

INDEX OF AUTHORS, 1954

A.

- Aardt, J. H. P. van**, some cycloheptatriene derivatives, 2965.
Abramovitch, R. A., the pattern of picrate formation in the pyridylquinoline series, 3839.
Abramovitch, R. A., and **Hey, D. H.**, internuclear cyclisation. Part VIII. Naphth[3 : 2 : 1-*c,d*]oxindoles, 1697.
Abramovitch, R. A., **Hey, D. H.**, and **Mulley, R. D.**, internuclear cyclisation. Part XI. The synthesis of *ind-N*-methyl- α -carbolines, 4263.
Acheson, R. M., and **Burstall, M. L.**, the reaction between acridine and methyl acetylenedicarboxylate, 3240.
Acheson, R. M., **Burstall, M. L.**, **Jefford, C. W.**, and **Sansom, B. F.**, some tautomeric acridines, 3742.
Acheson, R. M., **Hoult, T. G.**, and **Barnard, K. A.**, the bromination of acridine, 4142.
Adams, W. J., **Kirk, D. N.**, **Patel, D. K.**, **Petrow, V.**, and **Stuart-Webb, I. A.**, 12-oxygenated pregnane derivatives. Part II. Preparation of 21-acetoxy-17 α -hydroxyallo-pregnane-3 : 12 : 20-trione from hecogenin. Part III. Ketals of *allo*-pregnane-12 : 20-diones, 2209, 2298.
Adams, W. J., **Patel, D. K.**, and **Petrow, V.**, 12-oxygenated pregnane derivatives. Part IV. 21-Acetoxy-17 α -hydroxy-pregn-4-ene-3 : 12 : 20-trione, 4688.
Adams, W. J., **Patel, D. K.**, **Petrow, V.**, and **Stuart-Webb, I. A.**, 12-oxygenated pregnane derivatives. Part I. (a) 21-Acetoxy-12 α : 17 α -dihydroxypregn-4-ene-3 : 20-dione; (b) 12 α : 21-diacetoxyl-17 α -hydroxypregn-4-ene-3 : 20-dione; (c) 3 α : 12 α : 21-triacetoxyl-17 α -hydroxypregn-20-one; and (d) miscellaneous observations, 1825.
Addison, C. C., and **Hodge, N.**, the liquid dinitrogen tetroxide solvent system. Part XVI. Reactions with ethylammonium nitrate solutions: ethylammonium tetranitroato-zincate, 1138.
Addison, C. C., **Hodge, N.**, and **Thompson, R.**, the liquid dinitrogen tetroxide solvent system. Part XVII. The equilibrium between alkylammonium and nitrosonium tetranitroato-zincates, 1143.
Addison, C. C., **Kerridge, D. H.**, and **Lewis, J.**, liquid metals. Part I. The surface tension of liquid sodium : the vertical-plate technique, 2861.
Aebi, A., **Barton, D. H. R.**, **Burgstahler, A. W.**, and **Lindsey, A. S.**, sesquiterpenoids. Part V. The stereochemistry of the tricyclic derivatives of caryophyllene, 4659.
Aghoramurthy, K., and **Seshadri, T. R.**, nuclear oxidation in flavones and related compounds. Part XLVII. A new synthesis of fraxetin and a synthesis of 4-methylfraxetin, 3065.
Ahluwalia, V. K., **Mukerjee, S. K.**, and **Seshadri, T. R.**, nuclear oxidation of flavones and related compounds. Synthesis of gardenin, 3988.
Ahmad, Y., and **Hey, D. H.**, acylarylnitrosamines. Part VII. Reactions of 3-aminomethoxypyridines and 3-amino-1-methylpyridones. The preparation of 2-methoxy-3-phenyl-, 4-methoxy-3-phenyl-, and 2-methoxy-5-phenyl-pyridine, 4516.
Akroyd, P., **Haworth, R. D.**, and **Jefferies, P. R.**, purpurogallin. Part XI. Some further rearrangement reactions of the tropolones, 286.
Albert, A., and **Brown, D. J.**, purine studies. Part I. Stability to acid and alkali. Solubility. Ionization. Comparison with pteridines, 2060.
Albert, A., **Brown, D. J.**, and **Wood, H. C. S.**, pteridine studies. Part V. The monosubstituted pteridines, 3832.
Albert, A., and **Hampton, A.**, analogues of 8-hydroxyquinoline having additional cyclic nitrogen atoms. Part II. Further preparations, and some physico-chemical properties, 505.
Allan, A. J. G., and **Schulman, J. H.**, surface films of phenolic compounds, 1238.
Allan, G. G., **Johnston, J. D.**, and **Spring, F. S.**, triterpene resins and related acids. Part XXIX. The structure of oxo- β -amyradienyl acetate, 1546.
Allen, A. D., studies in the hydrolysis and alcoholysis of some organic nitrates, 1968.
Allen, K. A., **Cymerman-Craig, J.**, and **Diamantis, A. A.**, the strengths of some organic bases, 234.
Allerton, R., and **Overend, W. G.**, deoxy-sugars. Part XXVI. The cleavage of sulphonic esters with lithium aluminium hydride, 3629.
Allison, J. A. C., **Braunholtz, J. T.**, and **Mann, F. G.**, the preparation and properties of 1 : 2 : 3 : 4-tetrahydro-1-methyl-4-oxoquinoline, 403.
Alt, G. H., and **Barton, D. H. R.**, the action of perphthalic acid on 5-dihydroergosteryl and ergosteryl acetates, 1356. Some conformational aspects of neighbouring-group participation, 4284.
Amendola, C., **Rosenkranz, G.**, and **Sondheimer, F.**, steroids. Part LII. Synthesis of steroid hormones analogues hydroxylated at C₍₆₎, 1226.
Ames, D. E., **Bowman, R. E.**, and **Grey, T. F.**, synthesis of some carboxybutenolide derivatives, 375.
Ames, T. R., **Beton, J. L.**, **Bowers, A.**, **Halsall, T. G.**, and **Jones, E. R. H.**, the chemistry of the triterpenes and related compounds. Part XXIII. The structure of taraxasterol, ψ -taraxasterol (heterolupol), and lupenol-I, 1905.
Anbar, M., and **Dostrovsky, I.**, a kinetic study of the formation and hydrolysis of *tert*-butyl hypochlorite, 1094. Ultra-violet absorption spectra of some organic hypohalites, 1105.
Anbar, M., **Dostrovsky, I.**, **Samuel, D.**, and **Yoffe, A. D.**, esters of inorganic oxyacids. Part I. The mechanism of hydrolysis of alkyl esters, ¹⁸O being used as tracer, and its relation to other reactions in alkaline media, 3603.
Andersen, W., **Hayes, D. H.**, **Michelson, A. M.**, and **Todd, Sir A.**, deoxyribonucleosides and related compounds. Part IV. The configuration at the glycosidic centre in deoxyadenosine and deoxycytidine, 1882.
Anderson, J. S., **Edgington, D. N.**, **Roberts, L. E. J.**, and **Wait, E.**, the oxides of uranium. Part IV. The system UO₂-ThO₂-O, 3324.
Anderson, R. M., **Clemo, G. R.**, and **Swan, G. A.**, the constitution of yohimbine and related alkaloids. Part VII. Synthesis of 5 : 6 : 7 : 8-tetrahydroisoquinoline-3-carboxylic acid. Part VIII. Synthesis of 3-ethyl-2-(5-ethyl-2-pyridyl)indole, a degradation product of corynantheine, 2579, 2962.
Andon, R. J. L., **Cox, J. D.**, and **Herington, E. F. G.**, phase relationships in the pyridine series. Part V. The thermodynamic properties of dilute solutions of pyridine bases in water at 25° and 40°, 3188.
Andrews, K. J. M., **Atherton, F. R.**, **Bergel, F.**, and **Morrison, A. L.**, hydroxypyridine and hydroxyquinolinc phosphates as anti-cholinesterases, 1638.
Andrews, K. J. M., **Bergel, F.**, and **Morrison, A. L.**, branched-chain thia-alkanebis(quaternary ammonium) salts as ganglion-blocking agents, 3483.
Andrews, P., **Hough, L.**, and **Jones, J. K. N.**, the galactan of *Strychnos nux-vomica* seeds, 806.
Andrews, P., and **Jones, J. K. N.**, the isolation of oligosaccharides from gums and mucilages. Part II, 1724. Part III. Golden apple gum, 4134.
Andriesse, P. See **Heertjes, P. M.**, 18.
Anet, F. A. L., **Chakravarti, D.**, **Robinson, Sir R.**, and **Schlittler, E.**, ajmaline. Part I, 1242.

- Ansell, M. F., intramolecular acylation. Part I. The ring closure of some α -substituted β -1-naphthylpropionic acids, 575.
- Ansell, M. F., and Berman, A. M., intramolecular acylation. Part II. The ring closure of some β -substituted β -1-naphthylpropionic acids, 1792.
- Antia, N. J., Mazur, Y., Wilson, R. R., and Spring, F. S., steroids. Part XI. Isolation of cholegenin and iso-cholegenin from ox-bile, 1218.
- Archer, D. P., and Hickinbottom, W. J., the synthesis and reactions of branched-chain hydrocarbons. Part V. Oxidation of 2 : 2 : 4-trimethylpentane and of 2 : 2 : 4 : 6 : 6-pentamethylheptane by chromic oxide, 4197.
- Arcus, C. L., and Coombs, M. M., substituted fluoren-9-ols, 3977.
- Reactions of organic azides. Part III. The synthesis of phenanthridines by the interaction of fluoren-9-ols with hydrazoic and sulphuric acids, and the mechanism of the rearrangement of the intermediate azides, 4319.
- Arcus, C. L., and Prydal, B. S., isocyanates. Part II. The Hofmann reaction with *C*-benzoylformamide, 4018.
- Armitage, J. B., Entwistle, N., Jones, E. R. H., and Whiting, M. C., researches on acetylenic compounds. Part XLI. The synthesis of diphenylpolyacetylenes, 147.
- Arnall, P., pyridane (2 : 3-cyclopentenopyridine) as a coal-tar base, 4040.
- Arthur, H. R., and Hui, W. H., triterpene acids from the leaves of *Psidium guajava*, L., 1403. Products from some plants of Hong Kong, 2782.
- An examination of the Ericaceae of Hong Kong. The occurrence of ursolic acid, 4683.
- Askan, V., and Linnell, W. H., the cyclisation of some substituted phenylsuccinic acids, 2435.
- Ethyl 6-acetylindane-1-carboxylate, 4691.
- Aspinall, G. O., Hirst, E. L., and Mahomed, R. S., hemicellulose A of beechwood (*Fagus sylvatica*), 1734.
- Aspinall, G. O., and Mahomed, R. S., the constitution of a wheat-straw xylan, 1731.
- Aspinall, G. O., and Telfer, R. G. J., cereal gums. Part I. The methylation of barley glucosans, 3519.
- Atherton, F. R. See Andrews, K. J. M., 1638.
- Atkinson, C. M., Brown, C. W., McIntyre, J., and Simpson (the late), J. C. E., cinnolines and other heterocyclic types in relation to the chemotherapy of trypanosomiasis. Part IX. Synthesis of azoquinoxaline derivatives, 2023.
- Atkinson, C. M., Simpson (the late), J. C. E., and Taylor, A., cinnolines and other heterocyclic types in relation to the chemotherapy of trypanosomiasis. Part VII. Intermediates. Part VIII. Attempts to synthesise N^1N^3 -Di-(4-amino-7-cinnolyl)guanidine dimethiodide, 165, 1381.
- Atkinson, M. R., Komzak, A. A., Parkes, E. A., and Polya, J. B., triazoles. Part V. Derivatives of 3-amino-1 : 2 : 4-triazole, 4508.
- Atkinson, M. R., Parkes, E. A., and Polya, J. B., triazoles. Part IV. Ultra-violet absorption spectra of some 1 : 2 : 4-triazoles, 4256.
- Atkinson, M. R., and Polya, J. B., triazoles. Part II. N-Substitution of some 1 : 2 : 4-triazoles. Part III. Mono- and di-methyl(phenyl)-1 : 2 : 4-triazoles, 141, 3319.
- Atkinson, R. O., some reactions of phthalimide, 1329.
- Awad, W. I., Baddar, F. G., and Marei, A. E., β -aryloxypropionic acids. Part III. Further observations on the Fries rearrangement, 4538.
- Ayer, W. A., Humber, L. G., and Taylor, W. I., the addition of isoprene to 4-methoxytoluquinone, 3505.
- Aynsley, E. E., and Hetherington, G., a new pyridine complex of selenium tetrafluoride, 4895.
- Aynsley, E. E., Hetherington, G., and Robinson, P. L., the preparation and some reactions of nitryl fluoride, 1119.
- Ayscough, P. B., and Emeléus, H. J., kinetics of the pyrolysis of trimethylarsine, tristrifluoromethylarsine, and related compounds, 3381.
- B.
- Backhouse, A. J., and Bradley, W., the direct hydroxylation of pyranthrone and amphi-isopyranthrone, 4506.
- Bacon, R. G. R., Grime, R., and Munro, D. J., oxidation studies. Part I. Metal-catalysed persulphate oxidation of some simple phenols, 2275.
- Baddar, F. G., and Iskander, Z., triad prototropic systems. Part II. The effect of substituents on the mobility of the azomethinecarboxylic acids. Part III. The effect of substituents on the mobility of the azomethine system, 203, 209.
- Baddar, F. G. See also Awad, W. I., 4538.
- Baddeley, G., Chadwick, J., and Taylor, H. T., steric relations between ionisation of aralkyl chlorides and dissociation of anilinium ions. Part I, 2405.
- Baddeley, G., and Nield, P. G., the dismutation of bisdiphenylmethyl ether by deuterium perchlorate, 4684.
- Baddeley, G., and Voss, D., the mechanism of Friedel-Crafts acylation, 418.
- Badiley, J., Buchanan, J. G., and Szabó, L., sugar phosphates. Part I. Derivatives of glucose 4 : 6-(hydrogen phosphate), 3826.
- Badiley, J., and Jamieson, G. A., synthesis of "active methionine," 4280.
- Baddiley, J., and Mathias, A. P., cytidine nucleotides. Part I. Isolation from *Lactobacillus arabinosus*, 2723.
- Coenzyme A. Part IX. The synthesis of pantothenoylcysteine, its 4'-phosphate, and related compounds as possible precursors of the coenzyme, 2803.
- Badger, G. M., and Buttery, R. G., aromatic azo-compounds. Part VI. The action of light on azoxy-compounds, 2243.
- Badger, G. M., Buttery, R. G., and Lewis, G. E., aromatic azo-compounds. Part V. The absorption spectra of *N*-substituted 4-aminoazobenzenes and their mono-acid salts, 1888.
- Badger, G. M., Pearce, R. S., Rodda, H. J., and Walker, I. S., substituted anthracene derivatives. Part VII. An examination of some naphthacene endooxide derivatives, 3151.
- Badger, G. M., Rodda, H. J., and Sasse, W. H. F., synthetical applications of the desulphurisation reaction. Part I. The synthesis of fatty acids, 4162.
- Badger, G. M., and Seidler, J. H., polynuclear heterocyclic systems. Part VIII. Synthetic applications of the Schmidt reaction, 2329.
- Badger, G. M., and Walker, I. S., substituted anthracene derivatives. Part VIII. The conjugating powers of the substitution positions in 3 : 4-benzophenanthrene, 3238.
- Bagnall, K. W., and D'Eye, R. W. M., the preparation of polonium metal and polonium dioxide, 4295.
- Bailey, B., Haworth, R. D., and McKenna, J., the constitution of conessine. Part VII. Degradation of some reduced quinoline and indole bases, 967.
- Baker, B. W., Kierstead, R. W., Linstead, R. P., and Weedon, B. C. L., anodic syntheses. Part XI. Synthesis of taric and petroselinic acid, 1804.
- Baker, J. W., and Neale, A. J., hydrolytic decomposition of esters of nitric acid. Part III. Kinetic evidence for ion exchange between anionic reagents and the solvent in the carbonyl elimination reaction (E_{co2}), 3225.
- Baker, W., Boarland, M. P. V., and McOmie, J. F. W., preparation and reactions of diphenylene, 1476.
- Baker, W., Clarke, G. G., and Harborne, J. B., reactions of 4-thionchromones with amino-compounds, and with methyl iodide, 998.
- Baker, W., Harborne, J. B., Price, A. J., and Rutt, A., eight- and higher-membered ring compounds. Part XI. Alkyl derivatives of di-, tri-, and tetra-salicylides, 2042.
- Balasubramanian, M., and Baliah, V., synthesis of β -amino-sulphones and $\alpha\beta$ -unsaturated sulphones, 1844.
- Balenović, K., and Dvorak, D., a synthesis of (-)- β -amino- γ -methylvaleric acid [(-)- β -leucine], 2976.
- Balfe, M. P., Jackman, W. H. F., and Kenyon, J., acid-catalysed racemisation of 1-methylheptyl acetate, 965.
- Balfe, M. P., Kenyon, J., and Waddan, D. Y., some reactions of optically active 1-phenylpent-1-en-3-ol and 1-phenylpent-2-en-1-ol, 1366.
- Baliah, V., and Rangarajan, T., preparation of tetrahydro-1 : 4-thiazine 1 : 1-dioxides, 3068.
- Baliah, V. See also Balasubramanian, M., 1844.
- Ball, G. T. See Maxted, E. B., 2778, 3947.
- Barclay, K. S., Bourne, E. J., Stacey, M., and Webb, M., structural studies of the cellulose synthesised by *Acetobacter aceti*genum, 1501.
- Barduhn, A. J., and Kobe, K. A., reduction of acids to aldehydes with formic acid, 1651.

