

# INDEXES

Volume 12, 1983

The indexes in this issue cover  
Volumes 1—12

(Figures in bold type refer to the volume number)

## INDEX OF AUTHORS

- Aarons, L. J., **5**, 359  
 Ackroyd, J., **11**, 321  
 Ager, D. J., **11**, 493  
 Ahluwalia, J. C., **2**, 203  
 Allen, N. S., **4**, 533  
 Angyal, S. J., **9**, 415  
 Ambroz, H. B., **8**, 353  
 Atkinson, D., **8**, 475  
 Baker, A. D., **1**, 355  
 Barber, B. E., **9**, 143  
 Bartle, K. D., **10**, 113  
 Bartlett, P. D., **5**, 149  
 Baxendale, J. H., **7**, 235  
 Beattie, I. R., **4**, 107  
 Bell, R. P., **3**, 513  
 Belson, D. J., **11**, 41  
 Bentley, P. H., **2**, 29  
 Berkoff, C. E., **3**, 273  
 Bird, C. L., **10**, 49  
 Bird, C. W., **3**, 309  
 Blandamer, M. J., **4**, 55  
 Blundell, T. L., **6**, 139  
 Boelens, H., **7**, 167  
 Bradshaw, T. K., **6**, 43  
 Braterman, P. S., **2**, 271  
 Breslow, R., **1**, 553  
 Brown, D. H., **9**, 217  
 Brown, I. D., **7**, 359  
 Brown, K. S., jun., **4**, 263  
 Brundle, C. R., **1**, 355  
 Buchanan, G. L., **3**, 41  
 Burdett, J. K., **3**, 293; **7**, 507  
 Burgess, J., **4**, 55  
 Burnett, M. G., **12**, 267  
 Burrows, H. D., **3**, 139  
 Burtles, S. M., **7**, 201  
 Butterworth, K. R., **7**, 185  
 Cadogan, J. I. G., **3**, 87  
 Carabine, M. D., **1**, 411  
 Cardin, D. J., **2**, 99  
 Carless, H. A. J., **1**, 465  
 Casellato, U., **8**, 199  
 Çetinkaya, B., **2**, 99  
 Chamberlain, J., **4**, 569  
 Chatt, J., **1**, 121  
 Chesters, J. K., **10**, 270  
 Chivers, T., **2**, 233  
 Clark, G. M., **5**, 269  
 Collins, C. J., **4**, 251  
 Colvin, E. W., **7**, 15  
 Connor, J. N. L., **5**, 125  
 Corfield, G. C., **1**, 523  
 Cornforth, J. W., **2**, 1  
 Cotton, F. A., **4**, 27; **12**, 35  
 Coulson, E. H., **1**, 495  
 Cowan, J. M., **8**, 419  
 Cox, B. G., **9**, 381  
 Coyle, J. D., **1**, 465; **3**, 329; **4**, 523  
 Cragg, G. M. L., **6**, 393  
 Cramer, R. D., **3**, 273  
 Crammer, B., **6**, 431  
 Cross, R. J., **2**, 271; **9**, 185  
 Curthoys, G., **8**, 475  
 Dack, M. R. J., **4**, 211  
 Dainton, F. S., **4**, 323  
 Dalton, H., **8**, 297  
 Davies, D. I., **8**, 171  
 de Rijke, D., **7**, 167  
 de Silva, A. P., **10**, 181  
 de Valois, P. J., **7**, 167  
 Dickinson, L. C., **12**, 387  
 Dobson, J. C., **5**, 79  
 Dowle, M. D., **8**, 171  
 Doyle, M. J., **2**, 99  
 Drummond, I., **2**, 233  
 Dunkin, I. R., **9**, 1  
 Duxbury, G., **12**, 453  
 Elliott, M., **7**, 473  
 Emsley, J., **9**, 91  
 Eschenmoser, A., **5**, 377  
 Evans, D. A., **2**, 75  
 Evans, J., **10**, 159  
 Fenby, D. V., **3**, 193  
 Fenton, D. E., **6**, 325; **8**, 199  
 Ferguson, L. N., **4**, 289  
 Fisher, L. R., **6**, 25  
 Fleming, I., **10**, 83  
 Flygare, W. H., **6**, 109  
 Forage, A. J., **8**, 309  
 Fox, M. F., **9**, 143  
 Frazer, M. J., **11**, 171  
 Fry, A., **1**, 163  
 Funk, R. L., **9**, 41  
 Garson, M. J., **8**, 539  
 Georghiou, P. E., **6**, 83  
 Gheorghiu, M. D., **10**, 289  
 Gibson, K. H., **6**, 489  
 Gilbert, J., **10**, 255  
 Gilchrist, T. L., **12**, 53  
 Gillespie, R. J., **8**, 315  
 Goodings, E. P., **5**, 95  
 Gorman, A. A., **10**, 205  
 Gray, B. F., **5**, 359  
 Green, C. L., **2**, 75  
 Greenhill, J. V., **6**, 277  
 Greenwood, N. N., **3**, 231  
 Grey Morgan, C., **8**, 367  
 Grice, R., **11**, 1  
 Griffiths, J., **1**, 481  
 Grimshaw, J., **10**, 181  
 Grossert, J. S., **1**, 1  
 Groves, J. K., **1**, 73  
 Guilford, H., **2**, 249  
 Gutteridge, N. J. A., **1**, 381  
 Haines, R. J., **4**, 155  
 Hall, G. G., **2**, 21  
 Hall, L. D., **4**, 401  
 Hall, T. W., **5**, 431  
 Halliwell, H. F., **3**, 373  
 Hamdan, I. Y., **8**, 143  
 Hamer, G., **8**, 143  
 Harmony, M. D., **1**, 211  
 Harris, K. R., **5**, 215  
 Harris, R. K., **5**, 1  
 Harrison, L. G., **10**, 491  
 Hartley, F. R., **2**, 163  
 Hartshorn, S. R., **3**, 167  
 Hathway, D. E., **9**, 63, 241  
 Hayward, R. C., **12**, 285  
 Heelis, P. F., **11**, 15  
 Henderson, J. W., **2**, 397  
 Hepler, L. G., **3**, 193  
 Hilburn, M. E., **8**, 63  
 Hinchliffe, A., **5**, 79  
 Holbrook, K. A., **12**, 163  
 Holland, H. L., **10**, 435; **11**, 37  
 Holm, R. H., **10**, 455  
 Hore, P. J., **8**, 29  
 Horton, E. W., **4**, 589  
 Hudson, M. F., **4**, 363  
 Huntress, W. T. jun., **6**, 295  
 Hutchinson, D. W., **6**, 43  
 Ibers, J. A., **11**, 57  
 Ikan, R., **6**, 431

