantum efficiency and the photoreaction paths of  $(W(CO)_5X)^-$  anions, 863-4

**QUENCHING**

Luminescence from  $(Ru(bipyridyl)_3)^{2+}$  ions adsorbed on ion exchange surfaces. Dynamic quenching reactions between adsorbed cations, 408-9

The quenching of aromatic hydrocarbon fluorescence by  $\alpha,\omega$ -diaminoalkanes and the formation of excited ternary complexes, 911-13

The quenching of excited singlet states of Rose Bengal by bifunctional compounds, 913-14

**QUININE**

Stereoconservative transformation of secologanin into meroquinene and its derivatives, 725-6

**QUINIZARIN**

Regio-selective synthesis of 2- and 3-alkyl-5-hydroxyquinizarins, 712-13

4a,9a-Epoxy-4a,9a-dihydroanthracene-1,4,9,10-tetrone: a versatile synthon in anthracyclinone synthesis, 997-8

**QUINOLINE**

Palladium of 8-methylquinoline and related 2-substituted derivatives: evidence for in-plane metallation of methyl groups, 344-5

Novel type of metallation reaction: cyclometallation of heterocyclic amines by dicyclopentadienylmethyltitanium, 659-60

Ring expansion of azidoquinolines to benzo-1,4-diazepines, 806-7

**QUINOLIZINE**

High-pressure reaction of 2-halogenopyridines with dimethyl acetylenedicarboxylate, 543-4

**QUINOLONE**

Asymmetric synthesis and absolute stereochemistry of the alkaloids araliopsine, isoplatydesmine, and ribalinine. Dual mechanism for a dihydrofuroquinolone-dihydropyranoquinolone rearrangement 624-6

**QUINOLONECARBOXYLATE**

Oxidation-reduction in hydrolysis of pyrimido(4.5-b)quinoline-2(3H),4(10H)-diones (5-deazaflavins), 398-9

**QUINUCRIDINEOSMIUM**

X-ray molecular structure of the asymmetrically bridged ester complex di- $\mu$ -oxobis(cyclohexane-1,2-diolato)oxo(quinucridine)osmium(VI),  $(OsO_2(O_2C_6H_{10})(C_7H_{13}N))_2$ , 853-4

**RABBIT MUSCLE**

Evidence for a dissociative  $S_N1(P)$  mechanism of phosphoryl transfer by rabbit muscle pyruvate kinase, 783-5

**RACEMIZATION**

An approach to the prevention of racemization in the synthesis of histidine-containing peptides, 472-3

**RADICAL**

Radical alkyldenitration. A synthetically useful example of homolytic aromatic ipso-substitution reactions, 93-4

Second-order effects observed in the electron spin resonance spectra of methyl radicals stabilized on silica at 77 K, 164-5

Linear free energy relations in intramolecular aromatic ipso-substitutions by substituted methyl radicals, 166-7

Pulsed laser photolysis of chlorocopper(II) complexes in acetonitrile: evidence for chlororadical formation, 207-8

Spin trapping experiments on NADH analogues and the role of radicals in carbonyl reductions, 300-1

Stabilizing influence of a strong acid medium on tertiary aminium radicals, 329-30

Photolysis of cyclopentadienyltin compounds: a new source of tin-centred radicals, 353-4

Electron-transfer reactions between the semiquinone anion radical and metallo-tetraphenylporphyrins, 361

Decay of locus populations in a compartmentalized free radical polymerization reaction upon removal of radical source, 381

Phenylene(1,9-cd)dithioly: the first example of a monomeric, coplanar, carbon-based free radical, 429-30

Selectivity in the addition of organic radicals to the alkene bond, 438-9

Redox-photosensitized cleavage of indene dimers using aromatic hydrocarbon-dicyanobenzene systems; catalysis by the cation radical of aromatic hydrocarbons, 490-1

Observation and interpretation of an apparent inverse secondary isotope effect on the electron impact-induced loss of a methyl radical from methyl isobutyrate, 521-2

Solvent effects on the spin-trapping of primary alkyl radicals, 525-6

Intramolecular homolytic aromatic ipso substitution in halogenobenzenes by aryl radicals, 530-1

Generation and some reactions of the bis(trimethylsilyl)aminyl radical, 545-6

An electron spin resonance study of the cyclobutylhydroxymethyl radical: its conformation, and its ring opening followed by 1,6-transfer of enolic hydrogen, 569-71

Stereochemistry of the transition state of hydrogen abstraction by vinyl radicals, 574-5

Radical coupling products derived from ammonium ylides.

Competing (1,2), (1,3), and (1,4) anionic rearrangements, 670-1

Limited rotational equilibration in reactions involving diradical intermediates, 675-6

A new group of nitroxide free radicals formed from aliphatic nitrosamines and thiols, 741-2

Radical chain bromination of hydrocarbons using bis(trimethylsilyl)bromamine, 752-3

Thermal isomerization of methyl linoleate hydroperoxides. Evidence of molecular oxygen as a leaving group in a radical rearrangement, 756-7

Pyramidal geometry of the trivalent carbon atom of the norbornadien-7-yl radical; electron spin resonance study, 804

Formation of a novel complex between pyridinium bis(alkoxycarbonyl)methylides and diphenylcyclopropenone; trapping of pyridinium bis(alkoxycarbonyl)methylide cation radicals, 817-19

Homolytic addition to N-methylene-tert-butylamine: a new route to aminyl radicals, 960-1

Study of the Haber-Weiss reaction using a sensitive method for detection of hydroxyl radicals, 970-1

**RADICAL CATION**

Radical cation of 2,2,3,3-tetramethylbutane: an electron spin resonance study, 686-7

Experimental proof of the existence of a fourth stable gas phase



$C_2H_4O^+$  isomer: the open ethylene oxide ion, 724-5

#### RADIOCHEM

Analysis of ultra-thin fluorine-containing layers on polyethylene by  $^{19}F(p,\alpha\gamma)$  spectrometry, 1011-12

#### RADIOLYSIS

Aromatic hydroxylation by  $O(^3P)$  atoms on  $\gamma$ -radiolysis of liquid carbon dioxide solutions of alkylbenzenes, 16-18

Direct evidence of neighbouring group participation in the gas phase, 213-14

Radical cation of 2,2,3,3-tetramethylbutane: an electron spin resonance study, 686-7

Production, detection, and characterization of transient hexavalent technetium in aqueous alkaline media by pulse radiolysis and very fast scan cyclic voltammetry, 1038-40

#### RAMAN

Copper derivatives of tetrathiafulvalene, 69-70

Raman optical activity due to isotopic substitution: (1S)-4,4-dideuterioadamantan-2-one, 259-60

Formation of the dioxen cation,  $Xe_2^+$ , in fluoroantimonate(V) media by oxidation-reduction methods: spectroscopic properties of the ion, 502-4

Raman spectra of molecules adsorbed on heavy metal oxides. Propylene on zinc oxide: the anionic nature of the adsorbed allyl species, 868-9

Determination of the basicity of nitric acid in concentrated sulphuric acid by Raman and ultraviolet spectroscopy, 873-4

Combined use of M.c.d. and resonance Raman spectra for the detection of different electronic transitions in a charge-transfer band of  $(Mo(CO)_4L)$  ( $L = 2$ -iminomethylpyridine), 1016-17

#### RARE EARTH

Efficient synthesis of acetals catalysed by rare earth chlorides, 976-7

#### REAGENT

A simple route to  $\alpha$ -aminoketones and related derivatives by dianion acylation reactions; an improved preparation of  $\delta$ -aminolevulinic acid, 753-4

#### REARRANGEMENT

$\alpha$ -Ketol rearrangements involving small rings: the formation and rearrangement of 1-hydroxy-6-isopropylbicyclo(3.2.0)heptan-7-one, 87-8

Regioselectivity in the di- $\pi$ -methane rearrangement; alternative processes in the photochemistry of halogeno-1,4-dienes, 101-2

Biosynthesis of type-III porphyrins: proof of intact enzymic conversion of the head-to-tail bilane into uro'gen-III by intramolecular rearrangement, 185-6

Differing substituent effects on rates and regioselectivities in the di- $\pi$ -methane rearrangement. New photochemical theory: excitation distribution (the  $\Delta P$  matrix), reaction inhibition by vertical excited state stabilization, ground Vs. excited state control, 228-30

Topology of the photochemical 'bicycle' reaction. Mechanistic and exploratory organic photochemistry, 232-4

Stereospecific double rearrangement of anti-1,5-bishomocycloheptatriene. A rebound path of thermal rearrangement involving intermediate geminal hydrogen interchange, 365-6

Thermal rearrangement of alkoxy-cyclobutanes, 392-3

Preparation and thermal rearrangement of an azaanalogue of 4,5-homotropone (bicyclo(5.1.0)octa-3,5-dien-2-one), 404-5

Novel direct rearrangement of a  $9\beta,11\beta$ -epoxy lanostan-7-one into a  $\beta$ -homo-derivative with incorporation of the C-10 angular methyl group, 411-12

A new and versatile chelating dithio ligand: X-ray crystal structure of  $(Ru(CO)(SC_6H_3Me-o-SC_6H_4Me)(\eta-C_5H_5))$ , 486-8

Thermal and photochemical rearrangements of 3H-thieno-1,2-diazepines, 568-9

Asymmetric synthesis and absolute stereochemistry of the alkaloids araliopsine, isoplatydesmine, and ribalinine. Dual mechanism for a dihydrofuroquinolone-dihydropyranoquinolone rearrangement 624-6

Radical coupling products derived from ammonium ylides.

Competing (1,2), (1,3), and (1,4) anionic rearrangements, 670-1

Stereoselectivities in competing (1,2) and (1,3) rearrangements, 672-3

The thermal rearrangements of pentadienylammonium ylides.

Competing (1,2), (3,2), and (5,2) rearrangements, 673-5

Limited rotational equilibration in reactions involving diradical intermediates, 675-6

#### RECEPTOR

Anion receptor molecules. Synthesis and some anion binding properties of macrocyclic guanidinium salts, 934-6

#### REDN

New method for reduction of ketones and primary alcohols to hydrocarbons: reaction of the derived selenides with tin hydrides, 41-2

Metal-amine reduction of sterically hindered esters to alkanes, a new method for the deoxygenation of hindered alcohols, 68-9

Stoichiometric reduction of carbon monoxide and carbon dioxide to methanol: evidence for carbon monoxide insertion into zirconium-hydrogen bond, 269-70

Efficiently monitored reduction of carboxylic acids into alcohols or aldehydes via 2-thiazoline-2-thiol esters by sodium borohydride or diisobutylaluminium hydride, 330

Metal-assisted borohydride reduction of acid chlorides to aldehydes 354-5

Electrochemical reductive acylation of astacene; a route to the carotenoid astaxanthin, 387-8

Stereoselective reduction of 3-O-hexofuranosyl S-methyl dithiocarbonates with tributyltin deuteride, 449-50

Asymmetric reduction of trifluoromethyl ketones by actively fermenting yeast, 456-7

Selective synthesis of the nonachlorononaborate clusters nonachlorononaboron and nonachlorononaborate dianion, 462-3

Electrochemical reductive cyclization of dimethyl 2, ( $\omega - 1$ ) -dibromoalkanedioates, 481-2

Surprising electrochemical reduction product from a dihydrodiazepinium salt, 499

Formation of the dioxen cation,  $Xe_2^+$ , in fluoroantimonate(V) media by oxidation-reduction methods: spectroscopic properties of the ion, 502-4

Electrochemical reduction of a heterodienetricarbonyliron(0) complex as a route to novel tricarbonyliron anions, 552-3

Reduction of alkyl esters to alkanes by sodium in hexamethylphosphoric triamide. A new method for the deoxygenation of alcohols, 567-8

Reduction of natural enones in the presence of cerium trichloride, 601-2

Conversion of penicillins into biosynthetically significant peptides, 609-10

Stereochemistry of the reduction of nicotinic acid when it serves as a precursor of anatabine 616-11

Synthesis of allenes via reduction of acetylenic  $p$ -tolylsulphonylhydrazones, 726-7

Preparation of diarenemetal complexes by potassium atom reduction, 730-1

Introduction of sulphur into organic molecules via lithium triethylborohydride reduction of  $S_8$ , 838-9

Asymmetric reduction of aromatic ketones by sodium borohydride in the presence of bovine serum albumin, 926-7

Reduction of the carboxyl-function in aromatic carboxylic acids by alkali metal-liquid ammonia solutions, 941-3

Production, detection, and characterization of transient hexavalent technetium in aqueous alkaline media by pulse radiolysis and very fast scan cyclic voltammetry, 1038-40

Reduction of  $\alpha, \alpha'$ -dibromoketones by ultrasonically dispersed mercury in some aliphatic ketone solvents. A convenient synthesis of 4-isopropylidene-1,3-dioxolans, 1040-1

Cyanoborohydride supported on an anion exchange resin as a selective reducing agent, 1088-9

Visible light-assisted electrochemical reduction of oxygen at a platinum electrode coated with surface active cobalt(II) and manganese(III) porphyrins, 1106-7

#### REDN MECHANISM

Spin trapping experiments on NADH analogues and the role of radicals in carbonyl reductions, 300-1

#### REDN POTENTIAL

Experimental determination of the standard reduction potential of the gold(I) ion, 606-7

#### REDOX

Redox-photosensitized cleavage of indene dimers using aromatic hydrocarbon-dicyanobenzene systems; catalysis by the cation radical of aromatic hydrocarbons, 490-1

#### REDOX POTENTIAL

Solvation as the determining factor for the redox potential of  $Fe_4S_4(S(CH_2)_nCO_2)^6-$  cluster ions, 703-4



**REDUCTIVE**

Novel carbon-carbon reductive cleavage of terphenyls with alkali metal-hexamethylphosphoric triamide, 153-4

**REDUCTIVE ELIMINATION**

A novel type of platinum-carbon interaction and a model for the final stage in reductive elimination processes involving carbon-carbon coupling at platinum; synthesis and molecular geometry of (1, N, N'- $\eta$ -2,6-bis(dimethylamino)methyl)toluene iodoplatinum(II) tetrafluoroborate, 250-2

**REGIOSELECTIVE**

Regioselective oxidation of unactivated methylene and methine groups by dry ozonation: similarity to microbiological oxidation, 413-14

Selective homo Diels-Alder addition of acetylenic hydrocarbons to norbornadiene catalysed by a cobalt complex, 636-8

Regio-selective synthesis of 2- and 3-alkyl-5-hydroxyquinizarins, 712-13

**REGIOSELECTIVITY**

Metal ion-catalysed oxidation of linoleic acid. Lipoxigenase-like regioselectivity of oxygenation, 82-3

Regioselectivity in the Diels-Alder reactions of 3- and 4-substituted 1-trimethylsilylbutadienes, 178-80

Differing substituent effects on rates and regioselectivities in the di- $\pi$ -methane rearrangement. New photochemical theory: excitation distribution (the  $\Delta P$  matrix), reaction inhibition by vertical excited state stabilization, ground Vs. excited state control, 228-30

**REGIOSPECIFIC**

Selectivity in the addition of organic radicals to the alkene bond, 438-9

Unusual conditions for cine-substitution in the pyrrole ring: isolation of a pyrroline as an intermediate, 564-5

Regiospecific carbon-2-addition of thiolates to methoxytropylium ion. The first practical entry to the monocyclic 1,7-difunctionalized cycloheptatriene series, 710

Substitution of allylic sulphides of benzothiazole-2-thiol with organomagnesium compounds in the presence of copper(I) iodide. A regioselective synthesis of olefins, 1085-6

**RESOLN**

Binaphthyl-2,2'-diyl hydrogen phosphate. A new chiral atropisomeric selector for the resolution of helicenes using high performance liquid chromatography, 173-5

Organometallic photochemistry with circularly polarized light.