- Barker, A., and Barker, C. C., 3 : 6-disubstituted fluorenes. Part II. The preparation of 3 : 6-diaminofluorene from fluorene, and the attempted internuclear cyclisation of derivatives of 4 : 4'-diaminodiphenylmethane. Part III. Fluorene analogues of Michler's hydrol, malachite-green, and crystal-violet, 870, 1307.
- Barker, C. C., the dehydration of some β -benzamido-acids with acetic anhydride, 317.
See also Barker, A., 870, 1307.
- Barker, G. R., the synthesis of isotopically labelled adenosine-2' phosphate and adenosine-3' phosphate, 3396.
- Barker, G. R., Luthy, N. G., and Dhar, M. M., the synthesis of 5-pyridinyl sulphides and disulphides, 4206.
- Barker, G. R., and Smith, D. C. C., the chemistry of ribose and its derivatives. Part III. The separation of anomeric methyl ribosides, 2151.
- Barker, S. A., Bourne, E. J., Bruce, G. T., Neely, W. B., and Stacey, M., immunopolysaccharides. Part II. Structure of a *Betacoccus arabinosaceous* dextran, 2395.
- Barker, S. A., Bourne, E. J., and Carrington, T. R., studies of *Aspergillus niger*. Part III. The structure of a trisaccharide synthesised from sucrose, 2125.
- Barker, S. A., Bourne, E. J., Stacey, M., and Whiffen, D. H., infra-red spectra of carbohydrate. Part I. Some derivatives of D-glucopyranose, 171.
- Barker, S. A., Bourne, E. J., Stephens, R., and Whiffen, D. H., infra-red spectra of carbohydrates. Part II. Anomeric configuration of some hexo- and pento-pyranoses. Part III. Characterisation of deoxy-compounds, 4211, 3468.
- Barker, S. A., and Stephens, R., infra-red spectra of carbohydrates. Part IV. Characterisation of furanose derivatives, 4550.
- Barlin, G. B., Pausacker, K. H., and Riggs, N. V., oxidations with phenyl iodosoacetate. Part III. Primary aromatic amines in acetic acid, 3122.
- Barlin, G. B., and Riggs, N. V., the reaction of phenyl iodosoacetate with *N*-aryacetamides, 3125.
- Barlrop, J. A., and Jeffreys, J. A. D., the Diels-Alder reaction with certain o-quinones, 154.
- Curare and related topics. Part I. A preliminary examination of *Chondrodendron limacifolium*, 159.
- Barlrop, J. A., and Taylor, D. A. H., experiments on the synthesis of lysergic acid. Part I. Derivatives of indole. Part II. Derivatives of 1-azaphenanthrene, 3399, 3403.
- Barnard, J. A., Winter, E. R. S., and Briscoe, H. V. A., exchange reactions of solid oxides. Part IV. Zinc oxide, 1517.
- Barnard, K. A. See Acheson, R. M., 4142.
- Barnes, J. H., and Marshall, P. G., synthesis of 2-chloro-6-methylphenoxyacetic acid, 1159.
- Barnett, M. P. See Coulson, C. A., 3108.
- Barr, D. A., and Rose, J. B., cationic polymerisation of 2 : 3-dihydrofurans, 3766.
- Barrett, R. M., and Raitt, J. S., ion exchange in ultramarine, 4641.
- Barry, V. C., McCormick, J. E., and Mitchell, P. W. D., properties of periodate-oxidised polysaccharides. Part III. Estimation of α -glycol groupings in a polysaccharide, 3692.
- Barry, V. C., and Mitchell, P. W. D., properties of periodate-oxidised polysaccharides. Part IV. The products obtained on reaction with phenylhydrazine, 4020.
- Barry, W. J., and Finar, I. L., derivatives of 5-o-mercaptophenyl-3-methyl-1-phenylpyrazole, 138.
- Barton, D. H. R., Brooks, C. J. W., and De Mayo, P., steroidal alkaloids. Part III. The constitution and stereochemistry of cevine, 3950.
- Barton, D. H. R., Brooks, C. J. W., and Fawcett, J. S., steroidal alkaloids. Part II. Some observations on the constitution of cevine, 2137.
- Barton, D. H. R., and De Mayo, P., triterpenoids. Part XV. The constitution of icterogenin, a physiologically active triterpenoid. Part XVI. The constitution of rehmannic acid, 887, 900.
- Barton, D. H. R., De Mayo, P., Warnhoff, E. W., Jeger, O., and Perold, G. W., triterpenoids. Part XIX. The constitution of lantadene B, 3689.
- Barton, D. H. R., Evans, R. M., Hamlet, J. C., Jones, P. G., and Walker, T., studies in the synthesis of cortisone. Part VII. The preparation of 3β : 17 α -dihydroxyallo-pregnane-11 : 20-dione, 747.
- Barton, D. H. R., Ives, D. A. J., and Thomas, B. R., triterpenoids. Part XVII. The transformation of lanostadienol (lanosterol) into 14-methylcholestan-3 β -ol, 903.
- Barton, D. H. R., and Laws, G. F., some oxidation products of ergosta-7 : 14 : 22-trien-3 β -yl acetate (ergosterol B₁ acetate), 52.
- Barton, D. H. R., and Nickon, A., sesquiterpenoids. Part VI. The absolute configuration of caryophyllene, 4665.
- Barton, D. H. R., Page, J. E., and Warnhoff, E. W., triterpenoids. Part XVIII. The constitutions of phyllanthol and cycloartenol, 2715.
- Barton, D. H. R., and Robinson, C. H., the stereospecificity of carbanion reduction processes, 3045.
- Barton, D. H. R., and Tarlton, E. J., sesquiterpenoids. Part IV. The constitution of carissone, 3492.
- Barton, D. H. R. See also Aebi, A., 4659, and Alt, G. H., 1358, 4284.
- Bassett, H. L., and Thomas, C. R., the Bodroux reaction, 1188.
- Bassett, I. M., and Brown, R. D., a theoretical investigation of the chemical reactivity of glyoxaline, 2701.
- Bates, E. B., Jones, E. R. H., and Whiting, M. C., researches on acetylenic compounds. Part XLII. Reductions with lithium aluminium hydride, 1854.
- Bates, R. J., and Cymerman-Craig, J., a novel method of cyanoethylation. Part II. 10-2'-Cyanoethyl-9 : 10-dihydrophenanthridine, 1153.
- Bayne, S., and Wildy, J., crystalline 1-O-methyl-D-fructose, 1147.
- Beale, R. N., proximity effects in the interpretation of the basic strengths of primary aromatic amines, 4494.
- Beaven, G. H., Hall, D. M., Lesslie, M. S., Turner, E. E., and Bird, G. R., the relation between configuration and conjugation in diphenyl derivatives. Part III. The ultra-violet absorption spectra of some 2 : 2'-bridged compounds with meta-substituents, 131.
- Beckett, A. H., and Kerridge, K. A., some alkyl and acyl derivatives of 2-phenacylpypyridine, 2948.
- Beech, W. F., preparation of aromatic aldehydes and ketones from diazonium salts, 1297.
- Beecher, L. See Bellamy, L. J., 4487.
- Beer, R. J. S., Broadhurst, T., and Robertson, A., the chemistry of the melanins. Part V. The autoxidation of 5 : 6-dihydroxyindoles, 1947.
- Beer, R. J. S., Donavanik, T., and Robertson, A., peroxides of tetrahydrocarbazole and related compounds. Part VI. Some indoleninyl hydroperoxides, 4139.
- Beer, R. J. S., Jaquis, D. B., Robertson, A., and Savage, W. E., quassin and neocouassan. Part II, 3672.
- Beer, R. J. S., Jennings, B. E., and Robertson, A., the chemistry of bacteria. Part III. An indolylpyrrolmethene from violacein, 2679.
- Belcher, R., Nutten, A. J., and Stephen, W. I., substituted benzidines and related compounds as reagents in analytical chemistry. Part XIII. The behaviour of certain *N*- and *N*'-alkylated benzidines towards oxidising agents, 2543.
- Belcher, R., Stacey, M., Sykes, A., and Tatlow, J. C., the synthesis of certain trifluoromethylquinoline derivatives, 3846.
- Belcher, R., Sykes, A., and Tatlow, J. C., trifluoromethyl-substituted benzimidazoles, 4159.
- Bell, C. F. See Irving, H., 4253.
- Bell, D. J., and Debonder, R., a structural re-examination of the levans formed by *Pseudomonas prunicola*, Wormald, and *Bacillus subtilis*, BG2 Fl., 2866.
- Bell, D. J., and Edelman, J., disaccharide synthesis following fructose-transfer from sucrose by yeast invertase, 4652.
- Bell, D. J., Isherwood, F. A., and Hardwick, N. E., d(+)-Apiose from the monocotyledon, *Posidonia australis*. (With a note on the stereochemistry and nomenclature. By R. S. Cahn), 3702.
- Bell, D. J., and Manners, D. J., crystalline 2 : 4-di-O-methyl- α -D-glucosans. Part I. The inter-chain linkages in glycogens, 1891.
- Bell, D. J. See also Gross, D., 1727.
- Bell, F., the halogenation of 2-methoxy-1-acetonaphthalide, 472.
- Bell, F., and Gibson, J. A., the interaction of 2-benzenesulphon-amido-1-bromonaphthalene with chlorine, 4635.