- Isaacs, N. S., **5**, 181  
 Isbell, H. S., **3**, 1  
 Jaffè, H. H., **5**, 165  
 James, A. M., **8**, 389  
 Jamieson, A. M., **2**, 325  
 Janes, N. F., **7**, 473  
 Jencks, W. P., **10**, 345  
 Jenkins, J. A., **6**, 139  
 Johnson, A. W., **4**, 1; **9**, 125  
 Johnson, S. P., **5**, 441  
 Johnstone, A. H., **7**, 317; **9**, 365  
 Jones, J. R., **10**, 329  
 Joslin, C. G., **8**, 29  
 Jotham, R. W., **2**, 457  
 Kalyanasundaram, K., **7**, 453  
 Keenan, A. G., **8**, 259  
 Kemp, T. J., **3**, 139; **8**, 353  
 Kennedy, J. F., **2**, 355; **8**, 221  
 Kennewell, P. D., **4**, 189; **9**, 477  
 Kenny, A. W., **4**, 90  
 King, G. A. M., **7**, 297  
 Kirby, G. W., **6**, 1  
 Kitaigorodsky, A. I., **7**, 133  
 Koch, K. R., **6**, 393  
 Kolar, G. F., **9**, 241  
 Korpela, T., **12**, 309  
 Kresge, A. J., **2**, 475  
 Krishnaji, **7**, 219  
 Kroto, H., **11**, 435  
 Krüger, H., **11**, 227  
 Kuhn, A. T., **10**, 49  
 Lappert, M. F., **2**, 99  
 Lee, M. L., **10**, 113  
 Lee-Ruff, E., **6**, 195  
 Leigh, G. J., **1**, 121; **4**, 155  
 Lemieux, R. U., **7**, 423  
 Leznoff, C. C., **3**, 65  
 Lindberg, B., **10**, 409  
 Lindsay, D. G., **10**, 233  
 Lindoy, L. F., **4**, 421  
 Linford, R. G., **1**, 445  
 Lipscomb, W. N., **1**, 319  
 Liu, M. T. H., **11**, 127  
 Lynch, J. M., **3**, 309  
 Lythgoe, B., **9**, 449  
 Mäkelä, M. J., **12**, 309  
 McCleverty, J. A., **12**, 331  
 McKean, D. C., **7**, 399  
 McKellar, J. F., **4**, 533  
 McKervey, M. A., **3**, 479  
 Mackie, R. K., **3**, 87  
 McLauchlan, K. A., **8**, 29  
 McNab, H., **7**, 345  
 Maitland, G. C., **2**, 181  
 Maitlis, P. M., **10**, 1  
 Manning, P. G., **5**, 233  
 Maret, A. R., **2**, 325  
 Maslowsky, E., **9**, 25  
 Mason, R., **1**, 431  
 Mayo, B. C., **2**, 49  
 Meadowcroft, A. E., **4**, 99  
 Menger, H. W., **2**, 415  
 Midgley, D., **4**, 549  
 Millen, D. J., **5**, 253  
 Mills, R., **5**, 215  
 Moore, D. S., **12**, 415  
 Moore, H. W., **2**, 415; **10**, 289  
 Morley, R., **5**, 269  
 Morris, D. G., **11**, 397  
 Morris, J. H., **6**, 173  
 Muetterties, E. L., **11**, 283  
 Mulheirn, L. F., **1**, 259  
 Munn, A., **4**, 87  
 Murphy, W. S., **12**, 213  
 Newman, J. F., **4**, 77  
 Nightingale, W. H., **7**, 195  
 Norman, R. O. C., **8**, 1  
 North, A. M., **1**, 49  
 Oakenfull, D. G., **6**, 25  
 Overton, K. H., **8**, 447  
 Page, M. I., **2**, 295  
 Parthasarathy, R., **12**, 361  
 Pelter, A., **11**, 191  
 Perkins, P. G., **6**, 173  
 Pickford, C. J., **10**, 245  
 Pletcher, D., **4**, 471  
 Poliakoff, M., **3**, 293; **7**, 527  
 Prakash, V., **7**, 219  
 Pratt, A. C., **6**, 63  
 Puddephatt, R. J., **12**, 99  
 Ramm, P. J., **1**, 259  
 Rao, C. N. R., **5**, 297; **12**, 361  
 Rao, K. J., **12**, 361  
 Ratledge, C., **8**, 283  
 Rattee, I. D., **1**, 145  
 Redl, G., **3**, 273  
 Redpath, J., **12**, 75  
 Richards, D. H., **6**, 235  
 Ritch, J. B., jun., **5**, 452  
 Roberts, M. W., **6**, 373  
 Robinson, F. A., **5**, 317  
 Robinson, S. D., **12**, 415  
 Roche, M., **5**, 165  
 Rodgers, M. A. J., **7**, 235  
 Rose, A. E. A., **6**, 173  
 Rouvray, D. H., **3**, 355  
 Rowlinson, J. S., **7**, 329; **12**, 251  
 Sanders, J. K. M., **6**, 467  
 Sarma, T. S., **2**, 203  
 Satchell, D. P. N., **4**, 231; **6**, 345  
 Satchell, R. S., **4**, 231  
 Scheinmann, F., **11**, 321  
 Schlegel, W., **7**, 177  
 Scriven, E. F. V., **12**, 129  
 Self, R., **10**, 255  
 Senthilnathan, V. P., **5**, 297  
 Shorter, J., **7**, 1  
 Simpson, T. J., **4**, 497  
 Singh, S., **5**, 297  
 Slorach, S. A., **10**, 280  
 Smith, E. B., **2**, 181  
 Smith, K., **3**, 443  
 Smith, K. M., **4**, 363  
 Smith, W. E., **6**, 173; **9**, 217  
 Snell, K. D., **8**, 259  
 Stacey, M., **2**, 145  
 Staunton, J., **8**, 539  
 Stevens, M. F. G., **7**, 377  
 Stoddart, J. Fraser, **8**, 85  
 Stokes, R. H., **11**, 257  
 Strachan, A. N., **11**, 41  
 Suckling, C. J., **3**, 387  
 Suckling, K. E., **3**, 387  
 Sutherland, J. K., **9**, 265  
 Sutherland, R. G., **9**, 241  
 Sutton, D., **4**, 443  
 Swan, J. S., **7**, 201  
 Swindells, R., **7**, 212  
 Symons, M. C. R., **5**, 337; **12**, 1, 387