Synthesis of optically active tropone-iron tricarbonyl complex by asymmetric destruction, 983-4

**RESORCINOL**

A new route to 5-substituted resorcinols, 118

Condensed tannins. Circular dichroism method of assessing the absolute configuration at carbon-4 of 4-arylflavan-3-ols, and stereochemistry of their formation from flavan-3,4-diols, 698-700

**RHENIUM**

Preparation of bis(cis-diacetyltetracarbonylrhenium)copper, 183-4

A rhenium polyphenyl complex: X-ray diffraction analysis of tris( $\eta^1$ -phenyl)bis(diethylphenylphosphine)rhenium, 825-6

An octahedral rhenium(III) cluster: X-ray crystal structure of Na<sub>4</sub>Re<sub>6</sub>S<sub>10</sub>(S<sub>2</sub>), 879-80

**RHIZOPUS**

Regioselective oxidation of unactivated methylene and methine groups by dry ozonation: similarity to microbiological oxidation, 413-14

**RHODIUM**

Rhodium(II)-catalysed addition of dimethyl diazomalonate to thiophene: a simple synthesis of thiophenium bismethoxycarbonylmethylides and crystal and molecular structure of the unsubstituted methylide, 83-4

Stereochemistry of hydrogenation of cyclonona-1,2-diene with supported platinum metals and soluble rhodium complexes as evidence for allylic intermediates, 114-15

Formation and molecular structure of ( $\eta^5$ -cyclopentadienyl)-( $\eta^4$ -cyclobuta(1)phenanthrene)rhodium: a cyclobutadiene-metal complex derived from the intramolecular cyclodimerization of an acyclic diacetylene, 187-8

Mixed rhodium-platinum carbonyl clusters: synthesis and X-ray crystallographic characterization of (Rh<sub>3</sub>Pt(CO)<sub>15</sub>)-(Ph<sub>3</sub>P)<sub>2</sub>N<sup>+</sup>, 195-6

Synthesis of cluster compounds via nucleophilic metal complexes; X-ray crystal structures of (Os<sub>3</sub>Pt( $\mu$ -H)<sub>2</sub>(CO)<sub>10</sub>((C<sub>6</sub>H<sub>11</sub>)<sub>3</sub>P)) and (Os<sub>2</sub>Pt<sub>2</sub>( $\mu$ -H)<sub>2</sub>(CO)<sub>8</sub>(Ph<sub>3</sub>P)<sub>2</sub>), 260-2

Mechanism of asymmetric hydrogenation catalysed by rhodium(I) trans-4,5-bis(diphenylphosphinomethyl)-2,2-dimethyldioxolan (DIOP) complexes, 321-2

Photo-enhanced production of hydrogen by liquid-phase catalytic dehydrogenation of propan-2-ol with rhodium-tin chloride complexes, 348-9

Activation and transfer of molecular oxygen. Oxidation of terminal olefins to methyl ketones by rhodium dioxygen complexes, 559-60

Catalytic synthesis of ethanol from carbon monoxide and hydrogen under atmospheric pressure over pyrolyzed rhodium carbonyl clusters on titanium dioxide, zirconium dioxide, and dilanthanum trioxide, 566-7

Diversity of behaviour of bicyclo(2.2.1)heptadiene-bisphosphine-rhodium complexes on hydrogenation in methanol, 646-7

Evidence for the ready insertion of rhodium into a carbon-hydrogen bond of ethylene; crystal and molecular structure of  $\mu$ -but-2-ene- $\mu$ -ethylenebis-( $\eta^5$ -1-methylindenyl)dirhodium, 839-41

Novel three-coordinate rhodium(I) hydrido compounds, (RhH(P(CMe<sub>3</sub>)<sub>2</sub>)) and (RhH(P(cyclohexyl)<sub>3</sub>)<sub>2</sub>), 855-6

Alkylrhodium(III) porphyrins from rhodium(III) porphyrins and diazoalkanes, 937-8

Opening of the phosphorus-nitrogen bond of bicyclic phosphoranes. Synthesis and X-ray and molecular structure of rhodium complexes of perhydro-1,3,6,2-dioxazaphosphocine, 1022-4

**RHODOTORULA**

Microbial stereo-differentiating reduction of the carbonyl groups located on the C<sub>2</sub> axes of gyrochiral molecules, 667-8

Microbial stereo-differentiating reduction of carbonyl compounds; proposed quadrant rule, 668-7

**RHODOTORULIC ACID**

Synthesis and characterization of iron complexes of rhodotorulic acid: a novel dihydroxamate siderophore and potential chelating drug, 501-2

**RIBALININE**

Asymmetric synthesis and absolute stereochemistry of the alkaloids araliopsine, isoplatydesmine, and ribalinine. Dual mechanism for a dihydrofuroquinolone-dihydropyranoquinolone rearrangement 624-6

**RIBOFLAVIN**

Synthesis and characterization of covalent flavin-papain complexes with sulphur in the sulphide and sulphone oxidation states, 457-9

**RIBOFURANOSYLGLYCOSIDE**

Synthesis of  $\alpha$ -linked 3'-deoxy-pseudo-di- and -tri-saccharides related to aminocyclitol-glycoside antibiotics, 773-4

**RIBOSIDE**

Ribopyranosyldiaminomaleonitrile: a key intermediate for the synthesis of nucleosides, 1094-6

**RIBOSYL**

Ribopyranosyldiaminomaleonitrile: a key intermediate for the synthesis of nucleosides, 1094-6

**RING CLEAVAGE**

Synthesis of  $\alpha$ -alkoxycarbonylcycloalkanones by electrolysis of 1-trimethylsiloxybicyclo(n.1.0)alkanes, 293-4

Novel carbon-carbon bond cleavage of  $\alpha$ -azido steroidal ketones, 409-10

Preparation of the 7-oxo-4-oxa-1-azabicyclo(3.2.0)hept-2-ene system and the reversible cleavage of its oxazoline ring, 469-70

An electron spin resonance study of the cyclobutylhydroxymethyl radical: its conformation, and its ring opening followed by 1,6-transfer of enolic hydrogen, 569-71

Conversion of penicillins into biosynthetically significant peptides, 609-10

Electronic excited states of small ring compounds. Substituent effects on the photochemical ring cleavage of 3,3-dimethyl-1,2-diarylcyclopropenes, 743-4

Flash-vacuum pyrolysis of 1,3-oxazin-2- and -6-ones, 902-3

Mechanism of acid catalysed opening of the cyclopropane ring in the thujols, 1096-7

**RING CONTRACTION**

Reversible photochemical valence isomerization between  $\alpha$ -diazo-ketones and a  $\alpha$ -keto-diazirines, 442-3

Investigations on the ring contraction step in the biosynthesis of a nor-stanol by the marine sponge *Axinella verrucosa*, 524-5

**RING ENLARGEMENT**

Small ring-annulated nonbenzenoid aromatic compounds: 1,2-dihydrocyclobuta(e)tropolone, 215

Some novel transformations in indole chemistry, 332-3

- Novel direct rearrangement of a  $9\beta,11\beta$ -epoxylanostan-7-one into a  $\beta$ -homo-derivative with incorporation of the C-10 angular methyl group, 411-12
- Preparation of derivatives of a new heterocyclic system: 2-N-acylimino-1,3-oxaselenoles, 447-8
- RING EXPANSION**  
Ring expansion of azidoquinolines to benzo-1,4-diazepines, 806-7  
Novel type of transformation of a 2H-azirine in the presence of  $\text{Fe}_2(\text{CO})_9$ , 998-9
- RING OPENING**  
Ring opening polymerization of norbornene catalysed by ethyl aluminium dichloride; olefin metathesis in the absence of a transition metal, 603-4  
Novel synthesis of prostaglandin  $\text{E}_2$  involving regioselective ring opening of a 2,3-endo-epoxybicyclo(3.2.0)heptan-6-one acetal with a mixed organocuprate reagent, 662-4
- RING SIZE**  
Effect of ring size in cyclic phosphonates upon their reaction with nitrones, 6-7
- RING STRAIN**  
The kinetic effect of ring strain in an elimination reaction, 338-9
- ROSE BENGAL**  
The quenching of excited singlet states of Rose Bengal by bifunctional compounds, 913-14
- ROTATION**  
Limited rotational equilibration in reactions involving diradical intermediates, 675-6
- ROTATION BARRIER**  
Cis-trans isomerism in bis(trihalogenoacetyl)polymethylbenzenes resulting from restricted rotation about carbonyl groups: proton nuclear magnetic resonance evidence, 201-2
- ROTATIONAL BARRIER**  
Energy barrier for E-Z isomerization of N-sulphenylimines, 156-7  
Bulky alkyls and a hydridoalkyl of zirconium(IV): influence of steric constraints upon (i) conformation and the zirconium-carbon rotational barrier and (ii) the zirconium-carbon bond length. X-ray crystal and molecular structure of  $(\text{Zr}(\eta\text{-C}_5\text{H}_5)_2(\text{CH}(\text{SiMe}_3)_2)\text{Ph})$ , 1081-3
- RUBIDIUM**  
ESCA study of compounds of gold in the oxidation state-1, 905-6
- RUBROFUSARIN**  
Biomimetic syntheses of heptaketide metabolites: alternariol and a derivative of rubrofusarin, 406-7
- RUBROSULPHIN**  
Structure of xanthomegnin and related pigments: reinvestigation by carbon-13 nuclear magnetic resonance spectroscopy, 611-12
- RUTAMYCIN**  
X-ray structure of the antibiotic rutamycin, 318-19
- RUTHENIUM**  
Reaction of bis(triethylphosphine)platinum and pentakis(tert-butyl isocyanide)ruthenium with dicarba-nido-hexaboranes(8): molecular structures of (nido- $\mu_4$ -5-(trans-(Et<sub>3</sub>P)<sub>2</sub>Pt(H))- $\mu_5$ -6-H-2,3-C<sub>2</sub>B<sub>4</sub>H<sub>6</sub>), (closo-1,1-(Et<sub>3</sub>P)<sub>2</sub>-2,3-Me<sub>2</sub>-1,2,3-PtC<sub>2</sub>B<sub>4</sub>H<sub>4</sub>) and  $(\text{RuH}(\text{BuNC})_5)^+$  (nido-2,3-Me<sub>2</sub>-2,3-C<sub>2</sub>B<sub>4</sub>H<sub>5</sub>)<sup>-</sup>, 169-71  
Oxidative-addition of tertiary phosphine-ruthenium complexes to allylic carbon-hydrogen bonds, 223-4  
Polymeric sulphur nitride electrode: an example of electrocatalysis by surface chemical modification, 244-5  
Photochemistry of tris(2,2'-bipyridine)ruthenium(II) in chlorinated solvents, 285  
Luminescence from  $(\text{Ru}(\text{bipyridyl})_3)^{2+}$  ions adsorbed on ion exchange surfaces. Dynamic quenching reactions between adsorbed cations, 408-9  
X-ray molecular structure and reactions of bis(styrene) bis(triphenylphosphine)ruthenium(0); the first sixteen-electron ruthenium(0) species, 463-4  
A new and versatile chelating dithio ligand: X-ray crystal structure of  $(\text{Ru}(\text{CO})(\text{SC}_6\text{H}_3\text{Me}-o\text{-SC}_6\text{H}_4\text{Me})(\eta\text{-C}_5\text{H}_5))$ , 486-8  
Homogeneous catalytic oxidation of amines and secondary alcohols by molecular oxygen, 562  
An arene hydrido complex of ruthenium(II) as catalyst for the homogeneous hydrogenation of benzene and olefins, 582-3  
Photoredox reaction in micellar solutions sensitized by surfactant derivative of tris(2,2'-bipyridyl)ruthenium(II), 628-30  
Solution properties of  $(\text{CO})_5\text{Mo}(\text{pz})$  and  $(\text{CO})_5\text{Mo}_2(\text{pz})$ : organometallic analogues of  $(\text{NH}_3)_5\text{Ru}(\text{pz})^{2+}$  and  $(\text{NH}_3)_5\text{Ru}_2(\text{pz})^{4+}$  (pz = pyrazine), 859-61  
Reduction of tris(triphenylphosphine)dichlororuthenium(II) in acetonitrile: reformulation of the nature of the product; detection of the first paramagnetic d<sup>8</sup> complex, 883-4  
Preparative applications of metal vapours obtained by evaporation of metal powders from coated filaments: a new preparation of dibenzeneruthenium and observation of its limiting NMR spectrum, 898-9  
Syntheses and reactivity of cofacial, dimeric metal-metal bonded ruthenium(II) mixed valence ruthenium(II/III), and ruthenium(III) complexes of  $(\text{C}_{22}\text{H}_{22}\text{N}_4)^{2-}$ , a dibenzo-tetra-aza(14)annulene ligand, 909-10  
 $(\text{H}_3\text{Ru}_4(\text{CO})_{12})$ : the X-ray crystallographic determination of two structural isomers, 920-1  
'Capped' tri-ruthenium carbonyl cluster: X-ray crystal structure of  $(\text{Ru}_3(\text{CO})_9(\text{MeSi}(\text{PBu}_2)_3))$ , 1005-6  
Ammonia synthesis from methane, water, and nitrogen over silica-supported ruthenium, 1105-6
- RUTILE**  
Bronsted acidity of rutile developed during alcohol dehydration as shown by simultaneous alkene isomerization: microwave spectroscopic analyses, 835-6
- SACCHARIDE**  
Synthesis of  $\alpha$ -linked 3'-deoxy-pseudo-di- and -tri-saccharides related to aminocyclitol-glycoside antibiotics, 773-4
- SACCHAROMYCES**  
Stereochemical course of dehydration catalysed by the yeast fatty acid synthetase, 193-4
- SAFETY**  
Preparation and crystal structure of a new sulphur nitride,  $\text{S}_5\text{N}_6$ ; a molecular basket, 642-3
- SAFETY BORON NITRIDE FLUOROSULPHATE**  
Novel salts of graphite and a boron nitride salt, 200-1
- SAFETY EXPLOSION STRAINED FUOXAN**  
Sulphur dioxide mediated conversion of strained furazan N-oxides into diisocyanates, 113-14
- SALICYLALDIMINE**  
Effects of structural distortion on the ligand exchange reactions of copper(II) Schiff base complexes, 583-4
- SALICYLIDENEAMINE**  
X-ray crystal and molecular structure, absolute configuration, and stereoselectivity of  $(-)_435\text{-L-isoleucinato-NN'}$ -ethylenebis( $\alpha$ -methylsalicylideneaminato)cobalt(III), 266-7
- SALT**  
Novel salts of graphite and a boron nitride salt, 200-1
- SANDWICH**  
1:2 Metalloporphyrin nitroaromatic sandwich complexes: X-ray crystal structure of one such complex, 571-2
- SANTONIN**  
Synthesis of tetrahydrosantonin derivatives functionalized at their angular methyl groups, 748-9
- SAXITOXIN**  
Characterization of 11-hydroxysaxitoxin sulphate, a major toxin in scallops exposed to blooms of the poisonous dinoflagellate *Gonyaulax tamarensis*, 889-90
- SAYTZEFF**  
A relation between the product distribution from the dehydration of dimethylbutan-2-ols and catalytic acidity, 801-2
- SCALOP**  
Characterization of 11-hydroxysaxitoxin sulphate, a major toxin in scallops exposed to blooms of the poisonous dinoflagellate *Gonyaulax tamarensis*, 889-90
- SCANDIUM**  
Neutral and anionic silylmethyl complexes of Group\*IIIa and lanthanoid metals; the X-ray crystal and molecular structure of  $(\text{Li}(\text{thf})_4)(\text{Yb}(\text{CH}(\text{SiMe}_3)_2)_2\text{Cl})$  (thf = tetrahydrofuran), 140-2  
Novel coordination numbers in scandium(III) and yttrium(III) nitrate complexes. X-ray crystal structures of  $\text{Sc}(\text{NO}_3)_3 \cdot 2\text{N}_2\text{O}_4$  and  $\text{Y}(\text{NO}_3)_3 \cdot 2\text{N}_2\text{O}_4$ , 580-1  
Nuclear magnetic resonance study of ligand exchange on the hexakis(trimethyl phosphate)scandium(III) ion, 1047-8
- SCELETIUM**  
X-ray crystal and molecular structure of channaine, an unusual alkaloid, probably an artefact from *Sceletium strictum*, 1078-9
- SCF CALC**  
Metal-metal interactions in 2-Fe ferredoxins; SCF-X $\alpha$ -SW calculations, 1027-9
- SCHIFF**  
Effects of structural distortion on the ligand exchange reactions of copper(II) Schiff base complexes, 583-4
- SCHIFF BASE**  
X-ray crystal and molecular structure, absolute configuration, and