- Bell, F., and Morgan, W. H. D., the optical resolution of 1 : 1'-dinaphthyl-5 : 5'-dicarboxylic acid, 1716.
- Bell, R. P., and Brown, A. H., kinetics of the depolymerisation of paraldehyde in aqueous solution, 774.
- Bell, R. P., and Lindars, F. J., kinetics of the acid and alkaline hydrolysis of ethoxycarbonylmethyltriethylammonium chloride, 4601.
- Bellamy, L. J., and Beecher, L., the infra-red spectra of chelate compounds. Part I. Systems of keto-enol type, 4487.
- Bellamy, L. J., and Branch, R. F., the infra-red spectra of chelate compounds. Part II. Metal chelate compounds of β -diketones and of salicylaldehyde, 4491.
- Bendas, H. See Bergmann, E. D., 1064.
- Bennett, F. W., Emeléus, H. J., and Haszeldine, R. N., organometallic and organometalloid fluorine compounds. Part X. Trifluoromethyl-phosphonous and -phosphonic acids. Part XI. The hydrolysis of trifluoromethyl-phosphorus compounds, 3598, 3896.
- Bergel, F., and Stock, J. A., cyto-active amino-acid and peptide derivatives. Part I. Substituted phenylalanines, 2409.
- Bergel, F. See also Andrews, K. J. M., 1638, 3483.
- Bergmann, E. D., Bendas, H., and Krakauer, E., the β -phenyl-serine series. Part III, 1064.
- Berman, A. M. See Ansell, M. F., 1792.
- Besly, D. M., and Goldberg, A. A., antimalarial 2-alkoxy-6-chloro-9-dialkylaminoalkylamino-1 : 10-diaza-anthracenes, 2448.
- Beton, J. L. See Ames, T. R., 1905, and Simpson, T. H., 4065.
- Bevan, C. W. L., and Bye, G. C., the influence of the nitro-group on the reactivity of aromatic halogens. Part II, 3091.
- Bevington, J. C., the decomposition of $\alpha\alpha'$ -azoisobutyronitrile in solution, 3707.
- Bew, D. G., and Clemo, G. R., the preparation of β -*p*-hydroxy-phenyl- α -mercaptopropionic acid and some related acids, and the action of tyrosinase on the former, 1150.
- Bhargava, P. M. See Zaheer, S. H., 3360.
- Bhushan, B. See Zaheer, S. H., 3360.
- Biddiscombe, D. P., Coulson, E. A., Handley, R., and Herington, E. F. G., the preparation and physical properties of pure pyridine and some methyl homologues, 1957.
- Billimoria, J. D., and MacLagan, N. F., simple analogues of cortisone. Part III. Some monocyclic compounds, 3257.
- Bircumshaw, L. L., Taylor, F. M., and Whiffen, D. H., para-cyanogen: its formation and properties. Part I, 931.
- Bird, G. R. See Beaven, G. H., 131.
- Bird, M. L., Hughes, E. D., and Ingold, C. K., mechanism of substitution at a saturated carbon atom. Part XXXVI. Unimolecular Menschutkin reactions in sulphur dioxide solution. Remarks on the theory of border-line mechanisms, 634.
- Black, H. K., Horn, D. H. S., and Weedon, B. C. L., studies with acetylenes. Part I. Some reactions of Grignard reagents with alk-1-ynyl and alk-1-enyl halides, 1704.
- Blackburn, A., and Kipling, J. J., adsorption from binary liquid mixtures; the effect of hydrogen bonding between the components, 3819.
- Blackhall, A., and Thomson, R. H., aromatic keto-enols. Part III. Some heterocyclic quinols, 3916.
- Bladon, P., studies in the steroid group. Part LXVI. Formation of ergost-14-ene-3 β : 5 α -diol and related compounds, 736.
- Bladon, P., Henbest, H. B., Jones, E. R. H., Lovell, B. J., and Woods, G. F., studies in the steroid group. Part LXIII. Synthesis of cortisone acetate via 5 α -hydroxy-steroids, 125.
- Blair, J., and Newbold, G. T., phthalaldehydes and related compounds. Part V. Phthalaldehydes derived from hydralstal and cotarnone. Part VI. Further studies on vicinal carboxyphthalaldehydes, 1836, 3935.
- Blance, R. B., and Gibson, D. T., the promotion of Raney nickel catalysts, 2487.
- Blanchard, J. P., and Goering, H. L., the preparation of 2 : 4-dinitrobenzoic acid and 2 : 4-dinitrophenylacetic acid, 2977.
- Blanchard, P. H. See Gross, D., 1727.
- Boarland, M. P. V. See Baker, W., 1476.
- Boon, W. R., Carrington, H. C., Greenhalgh, N., and Vasey, C. H., some derivatives of tetra- and hexa-hydro-4 : 6-di-oxopyrimidine, 3263.
- Booth, H. See King, F. E., 3798.
- Booth, J., Boyland, E., and Orr, S. K. D., a spectroscopic study of the nature of the complexes of purines with aromatic compounds, 598.
- Bottomley, W. See King, F. E., 1399.
- Bounds, D. G., Linstead, R. P., and Weedon, B. C. L., anodic syntheses. Part X. Synthesis of nervonic (selacholeic) acid. Part XII. Synthesis of *cis*- and *trans*-octodec-11-enic acid, with a note on the nature of "vaccenic acid," 448, 4219.
- Bourne, E. J., Stacey, M., Tatlow, J. C., and Worrall, R., studies of trifluoroacetic acid. Part XII. Acyl trifluoroacetates and their reactions, 2006.
- Bourne, E. J., and Stephens, R., a descent of the sugar series based on ketose mercaptols, 4009.
- Bourne, E. J. See also Barclay, K. S., 1501, and Barker, S. A., 171, 2125, 2395, 3468, 4211.
- Bowden, K., and Green, P. N., syntheses in the piperidinc series. Part II. The preparation of piperidyl ethers and related compounds, 1795.
- Bowden, S. T., and Purnell, J. H., the influence of uranyl and thorium salts on the miscibility of phenol and water, 535.
- Bowden, S. T. See also Purnell, J. H., 539.
- Bowen, E. J., and Brocklehurst, B., the fluorescence spectra of coronene and 1 : 12-benzoperylene at low temperatures, 3875.
- Bowen, H. J. M., the compound of antimony pentachloride with nitric oxide, 3637.
- Bowers, A., Halsall, T. G., and Sayer, G. C., the chemistry of the triterpenes and related compounds. Part XXV. Some stereochemical problems concerning polyporenic acid C, 3070.
- Bowers, A. See also Ames, T. R., 1905.
- Bowman, R. E., and Cavalla, J. F., a new synthesis of pante-thine and some analogues thereof, 1171.
- Bowman, R. E., and Tivey, D. J., 1-phthalimidopentane-2 : 4-dione, 4548.
- Bowman, R. E. See also Ames, D. E., 375.
- Boyd, V. See Coffey, S., 2468.
- Boyland, E., and Sims, P., the oxidation of some aromatic amines with persulphate, 980.
- Boyland, E. See also Booth, J., 598.
- Brading, J. W. E., Georg-Plant, M. M. T., and Hardy, D. M., the polysaccharide from the alga *Ulva lactuca*. Purification, hydrolysis, and methylation of the polysaccharide, 319.
- Bradley, D. C., Saad, M. A., and Wardlaw, W., the preparation of thorium alkoxides, 1091.
- Alcoholates of thorium tetrachloride, 2002.
- Tertiary alkoxides of thorium, 3488.
- Bradley, W., and Bruce, C. S., 1 : 9-pyrazoloanthrone. Part III. The chemistry of the two *N*-methyl derivatives of 1 : 9-pyrazoloanthrone, 1894.
- Bradley, W., and Butcher, J. V., cyclisation of benzamido-derivatives of 1 : 1'-dianthraquinonylamine to derivatives of 1 : 2.7 : 8-diphthaloylcarbazole, 2311.
- Bradley, W., and Jeffrey, S., action of Grignard reagents and dialkylcadmiums on alkylquinolinium and alkylisoquinolinium salts. A relation between the basic strength of anions and their orientation in nuclear substitution reactions, 2770.
- Bradley, W., and Maissey, R. F., elimination of *N*-substituents from derivatives of 1-aminoanthraquinone, 247.
- Reduction of anthraquinone derivatives with alkaline dithionite, 274.
- Bradley, W., Maissey, R. F., and Thitchener, C. R., chemistry of indanthrone. Part IX. *NN'*-Dihydro-1 : 2.7 : 8-diphthaloylphenazine, 272.
- Bradley, W., and Paxton, F. W., nuclear substitution by anions and self-union in 1 : 8-naphthalimide and its *N*-methyl derivative, 4432.
- Self-union reactions and nuclear substitution by anions in some ring homologues of quinoxaline, 4436.
- Bradley, W., and Sutcliffe, F. K., the relation between self-condensation and substitution processes in the reactions of mesobenzanthrone with anions, 708.
- Bradley, W. See also Backhouse, A. J., 4506.
- Branch, R. F. See Bellamy, L. J., 4491.

- Branch, S. J., and Jones, B.**, kinetics and mechanism of aromatic halogenation by hypohalous acids. Part I. Bromination of aromatic ethers by hydrobromous acid, 2317.
- Brand, J. C. D., and Minkoff, G. J.**, the infra-red spectrum of dideuterglyoxal, 2970.
- Brandt, C. W., Taylor, W. I., and Thomas, B. R.**, a constituent of the essential oil of *Myrtus bullata*, 3245.
- Braude, E. A., Brook, A. G., and Linstead, R. P.**, hydrogen transfer. Part IV. The use of quinones of high potential as dehydrogenation reagents. Part V. Dehydrogenation reactions with diphenylpicrylhydrazyl, 3569, 3574.
- Braude, E. A., and Evans, E. A.**, alkenylation employing lithium alkynyls. Part VIII. Studies on alkadienyl derivatives, 607.
- Braude, E. A., Fawcett, J. S., and Webb, A. A.**, polycyclic systems. Part VI. 8-meso- α -Naphthanthr-10-one and 2 : 3-8 : 9-dibenzoperylene, 1049.
- Braude, E. A., Jackman, L. M., and Linstead, R. P.**, hydrogen transfer. Part II. The dehydrogenation of 1 : 4-dihydronaphthalene by quinones. Kinetics and mechanism. Part III. The dehydrogenation of hydroaromatic hydrocarbons by quinones. Quantitative comparison of donors, 3548, 3564.
- Braude, E. A., and Linstead, R. P.**, hydrogen transfer. Part I. Introductory survey, 3544.
- Braude, E. A., Linstead, R. P., and Mitchell, P. W. D.**, hydrogen transfer. Part VI. Metal-catalysed transfer-hydrogenation of ethylenic compounds, 3578.
- Braude, E. A., Linstead, R. P., Mitchell, P. W. D., and Wooldridge, K. R. H.**, hydrogen transfer. Part VIII. Metal-catalysed transfer-hydrogenation of miscellaneous acceptors, 3595.
- Braude, E. A., Linstead, R. P., and Wooldridge, K. R. H.**, hydrogen transfer. Part VII. Metal-catalysed transfer-hydrogenation of nitro-compounds, 3586.
- Braunholtz, J. T., and Mann, F. G.**, the preparation of bis-2-cyanoethyl derivatives of aromatic primary amines, and their conversion into 1 : 6-diketojulolidines. Part III, 651.
- Braunholtz, J. T.** See also Allison, J. A. C., 403.
- Brieux, J. A., and Deulofeu, V.**, the reaction velocity of some substituted *o*- and *p*-chloronitrobenzenes with piperidine, 2519.
- Briggs, L. H., and Cain, B. F.**, chemistry of the *Coprosma* genus. Part IX. The constitution of asperuloside, 4182.
- Briggs, L. H., and Nicholls, G. A.**, chemistry of the *Coprosma* genus. Part VIII. The occurrence of asperuloside, 3940.
- Briner, G. P., and Miller, J.**, the S_N mechanism in aromatic compounds. Part VIII, 4682.
- Briner, G. P., Miller, J., Liveris, M., and Lutz, P. G.**, the S_N mechanism in aromatic compounds. Part VII, 1265.
- Briscoe, H. V. A.** See Barnard, J. A., 1517.
- Bristow, N. W., Charlton, P. T., Peak, D. A., and Short, W. F.**, meso-ionic compounds derived from pyridino(1' : 2' : 1 : 2)glyoxaline, 616.
- Broadhurst, T.** See Beer, R. J. S., 1947.
- Brocklehurst, B.** See Bowen, E. J., 3875.
- Brodrick, C. I., Nicholson, J. S., and Short, W. F.**, heterocyclic derivatives of 1 : 2-5 : 6-dibenzocyclohepta-1 : 3 : 5-triene. Part II. 5-Aryl-2 : 3-6 : 7-dibenzo-1-thia-4-azacyclohepta-2 : 4 : 8-trienes and their 1 : 1-dioxides, 3857.
- Brook, A. G.** See Braude, E. A., 3569, 3574.
- Brooks, C. J. W.** See Barton, D. H. R., 2137, 3950.
- Brough, J. N., Lythgoe, B., and Waterhouse, P.**, macrozamin. Part IV. Positional and geometrical isomerism in mixed aliphatic-aromatic azoxy-compounds, 4069.
- Brown, A. H.** See Bell, R. P., 774.
- Brown, A. R., and Copp, F. C.**, diacid bases. Part II. Curarising agents. Derivatives of diphenyl ether, 873.
- Brown, B. R., Johnson, A. W., Quayle, J. R., and Todd, Sir A.**, colouring matters of the aphididae. Part VIII. Studies on the nature of the aromatic ring system in the erythroaphins, 107.
- Brown, B. R., and Todd, Sir A.**, colouring matters of the aphididae. Part IX. Some reactions of extended quinones, 1280.
- Brown, C. W.** See Atkinson, C. M., 2023.
- Brown, D. A., and Dewar, M. J. S.**, fluorene analogues of triphenylmethane dyes; calculation of their light absorption by the molecular-orbital method, 2134.
- A correction to "meta-interactions and inductive effects in heterocyclic systems," 2151.
- Brown, D. J.** See Albert, A., 2060, 3832.
- Brown, D. M., Fasman, G. D., Magrath, D. I., and Todd, Sir A.**, nucleotides. Part XXVII. The structures of adenylc acids *a* and *b*, 1448.
- Brown, D. M., Heppel, L. A., and Hilmoe, R. J.**, nucleotides. Part XXIV. The action of some nucleases on simple esters of monoribonucleotides, 40.
- Brown, D. M., Magrath, D. I., and Todd, Sir A.**, nucleotides. Part XXVI. The methylation of uridylic acid *b*, 1442.
- Brown, J. J., and Newbold, G. T.**, phthalaldehydes and related compounds. Part IV. Synthesis of gladiolic acid, 1076.
- Brown, R. D.** See Bassett, I. M., 2701.
- Bruce, C. S.** See Bradley, W., 1894.
- Bruce, D. B., and Thomson, R. H.**, quinones. Part IV. The elimination of substituents from 1 : 4-naphthaquinones, 1428.
- Bruce, G. T.** See Barker, S. A., 2395.
- Bryce-Smith, D.**, organometallic compounds of the alkali metals. Part III. Metallation of alkylbenzenes by alkyl-sodium and -potassium compounds. The character of aromatic metallation reactions, 1079.
- Bryce-Smith, D., Gold, V., and Satchell, D. P. N.**, the hydrogen isotope effect in the metallation of benzene and toluene, 2743.
- Buchanan, C., and Ritchie, A. C.**, the synthesis of some perhydrophenanthrene derivatives, 4523.
- Buchanan, G. L.**, tropolones. Part VIII. Synthesis and properties of 7-hydroxybenzocycloheptatrien-3-one, 1060.
- Buchanan, J. G.** See Baddiley, J., 3826.
- Buckingham, A. D., Holland, H. G., and Le Févre, R. J. W.**, a note on the dipole moment of benzyl alcohol, 1646.
- Buckle, A. L. J., McGookin, A., and Robertson, A.**, constituents of "Cortex Piscidiae Erythrinae." Part II. The synthesis of O-methylpisidic acid, 3981.
- Buckley, G. D.**, reaction of diazomethane with arylidene-anilines, 1850.
- Buist, G. J., and Bunton, C. A.**, the mechanism of oxidation of α -glycols by periodic acid. Part I. Ethylene glycol, 1406.
- Bullerwell, R. A. F., Lawson, A., and Morley, H. V.**, 2-mercaptoglyoxalines. Part VIII. The preparation of 2-mercaptoglyoxalines from glutamic acid, 3283.
- Bunton, C. A., Greenstreet, C. H., Hughes, E. D., and Ingold, C. K.**, mechanism of substitution at a saturated carbon atom. Part XXXVII. Halide-ion exchange with a simple alkyl halide in sulphur dioxide solution. Part XXXVIII. Menschutkin reactions of some simple alkyl halides in sulphur dioxide solution, 642, 647.
- Bunton, C. A.** See also Buist, G. J., 1406.
- Burawoy, A., Liversedge, F., and Vellins, C. E.**, o-mercaptop-azo-compounds. Part VI. Preparation and structure of azobenzene-2-sulphenyl derivatives, 4481.
- Burawoy, A.**, and Spinner, E., the rates of ionisation of 1 : 1-dimethylprop-2-ynyl chloride and its 3-alkyl derivatives, and the nature of the Baker-Nathan effect, 3752.
- Burawoy, A., Turner, C., Hyslop, W. I., and Raymakers, P.**, o-mercaptop-azo-compounds. Part IV. Preparation and debenzylation of 1-(2-benzylthiophenylazo)-2-naphthol and 1-(1-benzylthio-2-naphthylazo)-2-naphthol, 82.
- Burawoy, A., and Vellins, C. E.**, o-mercaptop-azo-compounds. Part V. Preparation and debenzylation of 2-benzylthio-azobenzene, 90.
- Burgstahler, A. W.** See Aeby, A., 4659.
- Burkin, A. R.**, ionisation equilibria of metal co-ordination complexes in benzene solution. Part I, 71.
- Burnell, R. H., and Taylor, W. I.**, ring expansion. Part I. The dienone-phenol rearrangement of spiro[5 : 5]undeca-1 : 4-dien-3-one, 3486.
- A base-catalysed rearrangement, of non-benzilic acid type, of a bridged α -diketone, 3636.
- Burr, J. G., jun., and Dewar, M. J. S.**, the mechanism of the Favorskii reaction, 1201.
- Burstall, M. L.** See Acheson, R. M., 3240, 3742.
- Burton, H., and Munday, D. A.**, acylation and allied reactions catalysed by strong acids. Part XII. The allyl and some related cations, 1456.