*Index*

- Takken, H. J., 7, 167  
Taylor, J. B., 4, 189; 9, 477  
Taylor, S. E., 10, 329  
Theobald, D. W., 5, 203  
Thomas, T. W., 1, 99  
Thompson, M., 1, 355  
Thornber, C. W., 8, 563  
Tincknell, R. C., 5, 463  
Toennies, J. P., 3, 407  
Tolman, C. A., 1, 337  
Trost, B. M., 11, 141  
Truax, D. R., 5, 411  
Twitchett, H. J., 3, 209  
Tyman, J. H. P., 8, 499  
Underhill, A. E., 1, 99; 9, 429  
van Dort, J. M., 7, 167  
van der Linde, L. M., 7, 167  
Varvoglis, A., 10, 377  
Vaughan, K., 7, 377  
Vidali, M., 8, 199  
Vigato, P. A., 8, 199  
Vollhardt, K. P. C., 9, 41  
Wain, R. L., 6, 261  
Walker, E. R. H., 5, 23  
Walker, I. C., 3, 467  
Waltz, W. L., 1, 241  
Ward, I. M., 3, 231  
Ward, R. S., 11, 75  
Watkins, D. M., 9, 429  
Wattanasin, S., 12, 213  
White, A. J., 3, 17  
Whitfield, R. C., 1, 27  
Wieser, H., 5, 411  
Wiesner, K., 6, 413  
Williams, G., 7, 89  
Williams, R. J. P., 9, 281, 325  
Wilson, A. D., 7, 265  
Wise, S. A., 10, 113  
Yoffe, A. D., 5, 51  
Zeelen, F. J., 12, 75

## INDEX OF TITLES

- Abiotic receptors, 12, 285
- Absorption bands in the spectra of stars, a crystal field approach, 5, 233
- Acidity of solid surfaces, 8, 475
- Across the living barrier, 6, 325
- Acylation and alkylation catalysts, 4-dialkylaminopyridines, super, 12, 129
- by ketens and isocyanates, a mechanistic comparison, 4, 231
- Acylation, Friedel-Crafts, of alkenes, 1, 73
- Adamantane rearrangements, 3, 379
- Affinity chromatography, chemical aspects of, 3, 249
- Alcohols and amines, conformational analysis of, 5, 411
- Alkali-metal complexes in aqueous solution, 4, 549
- Alkaloids, aconite, synthesis of, 6, 413
- Alkenes, the Friedel-Crafts acylation of, 1, 73
- Aluminium phosphates, the chemistry and binding properties of, 6, 173
- Amines and alcohols, conformational analysis of, 5, 411
- Analysis of trace constituents of the diet, organic and inorganic, 10, 245, 255
- Analytical methods, modern, for environmental polycyclic aromatic compounds, 10, 113
- Anionic cyclization of phenols, 12, 213
- Aphids and scale insects, their chemistry, 4, 263
- Application of electrochemical techniques to the study of homogeneous chemical reactions, 4, 471
- Applications of e.s.r. spectroscopy to kinetics and mechanism in organic chemistry, 8, 1
- Application of research findings to the development of commercial flavourings, 7, 177
- Aqueous mixtures, kinetics of reactions in, 4, 55
- Aqueous solution, micelles in, 6, 25
- Aryl cations—new light on old intermediates, 8, 353
- halides, photochemistry and photocyclization of, 10, 181
- Aryldiazonium cations, co-ordination chemistry of, 4, 443
- Aryliodine(III) dicarboxylates, 10, 377
- Atmosphere, interactions in, of droplets and gases, 1, 411
- Autocatalysis, 7, 297
- Azidoquinones and related compounds, chemistry of, 2, 415
- Azobenzene and its derivatives, photochemistry of, 1, 481
- Bile pigments, 4, 363
- Binding of heavy metals to proteins, 6, 139
- Binding properties and chemistry of aluminium phosphates, 6, 173
- Biological surfaces, molecular aspects of, 8, 389
- Biomimetic chemistry, 1, 553
- Biosynthesis of sterols, 1, 259
- Biosynthetic products from arachidonic acid, 6, 489
- studies, carbon-13 nuclear magnetic resonance in, 4, 497
- Bis(diphenylphosphino)methane, chemistry of, 12, 99
- Blood groups, human, and carbohydrate chemistry, 7, 423
- Bond strengths, CH, in simple organic compounds: effects of conformation and substitution, 7, 399
- valences—a simple structural model for inorganic chemistry, 7, 359
- Boron reagents, carbon-carbon bond formation involving, 11, 191
- Bredt's rule, 3, 41
- Brønsted relation—recent developments, 2, 475
- Butadiene, polymerization and copolymerization of, 6, 235
- Calciferols, hormonal: chemistry of "vitamin" D, 6, 83
- Calorimetric investigations of hydrogen bond and charge transfer complexes, 3, 193
- Cancer and chemicals, 4, 289
- Carbohydrate chemistry and human blood groups, 7, 423
- Carbohydrate-directed macromolecules, transition-metal oxide chelates of, 8, 221
- Carbohydrate-protein complexes, glycoproteins, and proteoglycans, of

- human tissues, chemical aspects of, 2, 355
- Carbohydrates to enzyme analogues, 8, 85
- Carbon-carbon bond formation involving boron reagents, 11, 191
- Carbon-13 nuclear magnetic resonance in biosynthetic studies, 4, 497
- Carbocation ions, carbanions, and radicals, chirality in, 2, 397
- Carbonyl clusters, metal, relationship with supported metal catalysts, 10, 159
- compounds, photochemistry of, 1, 465
- equivalents, silicon-containing, 11, 493
- group transpositions, 11, 397
- Carcinogens, chemical, mechanisms of reaction with nucleic acid, 9, 241
- Catalysis and surface chemistry, new perspectives, 6, 373
- Catalysis, homogeneous, and organometallic chemistry, the 16 and 18 electron rule in, 1, 337
- of the olefin metathesis reaction, 4, 155
- Catalysts, supported metal, relationship with metal carbonyl clusters, 10, 159
- CENTENARY LECTURE. Biomimetic chemistry, 1, 553
- CENTENARY LECTURE. Cyclopentanoids: a challenge for new methodology, 11, 141
- CENTENARY LECTURE. Hydrocarbon reactions at metal centres, 11, 283
- CENTENARY LECTURE. Light scattering in pure liquids and solutions, 6, 109
- CENTENARY LECTURE. Metal clusters in biology, 10, 455
- CENTENARY LECTURE. Quadruple bonds and other multiple metal to metal bonds, 4, 27
- CENTENARY LECTURE. Reactivities of carbon disulphide, carbon dioxide, and carbonyl sulphide towards some transition-metal systems, 11, 57
- CENTENARY LECTURE. Rotationally and vibrationally inelastic scattering of molecules, 3, 407
- CENTENARY LECTURE. Systematic development of strategy in the synthesis of polycyclic polysubstituted natural products: the aconite alkaloids, 6, 413
- CENTENARY LECTURE. Three-dimensional structures and chemical mechanism of enzymes, 1, 319
- Charge transfer and hydrogen bond complexes, calorimetric investigations of, 3, 193
- Chemical applications of advances in Fourier transform spectroscopy, 4, 569
- aspects of affinity chromatography, 2, 249
- of glycoproteins, proteoglycans, and carbohydrate-protein complexes of human tissues, 2, 355
- education research: facts, findings, and consequences, 9, 365
- interpretations of molecular wavefunctions, 5, 79
- models of enzymic transimination, 12, 309
- Chemically-induced dynamic electron polarization (CIDEP), role in chemistry, 8, 29
- Chemicals in rodent control, 1, 381
- which control plant growth, 6, 261
- Chemistry and binding properties of aluminium phosphates, 6, 173
- CHEMISTRY AND FLAVOUR**
- I Molecular Structure and Organoleptic Quality, 7, 167
- II Application of Research Findings to the Development of Commercial Flavourings, 7, 177
- III Safety Evaluation of Natural and Synthetic Flavourings, 7, 185
- IV The Influence of Legislation on Research in Flavour Chemistry, 7, 195
- V The Development of Flavour in Potable Spirits, 7, 201
- VI The Influence of Flavour Chemistry on Consumer Acceptance, 7, 212
- and the new industrial revolution, 5, 317
- , —a topological subject, 2, 457
- of aphids and scale insects, 4, 263
- of azidoquinones and related compounds, 2, 415
- , of dental cements, 7, 265
- of dyeing, 1, 145
- of the gold drugs used in the treatment of rheumatoid arthritis, 9, 217
- of homonuclear sulphur species, 2, 233