- stereoselectivity of (-)<sub>435</sub>-L-isoleucinato-NN'-ethylenebis(α-methylsalicylideneamino)cobalt(III), 266-7
- Regiospecific anodic pyridination of 2-hydroxy-3-methoxy-5-methylbenzaldehyde Schiff bases, 407-8
- SCHIZANDRIN**  
Total synthesis of the lignan (±)-schizandrin, 480-1
- SCHIZANDRIN DEOXY**  
Synthesis of the lignan (±)-deoxyschizandrin, 491-2
- SCLERIN**  
Biosynthesis of sclerin: incorporation studies with advanced precursors, 158-9
- SCLEROTINIA**  
Biosynthesis of sclerin: incorporation studies with advanced precursors, 158-9
- SECOCEMBRENE**  
Alternative synthetic route to the cembrene skeleton, 359-60
- SECONDARY ION**  
Secondary ion mass spectrometry: a tool for identification of matrix-isolated species, 751-2
- SECOSTEROID**  
Novel carbon-carbon bond cleavage of α-azido steroidal ketones, 409-10
- SECOXYLOGANIN**  
Stereoconservative transformation of secologanin into meroquinene and its derivatives, 725-6
- SELECTIVITY**  
Correlation between selectivity in photochemical cross-cycloaddition and ionization potential of the reacting olefins, 786-8
- SELENAFULVALENE**  
'Organic metals' with asymmetric acceptors: the monofluorotetracyanoquinodimethane anion, 992-3
- SELENENYLATION**  
1,3-Transposition of primary allylic alcohols: a new application of selenoxide chemistry, 770-1
- SELENIDE**  
New method for reduction of ketones and primary alcohols to hydrocarbons: reaction of the derived selenides with tin hydrides, 41-2
- SELENINATE**  
Dehydrogenation of hydrazines and of 4-azacholestan-3-one with benzeneseleninic acid and benzeneseleninic anhydride, 278-9  
Conversion of thiocarbonyl compounds into their corresponding oxo derivatives using benzeneseleninic anhydride, 393-4
- SELENINIC**  
Oxidation of aldehyde hydrazones, hydrazone compounds, and hydroxylamines with benzeneseleninic anhydride, 276-7
- SELENINIC ANHYDRIDE**  
Dehydrogenation of steroidal ketones using benzeneseleninic anhydride, 130-1  
Oxidation of alcohols using benzeneseleninic anhydride, 952-4
- SELENINYLMETHYLOXAAZABICYCLOHEPTANE**  
Total synthesis of methyl (2RS,5RS)-3-methylene-7-oxo-4-oxa-1-azabicyclo(3.2.0)heptane-2-carboxylate, a novel clavulanic acid analogue, 518-19
- SELENIUM**  
Insertion of selenium, tellurium, or arsenic atoms into borane cage compounds using element oxide reagents, 349-50  
Identification of the species (Te<sub>n</sub>Se<sub>4-n</sub>)<sup>2+</sup> by high resolution tellurium-125 and tellurium-123 Fourier transform NMR spectroscopy, 956-7  
125-Tellurium and 77-selenium multinuclear magnetic resonance studies of Te<sub>6</sub><sup>4+</sup>, Te<sub>4-n</sub>Se<sub>n</sub><sup>2+</sup>, Te<sub>2</sub>Se<sub>4</sub><sup>2+</sup>, and Te<sub>3</sub>Se<sub>3</sub><sup>2+</sup> polyatomic cations, 957-60  
Reaction of diborane with benzoxazole and its sulphur and selenium analogues. A novel rearrangement to benzoxazaboroles, benzothiazaboroles, and benzoselenazaboroles, 971
- SELENOACETAL**  
New method for reduction of ketones and primary alcohols to hydrocarbons: reaction of the derived selenides with tin hydrides, 41-2  
New method of access to selenoacetal chemistry: use of tris(phenylseleno)borane, 356
- SELENOBENZENE**  
A new use of cyclofunctionalization with selenenyl reagents: an example of carbon-carbon bond formation, 441-2
- SELENOCYANATE**  
Preparation of derivatives of a new heterocyclic system: 2-N-acylimino-1,3-oxaselenoles, 447-8
- SELENOXIDE**  
Total synthesis of clavulanic acid analogues from 7-oxo-3-vinyl-4-oxa-1-azabicyclo(3.2.0)heptanes, 439-41  
New synthesis of 4',5'-unsaturated nucleosides, 1084-5
- SELENYL**  
Cyclofunctionalization of olefinic urethanes with benzeneselenenyl reagents: a new general synthesis of nitrogen heterocycles, 379-80
- SELENYL CHLORIDE**  
Novel total synthesis of (±)-erysotramidine, an oxo-erythrinan alkaloid, 733-4
- SENSITIZER**  
Mechanism of the cadmium sulphide sensitized photooxidation of Leuco Crystal Violet in nonaqueous solution, 417-18  
Asymmetric cis-trans photoisomerization of cyclo-octene sensitized by chiral aromatic esters, 1024-5
- SEPTANOSE ANOMER**  
Sugar equilibria. Observation of a septanose anomer, 1073-4
- SERINE**  
Asymmetric synthesis of aziridine-2-carboxylic acid and the formation of chiral serine, 522-3
- SERUM**  
Asymmetric reduction of aromatic ketones by sodium borohydride in the presence of bovine serum albumin, 926-7
- SESQUITERPENE**  
Photocyclization of dicyclopent-1-enyl methanes to tricyclo(6.3.0.0<sup>2,6</sup>)undecanes: a synthesis of the hirsutane carbon skeleton, 5-6  
X-ray crystal structure of canellal, a novel antimicrobial sesquiterpene from *Canella winterana*, 75-6  
Structure and total synthesis of temisin, 76-8  
Stereoselective synthesis of (-)-acorenone and (-)-acorenone B; the absolute configuration of natural (-)-acorenone, 203-4  
Chemical defence in the termite *Ancistrotermes cavithorax*: ancistrodial and ancistrofuran, 410-11  
Spiro(5.5)undecane sesquiterpene analogues. Bridging vinyl ether and vinyl acetal formation via intramolecular attack by an enol during bromination, 425-6  
Synthesis of tetrahydrosantonin derivatives functionalized at their angular methyl groups, 748-9
- SESQUITERPENE INTERMEDIATE**  
New stereoselective synthesis of 9-methyl-cis-decalin derivatives by double Michael reaction of 3,5-dimethyl-4-methylenecyclohex-2-enone and dimethyl 3-oxoglutarate; X-ray crystal and molecular structure of two of the products, 717-18
- SESQUITERPENOID**  
Biosynthesis of illudin sesquiterpenoids from (1,2-<sup>13</sup>C<sub>2</sub>)acetate, 303-4  
Modhephene: a sesquiterpenoid carbocyclic (3.3.3)propellane. X-ray crystal structure of the corresponding diol, 420-1  
Solanascone: a novel sesquiterpene ketone from *Nicotiana tabacum*. X-ray structure determination of the corresponding oxime, 563-4
- SIDEROPHORE**  
Synthesis and characterization of iron complexes of rhodotorulic acid: a novel dihydroxamate siderophore and potential chelating drug, 501-2
- SIGMATROPIC REARRANGEMENT**  
Evidence for the participation of a nitrile group in (2,3) sigmatropic rearrangements of sulphonium ylides, 274-5
- SILACYCLOPROPENE**  
Photochemical reactions of a silacyclopropene with nitriles leading to new organosilicon ring systems, 80-1
- SILANE**  
Matrix photolysis of trimethylazidosilane: silicon-hydrogen bond formation, 762-3  
Specific dealkylation of phosphonate esters using iodotrimethylsilane, 870-1  
Novel method for dealkylation of esters, ethers, and acetals by chlorotrimethylsilane-sodium iodide, 874-5  
Medium-ring cyclosilanes from the reaction of dimethyldichlorosilane with lithium, 1092-3  
Pulsed proton nuclear magnetic resonance studies of molecular motion and plastic crystallinity in dodecamethylcyclohexasilane, 1093-4
- SILANE DIMETHYL DICHLORO**  
One-step synthesis of dodecamethylcyclohexasilane, 272
- SILICA**  
Second-order effects observed in the electron spin resonance spectra of methyl radicals stabilized on silica at 77 K, 164-5  
Anchoring of osmium clusters to silica, 1063-4

- Ammonia synthesis from methane, water, and nitrogen over silica-supported ruthenium, 1105-6
- Biphasic photochemistry: the photo-Fries rearrangement on silica gel, 1109-10
- SILICA GEL**  
Drifluor reagents: non-hygroscopic sources of the fluoride ion, 789-91
- SILICATE**  
Trimethylgermyl derivatives for the study of silicate structures, 560-1  
Very active hydrogenation catalyst composed of extremely dispersed palladium on vitreous supports, 979-80
- SILICON**  
Analogies between the dynamic stereochemistry at silicon and phosphorus. Kinetic study of solvent-induced epimerization of methyl chloro(phenyl)phosphonate, 104-5  
Structure of the compound purported to be NN-bis(chloromethyldimethylsilyl)acetamide: X-ray crystal structure analysis of the novel five-membered oxygen-, silicon-, and nitrogen-containing heterocycle (O-Si)-chloro((N-chlorodimethylsilylacetamido)methyl)dimethylsilane, 209-10  
A short synthesis of (R)-(+)-frontalin and Latia luciferin using new organosilicon reagents, 297-8  
Formation of a new silicon-containing ring system, 1,1,2,2,3,3-hexamethyl-4,5-diphenyl-1,2,3-trisilacyclopent-4-ene, 1029-30
- SILVER**  
Highly conducting transition metal derivatives of polyacetylene, 489-90  
Rapid formation of N-nitrosamines from nitric oxide in the presence of silver(I) salts, 707-8  
X-ray crystal and molecular structure of  $(W_2S_8Ag_4(PPh_3)_4)$ , a compound having a novel metal-sulphur cage fused by two connected six-membered  $WS_3Ag_2$  rings, 739
- SILYL**  
 $\beta$ -Silylketones as masked  $\alpha\beta$ -unsaturated ketones, 176-7  
A silicon-based protecting group for the  $\alpha\beta$ -unsaturation of  $\alpha\beta$ -unsaturated ketones, 177-8  
Convenient synthesis of unesterified acylphosphonic acids, 285-6  
Silylhydroxylamines as reagents for high-yield  $RCOCl \rightarrow RNCO$  conversions, 351-2  
Efficient method for the preparation of trimethylsilyl enol ethers of acyltrimethylsilanes, 478-9  
Silyl nitronates: improved nitro-aldol reactions and reductive routes to 2-aminoalcohols, 689-91  
Direct displacement and coupling of prop-2-ynyl acetates with organocuprates, 876-7
- SILYL TRIMETHYL**  
Bulky alkyls and a hydridoalkyl of zirconium(IV): influence of steric constraints upon (i) conformation and the zirconium-carbon rotational barrier and (ii) the zirconium-carbon bond length. X-ray crystal and molecular structure of  $(Zr(\eta-C_5H_5)_2(CH(SiMe_3)_2)Ph)$ , 1081-3
- SILYLACETAMIDE**  
Structure of the compound purported to be NN-bis(chloromethyldimethylsilyl)acetamide: X-ray crystal structure analysis of the novel five-membered oxygen-, silicon-, and nitrogen-containing heterocycle (O-Si)-chloro((N-chlorodimethylsilylacetamido)methyl)dimethylsilane, 209-10
- SILYLAMINYL**  
Generation and some reactions of the bis(trimethylsilyl)aminy radical, 545-6
- SILYLATION**  
Conversion of alkyl carbamates into amines via treatment with trimethylsilyl iodide, 315-16
- SILYLBROMAMINE**  
Radical chain bromination of hydrocarbons using bis(trimethylsilyl) bromamine, 752-3
- SILYLBUTADIENE**  
Regioselectivity in the Diels-Alder reactions of 3- and 4-substituted 1-trimethylsilylbutadienes, 178-80
- SILYLCYCLOPENTADIENE**  
Carbonium ion rearrangements in the norbornyl series controlled by a silyl group, 245-7
- SILYLCYCLOPROPANATION**  
Organosilicon chemistry in synthesis: silylcyclopropanation, 714-16
- SILYLETHOXYCARBONYL**  
The  $\beta$ -(trimethylsilyl)ethoxycarbonyl amino-protecting group, 358-9
- SILYLMETHYL**  
Neutral and anionic silylmethyl complexes of Group\*IIIa and lanthanoid metals; the X-ray crystal and molecular structure of  $(Li(thf)_4)(Yb(CH(SiMe_3)_2)_3Cl)$  (thf = tetrahydrofuran), 140-2
- SILYLMETHYLENESULPHURANE**  
Organosilicon chemistry in synthesis: silylcyclopropanation, 714-16
- SILYLMETHYLTIN**  
Catalysis and solvent participation in organometallic oxidative additions (platinum(0)  $\rightarrow$  platinum(II) and tin(II)  $\rightarrow$  tin(IV)), 192-3
- SILYLPHOSPHINE**  
'Capped' tri-ruthenium carbonyl cluster: X-ray crystal structure of  $(Ru_3(CO)_9(MeSi(PBu_2)_3))$ , 1005-6
- SILYLPROPENYL**  
2-Trimethylsilylprop-2-enyl, a new protecting group for phosphoric and related acids, 761-2
- SIOMYCIN A**  
Natural abundance nitrogen-15 nuclear magnetic resonance spectroscopic evidence for the structural relation between the peptide antibiotics thiostrepton and siomycin-A, 577-8
- SIROHYDROCHLORIN**  
Biosynthesis of vitamin B<sub>12</sub>: proof of A-B structure for sirohydrochlorin by its specific incorporation into cobyrinic acid, 150-1
- SITOSTEROL**  
Biosynthesis of  $\beta$ -sitosterol from (4-<sup>13</sup>C)mevalonic acid and sodium (1,2-<sup>13</sup>C)acetate in tissue cultures of *Isodon japonicus* hara, 319-20
- SODIUM**  
Aspects of the coordination chemistry of some electron-rich polyorganosulphur compounds; bis(ethylthio)carbene complexes  $(M(CO)_5(C(SET)_2))$  (M = Cr or W) from  $Na(TosNNC(SET)_2)$  (Tos = p-MeC<sub>6</sub>H<sub>4</sub>SO<sub>2</sub>), 146-7  
Efficiently monitored reduction of carboxylic acids into alcohols or aldehydes via 2-thiazoline-2-thiol esters by sodium borohydride or diisobutylaluminium hydride, 330  
Reaction of some arylacetic acids and related compounds with alkaline sodium hypochlorite solution, 459-60  
Dehydration sequence of cobalt exchanged synthetic A zeolite: evidence for 3-, 4-, 5-, and 6-fold coordination, 548-9  
Reduction of alkyl esters to alkanes by sodium in hexamethylphosphoric triamide. A new method for the deoxygenation of alcohols, 567-8  
An octahedral rhenium(III) cluster: X-ray crystal structure of  $Na_4Re_6S_{10}(S_2)$ , 879-80  
X-ray crystal structure of a 1,4-dihydropyridine-crown ether-sodium perchlorate complex crystallized with a molecule of acetone, 923-4  
Asymmetric reduction of aromatic ketones by sodium borohydride in the presence of bovine serum albumin, 926-7  
Reduction of the carboxyl-function in aromatic carboxylic acids by alkali metal-liquid ammonia solutions, 941-3  
Steric effects on chelation in carbon-13 nuclear magnetic resonance spectra of  $\beta$ -diketone enolates, 965-7  
X-ray crystal structures of anhydrous sodium and potassium complexes of an open chain polyether diol, 1001-3
- SODIUM HYPOCHLORITE**  
Biomimetic synthesis of anatabine from 2,5-dihydropyridine produced in situ by the action of sodium hypochlorite on baikiain 1055-6
- SODIUM IONS**  
Location of supercage sodium ions and water molecules in hydrated NaX zeolite, 493-4
- SODIUM SULPHATE CHLORIDE**  
A novel tunnel structure containing enclathrated hydrogen peroxide:  $4Na_2SO_4 \cdot 2H_2O_2 \cdot NaCl$ , 288-9
- SOLANASCONE**  
Solanascone: a novel sesquiterpene ketone from *Nicotiana tabacum*  
X-ray structure determination of the corresponding oxime, 563-4
- SOLUTION PROPERTIES**  
Solution properties of  $((CO)_5Mo(pz))$  and  $((CO)_5Mo)_2(pz)_2$ : organometallic analogues of  $((NH_3)_5Ru(pz))^2+$  and  $((NH_3)_5Ru)_2(pz)^{4+}$  (pz = pyrazine), 859-61
- SOLVATION**  
Solvation of the halogen acids in N-methylpropionamide, 523-4
- SOLVENT**  
Relative solvent transport of ions in binary aqueous mixtures: an unambiguous assignment to ionic constituents, 218-19