- Butcher, J. V.** See **Bradley, W.**, 2311.
Buttery, R. G. See **Badger, G. M.**, 1888, 2243.
Bun-Hoi, Ng. Ph., and **Jacquinon, P.**, carcinogenic nitrogen compounds. Part XVI. Some condensed carbazoles and their thiophen analogues, 513.
Bun-Hoi, Ng. Ph., **Xuong, N. D.**, and **Lavit, D.**, halogenated *o*- and *p*-phenolic ketones, 1034.
Bun-Hoi, Ng. Ph. See also **Demerseman, P.**, 2720, 4193.
Nam, N. H., 1690, and **Sy, M.**, 1975.
Buxton, M. W., **Stacey, M.**, and **Tatlow, J. C.**, studies upon α -trifluoromethylacrylic acid, α -trifluoromethylpropionic acid, and some derived compounds, 366.
Buxton, M. W., and **Tatlow, J. C.**, the reactions of highly fluorinated organic compounds. Part V. $1H:2H$ -Hexafluorocyclobutane and $1H$ -pentafluorocyclobut-1-ene, 1177.
Bye, G. C. See **Bevan, C. W. L.**, 3091.
- C.**
- Cade, J. A.**, and **Gerrard, W.**, interaction of carboxylic acids with phosphorus trichloride, or butyl phosphorodichloridite, or the chloridite in the absence, and in the presence, of pyridine, 2030.
Cadogan, J. I. G., **Hey, D. H.**, and **Williams, G. H.**, homolytic aromatic substitution. Part V. Partial rate factors for the phenylation of diphenyl. Part VII. Partial rate factors for the phenylation of *tert*-butylbenzene and *p*-di-*tert*-butylbenzene, 794, 3352.
Cain, B. F. See **Briggs, L. H.**, 4182.
Calderbank, A., **Johnson, A. W.**, and **Todd, Sir A.**, colouring matters of the aphidiidae. Part X. Preparation and properties of 4 : 9-dihydroxypyrene-3 : 10-quinone, 1285.
Caldin, E. F., and **Long, G.**, the equilibrium between ethoxide and hydroxide ions in ethanol and in ethanol-water mixtures, 3737.
Campbell, A. D., acrylonitrile in organic syntheses. Part I. Synthesis of 3*a* : 4 : 5 : 6-tetrahydroperinaphthalene-3*a*-carboxylic acid, 1377.
The preparation of polycyclic aromatic hydrocarbons from arylpropionic acids, 3659.
Campbell, N., and **Kidd, D.**, synthesis of 2-phenylnaphthalene, 2154.
Campbell, N., and **Wilshire, J. F. K.**, the preparation of 2-substituted fluoranthenes, 867.
Cardwell, H. M. E., and **Smith, S.**, digitalis glucosides. Part VII. The structure of the digitalis anhydrogenins and the orientation of the hydroxy-groups in digoxigenin and gitoxigenin, 2012.
Carleson, B. G. F., and **Irving, H.**, the stability constants of the indium halides, 4390.
Carpenter, A. T., and **Hunter, R. F.**, synthesis of 2 : 4 : 6-trishydroxymethylphenol and of 2 : 4 : 6-trishydroxybenzylphenol derivatives, 2731.
Carrington, H. C., **Crowther, A. F.**, and **Stacey, G. J.**, synthetic antimalarials. Part XLIX. The structure and synthesis of the dihydrotriazine metabolite of proguanil, 1017.
Carrington, H. C. See also **Boon, W. R.**, 3263.
Carrington, T. R. See **Barker, S. A.**, 2125.
Carruthers, W., and **Cook, J. W.**, the constituents of high-boiling petroleum distillates. Part I. Preliminary studies, 2047.
Cavalla, J. F., molecular compounds of quinolines and dihydric phenols, 4701.
Cavalla, J. F. See also **Bowman, R. E.**, 1171.
Cave-Browne-Cave (the late), J. E., **Fry, E. S. J.**, **El Khadem, H. S.**, and **Rydon, H. N.**, two serologically active polysaccharides from *Bacillus anthracis*, 3866.
Cavill, G. W. K., **Cole, E. R.**, **Gilham, P. T.**, and **McHugh, D. J.**, organic oxidation processes. Part I. The oxidation of some methylphenols with lead tetra-acetate, 2785.
Cavill, G. W. K., **Dean, F. M.**, **McGookin, A.**, **Marshall, B. M.**, and **Robertson, A.**, the oxidation of chromanones and flavanones with lead tetra-acetate, 4573.
Cavill, G. W. K., and **Ford, D. L.**, the chemistry of plant-growth regulators. Part I. 2 : 4-Dichloro-6-hydroxyphenoxyacetic acid and related compounds. Part II. Modification of the side-chain of 2 : 4-dichlorophenoxyacetic acid, 565, 1388.
- Cavill, G. W. K.**, and **Solomon, D. H.**, organic oxidation processes. Part II. The reaction of lead tetra-acetate with toluene and related compounds, 3943.
Cerniani, A., and **Passerini, R.**, the near-ultra-violet absorption spectra of some heterocyclic compounds. Part II. Benzothiazoles, 2261.
Chadwick, J. See **Baddeley, G.**, 2405.
Chakravarti, D. See **Anet, F. A. L.**, 1242.
Chalkley, D. E., and **Williams, R. J. P.**, the nature of inorganic chromatography on cellulose columns, 1718.
Challenger, F., **Lisle, D. B.**, and **Dransfield, P. B.**, studies on biological methylation. Part XIV. The formation of trimethylarsine and dimethyl selenide in mould cultures from methyl sources containing ^{14}C , 1760.
Challoner, A. R. See **Cox, J. D.**, 265.
Chanley, J. D., and **Polgar, N.**, constituents of the lipids of tubercle bacilli. Part II, 1003.
Chapman, N. B., and **James, J. W.**, *N*-ethyl(or -methyl or -phenyl)-*N*-2-halogenoethyl-1(or -2)-naphthylmethlamines. Part II. Chemical reactivity and pharmacological activity, 2103.
Chapman, N. B., **Parker, R. E.**, and **Soanes, P. W.**, nucleophilic displacement reactions in aromatic systems. Part IV. Kinetics of the reactions of *o*- and *p*-halogenonitrobenzenes with piperidine and with morpholine, 2109.
Chapman, N. B., and **Rees, C. W.**, nucleophilic displacement reactions in aromatic systems. Part III. Kinetics of the reactions of chloronitropyridines and chloropyrimidines with piperidine, morpholine, pyridine, and aniline, 1190.
Charalambous, G., and **Percival, E. E.**, products from the alkaline and reductive fission of the epoxide ring of methyl 3 : 4- and : 3-anhydro-6-deoxy- α -L-taloside and of their methylated derivatives, 2443.
Charlton, J. C., and **Hughes, E. D.**, mechanism of substitution at a saturated carbon atom. Part XLI. Unimolecular racemisation of 1-mesitylethyl chloride in acetone, 2939.
Charlton, P. T. See **Bristol, N. W.**, 616.
Chatt, J., and **Williams, A. A.**, the nature of the co-ordinate link. Part IX. The dissociation constants of the acids $p\text{-R}_2\text{M}\text{C}_6\text{H}_4\text{CO}_2\text{H}$ ($\text{M}=\text{C}$, Si, Ge, and Sn and $\text{R}=\text{Me}$ and Et) and the relative strengths of d_n-p_n bonding in the $\text{M}-\text{C}_6\text{H}_4$ bond, 4403.
Chentin, A. See **Demerseman, P.**, 2720.
Chierici, L., and **Passerini, R.**, a modified synthesis of dibenzosclenophen oxide, 3249.
Chilton, H. T. J., and **Gowenlock, B. G.**, reaction of nitric oxide with gaseous hydrocarbon free radicals. Part II. Radicals produced by pyrolysis of di-*n*-butylmercury, 3174.
Chipalkatti, H. R., **Giles, C. H.**, and **Vallance, D. G. M.**, adsorption at organic surfaces. Part I. Adsorption of organic compounds by polyamide and protein fibres from aqueous and non-aqueous solutions, 4375.
Christie, S. M. H., **Kenner, G. W.**, and **Todd, Sir A.**, nucleotides. Part XXV. A synthesis of flavin-adenine dinucleotide, 46.
Clar, E., **Kelly, W.**, and **Wright, J. W.**, aromatic hydrocarbons. Part LXVI. Diphenylphyleneanthracenes, 1108.
Clark, D., **Pritchard, H. O.**, and **Trotman-Dickenson, A. F.**, the exchange of iodine atoms between iodine and methyl iodide in the temperature range 150—375°, 2633.
Clark, H. C., **Curtis, N. F.**, and **Odell, A. L.**, exchange reactions and magnetic susceptibilities of complex salts. Part I. Some complex salts of ferric iron, 63.
Clark, P. F., **Elvidge, J. A.**, and **Linstead, R. P.**, conjugated macrocycles. Part XXV. Cross-conjugated macrocycles with inner great rings of 16, 20, and 24 atoms, 2490.
Clarke, G. G. See **Baker, W.**, 998.
Clarke, K., the synthesis of 1 : 2 : 4-oxadiazoles, 4251.
Clarke, P., and **Ramage, G. R.**, the caryophyllenes. Part XII. The structure of some derivatives of humulene, 4345.
Clark-Lewis, J. W. See **King, F. E.**, 1039, 1044, 1046.
Clemo, G. R., **Fox, B. W.**, and **Raper, R.**, the lupin alkaloids. Part XV. Some derivatives of the 4-oxo-3'-pyridylpyridocoline system, 2693.
Clemo, G. R., and **Hoggarth, M.**, synthesis of possible antimalarials. Part III. Synthesis of 1- and 3-isoquinolyl-2-quinolyl-2'-quinuclidylmethanol, 95.
Clemo, G. R., and **Lee, T. B.**, the rearrangement of some *N*-substituted hydrazobenzenes, 2417.

- Clemo, G. R., and Seaton, J. C., syntheses in the indole series, 2582.
- Clemo, G. R. See also Anderson, R. M., 2579, 2962, and Bew, D. G., 1150.
- Clingman, A. L., Rivett, D. E. A., and Sutton, D. A., the chemistry of polymerised oils. Part IV. Thermal polymerisation of some long-chain unsaturated fatty esters, 1088.
- Coates, E. See Lister, J. H., 4109.
- Coates, G. E., and Glockling, F., diisopropylberyllium and some beryllium hydrides, 22.
- Di-*tert*-butylberyllium and beryllium hydride, 2526.
- Cocker, W., and Jenkinson, D. S., the elimination of non-angular alkyl groups in aromatisation reactions. Part III, 2420.
- Coe, D. G., Landauer, S. R., and Rydon, H. N., the organic chemistry of phosphorus. Part II. The action of tri-phenyl phosphite dihalides on alcohols: two further new methods for the preparation of alkyl halides, 2281.
- Coelho, F. P. See Maddock, A. G., 4702.
- Coffey, S., and Boyd, V., the reduction of anthraquinone and other polycyclic quinones with aluminium alkoxides (Meerwein-Ponndorf reagent), 2468.
- Coffey, S. See also Robson, A. C., 2372.
- Coldham, M. W. G., Lewis, J. W., and Plant, S. G. P., structural problems in the indole group. Part V. Some derivatives of 2 : 3-diphenylindole, 4528.
- Cole, A. R. H., infra-red spectra of natural products. Part II. Compounds containing the cyclopropane ring. Part III. cycloArtenol and phyllanthol, 3807, 3810.
- Cole, E. R. See Cavill, G. W. K., 2785.
- Coleby, B., Keller, M., and Weiss, J., chemical actions of ionising radiations in solution. Part XII. The action of X-rays on some steroids in organic solvents, 66.
- Coles, L. E., Linnell, W. H., Mathieson, W., and Shoukri, A. S., perhydroindanes. Part IV. Some 1-substituted hexahydroindanes, 2617.
- Collins, R. F., crystalline 1-benzoyl-1 : 2-dihydroquinoline, 3641.
- Cook, J. W., Gailey, R. M., and Loudon, J. D., some methyl derivatives of β -carboline, 568.
- Cook, J. W., Loudon, J. D., and McCloskey, P., dehydration of lycorine, 4176.
- Cook, J. W., Loudon, J. D., and Razdan, R. K., a reaction of 2-chlorocycloheptatrienone, 4041.
- Colchicine and related compounds. Part XIII, 4234.
- Cook, J. W., Loudon, J. D., and Steel, D. K. V., tropolones. Part VII. Orientation in tropolone, 530.
- Cook, J. W. See also Carruthers, W., 2047.
- Cookson, R. C., absorption spectra of ketones. Part I. α -Halogeno-ketones, 282.
- Cookson, R. C., Page, J. E., and Trevett, M. E., the esterifying acids of lycoctonine alkaloids, 4028.
- Cooley, G., Ellis, B., and Petrov, V., 21-hydroxy-16 α -methoxy-pregn-4-ene-3 : 20-dione, 1813.
- Coombs, M. M. See Arcus, C. L., 3977, 4319.
- Cooper, F. C., and Partridge, M. W., cyclic amidines. Part I. Derivatives of phenomazine (dibenzo[b, f]-1 : 5-diazocine), 3429.
- Copp, F. C. See Brown, A. R., 873.
- Corbett, R. E., and Hanger, W. G., the structure of metrosiderene, 1179.
- Corbett, W. M., and Kenner, J., the degradation of carbohydrates by alkali. Part V. Lactulose, maltose, and maltulose. Part VI. Laminaribiose and turanose. Part VIII. Melibiose, 1789, 3274, 3281.
- Corbridge, D. E. C., and Lowe, E. J., the infra-red spectra of some inorganic phosphorus compounds, 493.
- The infra-red spectra of inorganic phosphorus compounds. Part II. Some salts of phosphorus oxy-acids, 4555.
- Conforth, J. W., Osbond, J. M., and Phillipps, G. H., the conversion of hecogenin acetate into 11-oxotigogenin acetate, 907.
- Cort, L. A., Gascoigne, R. M., Holker, J. S. E., Ralph, B. J., Robertson, A., and Simes, J. J. H., the chemistry of fungi. Part XXIII. Tumulosic acid, 3713.
- Cottrell, H. J., Pain, D. L., and Slack, R., tetrazolium compounds. Part IV. C-Heterocyclic derivatives, 2968.
- Cottrell, T. L., and Graham, T. E., the kinetics of the oxidation of propylene by nitrogen dioxide, 3644.
- Coulson, C. A., the calculation of resonance and localisation energies in aromatic molecules, 3111.
- Coulson, C. A., Moser, C. M., and Barnett, M. P., molecular-orbital calculations for Clar's hydrocarbon 1 : 13 : 12-6 : 16 : 7-dibenzonaphthacene (zethrene). Part II. The Diels-Alder reaction, 3108.
- Coulson, E. A. See Biddiscombe, D. P., 1957.
- Coulson, T. M. See Ward, E. R., 2974, 4541, 4545.
- Cox, B., complex fluorides. Part III. Lattice constants of some complex fluorides of lithium or sodium and quadrivalent elements, 3251.
- Cox, B., and Sharpe, A. G., complex fluorides. Part II. Studies on fluoroferrates and on hydrogen bonding in complex fluorides, 1798.
- Cox, J. D., phase relationships in the pyridine series. Part IV. The miscibility of the ethylpyridines and dimethylpyridines with water, 3183.
- Cox, J. D., Challoner, A. R., and Meetham, A. R., the heats of combustion of pyridine and certain of its derivatives, 265.
- Cox, J. D. See also Andon, R. J. L., 3188.
- Craig, D. P., MacColl, A., Nyholm, R. S., Orgel, L. E., and Sutton, L. E., chemical bonds involving d-orbitals. Parts I and II, 332, 354.
- Craig, D. P., and Ross, I. G., the triplet-triplet absorption spectra of some aromatic hydrocarbons and related substances, 1589.
- Craw, D. A., the kinetics of chlorohydrin formation. Part V. The reaction between hypochlorous acid and crotonic acid in buffered solutions at 25° and 35°. Part VI. The reaction between hypochlorous acid and tiglic acid at constant pH, 2510, 2515.
- Crawford, M., and Smyth, I. F. B., the optical resolution and racemisation of some diisoquinolyls, 3464.
- Crawshaw, A., Henbest, H. B., and Jones, E. R. H., studies in the steroid group. Part LXV. Reactions of 11-hydroxy- and 11-oxo-5 α -steroids, 731.
- Cremlyn, R. J. W., Rees, R. W., and Shoppee, C. W., steroids and Walden inversion. Part XVII. The configuration of β -cholesterol and the attempted preparation of 4 β -methoxy-5 : 7-cyclocholestane, 3790.
- Cremlyn, R. J. W., and Shoppee, C. W., steroids and Walden inversion. Part XVI. The epimeric cholestan-7-ols. Part XVIII. The preparation and configuration of the epimeric 7-chlorocholestanes, 3515, 3794.
- Crombie, L., and Harper, S. H., the chrysanthemumcarboxylic acids. Part VI. The configurations of the chrysanthemic acids, 470.
- Cromble, L., and Tayler, J. L., constitution and stereochemistry of the kamloplenic acids, 2816.
- Cross, B. E., gibberellic acid. Part I, 4670.
- Crowther, A. F. See Carrington, H. C., 1017.
- Cullinane, N. M., and Leyshon, D. M., titanium tetrachloride as a catalyst in the Friedel-Crafts reaction. Part III. Alkylation, 2942.
- Cullinane, N. M., Lloyd, E. T., and Tudball, J. K., the Fries re-arrangement, 3894.
- Cummins, J. A., Kaye, B. F., and Tomlinson, M. L., 1 : 2 : 3 : 4-tetrahydro-6-hydroxy-7-methylcarbazole and 3-hydroxy-2-methylcarbazole, 1414.
- Curtis, N. F. See Clark, H. C., 63.
- Cutler, A. A. See Mackie, A., 2577.
- Cymerman-Craig, J., Davis, E. G., and Lake, J. S., acetylenic compounds related to "agropyrene," 1874.
- Cymerman-Craig, J., and Loder, J. W., potential thiophen chemotherapeutics. Part III. Some 5-substituted 2-thienyl sulphides and sulphones, 237.
- Cymerman-Craig, J. See also Allen, K. A., 234, and Bates, R. J., 1153.