- of long-chain phenols of non-isoprenoid origin, 8, 499
- of the production of organic isocyanates, 3, 209
- of transition-metal carbene complexes and their role as reaction intermediates, 2, 99
- of "vitamin" D: the hormonal calciferols, 6, 83
- , some considerations on the philosophy of, 5, 203
- Chirality in carbonium ions, carbanions, and radicals, 2, 397
- Chlorophyll chemistry, n.m.r. spectral change as a probe, 6, 467
- Chromatography, affinity, chemical aspects of, 2, 249
- cis-* and *trans*-Effects of ligands, 2, 163
- Clathrates and molecular inclusion phenomena, 7, 65
- Collisional transfer of rotational energy and spectral lineshapes, 7, 219
- Compartmental ligands: routes to homo- and hetero-dinuclear complexes, 8, 199
- Complex formation between sugars and metal cations, 9, 415
- hydride reducing agents, the functional group selectivity of, 5, 23
- Complexes, alkali-metal, in aqueous solution, 4, 549
- homo- and hetero-dinuclear, routes *via* compartmental ligands, 8, 199
- , 1-D metallic, 9, 429
- , square-planar, isomerization mechanisms of, 9, 185
- Computer resolution of overlapping electronic absorption bands, 9, 143
- Conductivity and superconductivity in polymers, 5, 95
- Conformation and substitution, effects of, on individual CH bond strengths in simple organic compounds, 7, 399
- of rings and neighbouring group effects, development of Haworth's concepts of, 3, 1
- Conformational analysis of some alcohols and amines: a comparison of molecular orbital theory, rotational and vibrational spectroscopy, 5, 411
- studies on small molecules, 1, 293
- Contribution of ion-pairing to 'memory effects', 4, 251
- Contributions of pulse radiolysis to chemistry, 7, 235
- Conversion of ammonium cyanate into urea—a saga in reaction mechanisms, 7, 1
- Co-ordination chemistry of aryldiazonium cations: aryldiazono (aryloxo) complexes of transition metals, and the aryldiazononitrosyl analogy, 4, 433
- Corrin synthesis, post-B<sub>12</sub> problems in, 5, 377
- Crystal field approach to absorption bands in the spectra of stars, 5, 233
- Crystals and molecules, organic, non-bonded interactions of atoms in, 7, 133
- Current aspects of unimolecular reactions, 12, 163
- Cyanocobalt(III) complexes, the synthesis of mononuclear, 12, 267
- Cyanoketenes: synthesis and cyclo-additions, 10, 289
- Cyclization, initiation of, using 3-methylcyclohex-2-enone derivatives, 9, 265
- of phenols, anionic, 12, 213
- Cyclopentanoids: a challenge for new methodology, 11, 141
- Cyclopolymerization, 1, 523
- Dental cements, chemistry of, 7, 265
- Development of flavour in potable spirits, 7, 201
- 4-Dialkylaminopyridines: super acylation and alkylation catalysts, 12, 129
- Diazirines, the thermolysis and photolysis of, 11, 127
- Dielectric relaxation in polymer solutions, 1, 49
- Diffusion in liquids, the effect of isotopic substitution on, 5, 215
- Difluoroamino-radical, gas-phase kinetics of, 3, 17
- Droplets and gases, interactions in the atmosphere of, 1, 411
- Drug design, isosterism and molecular modification in, 8, 563
- , quantitative, 3, 273
- Dyeing, chemistry of, 1, 145
- Echinoderms, 1, 1
- Education, chemical, a reassessment of research in, 1, 27
- , review of research and development in the U.K., 1972–1976, 7, 317
- Effect of isotopic substitution on diffusion in liquids, 5, 215

## Index

- Electrochemical techniques, application of to study of homogeneous chemical reactions, 4, 471
- Electron as a chemical entity, 4, 323
- scattering spectroscopy, threshold, 3, 467
- spectroscopy, 1, 355
- Electronic absorption bands, overlapping, computer resolution of, 9, 143
- properties of some chain and layer compounds, 5, 51
- transitions, vibrational intensities in, 5, 165
- Electrons, solvated, in solutions of metals, 5, 337
- Electron spin resonance of haemoglobin and myoglobin, 12, 387
- Electrophilic aromatic substitutions, non-conventional, and related reactions, 3, 167
- C-nitroso-compounds, 6, 1
- Elimination reactions, isotope effect studies of, 1, 163
- Enaminones, 6, 277
- Energetics of neighbouring group participation, 2, 295
- Enumeration methods for isomers, 3, 355
- Environmental lead in perspective, 8, 63
- polycyclic aromatic compounds, modern analytical methods for, 10, 113
- protection in the distribution of hazardous chemicals, 4, 99
- regulation: an international view, 5, 431
- Enzyme analogues from carbohydrates, 8, 85
- Enzymes, immobilized, 6, 215
- in organic synthesis, 3, 387
- , the logic of working with, 2, 1
- , three-dimensional structures and chemical mechanisms of, 1, 319
- Enzymic reactions, stereochemical choice in, 8, 447
- E.s.r. spectroscopy, applications to kinetics and mechanism in organic chemistry, 8, 1
- Experimental studies on the structure of aqueous solutions of hydrophobic solutes, 2, 203
- FARADAY LECTURE. The electron as a chemical entity, 4, 323
- FARADAY LECTURE. The molecular theory of small systems, 12, 251
- Fast reactions, techniques for the kinetic study of, 11, 227
- Fats grown from wastes, 8, 283
- Fe(CO)<sub>4</sub>, 7, 527
- 5-Substituted pyrimidine nucleosides and nucleotides, 6, 43
- Fixation, of nitrogen, 1, 121
- Flavins (isoalloxazines), the photo-physical and photochemical properties of, 11, 15
- Forces between simple molecules, 2, 181
- Foreign compounds in mammals, importance of non-enzymic chemical reaction processes to the rate of, 9, 63
- Formation of hydrocarbons by micro-organisms, 3, 309
- Fourier transform spectroscopy, chemical applications of advances in, 4, 569
- Four-membered rings and reaction mechanisms, 5, 149
- Friedel-Crafts acylation of alkenes, 1, 73
- Functional group selectivity of complex hydride reducing agents, 5, 23
- Gas-phase kinetics of the difluoroamino-radical, 3, 17
- Gases, and droplets, interactions in the atmosphere of, 1, 411
- Glass transition: salient facts and theoretical models, 12, 361
- Glycoproteins, proteoglycans, and carbohydrate-protein complexes of human tissues, chemical aspects of, 2, 355
- Gold drugs used in the treatment of rheumatoid arthritis, chemistry of, 9, 217
- Growth of computational quantum chemistry from 1950 to 1971, 2, 21
- Haemoglobin and myoglobin, electron spin resonance of, 12, 387
- Handling toxic chemicals—environmental considerations, 4, 77
- HAWORTH MEMORIAL LECTURE. The consequences of some projects initiated by Sir Norman Haworth, 2, 145
- HAWORTH MEMORIAL LECTURE. The Haworth-Hudson controversy and the development of Haworth's concepts of ring conformation and of neighbouring group effects, 3, 1