## SOLVENT EFFECT

- Catalysis and solvent participation in organometallic oxidative additions (platinum(0)  $\rightarrow$  platinum(II) and tin(II)  $\rightarrow$  tin(IV)), 192-3
- Solvent effects in homogeneous asymmetric catalysis, 427-8
- Solvent effects on the spin-trapping of primary alkyl radicals, 525-6
- Solvent-assisted acetylenic oxy-Cope rearrangement: a novel synthesis of ionone and its analogues, 651-2
- Solvation as the determining factor for the redox potential of  $\text{Fe}_4\text{S}_4(\text{S}(\text{CH}_2)_n\text{CO}_2)_6^-$  cluster ions, 703-4
- Initial state and transition state solvation in the peroxodisulphate oxidation of dicyanobis(2,2'-bipyridyl)iron(II), 963-4
- Effect of solvent on the oxy-Cope rearrangement of the 4-isopropenyl-3,7-dimethylocta-1,6-dien-3-ol diastereomeric system, 972-3

## SOLVENT TRANSFER

- Solvent transfer hydrogenation of  $\alpha\beta$ -unsaturated aldehydes to the unsaturated alcohols catalysed by hydridoiridium sulphoxide complexes, 929-30

## SOLVOLYSIS

- Solvolysis of substituted benzylidene chlorides in dioxane-water; an unusual role for a distant carboxy-group in a carbonium ion reaction, 98-9
- Mechanisms of aqueous solvolyses, 418-20

## SOMATOSTATIN

- Synthesis of (6-(4- $^3\text{H}$ )phenylalanine)-somatostatin of high specific radioactivity, 901-2

## SPASMOLYTIC

- Clausmarins A and B: two novel spasmolytic terpenoid coumarins from *Clausena pentaphylla* (Roxb.)DC, 281-2

## SPILT OVER

- Continuous hydrogenation of ethene using spilt-over hydrogen, 891-2

## SPIN COUPLING

- Oxygen-17 nuclear magnetic resonance spectroscopy: spin coupling to phosphorus-31, 531-2
- Identification of the species  $(\text{Te}_n\text{Se}_{4-n})^{2+}$  by high resolution tellurium-125 and tellurium-123 Fourier transform NMR spectroscopy, 956-7
- 125-Tellurium and 77-selenium multinuclear magnetic resonance studies of  $\text{Te}_6^{4+}$ ,  $\text{Te}_{4-n}\text{Se}_n^{2+}$ ,  $\text{Te}_2\text{Se}_4^{2+}$ , and  $\text{Te}_3\text{Se}_3^{2+}$  polyatomic cations, 957-60
- Platinum(IV) complexes with  $\pi$ -acceptor ligands, 1056-7
- Carbon-carbon coupling in (90%  $^{-13}\text{C}$ -2)histidine, 1070-1

## SPIN LABEL

- Synthesis of intercalating and carcinogenic nitroxide spin labels, 215-16

## SPIN TRAP

- Spin trapping experiments on NADH analogues and the role of radicals in carbonyl reductions, 300-1

## SPIN TRAPPING

- Solvent effects on the spin-trapping of primary alkyl radicals, 525-6

## SPIROACTIVATED

- Homoconjugate addition of Grignard reagents spiroactivated cyclopropanes. An approach to the total synthesis of ( $\pm$ )-brefeldin A, 754-6

## SPIROBIINDAN

- Circular dichroism of diastereomeric 3,3'-di-tert-butyl-1,1'-spirobiindans, 810-12

## SPIROCYCLOALKANE

- ( $\pm$ )-Dinorpenicillin-2-spirocycloalkane, 46-7

## SPIROCYCLOPENTANEINDOLE

- The acylation of 3-alkyl-indoles, 779-81

## SPIRODODECANONE

- Reversible photochemical valence isomerization between  $\alpha$ -diazo-ketones and a  $\alpha$ -keto-diazirines, 442-3

## SPIRONONANE

- New conformational effect: predominance of the axial conformation in spiro(5.2)octan-4-ol derivatives, 147-8

## SPIROOCTANOL

- New conformational effect: predominance of the axial conformation in spiro(5.2)octan-4-ol derivatives, 147-8

## SPIROOXETANENAPHTHALENONE

- Reactions of substituted 3,3-diphenyl- and 3,3-dimethyl-1-oxaspiro(3.5)nona-5,8-diene-2,7-diones with nucleophiles, 312-13

## SPIROPHOSPHORANE PENTAOXY

- Synthesis of salts of a pentaoxospirophosphorane having a P-OH bond, 219-20

## SPIROUNDECANEDIONE

- Spiro(5.5)undecane sesquiterpene analogues. Bridging vinyl ether and vinyl acetal formation via intramolecular attack by an enol during bromination, 425-6

## SQUALENE

- Nonoxidative cyclization of squalene by *Tetrahymena pyriformis*. The incorporation of a  $3\beta$ -hydrogen (deuterium) atom into tetrahymanol, 333-4

## STABILITY

- Synthesis and solution stoichiometries and stabilities of mercury(II)-arene complexes, 1083-4

## STANNACYCLOPENTANE

- Formation and X-ray crystal structure of 1,1,6,6-tetraphenyl-1,6-distannacyclodecane, 791-2

## STANNANE

- Novel synthesis of substituted allenes via organoboration of alkynylstannanes, 402-3

## STAUROSPORINE

- X-ray structure of staurosporine: a new alkaloid from a *Streptomyces* strain, 800-1

## STELLATIN

- Use of long range proton-carbon-13 couplings in structure determination: stellatin, a novel dihydroisocoumarin from *Aspergillus varicolor*, 627-8

## STEMMADENINE

- Laboratory model for the biosynthesis of vallesimine, apparicine, and related alkaloids, 947-8

## STEREOCHEM

- Stereochemistry of the adduct from tert-butylcyanoketene and 2-methylbut-2-ene; X-ray crystal and molecular structure of 2-cyano-3,3,4-trimethyl-2-tert-butylcyclobutyl p-chlorobenzoate, 10-11
- Stereochemistry and mechanisms of electrophilic cleavage reactions of cis-(three-PhCHDCHD)Mn(CO)<sub>4</sub>PEt<sub>3</sub>, 11-12
- Stereochemical control of anodic cyanomethoxylation, 20-2
- Conformational control in eliminations with the (E<sub>1</sub>cB)<sub>R</sub> mechanism, 43-4
- Stereochemistry of the nucleophilic cleavage of cobalt-carbon bonds in organocobalt(IV) compounds, 44-6
- Stereoelectronic control of  $\alpha$  proton abstraction from iminium ions, 49-50
- Stereochemistry of hydrogenation of cyclonona-1,2-diene with supported platinum metals and soluble rhodium complexes as evidence for allylic intermediates, 114-15
- Stereochemical course of dehydration catalysed by the yeast fatty acid synthetase, 193-4
- Raman optical activity due to isotopic substitution: (1S)-4,4-dideuterioadamantan-2-one, 259-60
- Stereochemistry of the S<sub>N</sub>2' reaction with acyclic allylic esters, 454-5
- A new mechanism for the formation of cyclopropane derivatives in the thermolysis of pyrazolines, 461-2
- (1.3) Shifts of potassium alkoxides: the bicyclo(3.2.0)heptene-norbornene transformation, 479-80
- Stereoselective conversion of vitamin D<sub>3</sub> into its  $3\beta$ -halogenated derivatives. The synthesis of a 1 $\alpha$ -hydroxy- $3\beta$ -fluorovitamin D<sub>3</sub> analogue, 554-5
- Stereochemistry of the transition state of hydrogen abstraction by vinyl radicals, 574-5
- Stereochemistry of the reduction of nicotinic acid when it serves as a precursor of anatabine, 610-11
- Stereochemical control in the biomimetic conversion of heteroyohimbine alkaloid precursors. Isolation of a novel key intermediate, 618-19
- Asymmetric synthesis and absolute stereochemistry of the alkaloids araliposine, isoplatydesmine, and ribalinine. Dual mechanism for a dihydrofuroquinolone-dihydropyranoquinolone rearrangement 624-6
- Stereoselective cobalt-catalysed (2+2+2) cross-addition of norbornadiene and norbornene, 638-9
- Stereoselective chelate and amino acid synthesis with chelated 2-aminopropionate; crystal and molecular structures of  $\alpha$ -(N<sup>2</sup>-2-aminoethylamidino)alaninato-ONN''N'''-(ethylenediamine)cobalt(III) and  $\alpha$ -(N<sup>2</sup>-2-aminoethylamidino)alanine-NN''N'''-(chloro)ethylenediaminecobalt(III) tetrachlorozincates, 647-9
- Microbial stereo-differentiating reduction of the carbonyl groups

- located on the  $C_2$  axes of gyrochiral molecules, 667-8
- Microbial stereo-differentiating reduction of carbonyl compounds; proposed quadrant rule, 668-7
- Condensed tannins. Circular dichroism method of assessing the absolute configuration at carbon-4 of 4-arylflavan-3-ols, and stereochemistry of their formation from flavan-3,4-diols, 698-700
- Stereoconservative transformation of secologanin into meroquinone and its derivatives, 725-6
- Carbonyl insertion at chloro(alkyl- or -aryl) (methylphenylphosphine)carbonylplatinum: critical effects of stereochemistry and the nature of the alkyl or aryl group, 819-20
- Absence of common five-coordinate intermediates in the induced reactions of some cobalt(III)-acido complexes, 892-4
- Effect of solvent on the oxy-Cope rearrangement of the 4-isopropenyl-3,7-dimethylocta-1,6-dien-3-ol diastereomeric system, 972-3
- Orientation in elimination from carbanions, 975-6
- Stereochemistry of 1,4-addition of molecular deuterium to 2-methylbuta-1,3-diene over thorium dioxide, magnesium oxide, and dilanthanum trioxide, 1091-2
- STEREOELECTRONIC CONTROL**  
Stereo-electronic control of acetal hydrolysis, 803-4
- STEREOSELECTIVE**  
Synthesis of the first example of an optically active hexaorganoditin 81-2
- Stereoselective reduction of 3-O-hexofuranosyl S-methyl dithiocarbonates with tributyltin deuteride, 449-50
- Isomerization of allyl ethers catalysed by the cationic iridium complex  $(Ir(\text{cyclo-octa-1,5-diene})(PMePh_2)_2)PF_6$ . A highly stereoselective route to trans-propenyl ethers, 694-5
- STEREOSELECTIVE DEACYLATION**  
Stereoselective reaction of p-nitrophenyl N-acyl-phenylalanines with N-acyl-L-histidine in mixed micelles, 984-5
- STEREOSELECTIVITY**  
Unusual stereoselectivities in olefin metathesis, 341-2
- Stereoselectivities in competing (1,2) and (1,3) rearrangements, 672-3
- STEREOSPECIFIC**  
Partial asymmetric synthesis of substituted trans-2,3-diaryloxiranes using optically active arsonium ylides, 346-7
- A new use of cyclofunctionalization with selenenyl reagents: an example of carbon-carbon bond formation, 441-2
- STEREOSPECIFIC PREPN**  
Stereospecific synthesis of chiral acetic acid from glycine, 967-8
- STERIC EFFECT**  
Structural barriers to the rates of electron transfer of copper complexes. Oxidation of cytochrome c (II) by copper(II) complexes, 370-2
- Rate acceleration by steric inhibition to solvation of sulphur nucleophiles in acyl transfer processes. A comparison of steric effect in nucleophilic substitutions at carbonyl and aromatic carbon atoms, 613-14
- Stereo-electronic control of acetal hydrolysis, 803-4
- Bulky alkyls and a hydridoalkyl of zirconium(IV): influence of steric constraints upon (i) conformation and the zirconium-carbon rotational barrier and (ii) the zirconium-carbon bond length. X-ray crystal and molecular structure of  $(Zr(\eta-C_5H_5)_2)(CH(SiMe_3)_2)Ph$ , 1081-3
- STERIC HINDRANCE**  
Steric effects on chelation in carbon-13 nuclear magnetic resonance spectra of  $\beta$ -diketone enolates, 965-7
- STERIC MECHANISM**  
Steric mechanism of formation of the PdCl  $\pi$ -allyl derivative from (6 $\beta$ -<sup>2</sup>H)cholesterol-4-ene, 747-8
- STERIOD**  
Convenient preparation of esters of testosterone and 19-norethisterone with hindered acids, 980-1
- STERIOD**  
Mechanism of formation of 4-6 $\eta$ -3-oxo steroid-PdCl complexes, 15-16
- Investigations on the ring contraction step in the biosynthesis of A-nor-stanols by the marine sponge *Axinella verrucosa*, 524-5
- New approach to the aromatization of ring B in 19-norsteroids and to the synthesis of equilenin-type compounds, 916-18
- STEROIDAL**  
Reduction of natural enones in the presence of cerium trichloride, 601-2
- STEROIDAL DIENE**  
Retro-1,4-cycloaddition of adducts derived from steroidal 5,7-dienes and 4-phenyl-1,2,4-triazoline-3,5-dione, 727-8
- STEROIDAL KETONE**  
Dehydrogenation of steroidal ketones using benzeneseleninic anhydride, 130-1
- Novel carbon-carbon bond cleavage of  $\alpha$ -azido steroidal ketones, 409-10
- STEROIDAL KETONES**  
Ready formation of enol ethers in steroidal 20 $\beta$ -hydroxy-18-methyl-18-ketones, 241
- STILBENE**  
Addition of 3-nitrosobut-3-en-2-one to olefins and to electron-rich heterocycles, 847-9
- STREPTOMYCES**  
X-ray structure of the antibiotic rutamycin, 318-19
- X-ray determination of the structure of the polyether antibiotic K-41, 682-3
- Structure of the polyether antibiotic K-41 by mass and nuclear magnetic resonance spectrometry, 683-4
- X-ray structure of staurosporine: a new alkaloid from a Streptomyces strain, 800-1
- STRIATIN A**  
Striatin A, B, and C: novel diterpenoid antibiotics from *Cyathus striatus* X-ray crystal structure of striatin A, 665-6
- STRONTIUM**  
Alkaline earth metal complexes of pyridinyl containing Schiff base macrocycles: X-ray crystal and molecular structures of the calcium and strontium complexes, 279-80
- STRUCTURE**  
An octahedral rhenium(III) cluster: X-ray crystal structure of  $Na_4Re_6S_{10}(S_2)$ , 879-80
- STRYCHNOS**  
New synthetic routes to synthons for the synthesis of functionalized *Aspidosperma* alkaloids, 943-4
- STRYPHINATE**  
Isotope effects in molecular complexes of naphthalene, 455-6
- STYRENE**  
X-ray molecular structure and reactions of bis(styrene) bis(triphenylphosphine)ruthenium(0); the first sixteen-electron ruthenium(0) species, 463-4
- Palladium-promoted vinylic hydrogen substitution of alkenes by Grignard reagents. Stoichiometric and catalytic reactions, 918-19
- STYRYLCOBALT**  
Selective cyanation of bromostyrenes by pentacyanocobaltate(II) and nuclear magnetic resonance evidence for the formation of intermediate  $\sigma$ -styryl-cobalt(III) and  $\eta$ -cinnamionitrile-cobalt(I) cyano-complexes, 1059-61
- SUBSTITUENT EFFECT**  
Differing substituent effects on rates and regioselectivities in the di- $\pi$ -methane rearrangement. New photochemical theory: excitation distribution (the  $\Delta P$  matrix), reaction inhibition by vertical excited state stabilization, ground Vs. excited state control, 228-30
- Effect of substituents on the reactivity of a double bond towards ( $\pi_4s + \pi_2s$ ) and epoxidation reactions: a chemical manifestation of orbital interactions through space, 296-7
- Unusual stereoselectivities in olefin metathesis, 341-2
- Thermal rearrangement of alkoxy-cyclobutanes, 392-3
- Versatility of cycloaddition of electrophilic alkynes to  $\eta^2$ -CS<sub>2</sub> metal complexes. Reversible isomerization of 1,3-dithiol 2-ylideneiron and heterometallic complexes, 573-4
- Electronic excited states of small ring compounds. Substituent effects on the photochemical ring cleavage of 3,3-dimethyl-1,2-dialkylcyclopropenes, 743-4
- Carbonyl insertion at chloro(alkyl- or -aryl) (methylphenylphosphine)carbonylplatinum: critical effects of stereochemistry and the nature of the alkyl or aryl group, 819-20
- Asymmetric substituent effect on the reaction of (R)- and (S)-indan-1-carboxylic acids with (S)- $\alpha$ -phenylethylamine derivatives, 830
- Inverse substituent effect in an imido-yl azide to tetrazole cyclization limited by nitrogen inversion, 871-3
- Orientation in elimination from carbanions, 975-6
- Biphasic photochemistry: the photo-Fries rearrangement on silica gel, 1109-10
- SUCCINIMIDE CHLORO**  
Cleavage of  $\alpha$ -(phenylthio)alkylboron compounds to