D.

- Daglish, A. F., Green, J., and Poole, V. D., the synthesis of progesterone and related compounds, 2627.
- Dale, B., Foster, R., and Hammick, D. J., interaction of polynitro-compounds with aromatic hydrocarbons and bases. Part XIII. The effect of changing the nitro-compound, 3986.

- Dalglish, C. E., and Neuberger, A., the mechanism for the conversions of uric acid into allantoin and glycine, 3407.
- Dave, J. S., and Dewar, M. J. S., mixed liquid crystals, 4616.
- Davidson, G. F., the dissociation constant of chlorous acid, 1649.
- Davies, A. G., Foster, R. V., and Nery, R., organic peroxides. Part IV. Alkyl-oxygen heterolysis in organic peroxides, 2204.
- Davies, A. G., Foster, R. V., and White, A. M., organic peroxides. Part III. The preparation of alkyl hydroperoxides and diaryl peroxides. Characteristic derivatives of alkyl hydroperoxides, 2200.
- Davies, A. G., Kenyon, J., Lyons, B. J., and Rohan, T. A., alkyl-oxygen fission in carboxylic esters. Part XIV. 4-Methyldiphenylmethyl and 2:4:6-trimethyldiphenylmethyl compounds, 3474.
- Davies, C. W., and Nancollas, G. H., an electrochemical study of saline salts, 1112.
- Davies, D. W., and Hammick, D. L., the rearrangement of *N*-acetylhydrazobenzene, 475.
- Davies, K. N., and Whetstone, J., the aggregation tendencies of acid wool dyes in saline solutions, 865.
- Davies, M., and Jenkin, D. G., physical properties and thermodynamic functions of trichloroacetonitrile, 2374.
- Davies, M., and Jones, R. L., infra-red absorptions and molecular structures of phenol, phenolphthalein, fluorescein, and some alkali derivatives, 120.
- Davies, T., Singer, S. S., and Staveley, L. A. K., the heats of formation of complex ions containing ethylenediamine, 2304.
- Davies, W., and James, F. C., the conversion of thiophen into 4:7:8:9-tetrahydro-4:7-sulphinylnaphthen 1:1-dioxide, 15.
- Davis, E. G. See Cymerman-Craig, J., 1874.
- Dawkins, A. W. See MacMillan, J., 429.
- Dawson, J. K., magnetochemistry of the heaviest elements. Part VIII. Metallic plutonium, 3393.
- Dawson, J. K., D'Eye, R. W. M., and Truswell, A. E., the hydrated tetrafluorides of uranium and plutonium, 3922.
- Dawson, J. K., Elliott, R. M., Hurst, R., and Truswell, A. E., the preparation and some properties of plutonium fluorides, 558.
- Dean, F. M., Evans, E., and Robertson, A., usnic acid. Part X. The exploration of a route to 4:6-dimethoxy-3:5-dimethylcoumarilic acid, 4565.
- Dean, F. M., Roberts, J. C., and Robertson, A., the chemistry of fungi. Part XXII. Nidulin and nornidulin ("ustin"): chlorine-containing metabolic products of *Aspergillus nidulans*, 1432.
- Dean, F. M. See also Cavill, G. W. K., 4573.
- Dean, N. B., and Whalley, W. B., the pigments of "dragon's blood" resin. Part VI. 3:5-Dihydroxydiphenyl ether, 4638.
- Deans, D. R., and Eaborn, C., organosilicon compounds. Part IX. The reaction between iodine and trisubstituted silanes, 3169.
- Dear, D. J. A., and Eley, D. D., the heat of solution of aluminium iodide. A correction, 4684.
- Debonder, R. See Bell, D. J., 2866.
- Deeley, C. M., and Richards, R. E., nuclear magnetic resonance spectra and the structure of infusible white precipitate, 3897.
- De la Mare, P. B. D., some observations concerning the theory of aromatic substitution, 4450.
- De la Mare, P. B. D., Hughes, E. D., Ingold, C. K., and Pocker, Y., mechanism of substitution at a saturated carbon atom. Part XL. Unimolecular nucleophilic substitution and elimination of *tert*.butyl bromide with anionic reagents in nitromethane solvent; with some remarks on the addition of acids to olefins, 2930.
- De la Mare, P. B. D., Ketley, A. D., and Vernon, C. A., The kinetics and mechanisms of aromatic halogen substitution. Part I. Acid-catalysed chlorination by aqueous solutions of hypochlorous acid, 1290.
- De la Mare, P. B. D., and Pritchard, J. G., some experiments relating to the chemistry of the dichlorohydrins, 1644. The kinetics and mechanisms of addition to olefinic substances. Part I. Rearrangement accompanying addition of hypochlorous acid to allyl chloride. Part II. Addition of chlorine to allyl alcohol. The intermediates involved in electrophilic addition reactions, 3910, 3990.
- De la Mare, P. B. D., and Vernon, C. A., the kinetics and mechanisms of nucleophilic displacements in allylic systems. Part VI. Solvolysis and the accompanying rearrangement of 1:1- and of 3:3-dimethylallyl chloride. Part VII. Solvent effects in the reactions of the dichloropropenes and related compounds, 2504, 3679.
- De Mayo, P. See Barton, D. H. R., 887, 900, 3689, 3950.
- Demerseman, P., Bun-Hoi, Ng. Ph., and Royer, R., thiophen derivatives of biological interest. Part VIII. 2-Arylthiophens, 2:4-diaryliothiophens, and 2:4-diarylselenophens, 4193.
- Demerseman, P., Bun-Hoi, Ng. Ph., Royer, R., and Cheutin, A., thiophen derivatives of biological interest. Part VII. The synthesis of 2:4-diaryliothiophens and 2:4-diarylselenophens from anils of alkyl aryl ketones, 2720.
- De Nordwall, H. J., and Staveley, L. A. K., further studies of the supercooling of drops of some molecular liquids, 224.
- Densham, A. B. See Herington, E. F. G., 2643.
- De Silva, L. B. See Haworth, R. D., 3611.
- Deulofeu, V. See Brioux, J. A., 2519.
- Dewar, M. J. S., and Pettit, R., the calculation of bond orders, resonance energies, and orbital energies by a simple perturbation method, 1617. A molecular-orbital theory of organic chemistry. Part VII. The additivity of bond energies in unconjugated systems, 1625.
- Dewar, M. J. S. See also Brown, D. A., 2134, 2151, Burr, J. G., *jun.*, 1201, and Dave, J. S., 4616.
- D'Eye, R. W. M., and Sellman, P. G., the thorium-tellurium system, 3760.
- D'Eye, R. W. M. See also Bagnall, K. W., 4295, and Dawson, J. K., 3922.
- Dhar, M. M. See Barker, G. R., 4206.
- Diamantis, A. A. See Allen, K. A., 234.
- Dicastro, G., and San Marco, M., continuous electrophoresis on paper, 4157.
- Dippy, J. F. J., and Hughes, S. R. C., conductimetric studies in ketonic solvents. Part I. Acetone as solvent, 953.
- Dippy, J. F. J., Hughes, S. R. C., and Laxton, J. W., chemical constitution and the dissociation constants of monocarboxylic acids. Part XIII. Some alkylbenzoic acids exhibiting steric effects. Part XIV. Monomethylcyclohexane-carboxylic acids, 1470, 4102.
- Dixon, S., and Wiggins, L. F., β -acetylacrylic (4-oxpent-2-enioic) acid in the Diels-Alder reaction. Part I. Some derivatives of the adduct derived from β -acetylacrylic acid and butadiene, 594.
- Djerassi, C., Lemkin, A. J., Rosenkranz, G., and Sondheimer, F., introduction of the 11-oxo- and the 11 α -hydroxy-group into ring α unsubstituted steroids. Part IX. The epoxides of $\Delta^{7:11(1)}\text{-}5\alpha\text{-hydroxysaponogenins}$, 2346.
- Dollimore, D. See Long, L. H., 4457.
- Donavanik, T. See Beer, R. J. S., 4139.
- Dostrovsky, I., and Samuel, D., the solvolytic reactions of 2:2-dimethyl-1-phenylpropyl bromide, 658.
- Dostrovsky, I. See also Anbar, M., 1094, 1105, 3603.
- Downie, T. C., and Speakman, J. C., the crystal structures of the acid salts of some monobasic acids. Part IV. Ammonium hydrogen disalicylate hydrate, 787.
- Dowrick, D. J. See Staveley, L. A. K., 1992.
- Dransfield, P. B. See Challenger, F., 1760.
- Driver, J. E., and Sousa, J. B., triphenylmethane derivatives from condensations of phenols with hydroxybenzaldehydes, 985.
- Drummond, A. Y., and Waters, W. A., stages in oxidations of organic compounds by potassium permanganate. Part IV. Oxidation of malonic acid and its analogues, 2456.
- Duwell, H., studies on *Xanthorrhoea* resins. Part I. Isolation of chrysophanic acid (1:8-dihydroxy-3-methylanthrone) and of 2':4-dihydroxy-4'-methoxychalkone, 2562.
- Duffin, G. F., and Kendall, J. D., the reaction of diazonium salts with 1-aryl Δ^2 -pyrazolines, 408.
- Dulin, C. I., and Elton, G. A. H., determination of electrokinetic charge and potential by the sedimentation method. Part VII. Silica in some solutions containing multivalent anions, 1324.
- Dunn, J. R., Waters, W. A., and Roitt, I. M., the retardation of benzaldehyde autoxidation. Part VI. The actions of a number of polycyclic aromatic hydrocarbons of carcinogenic interest, 580.
- Dvornik, D. See Balenović, K., 2976.

E.

- Eaborn, C., and Jeffrey, J. C., organosilicon compounds. Part X. The reaction between organosilylmethyl chlorides and iodide ion, 4266.
- Eaborn, C., and Parker, S. H., organosilicon compounds. Part VIII. The (trimethylsilylmethyl)benzoic acids, 939.
- Eaborn, C., and Shaw, R. A., ultra-violet absorption spectra of 9-substituted fluorenes, 2027.
- Eaborn, C. See also Deans, D. R., 3169.
- Edelman, J. See Bell, D. J., 4652.
- Edgington, D. N. See Anderson, J. S., 3324.
- Edward, J. T., the oxidation of *N*-alkylamines and related compounds with benzoyl peroxide, 1464.
- Edwards, D., and Stenlake, J. B., the oxidation of alkyl sulphides, 3272.
- Edwards, W. G. H., and Hodges, R., the addition of some acyl hypobromites to allyl bromide, 761.
- Edwards, W. G. H., and Petrow, V., some heterocyclic structures derived from acenaphthene, 2853.
- Eggleston, B. C., Evans, D. F., and Richards, R. E., the effect of dissolved oxygen on diamagnetic susceptibilities, 941.
- Eglinton, G., Jones, E. R. H., Mansfield, G. H., and Whiting, M. C., researches on acetylenic compounds. Part XLV. The alkaline isomerisation of but-3-ynoic acid, 3197.
- Eglinton, G., Jones, E. R. H., Shaw, B. L., and Whiting, M. C., researches on acetylenic compounds. Part XLIII. A new method for the preparation of alkoxyacetylenes, 1860.
- Ekladius, L. See Tadros, W., 2351.
- Elad, D., and Ginsburg, D., the synthesis of 2-phenylcycloheptatrienone from 2-phenylcyclohept-2-enone, 471. Syntheses in the morphine series. Part VI. The synthesis of morphine, 3052.
- El Din, A. M. S. See El Wakkad, S. E. S., 3094, 3098, 3103, 4276.
- Eley, D. D., and Saunders, J., the kinetics of ionic polymerisations. Part IV. The action of iodine chloride and iodine bromide on *n*-butyl vinyl ether. Part V. The inhibition by pyridine and 2-iodopyridine of polymerisation of *n*-butyl vinyl ether catalysed by iodine. Part VI. The copolymerisation of *n*-butyl vinyl ether and 2-chloroethyl vinyl ether, 1668, 1672, 1677.
- Eley, D. D., and Watts, H., aluminium halide complexes with pyridine, trimethylamine, and triethylamine. Part II, 1319.
- Eley, D. D. See also Dear, D. J. A., 4684.
- El Khadem, H. S. See Cave-Browne-Cave (the late), J. E., 3866.
- El-Kholy, I. E.-S. See Soliman, G., 1755.
- Elks, J., studies in the synthesis of cortisone. Part VI. Conjugated trienes derived from ergosterol, 468.
- Elks, J., Evans, R. M., Long, A. G., and Thomas, G. H., studies in the synthesis of cortisone. Part IV. The oxidation of steroid 7 : 9-dienes with sodium dichromate in acetic acid, 451.
- Elks, J., Evans, R. M., Oughton, J. F., and Thomas, G. H., studies in the synthesis of cortisone. Part V. Acid rearrangement of 9 α : 11 α -epoxy- Δ^7 -steroids having hydroxy- or acetoxy-groups at C₍₅₎, 463.
- Elks, J., Phillips, G. H., Taylor, D. A. H., and Wyman, L. J., studies in the synthesis of cortisone. Part VIII. A Wagner-Meerwein rearrangement involving rings C and D of the steroid nucleus, 1739.
- Elliott, R. M. See Dawson, J. K., 558.
- Ellis, A. J., and Soper, F. G., studies of *N*-halogeno-compounds. Part VI. The kinetics of chlorination of tertiary amines, 1750.
- Ellis, B. See Cooley, G., 1813.
- Ellison, L., and Kenyon, J., alkyl-oxygen fission in carboxylic esters. Part XIII. The resolution and reactions of 1 : 2 : 2 : 2-tetraphenylethanol. Crystalline solvent complexes of (+)-1 : 2 : 2-tetraphenylethyl hydrogen phthalate, 779.
- Elmore, D. T., and Toeland, P. A., degradative studies on peptides and proteins. Part I. A new method of stepwise degradation of peptides from the end bearing a free amino-group, employing *N*-acyldithiocarbamylates, 4533.
- El Sayed, J. A. See El Wakkad, S. E. S., 3103.
- Elton, G. A. H., adsorption from binary solutions of completely miscible liquids. Part III. Surface activity coefficients of components adsorbed from perfect solutions, 3813.
- Elton, G. A. H., and Mitchell, J. W., adsorption of ions by carbondum, 741.
- Elton, G. A. H. See also Dulin, C. I., 1324.
- Elvidge, J. A., and Linstead, R. P., heterocyclic imines and amines. Part III. Succinimidine, 442.
- Elvidge, J. A. See also Clark, P. F., 2490.
- El Wakkad, S. E. S., Khalafalla, S. E., and El Din, S. A. M., polarography with a stationary platinum plate electrode. Part I. The time of decay of the diffusion layer, 4276.
- El Wakkad, S. E. S., and El Din, A. M. S., the anodic oxidation of metals at very low current density. Part IV. Palladium. Part V. Gold, 3094, 3098.
- El Wakkad, S. E. S., El Din, A. M. S., and El Sayed, J. A., the anodic oxidation of metals at very low current density. Part VI. Tin, 3103.
- Emeléus, H. J., Haszeldine, R. N., and Paul, R. C., organometallic and organometalloid compounds. Part VIII. Properties of trifluoromethyl-arsenic acids and of other fluorine-containing acids, 881.
- Emeléus, H. J. See also Ayscough, P. B., 3381, and Bennett, F. W., 3598, 3896.
- Entwistle, N. See Armitage, J. B., 147.
- Evans, A. G., Jones, J. A. G., and Osborne, G. O., the ionization of organic halides in nitroalkanes. Part V, 3803.
- Evans, D. D., Morris, D. S., Smith, S. D., and Tivey, D. J., analogues of chloramphenicol. Part III, 1687.
- Evans, D. E. M., and Tatlow, J. C., the reactions of highly fluorinated organic compounds. Part VI. Octafluorocyclohexa-1 : 3- and -1 : 4-diene and difluoromalonic acid, 3779.
- Evans, D. F. See Eggleston, B. C., 941.
- Evans, D. P., the influence of alkyl groups upon reaction velocities in solution. Part VII. The formation of phenyltrialkylammonium iodides in methyl alcohol, 1316.
- Evans, D. P., and Young, J. R., the influence of alkyl groups upon reaction velocities in solution. Part V. The dissociation constants of ketone cyanohydrins in aqueous alcohol. Part VI. The acid-catalysed prototropy of dialkyl ketones, 1310, 1314.
- Evans, E. See Dean, F. M., 4565.
- Evans, E. A., and Whalley, M., preparation of $\omega\omega'$ -diphenyl polymethylenes by anodic syntheses, 3642.
- Evans, E. A. See also Brande, E. A., 607.
- Evans, R. F., and Smith, J. C., cyclisation of arylbutyric acids with polyphosphoric acid. The by-products, 798.
- Evans, R. M., and Jansen, A. B. A., benzylpenicillanic thio-anhydride, 4037.
- Evans, R. M. See also Barton, D. H. R., 747, and Elks, J., 451, 463.
- Evans, W. P., and Monk, C. B., conductivity and solubility studies of some glycolates and lactates, 550.
- Everest, D. A., the bromo- and iodo-hypophosphites of bivalent tin, 4698.
- Everest, D. A., and Salmon, J. E., studies in the chemistry of quadrivalent germanium: ion-exchange studies of solutions of germanates, 2438.
- Everett, D. H., and Rasmussen, S. E., the electrochemistry of solutions of hydrogen chloride in acetone: the cell H₂[HCl]Ag, AgCl, 2812.