- HAWORTH MEMORIAL LECTURE. Human blood groups and carbohydrate chemistry, 7, 507
- HAWORTH MEMORIAL LECTURE. Structural studies of polysaccharides, 10, 409
- Hazards in the chemical industry—risk management and insurance, 8, 419
- Health hazards to workers from industrial chemicals, 4, 82
- High resolution laser spectroscopy, 12, 453
- Homogeneous catalysis, and organometallic chemistry, the 16 and 18 electron rule in, 1, 337
- chemical reactions, application of electrochemical techniques to the study of, 4, 471
- Human blood groups and carbohydrate chemistry, 7, 423
- Hydrido complexes of the transition metals, 12, 415
- Hydrocarbon formation by micro-organisms, 3, 309
- reactions at metal centres, 11, 283
- Hydrogen bond and charge transfer complexes, calorimetric investigations of, 3, 193
- bonded liquids, thermodynamics of, 11, 257
- bonding, very strong, 9, 91
- isotope effects, kinetic, recent advances in the study of, 3, 513
- Hydrophobic solutes, experimental studies on the structure of aqueous solutions of, 2, 203
- Imines, photochemistry of, 6, 63
- Immobilized enzymes, 6, 215
- Importance of (non-enzymic) chemical reaction processes to the fate of foreign compounds in mammals, 9, 63
- — — solvent internal pressure and cohesion to solution phenomena, 4, 211
- Inclusion phenomena, molecular, and clathrates, 7, 65
- Individual CH bond strengths in simple organic compounds: effects of conformation and substitution, 7, 399
- Industry, chemical, hazards in: risk management and insurance, 8, 419
- Influence of flavour chemistry on consumer acceptance, 7, 212
- — — legislation on research in flavour chemistry, 7, 195
- Infrared and Raman vibrational spectroscopy in inorganic chemistry, 4, 107
- INGOLD LECTURE. Four-membered rings and reaction mechanisms, 5, 149
- INGOLD LECTURE. How does a reaction choose its mechanism, 10, 345
- Initiation of cyclization using 3-methyl-cyclohex-2-enone derivatives, 9, 265
- Inorganic chemistry, bond valences, a simple structural model for, 7, 359
- pyro-compounds  $M_a[(X_2O_7)_b]$ , 5, 269
- Insect attractants of natural origin, 2, 75
- Insecticides, a new group of: synthetic pyrethroids, 7, 473
- Interactions in the atmosphere of droplets and gases, 1, 411
- , ion-solvent, thermodynamics of, 9, 381
- , metal-metal, in transition-metal complexes containing infinite chains of metal atoms, 1, 99
- , non-bonded, of atoms in organic crystals and molecules, 7, 133
- Introducing a new agricultural chemical, 4, 77
- Ion-molecule reactions in the evolution of simple organic molecules in interstellar clouds and planetary atmospheres, 6, 295
- Ion-pairing, contribution to 'memory effects', 4, 251
- Ion-solvent interactions, thermodynamics of, 9, 381
- Isocyanates and ketens, a mechanistic comparison of acylation by, 4, 231
- , organic, chemistry of the production of, 3, 209
- Isocyanic acid, preparation and properties of, 11, 41
- Isomer enumeration methods, 3, 355
- Isomerization mechanisms of square-planar complexes, 9, 185
- Isosterism and molecular modification in drug design, 8, 563
- Isotope effect studies of elimination reactions, 1, 163
- Isotopic hydrogen exchange in purines: mechanisms and applications, 10, 329
- substitution effects on diffusion in liquids, 5, 215
- JOHN JEYES LECTURE. Chemicals which control plant growth, 6, 261