- monothioacetals and acetals, 357-8
- SUCROSE PIVALOYL**  
Selective esterification of sucrose using pivaloyl chloride, 664-5
- SUGAR**  
Stereospecific synthesis from noncarbohydrate precursors of the deoxy and methyl branched deoxy sugars L-amicetose, L-mycarose, and L-olivomycose, 299-300  
Introduction, substitution, and elimination of bromine at C-5 of aldopyranose peresters, 1019-20  
Sugar equilibria. Observation of a septanose anomer, 1073-4
- SUGARS**  
Stereoselective reduction of 3-O-hexofuranosyl S-methyl dithiocarbonates with tributyltin deuteride, 449-50
- SULFIDE**  
An octahedral rhenium(III) cluster: X-ray crystal structure of  $\text{Na}_4\text{Re}_6\text{S}_{10}(\text{S}_2)$ , 879-80
- SULFUR**  
Synthesis of sulphur-containing prostacyclin  $\text{PGI}_1$  analogues, 6,9-epithio- $\text{PGI}_1$ , its S-oxide stereoisomers, and its SS-dioxide, 375-7  
Reaction of diborane with benzoxazole and its sulphur and selenium analogues. A novel rearrangement to benzoxaboroles, benzothiazaboroles, and benzoselenazaboroles, 971
- SULPHAMATE**  
Trimethylammoniosulphate esters, 48-9
- SULPHATE**  
The role of stress in nucleus development during dehydration of certain alums, 273-4
- SULPHATE AMMONIO**  
Trimethylammoniosulphate esters, 48-9
- SULPHENAMIDE**  
New syntheses of 1,4,2,4-benzothiadiazines, 1049-50
- SULPHENYL**  
Energy barrier for E-Z isomerization of N-sulphenylimines, 156-7
- SULPHENYL CHLORIDE**  
New syntheses of 1,4,2,4-benzothiadiazines, 1049-50
- SULPHENYLATION**  
Hydrogen bond assisted organic reactions: C- and O-alkylations, sulphenylations, and Michael additions aided by polymer immobilized fluoride ion, 466-7  
Drifluor reagents: non-hygroscopic sources of the fluoride ion, 789-91
- SULPHIDE**  
Formation and electron spin resonance spectra of subphuranyl radicals of the type  $(\text{CF}_3\text{SSR}_2)_n$ , 623-4  
The chemistry of thioesters. Conversion into monothioacetals, ketones and vinyl sulfides, 719-20  
Convenient synthesis of allenyl sulphides; application to the synthesis of  $\alpha\beta$ -unsaturated ketones, 822-4  
Introduction of sulphur into organic molecules via lithium triethylborohydride reduction of  $\text{S}_8$ , 838-9  
Photo-sensitized oxidation of sulphur and pyridinium ylides. Oxygen atom transfer to divalent sulphur, 894-5  
Substitution of allylic sulphides of benzothiazole-2-thiol with organomagnesium compounds in the presence of copper(I) iodide. A regioselective synthesis of olefins, 1085-6
- SULPHIDO**  
Detection of the new reactive molecule methyl(sulphido)boron, MeBS, by microwave spectroscopy, 19-20
- SULPHIDOPLATINATE**  
Inorganic optical activity, 936-7
- SULPHIMIDE**  
Fluorinated dichloro hexa- and penta-coordinated sulphur(VI) compounds, 154-5
- SULPHINYL RADICAL**  
Detection of aromatic sulphinyl ( $\text{ArSO}\cdot$ ) radicals during the photolysis and thermolysis of S-aryl arenethiosulphonates and diaryl sulphoxides, 78-9
- SULPHONE**  
Conformational control in eliminations with the  $(\text{E}_1\text{cB})_R$  mechanism, 43-4  
The kinetic effect of ring strain in an elimination reaction, 338-9  
Phenyl trans-2-chlorovinyl sulphone, a vinyl cation equivalent, 914-15
- SULPHONIUM**  
Evidence for the participation of a nitrile group in (2,3) sigmatropic rearrangements of sulphonium ylides, 274-5  
General synthesis of oxiranes, 785-6  
Photo-sensitized oxidation of sulphur and pyridinium ylides. Oxygen atom transfer to divalent sulphur, 894-5
- SULPHONYL**  
Pyranosultone: a novel binuclear heterocyclic system, 325-6  
Anti-Markownikoff 1,2-hydrosulphonylation of 1,3-dienes via  $\pi$ -allylpalladium complexes, 367-8
- SULPHONYLATION**  
Reactions of sulphur nucleophiles with activated derivatives of clavulanic acid, 467-8
- SULPHONYLHYDRAZONE**  
Novel synthesis of  $\alpha$ -methylene- $\gamma$ -lactones, 1071-2
- SULPHOXIDE**  
Detection of aromatic sulphinyl ( $\text{ArSO}\cdot$ ) radicals during the photolysis and thermolysis of S-aryl arenethiosulphonates and diaryl sulphoxides, 78-9  
A new synthesis of conjugated dienones, 608  
Solvent transfer hydrogenation of  $\alpha\beta$ -unsaturated aldehydes to the unsaturated alcohols catalysed by hydrido-iridium sulphoxide complexes, 929-30
- SULPHUR**  
A bicyclic sulphur-nitrogen cation: the synthesis and crystal structure of  $\text{S}_4\text{N}_5\text{Cl}$ , 212-13  
X-ray crystal structure of  $(\text{AsPh}_4)^+(\text{NSF}_2\text{NSO}_2\text{F})^-$ : three different types of sulphur-nitrogen bonds in the anion, 226  
Polymeric sulphur nitride electrode: an example of electrocatalysis by surface chemical modification, 244-5  
Photopolymerization of  $\text{S}_2\text{N}_2$  to  $(\text{SN})_x$ , 301-2  
A planar, cyclic sulphur-nitrogen anion: the X-ray crystal and molecular structure of  $(\text{Bu}_4\text{N})^+(\text{S}_3\text{N}_3)^-$ , 391-2  
Synthesis and molecular geometry of novel di- and tri-nuclear iron complexes resulting from the interaction of  $(\text{Fe}_2(\text{CO})_9)$  with  $\text{R}-\text{N}=\text{S}=\text{N}-\text{R}$  ( $\text{R} = \text{tert-butyl}$  or  $p\text{-tolyl}$ ); X-ray crystal structures of  $(\text{Fe}_2(\text{CO})_6(\text{RNC}(\text{O})\text{S}))$  and  $(\text{Fe}_3(\text{CO})_9(\text{RNS})\text{S})$ , 506-7  
Preparation and crystal structure of a new sulphur nitride,  $\text{S}_5\text{N}_6$ ; a molecular basket, 642-3  
Solvation as the determining factor for the redox potential of  $\text{Fe}_4\text{S}_4(\text{S}(\text{CH}_2)_n\text{CO}_2)_6$  cluster ions, 703-4  
Iron porphyrins containing appended sulphur ligands, 705-7  
X-ray crystal and molecular structure of  $(\text{W}_2\text{S}_8\text{Ag}_4(\text{PPh}_3)_4)$ , a compound having a novel metal-sulphur cage fused by two connected six-membered  $\text{WS}_3\text{Ag}_2$  rings, 739  
Crystal structure of tris(tetra-n-butylammonium) tri- $\mu$ -benzenethiolatobis(tri- $\mu$ -sulphido- $(\mu_3$ -sulphido-tris(benzenethiolatoiron))molybdenum)  $(\text{Bu}_4\text{N})_3((\text{PhSFe})_3\text{MoS}_4)_2(\text{SPh})_3$ ; an  $\text{Fe}_3\text{MoS}_4$  cubic cluster dimer, 740-1  
Crystal and molecular structure of 3,3'-thiobis(2-methyl-1-phenylimidazo-(1,5-a)pyridinium) bistetrafluoroborate; a potent new sulphur containing curariform agent, 816-17  
Introduction of sulphur into organic molecules via lithium triethylborohydride reduction of  $\text{S}_8$ , 838-9
- SULPHUR BRIDGE**  
Synthesis of some diplatinum complexes, including bis- $\mu$ -(bis(diphenylphosphino)methane)- $\mu$ -methylene-dichlorodiplatinum,  $(\text{Pt}_2\text{Cl}_2(\mu\text{-CH}_2)(\mu\text{-Ph}_2\text{PCH}_2\text{PPh}_2)_2)$ , from  $(\text{Pt}_2\text{Cl}_2(\mu\text{-Ph}_2\text{PCH}_2\text{PPh}_2))$ , 749-51
- SULPHUR DIOXIDE**  
Sulphur dioxide mediated conversion of strained furazan N-oxides into diisocyanates, 113-14  
Matrix isolated 1,2-oxathietan-4-one 2-oxide: a  $2\pi + 2\pi$  adduct of sulphur dioxide and ketene, 1020-22
- SULPHUR INVERSION**  
Sulphur inversion in dimolybdenum complexes: X-ray crystal structure of  $(\text{Mo}_2(\text{CO})_2(\text{P}(\text{OMe})_3)(\mu_2\text{-SCMe}_3)_3(\eta^7\text{-C}_7\text{H}_7))$ , 878-9
- SULPHUR NUCLEOPHILE**  
Reactions of sulphur nucleophiles with activated derivatives of clavulanic acid, 467-8
- SULPHURANYL**  
Formation and electron spin resonance spectra of subphuranyl radicals of the type  $(\text{CF}_3\text{SSR}_2)_n$ , 623-4
- SULPHURATION**  
Preparation of some S-methyl thiiranium salts of adamantylideneadamantane. Demethylation and desulphurization with nucleophiles, 630-1  
A new group of nitroxide free radicals formed from aliphatic nitrosamines and thiols, 741-2  
Regiospecific synthesis of 1,7-dialkylthiocycloheptatrienes. A case of rapid (1,7) sigmatropic migration of unhindered alkylthio-groups, 945-6

## SULPHURIC ACID

Mechanism of formation of 4-methyl- and 4-chloro-2-nitrophenol in the nitration of 4-methyl- and 4-chloro-anisole, respectively, in aqueous sulphuric acid, 180-1

Determination of the basicity of nitric acid in concentrated sulphuric acid by Raman and ultraviolet spectroscopy, 873-4

## SULTONE

Pyranosultone: a novel binuclear heterocyclic system, 325-6

## SUPEROXIDE

Electrocatalytic formation of superoxides in the presence of cobalt chelates, 339-40

Study of the Haber-Weiss reaction using a sensitive method for detection of hydroxyl radicals, 970-1

## SUPPORT

Chain ends as supports for  $\alpha$ -helical structures in oligopeptides, 692-3

Very active hydrogenation catalyst composed of extremely dispersed palladium on vitreous supports, 979-80

## SURFACE

Changes in surface composition of a cobalt-molybdenum binary oxide catalyst during various treatments studied by X-ray photoelectron spectroscopy, 47-8

Resolved nitrogen-14 hyperfine coupling for surface electrons on magnesium oxide in the presence of ammonia and amines, 71-2

Polymeric sulphur nitride electrode: an example of electrocatalysis by surface chemical modification, 244-5

Formation of surface phosphate phases on metallic iron, 308-9

Analysis of ultra-thin fluorine-containing layers on polyethylene by  $^{19}\text{F}(\text{p},\text{x}\gamma)$  spectrometry, 1011-12

## SURFACTANT

Photoredox reaction in micellar solutions sensitized by surfactant derivative of tris(2,2'-bipyridyl)ruthenium(II), 628-30

## SYNTHESIS

Novel isoflavan-pterocarpan interconversions: some structural requirements for cyclization, 224-5

## TANNIN

Condensed tannins: determination of the point of linkage in 'terminal' (+)-catechin units and degradative bromination of 4-flavanylflavan-3,4-diols, 696-8

Condensed tannins. Circular dichroism method of assessing the absolute configuration at carbon-4 of 4-arylflavan-3-ols, and stereochemistry of their formation from flavan-3,4-diols, 698-700

Condensed tannins: direct synthesis, structure, and absolute configuration of four biflavonoids from black wattle bark ('mimosa') extract, 700-2

## TANTALUM

Preparation and molecular structure of  $(\text{Ta}(\text{H}_2\text{Al}(\text{OC}_2\text{H}_4\text{OMe})_2)(\text{Me}_2\text{PC}_2\text{H}_4\text{PMe}_2)_2)_2$ , a coordinatively unsaturated aluminohydride adduct of tantalum(I), 500-1

Structure and reactivity in the group 5B tert-butylimido complexes  $(\text{Me}_2\text{N})_3\text{M}=\text{NCMe}_3$ ; X-ray crystal and molecular structure of N-tert-butylimidotris(dimethylamido)tantalum, 579-80

A new approach to cationic transition metal alkyls:  $(\text{M}(\eta\text{-C}_5\text{H}_5)_2(\text{CH}_2\text{SiMe}_3)_2)^+(\text{Y})^-$  ( $\text{M} = \text{Nb}$  or  $\text{Ta}$ ,  $\text{Y} = \text{BF}_4$  or  $\text{SbF}_6$ ) and their conversion into the alkylidene complexes  $(\text{M}(\eta\text{-C}_5\text{H}_5)_2(\text{CHSiMe}_3)(\text{CH}_2\text{SiMe}_3))$ , 925-6

Evidence for an almost 'T-shaped' coordination geometry for carbon in the bis(alkylidene) complex  $\text{Ta}(\text{CHCMe}_3)_2(2,4,6\text{-Me}_3\text{C}_6\text{H}_2)(\text{PMe}_3)_2$ : X-ray crystal structure, 1048-9

## TCNE

1,7-Cycloadditions of dichlorodicyano-p-benzoquinone and tetracyanoethylene to a dienylcyclopropane, 633-4

## TCNQ

'Organic metals': alkylthio substitution effects in tetrathiafulvalene-tetracyanoquinodimethane charge-transfer complexes, 18-19

Comments on the preparation of the one-dimensional conductor N-methylphenazinium 7,7,8,8-tetracyanoquinodimethanide, 331-2

Organic metals: a new class of conducting ion-radical salts based on 7,7,8,8-tetracyanoquinodimethane and iodine, 337-8