F.

- Fairbrother, F., Frith, W. C., and Woolf, A. A., the halides of niobium (columbium) and tantalum. Part IV. The electrical conductivities of niobium and tantalum penta-fluorides, 1031.
- Farmer, F. T., Rigg, T., and Weiss, J., chemical action of ionising radiations in aqueous solutions. Part XIII. Absolute yield of the ferrous sulphate dosimeter, 3248.
- Farrar, W. V., 8-amino-6-methoxyquinoline, and some derivatives of 5 : 5'-diquinolyl, 3252. The oxidation of some quinazoline derivatives, 3253.
- Fasman, G. D. See Brown, D. M., 1448.
- Favini, G. See Simonetta, M., 1840.
- Fawcett, J. S. See Barton, D. H. R., 2137, and Braude, E. A., 1049.
- Fawcett, R. W., and Harris, J. O., the chemistry of humulene Parts IV and V, 2669, 2673.

- Felton, D. G. I., Osdene, T. S., and Timmis, G. M., the synthesis of compounds with potential anti-folic acid activity. Part II. 5 : 7 : 9 : 10-Tetra-aza-1 : 2-benzenanthracene and related compounds, 2895.
- Felton, D. G. I., and Timmis, G. M., the reaction between *N*-*N*-di-2'-chloroalkyl-2-naphthylamines and 4-amino-5-nitrosopyrimidines, 2881.
- Ferguson, J., the near-ultra-violet absorption spectra of naphthalene and its monohalogen derivatives in solution, 304.
- Ferguson, J., Iredale, T., and Taylor, J. A., the phosphorescence spectra of naphthalene and some simple derivatives, 3160.
- Ferguson, J., and Werner, R. L., the infra-red spectra of the monohalogenonaphthalenes, 3645.
- Ferrett, D. J. See Irving, H., 3494.
- Fennell, A. J., and Skellon, J. H., the oxidation of mono-*o*-phenylenoid fatty acids and esters. Catalytic oxidation of *n*-propyl oleate. The oxidation products, 3414.
- Ficken, G. E., France, H., and Linstead, R. P., 1 : 2-dicarboxylic acids. Part III. Nitrogenous derivatives of the isomeric hexahydrophthalic acids and of 3 : 4 : 5 : 6-tetrahydro-phthalic acid, 3730.
- Figgis, B. N., and Nyholm, R. S., magnetic moments and stereochemistry of cobaltous compounds, 12.
- Finar, I. L., and Godfrey, K. E., the preparation and properties of some derivatives of 1-phenylpyrazole, 2293.
- Finar, I. L. See also Barry, W. J., 138.
- Finch, A., Jacobs, P. W. M., and Tompkins, F. C., the decomposition of silver oxalate, 2053.
- Fischer, E. See Hirshberg, Y., 297, 3129.
- Fletcher, J. R., Hall, R. B., Richards, E. L., Slater, S. N., and Watson, C. C., picrotoxin and tutin. Part VII. Experiments with tutin, 1953.
- Ford, D. L. See Cavill, G. W. K., 565, 1388.
- Foster, A. B., Overend, W. G., Stacey, M., and Vaughan, G., deoxy-sugars. Part XXV. Structure and reactivity of anhydro-sugars. Part II. Derivatives of 3 : 6-anhydro-D-mannose, 3 : 6-anhydro-2-deoxy-D-galactose, and 3 : 6-anhydro-2-deoxy-D-glucose, 3367.
- Foster, A. B., Overend, W. G., and Vaughan, G., structure and reactivity of anhydro-sugars. Part III. An interpretation of some reactions of 3 : 6-anhydro-D-hexoses, 3625.
- Foster, G. L., the kinetics of the phenol-styrene reaction, 2788.
- Foster, R., and Hammick, D. L., potassium ethyl 1-methoxy-picrate, 2153.
- Interaction of polynitro-compounds with aromatic hydrocarbons and bases. Part XII. Complexes of *N*-alkylated anilines with *s*-trinitrobenzene and *s*-trinitrotoluene, 2685.
- Foster, R. See also Dale, B., 3986.
- Foster, R. V. See Davies, A. G., 2200, 2204.
- Fouad, M. G., and Herringshaw, J. F., a comparison of chemical and electrolytic methods of reduction, 1207.
- Fox, B. W. See Clemo, G. R., 2693.
- France, H. See Ficken, G. E., 3730.
- Franklin, C. S., Morris, D. S., and Smith, S. D., analogues of chloramphenicol. Part II, 1683.
- Fredericks, G. E. See Hilal, O. M., 785.
- French, C. M., and Harrison, D., the Gray and Cruickshank method of calculating diamagnetic susceptibility of organic molecules, 4687.
- Friedmann, C. A., and Gladych, J. M. Z., the reaction between formaldehyde and ethyl α -formylphenylacetate, 3687.
- Frits, W. C. See Fairbrother, F., 1031.
- Fry, E. S. J. See Cave-Browne-Cave, J. E., 3866.
- Fudge, A. J., Shoppee, C. W., and Summers, G. H. R., steroids. Part VII. Some 5-hydroxy-derivatives of cholesterol, 958.
- G. Galley, R. M. See Cook, J. W., 568.
- Gardiner, D., Grove, John Frederick, and Ismay, D., gladiolic acid. Part V. Syntheses of some methoxybenzenetricarboxylic acids, 1817.
- Gascoigne, R. M. See Cort, L. A., 3713.
- Gasson, E. J., Graham, A. R., Millidge, A. F., Robson, I. K. M., Webster, W., Wild, A. M., and Young, D. P., oxidation products of diisobutylene. Part II. The isomerisation of 1 : 2-epoxy-2 : 4 : 4-trimethylpentane, and some products derived from 2 : 4 : 4-trimethylpentanal, 2170.
- Gasson, E. J., Millidge, A. F., Primavesi, G. R., Webster, W., and Young, D. P., oxidation products of diisobutylene. Part I. Liquid-phase oxidation of diisobutylene: formation, properties, and analysis of 1 : 2-epoxy-2 : 4 : 4-trimethylpentane, 2161.
- Gelles, E., Hughes, E. D., and Ingold, C. K., mechanism of substitution at a saturated carbon atom. Part XXXIX. Nucleophilic substitutions in tertiary alkyl halides by hydroxyl reagents in nitromethane solvent, 2918.
- George, P., the oxidation of ferrous perchlorate by molecular oxygen, 4349.
- George, P., and Irvine, D. H., electron-transfer reactions between metallic ions, co-ordination complexes, and haemoglobin, 587.
- Spectrophotometric titrations involving the higher oxidation state of ferrimyoglobin, 3142.
- Georg-Plant, M. M. T. See Brading, J. W. E., 319.
- Gerrard, W., Green, W. J., and Phillips, R. J., some phosphorus-containing derivatives of 2 : 2 : 2-trichloroethanol, 1148.
- Gerrard, W., and Jeacocke, G. J., reactions of dialkyl phosphorobromides relating to the reaction of phosphoryl bromide with alcohols and with trialkyl phosphates, 3647.
- Gerrard, W., and Tolcher, P., preparation of neopentyl chloride, 3640.
- Gerrard, W. See also Cade, J. A., 2030.
- Giannoni, G. See Sacconi, L., 2368, 2751.
- Gibson, D. T. See Blance, R. B., 2487.
- Gibson, J. A. See Bell, F., 4635.
- Gilbert, G. A., Greenwood, C. T., and Hybart, F. J., an evaluation of methods using stearic acid and cellulose for the purification of amylopectin, 4454.
- Giles, C. H., Mehta, H. V., Stewart, C. E., and Subramanian, R. V. R., adsorption at inorganic surfaces. Part I. An investigation into the mechanism of adsorption of organic compounds by the anodic film on aluminium, 4360.
- Giles, C. H. See also Chipalkatti, H. R., 4375.
- Gilham, P. T. See Cavill, G. W. K., 2785.
- Gillespie, R. J., solutions in sulphuric acid. Part XVI. A reconsideration of the value of the cryoscopic constant, 1851.
- Gillespie, R. J., and Leisten, J. A., solutions in sulphuric acid. Part XIV. Cryoscopic measurements on some unsaturated aromatic ketones and aldehydes. Part XV. The sulphonation of some unsaturated aromatic ketones in sulphuric acid, 1, 7.
- Gingras, B. A., and Waters, W. A., properties and reactions of free alkyl radicals in solution. Part VII. Reactions with quinone imids, nitric oxide, and nitroso-compounds, 1920.
- The thermal decomposition of octyl nitrite in hydrocarbon solvents, 3508.
- Ginsburg, D., studies in the alicyclic series. Part I. 1-Benzoylcycloalkanes as acceptors in the Michael condensation, 2361.
- Ginsburg, D. See also Elad, D., 471, 3052, and Rosenfelder, W. J., 2955.
- Gladych, J. M. Z. See Friedmann, C. A., 3687.
- Glasner, A., and Makovsky, A., the thermal decomposition of guanidine perchlorate. Part III. Catalysts and time-lag before ignition, 1606.
- Glazebrook, R. W., and Saville, R. W., the reactions of amines and sulphur with olefins. Part III. The reaction of diethylamine and sulphur with 1 : 5-diolefins, 2094.
- Glockling, F. See Coates, G. E., 22, 2526.
- Godfrey, K. E. See Finar, I. L., 2293.
- Goering, H. L. See Blanchard, J. P., 2977.
- Gold, V., Hilton, J., and Jefferson, E. G., a comparison of the mechanisms of the solvolytic hydrolysis reactions of acetic anhydride and benzoyl chloride, 2756.
- Gold, V. See also Bryce-Smith, D., 2743.
- Goldberg, A. A., and Theobald, R. S., the reduction of 4-amino- and 4-acetamido-salicyclic acids, 2641.
- Goldberg, A. A., Theobald, R. S., and Williamson, W., derivatives of 2-alkoxy-8-amino-1 : 5-naphthyridines, 2357.
- Goldberg, A. A., and Walker, H. A., 4-aminosalicylaldehyde, 2540.