## Index

- KELVIN LECTURE. Across the living barrier, **6**, 325
- Ketens and isocyanates, a mechanistic comparison of acylation by, **4**, 231
- Kinetics and mechanism in organic chemistry, applications of e.s.r. spectroscopy to, **8**, 1
- , gas-phase, of the difluoroamino-radical, **3**, 17
- of reactions in aqueous mixtures, **4**, 55
- $\beta$ -Lactams, synthetic routes to, **5**, 181
- Lanthanide shift reagents in nuclear magnetic resonance spectroscopy, **2**, 49
- Laser light scattering, quasielastic, **2**, 325
- Laser spectroscopy of ultra-trace quantities, **8**, 367
- Lasers, tunable, **3**, 293
- Lead, environmental, in perspective, **8**, 63
- Leukotrienes; a new class of biologically active compounds including SRS-A, the synthesis of, **11**, 321
- Ligands, *cis*- and *trans*-effects of, **2**, 163
- , compartmental: routes to homo- and hetero-dinuclear complexes, **8**, 199
- Lignans and neolignans, the synthesis of, **11**, 75
- Liquid, surface of, **7**, 329
- LIVERSIDGE LECTURE. On first looking into Nature's Chemistry:
- I The rôle of small molecules and ions: the transport of elements, **9**, 281
- II The rôle of large molecules, especially proteins, **9**, 325
- LIVERSIDGE LECTURE. Recent advances in the study of kinetic hydrogen isotope effects, **3**, 513
- LIVERSIDGE LECTURE. The surface of a liquid, **7**, 329
- Macrocyclic ligands, synthetic, transition-metal complexes of, **4**, 421
- Main-group elements, ring, cage, and cluster compounds of, **8**, 315
- Matrix isolation technique and its application to organic chemistry, **9**, 1
- Mechanisms, chemical, and three-dimensional structures of enzymes, **1**, 319
- , isomerisation, of square-planar complexes, **9**, 185
- of the microbial hydroxylation of steroids, **11**, 371
- of reaction between ultimate chemical carcinogens and nucleic acid, **9**, 241
- MELDOLA MEDAL LECTURE. Chemical aspects of glycoproteins, proteoglycans, and carbohydrate-protein complexes of human tissues, **3**, 355
- MELDOLA MEDAL LECTURE.  $\text{Fe}(\text{CO})_4$ , **7**, 527
- MELDOLA MEDAL LECTURE. Molecular collisions and the semiclassical approximation, **5**, 125
- MELDOLA MEDAL LECTURE. Molecular shapes, **7**, 507
- MELDOLA MEDAL LECTURE. N.m.r. spectral change as a probe of chlorophyll chemistry, **6**, 467
- MELDOLA MEDAL LECTURE. The relationship between metal carbonyl clusters and supported metal catalysts, **10**, 159
- Meldrum's acid, **7**, 345
- Metal carbonyl clusters, relationship with supported metal catalysts, **10**, 159
- centres, hydrocarbon reactions at, **11**, 283
- clusters in biology, **10**, 455
- Metal-ion-promoted reactions of organo-sulphur compounds, **6**, 345
- l-D Metallic complexes, **9**, 429
- Metalloboranes and metal-metal bonding, **3**, 231
- Metal-metal bonding and metalloboranes, **3**, 231
- bonds of various orders, synergic interplay of experiment and theory in studying, **12**, 35
- bonds, multiple (especially quadruple), **4**, 27
- interactions in transition-metal complexes containing infinite chains of metal atoms, **1**, 99
- Metals, binding to proteins, **6**, 139
- Methyl group removal in steroid biosynthesis, **10**, 435
- Micelle-forming surfactant solutions, photophysics of molecules in, **7**, 453
- Micelles in aqueous solution, **6**, 25
- Microbes, use in the petrochemical industry, **8**, 297
- Micro-organisms, protein production by, **8**, 143

- Molecular aspects of biological surfaces, 8, 389
- beam reactive scattering, 11, 1
- collisions and the semiclassical approximation, 5, 125
- orbital theory, comparison with rotational and vibrational spectroscopy in conformational analysis of alcohols and amines, 5, 411
- shapes, 7, 507
- structure and organoleptic quality, 7, 167
- theory of small systems, 12, 251
- wavefunctions, chemical interpretations of, 5, 79
- Molybdenum and tungsten; alkoxy, amido, hydrazido, and related compounds of, 12, 331
- Monoalkyltriazenes, 7, 377
- Morphogenesis, biological, the physical chemistry of, 10, 491
- Motion, molecular, and time-correlation functions, 7, 89
- Multistability in open chemical reaction systems, 5, 359
- Myoglobin and haemoglobin, electron spin resonance of, 12, 387
- Natural products from echinoderms, 1, 1
- —, polycyclic polysubstituted, systematic development of strategy in, 6, 413
- Neighbouring-group effects and ring conformation, development of Haworth's concepts of, 3, 1
- participation, energetics of, 2, 295
- New perspectives in surface chemistry and catalysis, 6, 373
- Nitrogen fixation, 1, 121
- Nitroso-alkenes and nitroso-alkynes, 12, 53
- C-Nitroso-compounds, electrophilic, 6, 1
- NMR and vibrational spectroscopic studies, structure in solvents and solutions, 12, 1
- Non-bonded interactions of atoms in organic crystals and molecules, 7, 133
- Non-conventional electrophilic aromatic substitutions and related reactions, 3, 167
- Nuclear magnetic resonance and the periodic table, 5, 1
- — —, carbon-13 in biosynthetic studies, 4, 597
- — — methods (new) for tracing the future of hydrogen in biosynthesis, 8, 539
- — — spectral change as a probe of chlorophyll chemistry, 6, 467
- — — spectroscopy, lanthanide shift reagents in, 2, 49
- — —: spin-lattice relaxation, 4, 401
- Nucleic acid, mechanisms of reaction with ultimate chemical carcinogens, 9, 241
- Nucleosides and nucleotides, pyrimidine, 5-substituted, 6, 43
- Nutritional chemistry of inorganic trace constituents of the diet, 10, 270
- NYHOLM MEMORIAL LECTURE. Chemical education research: facts, findings, and consequences, 9, 365
- NYHOLM MEMORIAL LECTURE. Forward from Nyholm's March on Lecture, 3, 373
- NYHOLM MEMORIAL LECTURE. Growth, change, challenge, 5, 253
- NYHOLM MEMORIAL LECTURE. Ring, cage, and cluster compounds of the main group elements, 8, 315
- NYHOLM MEMORIAL LECTURE. Solving chemical problems, 11, 171
- NYHOLM MEMORIAL LECTURE. Synergic interplay of experiment and theory in studying metal-metal bonds of various orders, 12, 35
- Olefin metathesis and its catalysis, 4, 155
- Olefinic compounds, photochemistry of, 3, 329
- On first looking into nature's chemistry:
- I The rôle of small molecules and ions: the transport of the elements, 9, 281
- II The rôle of large molecules, especially proteins, 9, 325
- Organic chemistry of superoxide, 6, 195
- Organoboranes as reagents for organic synthesis, preparation of, 3, 443
- Organoborates in organic synthesis: the use of alkenyl-, alkynyl-, and cyanoborates as synthetic intermediates, 6, 393
- Organometallic chemistry and homoge-