Cycloaddition of sterically hindered 1,2-dicyclopropylethylenes with tetracyanoquinodimethane; one-step formation of (10) paracyclophadienes, 864-5

'Organic metals' with asymmetric acceptors: the monofluorotetracyanoquinodimethane anion, 992-3

## TECHNETIUM

Production, detection, and characterization of transient hexavalent technetium in aqueous alkaline media by pulse radiolysis and

very fast scan cyclic voltammetry, 1038-40

## TELLURIUM

Insertion of selenium, tellurium, or arsenic atoms into borane cage compounds using element oxide reagents, 349-50

Identification of the species  $(\text{Te}_n\text{Se}_{4-n})^{2+}$  by high resolution tellurium-125 and tellurium-123 Fourier transform NMR spectroscopy, 956-7

125-Tellurium and 77-selenium multinuclear magnetic resonance studies of  $\text{Te}_6^{4+}$ ,  $\text{Te}_{4-n}\text{Se}_n^{2+}$ ,  $\text{Te}_2\text{Se}_4^{2+}$ , and  $\text{Te}_3\text{Se}_3^{2+}$  polyatomic cations, 957-60

## TEMISIN

Structure and total synthesis of temisin, 76-8

## TERBIUM

Neutral and anionic silylmethyl complexes of Group\*IIIa and lanthanoid metals; the X-ray crystal and molecular structure of  $(\text{Li}(\text{thf})_4)(\text{Yb}(\text{CH}(\text{SiMe}_3)_2)_3\text{Cl})$  (thf = tetrahydrofuran), 140-2

## TERNARY

The quenching of aromatic hydrocarbon fluorescence by  $\alpha,\omega$ -diaminoalkanes and the formation of excited ternary complexes, 911-13

## TERPENE

Andilesin, a  $\text{C}_{25}$  polyisoprenoid from *Aspergillus* sp. X-ray crystallographic and spectroscopic determination of the structure, 533-4

Biosynthesis of andibenin, a novel polyketide terpenoid metabolite of *Aspergillus varicolor*, 626-7

Striatin A, B, and C: novel diterpenoid antibiotics from *Cyathus striatus* X-ray crystal structure of striatin A, 665-6

## TERPENOID

Clausmarins A and B: two novel spasmodic terpenoid coumarins from *Clausena pentaphylla* (Roxb.)DC, 281-2

Reduction of natural enones in the presence of cerium trichloride, 601-2

Use of deuterium as a tracer with carbon-13 nuclear magnetic resonance spectroscopy in following deuteride migration in terpenoid biosynthesis: mechanism of geranylgeranyl pyrophosphate cyclization in fusicoccin biosynthesis, 843-5

Microbiological production of 9 $\alpha$ -fluorogibberellin A<sub>4</sub>, 9 $\alpha$ -fluorogibberellin A<sub>14</sub>, and other fluoroterpenoids, 1013-15

## TERPHENYL

Novel carbon-carbon reductive cleavage of terphenyls with alkali metal-hexamethylphosphoric triamide, 153-4

## TESTOSTERONE

A mild, regiospecific but-2-enolide synthesis and a convenient preparation of acylated dienes, 311-12

Reduction of natural enones in the presence of cerium trichloride, 601-2

Convenient preparation of esters of testosterone and 19-norethisterone with hindered acids, 980-1

## TETRAAZACYCLOTETRADECANE

Synthesis and metal complexes of mono-N-substituted tetraazamacrocycles, 14-15

## TETRACHLOROCHROMATE

Correlation of magnetic and optical properties in the organic-intercalated two-dimensional ionic ferromagnet

bis(monomethylammonium) tetrachlorochromate(II), 511-12

## TETRACYCLODODECENE

Effect of substituents on the reactivity of a double bond towards  $(\pi_4s + \pi_2s)$  and epoxidation reactions: a chemical manifestation of orbital interactions through space, 296-7

## TETRACYCLOTRIDECATRIENE

Novel reaction of 2-aryl-3,3-dimethylbicyclo(2.2.1)heptan-2-yl cations; X-ray crystal and molecular structure of 11-fluorosulphonyl-7,8,12-trimethyltetracyclo(7.4.0.0<sup>2,7</sup>.0<sup>4,8</sup>)trideca-1(9),10,12-triene, 111-12

## TETRAHYMENA

Nonoxidative cyclization of squalene by *Tetrahymena pyriformis*. The incorporation of a 3 $\beta$ -hydrogen (deuterium) atom into tetrahymanol, 333-4

## TETRALONOL

A general route to substituted naphthols, 162-4

## TETRAOXAPHOSPHATRICYCLOUNDECANE

Reaction of o-hydroxyacetophenone with dichlorophenylphosphine X-ray crystal and molecular structure of an unusual tricyclic tetraoxaphospha-undecane, 510-11

## TETRAPANAX

X-ray analysis of the triterpene papyriogenin G, 364-5



**TETRATHIAFULVALENE**

'Organic metals': alkylthio substitution effects in tetrathiafulvalene-tetracyanoquinodimethane charge-transfer complexes, 18-19  
Copper derivatives of tetrathiafulvalene, 69-70  
Vinyltetrathiafulvalene, 832-3

'Organic metals' with asymmetric acceptors: the monofluorotetracyanoquinodimethane anion, 992-3

**TETRATHIANE**

Electrochemical formation of a tetrathiane ring, 809-10

**TETRATHIOQUINODIMETHANE**

Tetrathio-derivatives of quinodimethane. Synthesis and ion-radical complex formation of cyclohexa-2,5-diene-1,4-diyldienebis-1,3-benzodithiole derivative, 74-5

**TETRAZINE**

Effect of substituents on the reactivity of a double bond towards ( $\pi_4 + \pi_2$ ) and epoxidation reactions: a chemical manifestation of orbital interactions through space, 296-7

**TETRAZOLE**

Inverse substituent effect in an imidoyl azide to tetrazole cyclization limited by nitrogen inversion, 871-3

**TETRONIC ACID**

Total synthesis and stereostructure of methyl (E)-O-methylmulticolanate, a 4-ylidenetetrone acid from *Penicillium multicolor*, 60-1

**THALLIUM**

Bromodemallation of  $\beta$ -methoxyphenethylthallium(III) diacetate and  $\beta$ -methoxyphenethylmercury(II) acetate with copper-(I) and -(II) bromide, direct evidence for alkyl radicals in bromodethallation by the spin trapping technique, 65-6  
Deuteriated cyclopentadienyls of thallium and other metals, 709  
X-ray crystal structure of the thallium salt of antibiotic-6016, a new polyether ionophore, 875-6

**THALLIUM CARBON**

Reductant-induced homolysis of the thallium-carbon bond: novel oxygenation of alkylthallium(III) compounds with ascorbic acid, 716-17

**THERMAL**

Stereospecific double rearrangement of anti-1,5-bishomocycloheptatriene. A rebound path of thermal rearrangement involving intermediate geminal hydrogen interchange, 365-6

Synthesis of fluorinated dienes and cyclobutenes, 475-6

Thermal fission and reformation of the carbon-nitrogen bond in formamide as studied by carbon-13-nitrogen-15 coupling, 485-6

Thermal and photochemical rearrangements of 3H-thieno-1,2-diazepines, 568-9

Thermal isomerization of methyl linoleate hydroperoxides. Evidence of molecular oxygen as a leaving group in a radical rearrangement, 756-7

Base catalysed and thermal rearrangements of grisadiendiones to depsidones, 1043-4

**THERMAL ELIMINATION**

Thermal conversion of 2-ethoxypyridine into 2-pyridone; an analogue of ester pyrolysis, 732-3

**THERMODYNAMICS**

Thermodynamics of formation of 18-crown-6 complexes with arenediazonium and anilinium salts in methanol at 25°C, 386-7  
Solvation of the halogen acids in N-methylpropionamide, 523-4

**THERMOLYSIS**

Detection of aromatic sulphinyl (ArSO $\cdot$ ) radicals during the photolysis and thermolysis of S-aryl arenethiosulphonates and diaryl sulphoxides, 78-9

Benzisoxazolo(2,3-a)pyridinium tetrafluoroborates. Possible generation of an aryloxonium ion, 149-50

A new mechanism for the formation of cyclopropane derivatives in the thermolysis of pyrazolines, 461-2

Preparation and chemoselective thermolysis of potential azatricyclic synthons containing an eight-membered nucleus, 915-16

Synthesis of 3-arylisquinolines by thermolysis of 3-aryl-1,2-dihydroisquinolin-4(3H)-one salts, 1026-7

**THIABENZENE OXIDE**

X-ray crystal structures of a thiabenzene 1-oxide and its 2-azathia-analogues, 197-8

**THIADIAZOLINE**

The constitution of Hector's base; X-ray crystal and molecular structure of 5-imino-4-phenyl-3-phenylamino-4H-1,2,4-thiadiazoline, 652-4

**THIAFULVALENE**

'Organic metals' with asymmetric acceptors: the

monofluorotetracyanoquinodimethane anion, 992-3

**THIAZINE**

Linear free energy relations in intramolecular aromatic ipso-substitutions by substituted methyl radicals, 166-7

**THIAZOLINETHIOL**

Efficiently monitored reduction of carboxylic acids into alcohols or aldehydes via 2-thiazoline-2-thiol esters by sodium borohydride or diisobutylaluminium hydride, 330

**THIENODIAZEPINE**

Thermal and photochemical rearrangements of 3H-thieno-1,2-diazepines, 568-9

**THIENOPYRAZOLE**

Novel ring transformation of a thiophene into a pyrrole, 453  
Thermal and photochemical rearrangements of 3H-thieno-1,2-diazepines, 568-9

**THIENYLHEXENYLCYCLOPENTENOL**

cis-BC ring fusion upon (E)-polyene cyclizations, 1103-5

**THIIRANIUM**

Preparation of some S-methyl thiiranium salts of adamantylideneadamantane. Demethylation and desulphurization with nucleophiles, 630-1

**THIO**

Metal-metal interactions in 2-Fe ferredoxins; SCF-X $\alpha$ -SW calculations, 1027-9

**THIO ESTER**

The chemistry of thioesters. Conversion into monothioacetals, ketones and vinyl sulfides, 719-20

**THIOACETAL**

Cleavage of  $\alpha$ -(phenylthio)alkylboron compounds to monothioacetals and acetals, 357-8

The chemistry of thioesters. Conversion into monothioacetals, ketones and vinyl sulfides, 719-20

**THIOALLENYL**

New synthesis of conjugated ketones from 2-phenylthioallyl and -allenyl alcohols, 821-2

**THIOALLYL**

New synthesis of conjugated ketones from 2-phenylthioallyl and -allenyl alcohols, 821-2

**THIOBENZOATE**

Electrochemical formation of a tetrathiane ring, 809-10

**THIOBISIMIDAZOPYRIDINIUM**

Crystal and molecular structure of 3,3'-thiobis(2-methyl-1-phenylimidazo-(1,5-a)pyridinium) bistetrafluoroborate; a potent new sulphur containing curariform agent, 816-17

**THIOCAMPHOR**

Reaction of ozone with vinyl sulphides. Reactions retaining hydrocarbon chains, 1032-3

**THIOCARBAMOYLATION**

Reactions of sulphur nucleophiles with activated derivatives of clavulanic acid, 467-8

**THIOCARBONYL**

Conversion of thiocarbonyl compounds into their corresponding oxo derivatives using benzeneseleninic anhydride, 393-4

**THIOCARBOXYLATION**

Reactions of sulphur nucleophiles with activated derivatives of clavulanic acid, 467-8

**THIOCYANATE**

Conversion of primary aliphatic amines into thiocyanates and thiocarbonate esters, 133-4

Preparation of derivatives of a new heterocyclic system: 2-N $\cdot$  acylimino-1,3-oxaselenoles, 447-8

Novel synthesis of isothiocyanatophosphoranes and isothiocyanatophosphonium salts via ligand substitution. Versatile reagents for converting hydroxy groups into thiocyanate and isothiocyanate functions, 940-1

**THIOESTER**

Conversion of thiocarbonyl compounds into their corresponding oxo derivatives using benzeneseleninic anhydride, 393-4

**THIOL**

Synthesis of sulphur-containing prostacyclin PGI $_1$  analogues, 6,9-epithio-PGI $_1$ , its S-oxide stereoisomers, and its SS-dioxide, 375-7

A new group of nitroxide free radicals formed from aliphatic nitrosamines and thiols, 741-2

Sulphur inversion in dimolybdenum complexes: X-ray crystal structure of (Mo $_2$ (CO) $_2$ (P(OMe) $_3$ )( $\mu_2$ -SCMe $_3$ ) $_3$ ( $\eta^7$ -C $_7$ H $_7$ )), 878-9