- G**oldberg, A. A. See also Besly, D. M., 2448.
Goodall, A. M., and Howlett, K. E., the pyrolysis of chloro-alkenes. Part I. Allyl chloride. Part II. Trichloroethylene, 2596, 2599.
Gordon, M., observations on the synthesis of [8-¹⁴C]adenine, 757.
Gore, P. H., a prediction of the reactivity of some penta- and hexa-cyclic hydrocarbons, 3166.
Gorin, P. A. J., Hough, L., and Jones, J. K. N., a synthesis of 4-deoxy-D-erythrohexulose, 4700.
Gorrod, A. R. N., and Jones, J. K. N., the hemicelluloses of Scots pine (*Pinus sylvestris*) and black spruce (*Picea nigra*) woods, 2522.
Govindachari, T. R., and Nagarajan, K., synthesis of 10-hydroxy-4:5:6-trimethoxyaporphine, 2537.
Action of alcoholic potassium hydroxide on 3:4-dihydro-1,2-nitrobenzylisoquinolines, 3785.
Govindachari, T. R., Pai, B. R., and Nagarajan, K., chemical examination of *Tylophora asthmatica*. Part I, 2801.
Govindachari, T. R., Pai, B. R., and Narasimhan, N. S., pseudocarpaine, a new alkaloid from *Carica papaya* L., 1847.
Gowenlock, B. G. See Chilton, H. T. J., 3174.
Graham, A. R., Millidge, A. F., and Young, D. P., oxidation products of diisobutylene. Part III. Products from ring-opening of 1:2-epoxy-2:4:4-trimethylpentane, 2180.
Graham, A. R. See also Gasson, E. J., 2170.
Graham, T. E. See Cottrell, T. L., 3644.
Grassie, N., and Vance, E., the anomalous osmotic behaviour of polymethacrylonitrile, 2122.
Gray, G. W., and Jones, B., the preparation of 4- and 5-n-alkoxy-1-naphthoic and 6- and 7-n-alkoxy-2-naphthoic acids, 678.
Mesomorphism and chemical constitution. Part I. The n-alkoxynaphthoic acids. Part II. The trans-p-n-alkoxycinnamic acids. Part III. The effect of halogen substitution on the mesomorphism of the 4-alkoxybenzoic acids, 683, 1467, 2556.
Gray, P., and Smith, P. L., low-temperature calorimetry and the thermodynamic properties of ethyl nitrate, 769.
Green, A. L., some applications of valence-bond theory to aromatic substitution, 3538.
Green, A. L., and Hey, D. H., intramolecular acylation. Part V. Preparation and ring closure of some methoxy-1-naphthyl-acetic, -propionic, -butyric, and - α -ethylglutaric acids, 4306.
Green, J. See Daglish, A. F., 2627.
Green, P. N. See Bowden, K., 1795.
Green, W. J. See Gerrard, W., 1148.
Greenhalgh, N., the preparation of 1:4- and 2:4-dichloro-9-hydroxyfluorene-9-carboxylic acids, 4699.
Greenhalgh, N. See also Boon, W. R., 3263.
Greenhow, E. J., Harris, A. S., and White, E. N., the chemistry of fluorene. Part IV. Some new chloro- and nitro-derivatives, 3116.
Greenstreet, C. H. See Bunton, C. A., 642, 647.
Greenwood, C. T., and Robertson, J. S. M., physicochemical studies on starches. Part I. The characterization of the starch present in the seeds of the rubber tree, *Hevea brasiliensis*, 3769.
Greenwood, C. T. See also Gilbert, G. A., 4454.
Gregg, S. J., and Packer, R. K., the production of active solids by thermal decomposition. Part IV. Vermiculite, 3887.
Grey, T. F. See Ames, D. E., 375.
Griffiths, J. H., and Phillips, C. S. G., the chromatography of gases and vapours. Part IV. Applications of the surface-potential detector, 3446.
Griffiths, J. M. M. See Irving, H., 213.
Griffiths, V. S., the conductivity of electrolytes in non-aqueous and mixed solvents. Part I, 686.
Densities of some binary liquid mixtures. Part II, 860.
Grigor, J., Laird, W., Maclean, D., Newbold, G. T., and Spring, F. S., steroids. Part XIV. 7:8-Epoxides of 9 α - and 9 β -ergostan-11-one derivatives, 2333.
Grime, R. See Bacon, R. G. R., 2275.
Grimley, J., and Holliday, A. K., co-ordination compounds of boron trihalides. Part II. Boron trichloride-cyclic ethers. Part III. Compounds of boron trifluoride with cyclic ethers and dioxan, 1212, 1215.
- G**ross, D., Blanchard, P. H., and Bell, D. J., neokestose: a trisaccharide formed from sucrose by yeast invertase, 1727.
Grove, John Frederick, the structure of terrein, 4693.
Grove, John Frederick. See also Gardner, D., 1817.
Grundon, M. F., and Perry, H. J. H., bisbenzylisoquinolines. Part I. The synthesis of 4-(2-aminoethyl)-5'-carboxymethyl-2':2'-dimethoxydiphenyl ether and phenoxyisoquinolines, 3531.
Grundy, J., synthetic oestrogens, 2649.
Guider, J. M., Halsall, T. G., Hodges, R., and Jones, E. R. H., the chemistry of the triterpenes and related compounds. Part XXVI. The nature of polyporic acid B, 3234.
Guider, J. M., Halsall, T. G., and Jones, E. R. H., the chemistry of the triterpenes and related compounds. Part XXVII. Pinicolic acid A, 4471.
Gunstone, F. D., fatty acids. Part II. The nature of the oxygenated acid present in *Vernonia anthelmintica* (Willd.) seed oil, 1611.
Gupta, S. R., and Seshadri, T. R., survey of anthoxanthins. Part VI. Colouring matter of *Tamarix troupii*. Constitution of the aglycone and its synthesis, 3063.

H.

- H**adley, D. J., Hall, R. H., Heap, R., and Jacobs, D. I. H., vapour-phase oxidation of olefins. The catalysed oxidation of diisobutene in the presence of selenium, 1416.
Hales, J. L., Jones, J. I., and Lindsey, A. S., mechanism of the Kolbe-Schmitt reaction. Part I. Infra-red studies, 3145.
Hall, D. M., Ridgwell, S., and Turner, E. E., optical activity in 1-phenylnaphthalene-2'-carboxylic acid and related compounds, 2498.
Hall, D. M. See also Beaven, G. H., 131.
Hall, G. R., and Hermiman, P. D., the separation and purification of americium-241 and the absorption spectra of trivalent and quinquevalent americium solutions, 2214.
Hall, R. B. See Fletcher, J. R., 1953.
Hall, R. H., $\alpha\beta$ -unsaturated aldehydes and related compounds. Part VI. Pyran derivatives from α -methylacraldehyde, 4303.
Hall, R. H., and Jacobs, D. I. H., $\alpha\beta$ -unsaturated aldehydes and related compounds. Part IV. The homolytic addition of carbon tetrachloride to acraldehyde and its acetals, 2034.
Hall, R. H., and Stern, E. S., $\alpha\beta$ -unsaturated aldehydes and related compounds. Part V. Reaction of acraldehyde with simple aliphatic alcohols. Formation of acraldehyde dialkyl acetals and of β -alkoxypropaldehydes and their acetals, 3388.
Hall, R. H. See also Hadley, D. J., 1416.
Halmann, M., the ultra-violet absorption of triethyl phosphite, 2158.
Halsall, T. G., and Hodges, R., the chemistry of the triterpenes and related compounds. Part XXIV. The conversion of polyporic acid A into a lanosterol derivative, 2385.
Halsall, T. G., Jones, E. R. H., and Swayne, R. E. H., the chemistry of the triterpenes and related compounds. Part XXII. The conversion of lupeol into ψ -taraxasterol (heterolupeol), 1902.
Halsall, T. G. See also Ames, T. R., 1905, Bowers, A., 3070, and Guider, J. M., 3234, 4471.
Hamlet, J. C. See Barton, D. H. R., 747.
Hammick, D. L. See Dale, B., 3986, Davies, D. W., 475, and Foster, R., 2153, 2685.
Hampton, A. See Albert, A., 505.
Handley, R. See Biddiscombe, D. P., 1957.
Hanger, W. G. See Corbett, R. E., 1179.
Hanson, K. R., Jaquiss, D. B., Lamberton, J. A., Robertson, A., and Savage, W. E., quassin and neocassassin. Part III, 4238.
Harborne, J. B., and Weaving, A. S., 2-acetoacetyl-4-methylphenol as a reagent for primary amines, 1157.
Harborne, J. B. See also Baker, W., 998, 2042.
Harding, J. S., and Owen, L. N., dithiols. Part XIII. The alkaline hydrolysis of acetylated vicinal hydroxy-thiols. Part XIV. The alkaline hydrolysis of acetylated non-vicinal hydroxythiols, 1528, 1536.

- Hardman, R.**, and **Partridge, M. W.**, cyclic amidines. Part II. Derivatives of 2-amino-4-hydroxyquinoxine, 3878.
Hardwick, N. E. See **Bell, D. J.**, 3702.
Hardy, D. M. See **Brading, J. W. E.**, 319.
Hargreaves, M. K., the heats of dissolution and the optical rotatory dispersion of 1 : 2-diphenylethanol, 1233. Temperature and the optical rotatory power of solutions. 9 : 10-Dihydro-3 : 4-5 : 6-dibenzophenanthrene, 1781.
Harkness, M. L. R., and **Wassermann, A.**, properties of actomyosin before and after treatment with ion-exchange resins: influence of pH and ionic strength on molecular shape of a structural muscle protein, 1344.
Harley-Mason, J., and **Jackson, A. H.**, 5-aminoindole, 1158. Hydroxytryptamines. Part I. Bufotenine, 6-hydroxybufotenine, and serotonin. Part II. A new synthesis of physostigmine, 1165, 3651.
Harnik, E., **Herzstein, F. H.**, **Schmidt, G. M. J.**, and **Hirschfeld, F. L.**, the structure of overcrowded aromatic compounds. Part I. A preliminary survey, 3288.
Harnik, E., and **Schmidt, G. M. J.**, the structure of overcrowded aromatic compounds. Part II. The crystal structure of dianthronylidene, 3295.
Harper, S. H. See **Crombie, L.**, 470.
Harris, A. S. See **Greenhow, E. J.**, 3116.
Harris, J. O. See **Fawcett, R. W.**, 2669, 2673.
Harrison, D. See **French, C. M.**, 4687.
Hart, E. P., naphthyridines. Part I. The chemistry of 1 : 5-naphthyridine. Part II. The attempted cyclisation of Schiff's bases, 1879, 4030.
Hartman, L., oxidation of glycerol by periodate in alkaline solution, 4024.
Harwood, V. D., **Laidlaw, R. A.**, and **Telfer, R. G. J.**, studies on fructosans. Part V. Short-chain fructosans from *Lolium perenne*, 2364.
Haszeldine, R. N., perfluoroalkyl Grignard and Grignard-type reagents. Part IV. Trifluoromethylmagnesium iodide, 1273. Reactions of metallic salts of acids. Part V. Synthesis of fluoro-dienes from fluoro-dicarboxylic acids, 4026. Studies in spectroscopy. Part VII. Spectroscopic evidence for molecular-compound formation with iodine cyanide, 4145.
Haszeldine, R. N., and **Jander, J.**, studies in spectroscopy. Part VI. Ultra-violet and infra-red spectra of nitro-azines, nitrites, and related compounds, 691.
Haszeldine, R. N., and **Kidd, J. M.**, perfluoroalkyl derivatives of sulphur. Part I. Trifluoromethanesulphonic acid, 4228.
Haszeldine, R. N., and **Leedham, K.**, reactions of fluorocarbon radicals. Part XV. Synthesis and hydration of 1 : 1 : 1-trifluorobut-2-yne, 1261.
Haszeldine, R. N., **Leedham, K.**, and **Steele, B. R.**, addition of free radicals to unsaturated systems. Part IX. The direction of free-radical addition to allene and allyl chloride, 2040.
Haszeldine, R. N., and **Steele, B. R.**, addition of free radicals to unsaturated systems. Part VII. 1 : 1-Difluoroethylene. Part X. The reaction of hydrogen bromide with tetrafluoroethylene and chlorotrifluoroethylene, 923, 3747.
Haszeldine, R. N. See also **Bennett, F. W.**, 3598, 3896. **Emeléus, H. J.**, 881; **Jander, J.**, 696, 912, 919, and **Leedham, K.**, 1634.
Hawkins, E. G. E., and **Nelson, W. E.**, the reaction of iso-propanol with alkali, 4704.
Hawkins, J. G. See **Ward, E. R.**, 2974, 2975, 4541.
Haworth, R. D., and **De Silva, L. B.**, chebulinic acid. Part II. 3611.
Haworth, R. D., **Pindred, H. K.**, and **Jeffries, P. R.**, chebulinic acid. Part III. Oxidation of ellagic and flavellaglic acids and the synthesis of some isocoumarin derivatives, 3617.
Haworth, R. D. See also **Akroyd, P.**, 286, and **Bailey, B.**, 967.
Hay, J. E., **Johnstone, N. M.**, **Tipper, C. F. H.**, and **Williams, R. K.**, kinetics of the decomposition of tetralin hydro-peroxide in acidic and basic solvents, 629.
Hayes, D. H. See **Andersen, W.**, 1882.
Heacock, R. A., and **Hey, D. H.**, internuclear cyclisation. Part X. The preparation of 3 : 4-benzocoumarin, 2481.
Head, F. S. H., and **Hughes, G.**, the oxidation of cellobiose by periodate, 603.
Heald, K., and **Williams, G.**, the participation of stannic halide catalysts in the reactions of styrene with hydrogen halides. Halogen exchange between stannic halides and 1-phenylethyl halides, 357.
The racemisation of (-)-1-phenylethyl chloride by stannic chloride in carbon tetrachloride and its bearing on the cationic polymerisation of styrene, 362.
Heap, R. See **Hadley, D. J.**, 1416.
Heertjes, P. M., **Knape, A. A.**, and **Talsma, H.**, derivatives of benzo-1 : 4-dioxan. Part II. Some compounds derived from 5 : 7-dinitrobenzo-1 : 4-dioxan, 1868.
Heertjes, P. M., **Knape, A. A.**, **Talsma, H.**, and **Andriessie, P.**, derivatives of benzo-1 : 4-dioxan. Part I. Some halogenated benzo-1 : 4-dioxans and amino- and nitro-derivatives thereof, 18.
Henbest, H. B., **Meakins, G. D.**, and **Wood, G. W.**, studies in the steroid group. Part LXVII. Infra-red absorption of disubstituted *cis*-ethylenic centres, 800.
Henbest, H. B., and **Wagland, A. A.**, studies in the steroid group. Part LXIV. Some reactions starting from 3 β -acetoxy-9 α : 11 α -epoxyergosta-7 : 22-diene, 728.
Henbest, H. B. See also **Bladon, P.**, 125, and **Crawshaw, A.**, 731.
Heppel, L. A. See **Brown, D. M.**, 40.
Hepworth, M. A., **Peacock, R. D.**, and **Robinson, P. L.**, complex fluorides of quadri- and quinque-valent ruthenium, 1197.
Hepworth, M. A., **Robinson, P. L.**, and **Westland, G. J.**, complex fluorides of iridium and osmium, 4269.
Herzstein, F. H., and **Schmidt, G. M. J.**, the structure of overcrowded aromatic compounds. Part III. The crystal structure of 3 : 4-benzophenanthrene. Part IV. The crystal structure of tetrabenzonaphthalene, 3302, 3314.
Herzstein, F. H. See also **Harnik, E.**, 3288.
Herington, E. F. G., **Densham, A. B.**, and **Malden, P. J.**, the preparation and freezing point of pure naphthalene, 2643.
Herington, E. F. G. See also **Andon, R. J. L.**, 3188, and **Biddiscombe, D. P.**, 1957.
Herniman, P. D. See **Hall, G. R.**, 2214.
Herringshaw, J. F. See **Fouad, M. G.**, 1207.
Heslop, R. B., and **Robinson, P. L.**, the nitration and hydroxylation of phenetole, phenyl *n*-propyl ether, and acetophenone by pernitrous acid, 1271.
Hetherington, G., and **Robinson, P. L.**, nitryl fluoride as a nitrating agent, 3512.
Hetherington, G. See also **Aynsley, E. E.**, 1119, 4695.
Hewgill, F. R., **Jeffries, P. R.**, and **Macbeth, A. K.**, epimeric alcohols of the cyclohexane series. Part X. (\pm)-*trans*-3-Methylcyclohexanecarboxylic acid and (\pm)-*trans*-3-methylcyclohexylamine, 699.
Hey, D. H., **Honeyman, J.**, and **Peal, W. J.**, the steroid series. Part III. Synthesis of methyl 3 β -acetoxybisanor δ cholanate from dehydroepiandrosterone acetate. Alteration to nomenclature, 185, 2648.
Hey, D. H., and **Lobo, L. C.**, the aporphine series. Part I. Developments of the Bischler-Napieralski-Pschorr synthetic method. The synthesis of (\pm)-*iso*bulbocapnine and (\pm)-actinodaphnine methyl ether, 2246.
Hey, D. H., and **Nagy, K. A.**, intramolecular acylation. Part IV. Preparation and ring closure of some γ -aryl- γ -carboxy- and γ -cyano-*p*imelic acids, 1204.
Hey, D. H., **Stirling, C. J. M.**, and **Williams, G. H.**, homolytic aromatic substitution. Part VI. Lead tetrabenzoate—a new phenylating agent, 2747.
Hey, D. H., and **Turpin, D. G.**, internuclear cyclisation. Part IX. Abnormal reactions of 2-amino-*N*-methylbenzimidazoles containing *ortho*-substituents, 2471.
Hey, D. H. See also **Abramovitch, R. A.**, 1697, 4263, **Ahmad, Y.**, 4516; **Cardigan, J. I. G.**, 794, 3352; **Green, A. L.**, 4306, and **Heacock, R. A.**, 2481.
Hickinbottom, W. J., and **Hogg, D. R.**, the reaction of epoxides with carboxylic acids, 4200.
Hickinbottom, W. J., **Hogg, D. R.**, **Peters, D.**, and **Wood, D. G. M.**, reactions of unsaturated compounds. Part XI. The oxidation of 2 : 3-dimethylbut-2-ene by chromic acid, 4400.
Hickinbottom, W. J., **Hyatt, A. A.**, and **Sparke, M. B.**, the synthesis and reactions of branched-chain hydrocarbons. Part III. α -Hydroxy-ketones with secondary and tertiary alkyl groups. Part IV. The synthesis of ketones with quaternary carbon atoms, 2529, 2533.