- neous catalysis, the 16 and 18 electron rule in, 1, 337
- Organomethyl compounds, synthesis, structure, and vibrational spectra, 9, 25
- Organosulphur compounds, metal-ion-promoted reactions of, 6, 345
- Organo-transition-metal complexes: stability, reactivity, and orbital correlations, 2, 271
- Oxygen, singlet molecular, 10, 205
- PEDLER LECTURE. Porphyrins and related ring systems, 4, 1
- Phase boundaries, reactivity of organic molecules at, 1, 229
- Phenols, anionic cyclization of, 12, 213
- , long-chain, of non-isoprenoid origin, 8, 499
- Philosophy of chemistry, some considerations, 5, 203
- Phosphates, aluminium, the chemistry and binding properties of, 6, 173
- Phosphorus compounds, tervalent, in organic synthesis, 3, 87
- Photochemistry of azobenzene and its derivatives, 1, 481
- of carbonyl compounds, 1, 465
- of imines, 6, 63
- of olefinic compounds, 3, 329
- of organic sulphur compounds, 4, 523
- of the uranyl ion, 3, 139
- of transition-metal co-ordination compounds—a survey, 1, 241
- Photocyclization and photochemistry of aryl halides, 10, 181
- Photodegradation and stabilization of commercial polyolefins, 4, 533
- Photophysical and photochemical properties of flavins (isoalloxazines), 11, 15
- Photophysics of molecules in micelle-forming surfactant solutions, 7, 453
- Plant growth, control by chemicals, 6, 261
- Platinum metal complexes,  $\eta^5$ -cyclopentadienyl and  $\eta^6$ -arene as protecting ligands towards, 10, 1
- Polymer solutions, dielectric relaxation in, 1, 49
- supports, insoluble, use in organic chemical synthesis, 3, 65
- Polymerization and copolymerization of butadiene, 6, 235
- Polymers, conductivity and superconductivity in, 5, 95
- Polyolefins, commercial, photo-degradation and stabilization of, 4, 533
- Polysaccharides, structural studies of, 10, 409
- Porphyrins and related ring systems, 4, 1
- Post-B<sub>12</sub> problems in corrin synthesis, 5, 377
- Preparation of organoboranes: reagents for organic synthesis, 3, 443
- and properties of isocyanic acid, 11, 41
- PRESIDENTIAL ADDRESS 1976. Chemistry and the new industrial revolution, 5, 317
- Properties and syntheses of sweetening agents, 6, 431
- Prostaglandins, tomorrow's drugs, 4, 589
- , thromboxanes, PGX: biosynthetic products from arachidonic acid, 6, 489
- Prostanoids, total syntheses of, 2, 29
- Protecting ligands,  $\eta^5$ -cyclopentadienyl and  $\eta^6$ -arene towards platinum metal complexes, 10, 1
- Protein production by microorganisms, 8, 143
- Proteins, binding of heavy metals to, 6, 139
- , rôle of in nature's chemistry, 9, 325
- Pulse radiolysis, contributions to chemistry, 7, 235
- Purines, isotopic hydrogen exchange in, mechanisms and applications, 10, 329
- Pyrimidine nucleosides and nucleotides, 5-substituted, 6, 43
- Pyro-compounds, inorganic, M<sub>a</sub>[(X<sub>2</sub>O<sub>7</sub>)<sub>b</sub>], 5, 269
- Quadruple bonds and other multiple metal to metal bonds, 4, 27
- Quantitative drug design, 3, 273
- Quantum chemistry, computational, growth of from 1950 to 1971, 2, 21
- mechanical tunnelling in chemistry, 1, 211
- Quasielastic laser light scattering, 2, 325
- Radioactive and toxic wastes: a comparison of their control and disposal, 4, 90

- Radiolysis, pulse, contributions to chemistry, 7, 235
- Raman and infrared vibrational spectroscopy in inorganic chemistry, 4, 107
- R. A. ROBINSON MEMORIAL LECTURE.**  
Thermodynamics of hydrogen-bonded liquids, 11, 257
- Reaction mechanisms, four-membered rings and, 5, 149
- — —, the conversion of ammonium cyanate into urea, 7, 1
- Reactivities of carbon disulphide, carbon dioxide, and carbonyl sulphide towards some transition-metal systems, 11, 57
- Reactivity of organic molecules at phase boundaries, 1, 229
- Recent advances in the study of kinetic hydrogen isotope effects, 3, 513
- Recent syntheses in the Vitamin D field, 9, 449
- Research in chemical education: a reassessment 1, 27
- RESOURCES CONSERVATION BY NOVEL BIOLOGICAL PROCESSES**
- I** Grow Fats from wastes, 8, 283
- II** The Use of Microbes in the Petrochemical Industry, 8, 297
- III** Utilization of Agricultural and Food Processing Wastes containing Carbohydrates, 8, 309
- Review of chemical education research and development in the U.K., 1972–1976, 7, 317
- Ring, cage, and cluster compounds of the main group elements, 8, 315
- ROBERT ROBINSON LECTURE.** Post-B<sub>12</sub> problems in corrin synthesis, 5, 377
- ROBERT ROBINSON LECTURE.** The logic of working with enzymes, 2, 1
- ROBERT ROBINSON LECTURE.** Vitamin B<sub>12</sub>. Retrospect and prospects, 9, 125
- Rodent control, chemicals in, 1, 381
- Role of chemically-induced dynamic electron polarization (CIDEP) in chemistry, 8, 29
- Rotationally and vibrationally inelastic scattering of molecules, 3, 407
- Safety evaluation of natural and synthetic flavourings, 7, 185
- Scale insects and aphids, chemistry of, 4, 263
- Semistable molecules in the laboratory and in space, 11, 435
- Silicon compounds in organic synthesis, some uses of, 10, 83
- — — containing carbonyl equivalents, 11, 493
- — — in organic synthesis, 7, 15
- 16 and 18 Electron rule in organometallic chemistry and homogeneous catalysis, 1, 337
- Small molecules, conformation studies on, 1, 293
- Solids, surface energy of, 1, 445
- Solute-solvent interactions, spectroscopic studies of, 5, 297
- Solution phenomena, the importance of solvent internal pressure and cohesion, 4, 211
- Solutions of metals: solvated electrons, 5, 337
- Solvent internal pressure and cohesion, importance to solution phenomena, 4, 211
- Solving chemical problems, 11, 171
- Some considerations on the philosophy of chemistry, 5, 203
- Some recent developments in chemistry teaching in schools, 1, 495
- Spectra of stars, absorption bands in, a crystal field approach, 5, 233
- Spectral lineshapes, collisional transfer of rotational energy with, 7, 219
- Spectroscopic studies of solute-solvent interactions, 5, 297
- Spectroscopy, electron, 1, 355
- — —, Fourier transform, chemical applications of advances in, 4, 569
- — —, laser, of ultra-trace quantities, 8, 367
- — —, rotational and vibrational, comparison with molecular orbital theory in confirmational analysis of alcohols and amines, 5, 411
- — —, threshold electron scattering, 3, 467
- Spin-lattice relaxation: a fourth dimension for proton n.m.r. spectroscopy, 4, 401
- Square-planar complexes, isomerisation mechanisms of, 9, 185
- SRS-A, the synthesis of leukotrienes: a new class of biologically active compounds including, 11, 321
- Stability, reactivity, and orbital correlations of organo-transition-metal complexes, 2, 271