**THIOLATE**

Regiospecific carbon-2-addition of thiolates to

- methoxytropylium ion. The first practical entry to the monocyclic 1,7-difunctionalized cycloheptatriene series, 710
- THIOLYSIS**  
Molecular catalysis: enhanced rates of thiolysis with high structural and chiral recognition in complexes of a reactive macrocyclic receptor molecule, 949-51
- THIONITRITE**  
An unusually stable thionitrite from N-acetyl-D,L-penicillamine; X-ray crystal and molecular structure of 2-(acetylamino)-2-carboxy-1,1-dimethylethyl thionitrite, 249-50
- THIONITROSYL**  
Thionitrosyl ligand; X-ray molecular structure of dicarbonyl( $\eta^5$ -cyclopentadienyl)thionitrosylchromium, 1036-7
- THIOPHENE**  
Rhodium(II)-catalysed addition of dimethyl diazomalonate to thiophene: a simple synthesis of thiophenium bismethoxycarbonylmethylides and crystal and molecular structure of the unsubstituted methylyde, 83-4  
Thermal rearrangement of thiophenium bismethoxycarbonylmethylides: a novel synthesis of thiophene-2-malonic esters, 85-6  
Novel ring transformation of a thiophene into a pyrrole, 453  
Versatility of cycloaddition of electrophilic alkynes to  $\eta^2$ -CS<sub>2</sub> metal complexes. Reversible isomerization of 1,3-dithiol 2-ylideneiron and heterometalocyclic complexes, 573-4  
Recovery of the chromium tricarbonyl unit in the removal of organic ligands from their chromium carbonyl complexes, 989-90  
cis-BC ring fusion upon (E)-polyene cyclizations, 1103-5
- THIOPHENIUM**  
Rhodium(II)-catalysed addition of dimethyl diazomalonate to thiophene: a simple synthesis of thiophenium bismethoxycarbonylmethylides and crystal and molecular structure of the unsubstituted methylyde, 83-4  
Thermal rearrangement of thiophenium bismethoxycarbonylmethylides: a novel synthesis of thiophene-2-malonic esters, 85-6  
2,5-Dichlorothiophenium bismethoxycarbonylmethylide: a bismethoxycarbonylcarbene equivalent, 641-2
- THIOPHENONE**  
Photolysis of dihydrothiophen-3(2H)-ones, 205-6
- THIOPINACOLONE**  
Reaction of ozone with vinyl sulphides. Reactions retaining hydrocarbon chains, 1032-3
- THIOPYRAN ANION**  
Unusual reactivity of the 2H-thiopyran anion in alkylation with tert-butyl bromide and cyclohexyl bromide, 596-7
- THIOSTREPTON**  
Natural abundance nitrogen-15 nuclear magnetic resonance spectroscopic evidence for the structural relation between the peptide antibiotics thiostrepton and siomycin-A, 577-8
- THIOSULPHONIUM**  
Thiosulphonium ion intermediate in the oxidation of a thiol with dimethyl sulphoxide, 865-6
- THORIUM DIOXIDE**  
Stereochemistry of 1,4-addition of molecular deuterium to 2-methylbuta-1,3-diene over thorium dioxide, magnesium oxide, and dilanthanum trioxide, 1091-2
- THUJOL**  
Mechanism of acid catalysed opening of the cyclopropane ring in the thujols, 1096-7
- THYMINYLTHYMINE**  
Synthesis of a photoproduct from ultraviolet irradiation of bacterial spores: 5,6-dihydro-5-( $\alpha$ -thyminyl)thymine, 284
- TILIACORINE**  
Absolute configuration and biosynthesis of tiliacorine and tilacorinine, 226-8
- TIN**  
New method for reduction of ketones and primary alcohols to hydrocarbons: reaction of the derived selenides with tin hydrides, 41-2  
Synthesis of the first example of an optically active hexaorganoditin 81-2  
Catalysis and solvent participation in organometallic oxidative additions (platinum(0)  $\rightarrow$  platinum(II) and tin(II)  $\rightarrow$  tin(IV)), 192-3  
Photo-enhanced production of hydrogen by liquid-phase catalytic dehydrogenation of propan-2-ol with rhodium-tin chloride complexes, 348-9  
Photolysis of cyclopentadienyltin compounds: a new source of tin-centred radicals, 353-4  
Novel synthesis of substituted allenes via organoboration of alkynylstannanes, 402-3  
Stereoselective reduction of 3-O-hexofuranosyl S-methyl dithiocarbonates with tributyltin deuteride, 449-50  
Formation and X-ray crystal structure of 1,1,6,6-tetraphenyl-1,6-distannacyclodecane, 791-2  
Lithium phenylthio(trimethylstannyl)cuprate, a new reagent for conjugate addition of the trimethylstannyl group. The synthesis of  $\beta$ -trimethylstannyl- $\alpha\beta$ -unsaturated ketones, 1033-4
- TIN METHOXIDE**  
X-ray crystal structure of Sn<sub>6</sub>O<sub>4</sub>(OMe)<sub>4</sub>: an intermediate in the hydrolysis of tin(II) dimethoxide, 112-13
- TITANIUM**  
Hydrometallation of alkenes and alkynes with magnesium hydride, 30-1  
Reactions of nitrogen oxides with di(cyclopentadienyl)titanium complexes, 234-5  
Catalytic synthesis of ethanol from carbon monoxide and hydrogen under atmospheric pressure over pyrolyzed rhodium carbonyl clusters on titanium dioxide, zirconium dioxide, and dilanthanum trioxide, 566-7  
Novel type of metallation reaction: cyclometallation of heterocyclic amines by dicyclopentadienylmethyltitanium, 659-60  
Preparation of diarenemetal complexes by potassium atom reduction, 730-1
- TOCOPHEROL**  
Chromenylation of 2-naphthol and alkylhydroquinones: short syntheses of (2R,4'R,8'R)- $\alpha$ -tocopherol (vitamin E) and (2R,4'R,8'R)- $\beta$ -tocopherol, 59-60  
The acid-sensitive proton nuclear magnetic resonance spectra of tocopherols and other derivatives of 6-hydroxychroman, 265-6
- TOLUENE**  
Arene-tungsten chemistry: bis(arene)tungsten hydride derivatives; co-condensation of tungsten atoms from an electron gun source with aromatic hydrocarbons, 72-3  
Bromide catalysis in the preparation of benzylidene trichlorides via photochlorination, 105-6  
Radical chain bromination of hydrocarbons using bis(trimethylsilyl)bromamine, 752-3  
Synthesis, X-ray crystal structure, and chemistry of the cation (( $\eta$ -MePh)Mo( $\mu$ -SMe)<sub>4</sub>Mo( $\eta$ -MePh))<sup>2+</sup>; easy D<sub>2</sub>O-NaOD catalysed hydrogen-deuterium exchange of the methyl hydrogens of a  $\eta$ -bonded toluene ligand, 1009-11
- TOLUENETHIOL**  
Thiosulphonium ion intermediate in the oxidation of a thiol with dimethyl sulphoxide, 865-6
- TOLUIC**  
Synthesis and reactions of an insoluble polymeric yneamine, 1079-80
- TOLYLMETHYLSULPHONYL**  
p-Tolylmethylsulphonyl: a new amino-protecting group in peptide synthesis, 220-1
- TOLYLSULPHONYL**  
Vacuum pyrolysis of salts of 1-acyl-2-arylsulphonylhydrazines; a general McFadyen-Stevens aldehyde synthesis, 793-4
- TOLYLSULPHONYLHYDRAZONE**  
Synthesis of allenes via reduction of acetylenic p-tolylsulphonylhydrazones, 726-7
- TORSIONAL FREQUENCY**  
Microwave spectrum, dipole moment, and quadrupole coupling constants of trans-nitrosocyclopropane, 388-9
- TOXIN**  
Characterization of 11-hydroxysaxitoxin sulphate, a major toxin in scallops exposed to blooms of the poisonous dinoflagellate Gonyaulax tamarensis, 889-90
- TRANSESTERIFICATION**  
Transesterification of alkyl phosphinates, 54-5
- TRANSFERENCE NO**  
Relative solvent transport of ions in binary aqueous mixtures: an unambiguous assignment to ionic constituents, 218-19
- TRANSITION METAL**  
Use of triorganogermyllithium compounds in transition metal chemistry. Application to the synthesis of optically active anions containing a transition metal-germanium bond, 435-6  
Graphite lamellar compounds. A new route to transition metal intercalates, 927-8
- TRANSITION STATE**  
Stereochemistry of the transition state of hydrogen abstraction by

- vinyl radicals, 574–5  
Dramatic acceleration of a concerted reaction by a methoxy group, 1025–6
- TRANSPORT**  
Relative solvent transport of ions in binary aqueous mixtures: an unambiguous assignment to ionic constituents, 218–19  
Synthesis and characterization of iron complexes of rhodotorulic acid: a novel dihydroxamate siderophore and potential chelating drug, 501–2
- TRANSPOSITION**  
New 1,2-transpositions and alkylative 1,2-transpositions of a carbonyl group, 414–15
- TRIAMANTANE**  
Regioselective functionalization of triamantane, 306–8
- TRIAZATRIOXAOCCTADECANE**  
Alkaline earth metal complexes of pyridinyl containing Schiff base macrocycles: X-ray crystal and molecular structures of the calcium and strontium complexes, 279–80
- TRIAZOLE**  
Ribopyranosyldiaminomaleonitrile: a key intermediate for the synthesis of nucleosides, 1094–6
- TRIAZOLINEDIONE**  
Retro-1,4-cycloaddition of adducts derived from steroidal 5,7-dienes and 4-phenyl-1,2,4-triazoline-3,5-dione, 727–8
- TRICYCLONONYLCARBOXYLATE**  
Reversible photochemical valence isomerization between  $\alpha$ -diazo-ketones and  $\alpha$ -keto-diazirines, 442–3
- TRICYCLOOCTANONE**  
Intramolecular photochemical cycloadditions involving enolized cyclopentane-1,3-diones. A new approach to the bicyclo(3.2.1) octane ring system, 138–40
- TRICYCLOUNDECANONE**  
Photocyclization of dicyclopent-1-enyl methanes to tricyclo(6.3.0.0<sup>2,6</sup>)undecanes: a synthesis of the hirsutane carbon skeleton, 5–6
- TRIFLUOROACETYLATION**  
Trifluoroacetylation of trialkylindoles, 845–6
- TRIMERIZATION**  
Novel derivatives of perfluorocyclobutene, 433
- TRIMETHYLSILYLMETHYL**  
A new approach to cationic transition metal alkyls:  $(M(\eta-C_5H_5)_2(CH_2SiMe_3)_2)^+(Y)^-$  ( $M = Nb$  or  $Ta$ ,  $Y = BF_4$  or  $SbF_6$ ) and their conversion into the alkylidene complexes  $(M(\eta-C_5H_5)_2(CHSiMe_3)(CH_2SiMe_3))$ , 925–6
- TRINITROGEN**  
A planar, cyclic sulphur–nitrogen anion: the X-ray crystal and molecular structure of  $(Bu_4N)^+(S_3N_3)^-$ , 391–2
- TRIOXAADAMANTANE**  
Ortho ester hydrolysis: rate determining addition of water to a carboxonium ion intermediate, 678–9
- TRIPLET**  
Triplet state of protoporphyrin IX, 51–2
- TRIPLET STATE**  
A triplet state path for adduct formation between benz(a)anthracene and the penta-1,3-dienes, 588–9
- TRIPTYCENE**  
5,8-Dihydroxy-9,10-dihydro-9,10-(1,2)benzoanthracene-1,4-dione. An intramolecular triptycene quinhydrone, 720–1
- TRISACCHARIDE**  
Chemical synthesis of 2-O-( $\alpha$ -L-fucopyranosyl)-3-O-(2-acetamido-2-deoxy- $\alpha$ -D-galactopyranosyl)-D-galactose, the terminal structure in the blood-group A antigenic determinant, 535–7
- TRISILACYCLOPENTENE**  
Formation of a new silicon-containing ring system, 1,1,2,2,3,3-hexamethyl-4,5-diphenyl-1,2,3-trisilacyclopent-4-ene, 1029–30
- TRISULPHUR**  
A planar, cyclic sulphur–nitrogen anion: the X-ray crystal and molecular structure of  $(Bu_4N)^+(S_3N_3)^-$ , 391–2
- TRITERPENE**  
X-ray analysis of the triterpene papyriogenin G, 364–5
- TRITHIAPENTACYCLOOCTADECENE**  
X-ray crystal structure of 13,14,15-trithiapentacyclo(9.5.1.1<sup>3,9</sup>.0<sup>4,8</sup>.0<sup>12,16</sup>)octadec-5-ene, 658
- TRITIATED**  
Synthesis of (6-(4-<sup>3</sup>H)phenylalanine)-somatostatin of high specific radioactivity, 901–2
- TROPENYL IUM**  
Regiospecific carbon-2-addition of thiolates to methoxytropenylium ion. The first practical entry to the monocyclic 1,7-difunctionalized cycloheptatriene series, 710  
Regiospecific synthesis of 1,7-dialkylthiocycloheptatrienes. A case of rapid (1,7) sigmatropic migration of unhindered alkylthio-groups, 945–6
- TROPONE**  
Preparation and thermal rearrangement of an azaanalogue of 4,5-homotropone (bicyclo(5.1.0)octa-3,5-dien-2-one), 404–5  
Organometallic photochemistry with circularly polarized light. Synthesis of optically active tropone-iron tricarbonyl complex by asymmetric destruction, 983–4
- TROPONOID**  
Preparation of the first gem-dialkylthio-analogues of Meisenheimer complexes from troponoids, 167–8
- TRUXINATE**  
Synthesis of macrocyclic rings by internal photocycloaddition of  $\alpha$ ,  $\omega$ -dicinnamates, 400–1
- TUNGSTEN**  
Phosphorus-31 nuclear magnetic resonance and infrared spectroscopic evidence for coordinatively unsaturated zerovalent tungsten generated by interaction of  $W(CO)_5L$  ( $L = PPh_3$  or  $PBu^n_3$ ) with aluminium tribromide, 38–9  
Arene-tungsten chemistry: bis(arene)tungsten hydride derivatives; co-condensation of tungsten atoms from an electron gun source with aromatic hydrocarbons, 72–3  
Photoinduced synthesis of binuclear molybdenocene and tungstenocene derivatives: catalytic deoxygenation of epoxides by metallocenes, 99–100  
Aspects of the coordination chemistry of some electron-rich polyorganosulphur compounds; bis(ethylthio)carbene complexes  $(M(CO)_5C(SET)_2)$  ( $M = Cr$  or  $W$ ) from  $Na(TosNNC(SET)_2)$  ( $Tos = p-MeC_6H_4SO_2$ ), 146–7  
Difluoride dioxides of molybdenum(VI) and tungsten(VI), 254–5  
Unusual stereoselectivities in olefin metathesis, 341–2  
Use of triorganogermyllithium compounds in transition metal chemistry. Application to the synthesis of optically active anions containing a transition metal–germanium bond, 435–6  
X-ray structure of  $((\eta^5-C_5H_5)W(CO)_2C_{15}H_{15})$ : a compound containing three unusually bonded five-membered rings, 451–2  
New mixed-metal clusters via metal hydride coupling. Synthesis and crystal structures of  $((\mu_2-H)Os_3W(CO)_{12}(\eta^5-C_5H_5))$  and  $((\mu_2-H)_3Os_3W(CO)_{11}(\eta^5-C_5H_5))$ , 534–5  
Heat of formation of bis( $\eta$ -cyclopentadienyl)dimethyltungsten and bis( $\eta$ -cyclopentadienyl)dimethylmolybdenum, 737  
X-ray crystal and molecular structure of  $(W_2S_8Ag_4(PPh_3)_4)$ , a compound having a novel metal–sulphur cage fused by two connected six-membered  $WS_3Ag_2$  rings, 739  
Effect of cation on the quantum efficiency and the photoreaction paths of  $(W(CO)_5X)^-$  anions, 863–4
- TUNGSTEN HYDRIDE**  
Arene-tungsten chemistry: bis(arene)tungsten hydride derivatives; co-condensation of tungsten atoms from an electron gun source with aromatic hydrocarbons, 72–3
- TUNGSTENOCENE**  
Photoinduced synthesis of binuclear molybdenocene and tungstenocene derivatives: catalytic deoxygenation of epoxides by metallocenes, 99–100
- ULTRASONIC**  
Reduction of  $\alpha,\alpha'$ -dibromoketones by ultrasonically dispersed mercury in some aliphatic ketone solvents. A convenient synthesis of 4-isopropylidene-1,3-dioxolans, 1040–1
- UNSATD**  
Solvent transfer hydrogenation of  $\alpha\beta$ -unsaturated aldehydes to the unsaturated alcohols catalysed by hydrido-iridium sulphoxide complexes, 929–30
- URACIL**  
 $\sigma^*$ -electron addition to 5-halogenouracils in neutral glasses, 313–14  
New photochemical reaction of 6-azido-1,3-dimethyluracil with acyl halides to give 5-acylamino-6-chloro-1,3-dimethyluracils, 367  
Novel synthesis of pyrimido(4,5-b)quinoline-2(3H),4(10H)-diones (5-deazaflavins), 764
- URACIL HYDROXYMETHYL**  
Synthesis of a photoprotectant from ultraviolet irradiation of bacterial spores: 5,6-dihydro-5-( $\alpha$ -thyminy)thymine, 284
- URANIUM**  
Uranium(IV)-crown-ether complexes and cryptates. Proton nuclear magnetic resonance study, and X-ray crystal and molecular structure of tetrachloro(2,5,8,15,18,21-hexaoxatricyclo(20.4.0.0<sup>9,14</sup>)hexacosane)uranium(IV), 90–2

- Unusual reaction of uranyl nitrate with 2,6-diacetylpyridine bis(2-pyridylhydrazone): X-ray structure of nitrate(2,6-diacetylpyridine-bis(2-pyridylhydrazone)-NNNN)uranyl tetranitratodioxouranium, 235-6
- Hydrogen absorption in  $\text{YNi}_4\text{Mn}$ , an alloy with the cubic  $\text{UNi}_5$  structure, 581-2
- URETHANE**  
Cyclofunctionalization of olefinic urethanes with benzeneselenenyl reagents: a new general synthesis of nitrogen heterocycles, 379-80
- Preparation of urethanes from carbon dioxide via a copper(I) carbamate complex, 815-16
- URIDINE**  
O-Aryl S-methyl phosphorochloridithioates: terminal phosphorylating agents in the phosphotriester approach to oligonucleotide synthesis, 1050-2
- UV**  
Preparation of bis(cis-diacetyltetracarbonylrhenium)copper, 183-4
- Synthesis of a photoproduct from ultraviolet irradiation of bacterial spores: 5,6-dihydro-5-( $\alpha$ -thyminy)thymine, 284
- Photoluminescence from copper(I) complexes with low-lying metal-to-ligand charge transfer excited states, 759-61
- 2-(1-Methylindol-3-yl)-3-phenyldihydro-1,4-dioxin 2,3-epidioxide, a dioxetan resulting in efficient ultraviolet chemiluminescence, 781-2
- Circular dichroism of the isotopically dissymmetric molecules (1R, 2S)-(1- $^2\text{H}$ )- and (1R, 2S)-(1- $^{18}\text{O}$ )-1,2-dihydroxy-1,2-diphenylethane, 850-2
- Determination of the basicity of nitric acid in concentrated sulphuric acid by Raman and ultraviolet spectroscopy, 873-4
- Inorganic optical activity, 936-7
- VALENCE**  
Reversible photochemical valence isomerization between  $\alpha$ -diazo-ketones and a  $\alpha$ -keto-diazirines, 442-3
- ESCA study of compounds of gold in the oxidation state -1, 905-6
- 125-Tellurium and 77-selenium multinuclear magnetic resonance studies of  $\text{Te}_6^{4+}$ ,  $\text{Te}_{4-n}\text{Se}_n^{2+}$ ,  $\text{Te}_2\text{Se}_4^{2+}$ , and  $\text{Te}_3\text{Se}_3^{2+}$  polyatomic cations, 957-60
- VALINE**  
Conversion of penicillins into biosynthetically significant peptides, 609-10
- VALLESAMINE**  
Laboratory model for the biosynthesis of vallesamine, apparicine, and related alkaloids, 947-8
- VANADIUM**  
( $\eta^4$ -Cyclobutadiene)( $\eta^5$ -cyclopentadienyl)dicarbonylvanadium, 401-2
- Preparation of diarenemetal complexes by potassium atom reduction, 730-1
- VASOCONSTRICTOR**  
Synthesis of sulphur-containing prostacyclin  $\text{PGI}_1$  analogues, 6,9-epithio- $\text{PGI}_1$ , its S-oxide stereoisomers, and its SS-dioxide, 375-7
- VERRUCOSANEDIOL**  
Structure of (-)-2,9-dihydroxyverrucosane, a novel carbon skeletal diterpenoid from the liverwort *Mylia verrucosa*, 198-200
- VINYL**  
Intramolecular photocycloaddition of phenethyl vinyl ether, 129-30
- Spiro(5.5)undecane sesquiterpene analogues. Bridging vinyl ether and vinyl acetal formation via intramolecular attack by an enol during bromination, 425-6
- Carbene photocycloelimination from a vinyl-cyclopropane, 558-9
- Thermal and photochemical rearrangements of 3H-thieno-1,2-diazepines, 568-9
- Stereochemistry of the transition state of hydrogen abstraction by vinyl radicals, 574-5
- The chemistry of thioesters. Conversion into monothioacetals, ketones and vinyl sulfides, 719-20
- New synthesis of conjugated ketones from 2-phenylthioallyl and -allenyl alcohols, 821-2
- Phenyl trans-2-chlorovinyl sulphone, a vinyl cation equivalent, 914-15
- Reaction of ozone with vinyl sulphides. Reactions retaining hydrocarbon chains, 1032-3
- New mode of bonding of a vinyl ligand to an osmium cluster: the X-ray crystal structure of  $(\text{HO}_3(\text{CO})_{10}(\text{CF}_3\text{CCHCF}_3))$ , 1035-6
- VINYL CATION SYNTHON**  
Phenyl trans-2-chlorovinyl sulphone, a vinyl cation equivalent, 914-15
- VINYLCARBENE**  
Carbonylation of the  $\eta^3$ -vinylcarbene ligand. Synthesis and X-ray crystal and molecular structure of an ( $\eta^4$ -vinylketene) iron complex, 252-3
- VINYLCYCLOBUTANE**  
An easy vinylcyclobutane-cyclohexane rearrangement, 931-2
- VINYLKETENE**  
Carbonylation of the  $\eta^3$ -vinylcarbene ligand. Synthesis and X-ray crystal and molecular structure of an ( $\eta^4$ -vinylketene) iron complex, 252-3
- VINYLOSMIUM**  
Bridging hydrides in  $(\text{H}_2\text{Os}_3(\text{CO})_{10})$  and  $((\text{C}_2\text{H}_3)\text{HOs}_3(\text{CO})_{10})$ : a combined X-ray-neutron diffraction study, 723-4
- VINYLTETRATHIAFULVALENE**  
Vinyltetrathiafulvalene, 832-3
- VIOLET**  
Mechanism of the cadmium sulphide sensitized photooxidation of Leuco Crystal Violet in nonaqueous solution, 417-18
- VILOGEN**  
Photoredox reaction in micellar solutions sensitized by surfactant derivative of tris(2,2'-bipyridyl)ruthenium(II), 628-30
- VIOMELLEIN**  
Structure of xanthomegnin and related pigments: reinvestigation by carbon-13 nuclear magnetic resonance spectroscopy, 611-12
- VIOPURPURIN**  
Structure of xanthomegnin and related pigments: reinvestigation by carbon-13 nuclear magnetic resonance spectroscopy, 611-12
- VRIDIFLORATE**  
Curassavine, an alkaloid from *Heliotropium curassavicum* Linn. with a  $\text{C}_8$  necic acid skeleton, 423-4
- VISCOSITY**  
Partition of viscosity B-coefficients into ionic components, 56
- Biphasic photochemistry: use of the Barton reaction to determine micelle microviscosity, 1110-11
- VISCOSITY COEFF**  
Partition of viscosity B-coefficients into ionic components, 56
- VISIBLE**  
Formation of the dixenon cation,  $\text{Xe}_2^+$ , in fluoroantimonate(V) media by oxidation-reduction methods: spectroscopic properties of the ion, 502-4
- VISIBLE SPECTRA**  
Correlation of magnetic and optical properties in the organic-intercalated two-dimensional ionic ferromagnet bis(monomethylammonium) tetrachlorochromate(II), 511-12
- Solution properties of  $((\text{CO})_5\text{Mo}(\text{pz}))$  and  $((\text{CO})_5\text{Mo})_2(\text{pz})$ : organometallic analogues of  $(\text{NH}_3)_5\text{Ru}(\text{pz})^{2+}$  and  $((\text{NH}_3)_5\text{Ru})_2(\text{pz})^{4+}$  ( $\text{pz}$  = pyrazine), 859-61
- VITAMIN**  
Chromenylation of 2-naphthol and alkylhydroquinones: short syntheses of (2RS,4'R,8'R)- $\alpha$ -tocopherol (vitamin E) and (2RS,4'R,8'R)- $\beta$ -tocopherol, 59-60
- Biosynthesis of vitamin B<sub>12</sub>: proof of A-B structure for sirohydrochlorin by its specific incorporation into cobyrinic acid, 150-1
- VITAMIN B12**  
Biosynthesis of 5,6-dimethylbenzimidazole from 6,7-dimethyl-10-(1'- $^{14}\text{C}$ )formylmethylisalloxazine, 22-3
- VITAMIN D3**  
Stereoselective conversion of vitamin D<sub>3</sub> into its 3 $\beta$ -halogenated derivatives. The synthesis of a 1 $\alpha$ -hydroxy-3 $\beta$ -fluorovitamin D<sub>3</sub> analogue, 554-5
- VITREOUS SUPPORT**  
Very active hydrogenation catalyst composed of extremely dispersed palladium on vitreous supports, 979-80
- VOLTAMMETRY**  
Production, detection, and characterization of transient hexavalent technetium in aqueous alkaline media by pulse radiolysis and very fast scan cyclic voltammetry, 1038-40
- WATER**  
Relative solvent transport of ions in binary aqueous mixtures: an unambiguous assignment to ionic constituents, 218-19
- Location of supercage sodium ions and water molecules in hydrated NaX zeolite, 493-4
- Equilibrium constant for protium-deuterium exchange between methanol and water, 1037-8
- Ammonia synthesis from methane, water, and nitrogen over silica-supported ruthenium, 1105-6
- WITTIG**  
Conversion of aldehydes and ketones into chloroolefins and

- acetylenes using chloriodomethane as a chloromethylene source, 446-7
- WOLFF REARRANGEMENT**  
Reversible photochemical valence isomerization between  $\alpha$ -diazo-ketones and a  $\alpha$ -keto-diazirines, 442-3
- X RAY**  
X-ray photoelectron diffraction: a novel method of structural analysis in complex monocrystalline solids, 210-11
- X RAY EMISSION**  
Investigation of structure composition relationships in the serpentine minerals by combined X-ray K-emission spectrometry and high-resolution electron microscopy, 986-7
- X RAY SCATTERING**  
Very active hydrogenation catalyst composed of extremely dispersed palladium on vitreous supports, 979-80
- X RAY SPECTRA**  
Novel salts of graphite and a boron nitride salt, 200-1
- X RAY SPECTRUM**  
Direct evidence for the quadruple metal-metal bond in the octachlorodimolybdenum(II) ion,  $(\text{Mo}_2\text{Cl}_8)^{4-}$ , using X-ray emission spectroscopy, 262-3
- XANTHATE**  
Conversion of primary aliphatic amines into thiocyanates and thiocarbonate esters, 133-4  
Conversion of thiocarbonyl compounds into their corresponding oxo derivatives using benzeneseleninic anhydride, 393-4
- XANTHENE**  
The 9-phenylxanthen-9-yl protecting group, 639-40
- XANTHOMEGNIN**  
Structure of xanthomegnin and related pigments: reinvestigation by carbon-13 nuclear magnetic resonance spectroscopy, 611-12
- XENON**  
Difluoride dioxides of molybdenum(VI) and tungsten(VI), 254-5  
Formation of the dixonon cation,  $\text{Xe}_2^+$ , in fluoroantimonate(V) media by oxidation-reduction methods: spectroscopic properties of the ion, 502-4
- XENON DIFLUORIDE**  
Regiospecific boron trifluoride catalysed fluorine addition to fluoro-substituted benzene derivatives using xenon difluoride, 969-70
- XYLOPININE**  
Studies in synthetic photochemistry. Photochemistry of  $\alpha$ -keto-imines: a novel synthesis of xylopinine, 885-6
- YEAST**  
Asymmetric reduction of trifluoromethyl ketones by actively fermenting yeast, 456-7  
Synthesis and characterization of iron complexes of rhodotorulic acid: a novel dihydroxamate siderophore and potential chelating drug, 501-2
- YLIDE**  
Evidence for the participation of a nitrile group in (2,3) sigmatropic rearrangements of sulphonium ylides, 274-5  
Partial asymmetric synthesis of substituted trans-2,3-diaryloxiranes using optically active arsonium ylides, 346-7  
Radical coupling products derived from ammonium ylides. Competing (1,2), (1,3), and (1,4) anionic rearrangements, 670-1  
Stereoselectivities in competing (1,2) and (1,3) rearrangements, 672-3  
The thermal rearrangements of pentadienylammonium ylides. Competing (1,2), (3,2), and (5,2) rearrangements, 673-5  
Limited rotational equilibration in reactions involving diradical intermediates, 675-6  
Photo-sensitized oxidation of sulphur and pyridinium ylides. Oxygen atom transfer to divalent sulphur, 894-5
- YLIDENE**  
Rearrangement of 4-ylidenebutenolides to cyclopentene-1,3-diones: synthesis of calythrone and related compounds, 880-2
- YNEAMINE**  
Synthesis and reactions of an insoluble polymeric yneamine, 1079-80
- YOHIMBINE**  
Stereochemical control in the biomimetic conversion of heteroyohimbine alkaloid precursors. Isolation of a novel key intermediate, 618-19
- YTTERBIUM**  
Neutral and anionic silylmethyl complexes of Group\*IIIa and lanthanoid metals; the X-ray crystal and molecular structure of  $(\text{Li}(\text{thf})_4)(\text{Yb}(\text{CH}(\text{SiMe}_3)_2)_3\text{Cl})$  (thf = tetrahydrofuran), 140-2
- YTTRIUM**  
Neutral and anionic silylmethyl complexes of Group\*IIIa and lanthanoid metals; the X-ray crystal and molecular structure of  $(\text{Li}(\text{thf})_4)(\text{Yb}(\text{CH}(\text{SiMe}_3)_2)_3\text{Cl})$  (thf = tetrahydrofuran), 140-2  
Novel coordination numbers in scandium(III) and yttrium(III) nitrate complexes. X-ray crystal structures of  $\text{Sc}(\text{NO}_3)_3 \cdot 2\text{N}_2\text{O}_4$  and  $\text{Y}(\text{NO}_3)_3 \cdot 2\text{N}_2\text{O}_4$ , 580-1  
Hydrogen absorption in  $\text{YNi}_4\text{Mn}$ , an alloy with the cubic  $\text{UNi}_5$  structure, 581-2  
A new approach to cationic transition metal alkyls:  $(\text{M}(\eta\text{-C}_5\text{H}_5)_2(\text{CH}_2\text{SiMe}_3)_2)^+(\text{Y})^-$  ( $\text{M} = \text{Nb}$  or  $\text{Ta}$ ,  $\text{Y} = \text{BF}_4$  or  $\text{SbF}_6$ ) and their conversion into the alkylidene complexes  $(\text{M}(\eta\text{-C}_5\text{H}_5)_2(\text{CHSiMe}_3)(\text{CH}_2\text{SiMe}_3))$ , 925-6  
Alkyl bridged complexes of the group 3A and lanthanoid metals as homogeneous ethylene polymerization catalysts, 994-5
- ZEOLITE**  
Location of supercage sodium ions and water molecules in hydrated NaX zeolite, 493-4  
Dehydration sequence of cobalt exchanged synthetic A zeolite: evidence for 3-, 4-, 5-, and 6-fold coordination, 548-9
- ZEOLITE CUY**  
Activity of copper(II)-exchanged Y-type zeolites in the catalytic decomposition of nitrogen monoxide, 1058-9
- ZIEGLER NATTA**  
Mechanism for the stereospecific polymerization of olefins by Ziegler-Natta catalysts, 604-6
- ZINC**  
Selective hydrogenation of the internal double bond of penta-1,3-diene on a zinc oxide catalyst, 53-4  
Cytochrome oxidase models: a binuclear iron-copper site with a bipyrimidine bridge, 483-5  
Stereoselective chelate and amino acid synthesis with chelated 2-iminopropionate; crystal and molecular structures of  $\alpha$ -( $\text{N}^2$ -2-aminoethylamidino)alaninato- $\text{ONN}''\text{N}'''$ -(ethylenediamine) cobalt(III) and  $\alpha$ -( $\text{N}^2$ -2-aminoethylamidino)alanine- $\text{NN}''\text{N}'''$ -(chloro)ethylenediaminecobalt(III) tetrachlorozincates, 647-9  
Nitrogen-15 nuclear magnetic resonance studies of ligand binding to zinc tetraphenylporphyrin, 681-2
- ZINC OXIDE**  
Raman spectra of molecules adsorbed on heavy metal oxides. Propylene on zinc oxide: the anionic nature of the adsorbed allyl species, 868-9
- ZIRCONIUM**  
Organozirconium(III)-dinitrogen complexes: evidence for  $(\eta^2\text{-N}_2)$ -metal bonding in  $(\text{Zr}(\eta\text{-C}_5\text{H}_5)_2(\text{N}_2)(\text{R}))$  ( $\text{R} = \text{Me}_3\text{Si}_2\text{CH}$ ), 34-6  
Stoichiometric reduction of carbon monoxide and carbon dioxide to methanol: evidence for carbon monoxide insertion into zirconium-hydrogen bond, 269-70  
Catalytic synthesis of ethanol from carbon monoxide and hydrogen under atmospheric pressure over pyrolyzed rhodium carbonyl clusters on titanium dioxide, zirconium dioxide, and dilanthanum trioxide, 566-7  
Bulky alkyls and a hydridoalkyl of zirconium(IV): influence of steric constraints upon (i) conformation and the zirconium-carbon rotational barrier and (ii) the zirconium-carbon bond length. X-ray crystal and molecular structure of  $(\text{Zr}(\eta\text{-C}_5\text{H}_5)_2(\text{CH}(\text{SiMe}_3)_2)\text{Ph})$ , 1081-3
- ZWITTERION**  
Crystal and molecular structure of  $(\text{Cu}(\text{NO}_3)_2(\text{C}_8\text{H}_{12}\text{N}_2\text{O}_2)_2)\text{H}_2\text{O}$  a structure containing an unusual zwitterion of pyridoxamine and a symmetric nitrate-oxygen bridge, 97-8
- ZWITTERION EQUIL**  
syn-anti-Zwitterion equilibration in the ozonolysis of di-isopropylethylene, 263-4