- Stereochemical choice in enzymic reactions, **8**, 447
- Stereoselective synthesis of steroid side-chains, **12**, 75
- Steroid biosynthesis, methyl group removal in, **10**, 435
- , the mechanism of the microbial hydroxylation of, **11**, 371
- , routes to by intramolecular Diels-Alder reactions of *o*-xylylenes **9**, 41
- side-chains, stereoselective synthesis of, **12**, 75
- Sterols, biosynthesis of, **1**, 259
- Structure in solvents and solutions—NMR and vibrational spectroscopic studies, **12**, 1
- of aqueous solutions of hydrophobic solutes, experimental studies on, **2**, 203
- Substitution and conformation, effects of, on individual CH bond strengths in simple organic compounds, **7**, 399
- Sugars, complex formation with cations, **9**, 415
- Sulphoximides **4**, 189
- Sulphoximides—an update, **9**, 477
- Sulphur compounds, organic, photochemistry of, **4**, 523
- , organic compounds of, metal-ion-promoted reactions of, **6**, 345
- species, homonuclear, chemistry of, **2**, 233
- Superconductivity and conductivity in polymers, **5**, 95
- Superoxide, organic chemistry of, **6**, 195
- Surface chemistry and catalysis, new perspectives, **6**, 373
- energy of solids, **1**, 445
- modified electrodes, **8**, 259
- of a liquid, **7**, 329
- Surfaces, biological, molecular aspects of, **8**, 389
- , solid, their acidity, **8**, 475
- Sweetening agents, properties and syntheses of, **6**, 431
- Syntheses and properties of sweetening agents, **6**, 431
- of mononuclear cyanocobalt(III) complexes, **12**, 267
- , recent, in the Vitamin D field, **9**, 449
- , total, of prostanoids, **2**, 29
- Synthesis and cycloadditions, cyanoketenes, **10**, 289
- and synthetic utility of halolactones, **8**, 171
- , of corrins, post-B<sub>12</sub> problems in, **5**, 377
- of leukotrienes; a new class of biologically active compounds including SRS-A, **11**, 321
- of lignans and neolignans, **11**, 75
- of polycyclic polysubstituted natural products, systematic development of strategy in, **6**, 413
- , organic, enzymes in, **3**, 387
- , organic, preparation of organoboranes as reagents for, **3**, 443
- , organic, silicon in, **7**, 15
- , organic, some uses of silicon compounds, **10**, 83
- , organic, trivalent phosphorus compounds in, **3**, 87
- , organic, use of inorganic polymer supports in, **3**, 65
- , organic, the use of organoborates as synthetic intermediates, **6**, 393
- , structure, and vibrational spectra of organomethyl compounds, **9**, 25
- Synthetic pyrethroids, A new group of insecticides, **7**, 473
- routes to  $\beta$ -lactams, **5**, 181
- Systematic development of strategy in the synthesis of polycyclic polysubstituted natural products: the acetonide alkaloids, **6**, 413
- TATE AND LYLE LECTURE. From carbohydrates to enzyme analogues, **8**, 85
- TATE AND LYLE LECTURE. Spin-lattice relaxation: a fourth dimension for proton n.m.r. spectroscopy, **4**, 401
- TATE AND LYLE LECTURE. Transition-metal oxide chelates of carbohydrate-directed macromolecules, **8**, 221
- Teaching of chemistry in schools, some recent developments in, **1**, 495
- Techniques for the kinetic study of fast reactions in solution, **11**, 227
- Tervalent phosphorus compounds in organic synthesis, **3**, 87
- Thermal, photochemical, and transition-metal mediated routes to steroids by intramolecular Diels-Alder reactions of *o*-xylylenes (*o*-quinodimethanes), **9**, 41
- Thermodynamics of ion-solvent interactions, **9**, 381

- Thermolysis and photolysis of diazirines, 11, 127
- Three-dimensional structures and chemical mechanisms of enzymes, 1, 319
- Threshold electron scattering spectroscopy, 3, 467
- Thromboxanes, prostaglandins, PGX: biosynthetic products of arachidonic acid, 6, 489
- TILDEN LECTURE. Alkoxy, amido, hydrazido, and related compounds of molybdenum and tungsten, 12, 331
- TILDEN LECTURE. Applications of e.s.r. spectroscopy to kinetics and mechanism in organic chemistry, 8, 1
- TILDEN LECTURE. Carbon-carbon bond formation involving boron reagents, 11, 191
- TILDEN LECTURE. Concerning stereochemical choice in enzymic reactions, 8, 447
- TILDEN LECTURE.  $\eta^5$ -Cyclopentadienyl and  $\eta^6$ -arene as protecting ligands towards platinum metal complexes, 10, 1
- TILDEN LECTURE. Electrophilic C-nitroso-compounds, 6, 1
- TILDEN LECTURE. Initiation of cyclization using 3-methylcyclohex-2-enone derivatives, 9, 265
- TILDEN LECTURE. Molecular beam reactive scattering, 11, 1
- TILDEN LECTURE. New perspectives in surface chemistry and catalysis, 6, 373
- TILDEN LECTURE. Semistable molecules in the laboratory and in space, 11, 435
- TILDEN LECTURE. Some uses of silicon compounds in organic synthesis, 10, 83
- TILDEN LECTURE. Valence in transition-metal complexes, 1, 431
- Time-correlation functions and molecular motion, 7, 89
- Topological subject—chemistry, 2, 457
- Trace constituents of the diet, chemical aspects, 10, 233
- organic constituents of the diet, sources and biogenesis, 10, 280
- Transimination, chemical models of enzymic, 12, 309
- Transition-metal carbene complexes, chemistry and role as reaction intermediates, 2, 99
- complexes, containing infinite chains of metal atoms, metal-metal interactions in, 1, 99
- complexes of synthetic macrocyclic ligands, 4, 421
- complexes, valence in, 1, 431
- co-ordination compounds, photochemistry of, 1, 241
- hydrido complexes, 12, 415
- systems, reactivities of carbon disulphide, carbon dioxide, and carbonyl sulphide systems towards, 11, 57
- oxide chelates of carbohydrate-directed macromolecules, 8, 221
- Tunable lasers, 3, 293
- Unimolecular reactions, current aspects of, 12, 163
- Uranyl ion, photochemistry of, 3, 139
- Use of insoluble polymer supports in organic chemical synthesis, 3, 65
- Utilization of agricultural and food processing wastes containing carbohydrates, 8, 309
- Valence in transition-metal complexes, 1, 431
- Valences, bond, a simple structural model for inorganic chemistry, 7, 359
- Very strong hydrogen bonding, 9, 91
- Vibrational and NMR spectroscopic studies, structure in solvents and solutions, 12, 1
- , infrared, and Raman spectroscopy in inorganic chemistry, 4, 107
- intensities in electronic transitions, 5, 165
- spectra, synthesis, and structure of organomethyl compounds, 9, 25
- Vibrationally and rotationally inelastic scattering of molecules, 3, 407
- Viologens, electrochemistry of, 10, 49
- Vitamin B<sub>12</sub>, retrospects and prospects, 9, 125
- 'Vitamin' D, chemistry of: the hormonal calciferols, 6, 83
- Vitamin D, recent syntheses in, 9, 449