- Hickinbottom, W. J. See also Archer, D. P., 4197.
 Hickling, A., and Linacre, J. K., glow-discharge electrolysis. Part II. The anodic oxidation of ferrous sulphate, 711.
 Hilal, O. M., and Fredericks, G. E., magnetic susceptibility as measured by Gouy's method with the specimen in a fixed position, 785.
 Hilal, O. M., and Saleh, F. A., the magnetic susceptibility of lanthanum, 2635.
 Hilmoe, R. J. See Brown, D. M., 40.
 Hilton, J. See Gold, V., 2756.
 Hinshelwood, Sir C. See Large, N. R., 2736.
 Hirshberg, Y., and Fischer, E., photochromism and reversible multiple internal transitions in some spiropyrans at low temperatures. Parts I and II, 297, 3129.
 Hirst, E. L., the Hudson Memorial Lecture. Claude Silbert Hudson, 4042.
 Hirst, E. L., Percival (the late), E. G. V., and Wyiam, C. B., studies on seed mucilages. Part VI. The seed mucilage of *Plantago arenaria*, 189.
 Hirst, E. L., and Perlis, A. S., the gum of *Acacia pycnantha*, 2622.
 Hirst, E. L. See also Aspinall, G. O., 1734.
 Hobson, P. N. See Peat, S., 4440.
 Dodge, N. See Addison, C. C., 1138, 1143.
 Hodges, R. See Edwards, W. G. H., 761, Guider, J. M., 3234, and Halsall, T. G., 2385.
 Hogg, D. R. See Hickinbottom, W. J., 4200, 4400.
 Hogg, M. A. P. See Staveley, L. A. K., 1013.
 Hoggart, M. See Clemo, G. R., 95.
 Holding, A. F. LeC., and Ross, W. A., the attempted preparation of optically active β -dideuterobutyrophenone, 145.
 Holker, J. S. E. See Cort, L. A., 3713.
 Holland, H. G. See Buckingham, A. D., 1646.
 Holiday, A. K. See Grimley, J., 1212, 1215.
 Holliman, F. G., Largier, J. F., and Sebba, F., some surface properties of docosyltrimethylammonium bromide, and of docosane-1-sulphonic acid and its sodium salt, 738.
 Holmes-Walker, W. A., and Ubbelohde, A. R., electron transfer in alkali metal-hydrocarbon complexes, 720.
 Holstead, C., and Lamberton, A. H., nitramines and nitramides. Part VII. The irreversible decomposition of nitroguanidine and of nitrourethane by sulphuric acid, 2391.
 Holt, P. F., and Hughes, B. P., the reaction of phenyl-lithium with azobenzene, 764.
 Holt, S. J. See Poppeldorf, F., 1124, 4094.
 Honeyman, J., and Morgan, J. W. W., reactions of methyl α -D-mannoside with aldehydes, 744.
 Honeyman, J. See also Hey, D. H., 185, 2648.
 Hope, A. J. N., and Mitchell, S., the photoisomerisation of some chloronitroso-terpenes, 4215.
 Horn, D. H. S., Hougen, F. W., Rudloff, E. von, and Sutton, D. A., wool wax. Part V. The constitution of the α -hydroxy-acids derived therefrom, 177.
 Horn, D. H. S., and Pretorius, Y. Y., wool wax. Part VI. The synthesis and stereochemistry of the straight-chain α -hydroxy-acids, 1460.
 Horn, D. H. S. See also Black, H. K., 1704.
 Hougen, F. W. See Horn, D. H. S., 177.
 Hough, L., Jones, J. K. N., and Richards, E. L., the reaction of amino-compounds with sugars. Part III. The action of ammonia on melibiose, 295.
 Hough, L. See also Andrews, P., 806, and Gorin, P. A. J., 4700.
 Houghton, G., and Winter, E. R. S., exchange reactions of solid oxides. Part III. Magnesium oxide, 1509.
 Hould, T. G. See Acheson, R. M., 4142.
 Housley, J. R. See King, F. E., 1392.
 Howard, G. A., and Tatchell, A. R., the chemistry of hop constituents. Part VI. The structure of columulone, 2400.
 Howlett, K. E. See Goodall, A. M., 2596, 2599.
 Huang, R. L., the reaction of chloroacetone with aryl Grignard reagents, 2539.
 The cleavage of diaryl ethers by Grignard reagents in the presence of cobaltous chloride. Part I. Monosubstituted diphenyl ethers. Part II. Disubstituted diphenyl ethers, 3084, 3088.
 Synthesis of 2 : 2''-dimethoxy- α -terphenyl and some related substances, 3655.
- Huang, R. L., and Lee Kum-Tatt, synthetic oestrogens. Part II. The synthesis of tetra-alkyldibenzyls and substituted succinonitriles by free-radical dimerisation, 2570.
 Hub, D. R., and Robinson, P. L., the surface tension of antimony pentfluoride, 2640.
 Hudgell, A. W. D., Turnbull, J. H., and Wilson, W., the isomerisation of unsaturated steroids in liquid sulphur dioxide, 814.
 Hughes, B. P. See Holt, P. F., 764.
 Hughes, E. D. See Bird, M. L., 634, Bunton, C. A., 642, 647, Charlton, J. C., 2939, de la Mare, P. B. D., 2930, and Gelles, E., 2918.
 Hughes, G. See Head, F. S. H., 603.
 Hughes, G. M. K., and Saunders, B. C., studies in peroxidase action. Part IX. Reactions involving the rupture of the C-F, C-Br, and C-I links in aromatic amines, 4630.
 Hughes, S. R. C. See Dippy, J. F. J., 953, 1470, 4102.
 Hui, W. H. See Arthur, H. R., 1403, 2782, 4683.
 Humber, L. G., Kondo, H., Kotera, K., Takagi, S., Takeda, K., Taylor, W. I., Thomas, B. R., Tsuda, Y., Tsukamoto, K., Uyeo, S., Yajima, H., and Yanaihara, N., lycoris alkaloids. Part XXVIII. The constitution of lycorine and the synthesis of its degradation products, 4622.
 Humber, L. G. See also Ayer, W. A., 3505.
 Hunter, R. F. See Carpenter, A. T., 2731.
 Hurst, R. See Dawson, J. K., 558.
 Hyatt, A. A. See Hickinbottom, W. J., 2529, 2533.
 Hybart, F. J. See Gilbert, G. A., 4454.
 Hyslop, W. I. See Burawoy, A., 82.

I.

- Ingold, C. K. See Bird, M. L., 634, Bunton, C. A., 642, 647, de la Mare, P. B. D., 2930, and Gelles, E., 2918.
 Iredale, T. See Ferguson, J., 3160.
 Irvine, D. H. See George, P., 587, 3142.
 Irving, H., and Bell, C. F., studies with dithizone. Part IV. α -Alkyldithiones, 4253.
 Irving, H., and Griffiths, J. M. M., the stabilities of complexes formed by some bivalent transition metals with *N*-alkyl-substituted ethylenediamines, 213.
 Irving, H., and Pinnington, A. R., 8-hydroxyquinaldic acid, 3782.
 Irving, H., and Rossotti, H. S., the calculation of formation curves of metal complexes from pH titration curves in mixed solvents, 2904.
 The stabilities of some metal complexes of 8-hydroxy-quinoline and related substances, 2910.
 Irving, H., Williams, R. J. P., Ferrett, D. J., and Williams, A. E., the influence of ring size upon the stability of metal chelates, 3494.
 Irving, H. See also Carleson, B. G. F., 4390.
 Isherwood, F. A. See Bell, D. J., 3702.
 Iskander, Z. See Badar, F. G., 203, 209.
 Ismay, D. See Gardner, D., 1817.
 Ives, D. A. J. See Barton, D. H. R., 903.

J.

- Jack, J., Watkins, J. C., and White, D. E., the structure of tannins. Part II. The reduction products of 2'-hydroxy- and 2'-methoxy-chalkones and of flavanone, 3684.
 Jackman, L. M. See Braude, E. A., 3548, 3564.
 Jackman, W. H. F. See Balfe M. P., 965.
 Jackson, A. H. See Harley-Mason, J., 1158, 1165, 3651.
 Jacobs, D. I. H. See Hadley, D. J., 1416, and Hall, R. H., 2034.
 Jacobs, P. W. M. See Finch, A., 2053.
 Jacquignon, P. See Buu-Hoi, Ng. Ph., 513.
 James, D. H., and Phillips, C. S. G., the chromatography of gases and vapours. Part III. The determination of adsorption isotherms, 1066.
 James, D. R., and Shoppee, C. W., steroids and Walden inversion. Part XIX. The configurations of the bromination products of 6-oxocholestan- β -yl acetate, 4224.
 James, F. C. See Davies, W., 15.

- James, J. W. See Chapman, N. B., 2103.
- Jameson, R. F., and Salmon, J. E., complexes involving tervalent iron and orthophosphoric acid. Part III. The system ferric oxide-phosphoric oxide-water at 25°, 28.
- Aluminium phosphates: phase-diagram and ion-exchange studies of the system aluminium oxide-phosphoric oxide-water at 25°, 4013.
- Jamieson, G. A. See Baddiley, J., 4280.
- Jander, J., and Haszeldine, R. N., reactions of fluorocarbon radicals. Part XIII. Alternative syntheses, properties, and spectra of trifluoro-nitroso- and -nitro-methane. Part XIV. Hexafluoroazoxymethane, 912, 919. Addition of free radicals to unsaturated systems. Part VI. Free-radical addition to the nitroso-group, 696.
- Jander, J. See also Haszeldine, R. N., 691.
- Jansen, A. B. A. See Evans, R. M., 4037.
- Jaquiss, D. B. See Beer, R. J. S., 3672, and Hanson, K. R., 4238.
- Jeacocke, G. J. See Gerrard, W., 3647.
- Jefferies, P. R., friedelin and *epifriedelinol* from *Ceratopetalum apetalum* D. Don, 473.
- Jefferies, P. R., Macbeth, A. K., and Milligan, B., *p*-menthane-2 : 3-diols. Part IV. The reaction of mercuric acetate with (\pm)-menthone and (\pm)-isomenthone, 705.
- Jeffries, P. R. See also Akroyd, P., 286, Haworth, R. D., 3617, and Hewgill, F. R., 699.
- Jefferson, E. G. See Gold, V., 2756.
- Jefford, C. W. See Acheson, R. M., 3742.
- Jeffrey, J. C. See Earborn, C., 4266.
- Jeffrey, S. See Bradley, W., 2770.
- Jeffreys, J. A. D. See Barltrop, J. A., 154, 159.
- Jeffreys, R. A., some reactions of 5-oxothiazolinium merocyanine dyes, 389. Some dyes derived from 2-hydroxymethylbenzothiazole, 503. The cyclization of substituted *N*-thiocarbamoylglycines, and some merocyanine dyes derived from the products, 2221.
- Jeger, O. See Barton, D. H. R., 3689.
- Jenkin, D. G. See Davies, M., 2374.
- Jenkinson, D. S. See Cocker, W., 2420.
- Jennings, B. E. See Beer, R. J. S., 2679.
- Jocelyn, P. C., some derivatives of 2-phenylindane, 1640.
- John, W. D., and Young, G. T., amino-acids and peptides. Part XII. α - and β -L-Aspartyl-L-alanine, 2870.
- Johns, R. B., Johnson, A. W., and Murray, J., synthetic experiments in the cycloheptatrienone series. Part III. Syntheses of puberulic acid and isostipitatic acid, 198.
- Johns, R. B., Johnson, A. W., and Tisler, M., synthetic experiments in the cycloheptatrienone series. Part IV. 3-Hydroxytropone, 4605.
- Johnson, A. W. See Brown, B. R., 107, Calderbank, A., 1285, and Johns, R. B., 198, 4605.
- Johnson, F., Newbold, G. T., and Spring, F. S., steroids. Part XIII. The conversion of ergosterol into progesterone, 1302.
- Johnston, J. D., and Spring, F. S., triterpene resins and related acids. Part XXX. The oxidation of 12-oxoisooleana-9(11):14-dienyl acetate, 1556.
- Johnston, J. D. See also Allan, G. G., 1546.
- Johnstone, N. B. See Morrison, T. J., 3441.
- Johnstone, N. M. See Hay, J. E., 629.
- Jones, B., and Sleight, J. P., the halogenation of phenolic ethers and anilides. Part XVI. Kinetics of the chlorination of diphenyl and naphthyl ethers, 1775.
- Jones, B. See also Branch, S. J., 2317, and Gray, G. W., 678, 683, 1467, 2556.
- Jones, E. R. H., Mansfield, G. H., and Whiting, M. C., researches on acetylenic compounds. Part XLVII. The prototropic rearrangements of some acetylenic dicarboxylic acids, 3208.
- Jones, E. R. H., Shaw, B. L., and Whiting, M. C., researches on acetylenic compounds. Part XLVIII. The prototropic rearrangements of some diacetylenic dicarboxylic acids, 3212.
- Jones, E. R. H., Whitham, G. H., and Whiting, M. C., researches on acetylenic compounds. Part XLIV. The reaction between nickel carbonyl and some esters of ω -acetylenic acids. Part XLVI. Prototropic rearrangements of acetylenic acids, 1865, 3201.
- Jones, E. R. H. See also Ames, T. R., 1905, Armitage, J. B., 147, Bladon, P., 125, Crawshaw, A., 731, Eglinton, G., 1860, 3197, Guider, J. M., 4471, and Halsall, T. G., 1902.
- Jones, J. A. G. See Evans, A. G., 3803.
- Jones, J. I. See Hales, J. L., 3145.
- Jones, J. K. N., the synthesis of sugars from smaller fragments. Part VIII. The synthesis of D-*didoheptulosan* from D-xylose, 3643.
- Jones, J. K. N., and Reid, W. W., the structure of the oligosaccharides produced by the enzymic breakdown of pectic acid. Part I, 1361.
- Jones, J. K. N. See also Andrews, P., 806, 1724, 4134, Gorin, P. A. J., 4700, Gorrod, A. R. N., 2522, and Hough, L., 295.
- Jones, P. G. See Barton, D. H. R., 747.
- Jones, R. L. See Davies, M., 120.
- Jones, W. O., cyclooctatetraene derivatives. Part IV. Reduction of cyclooctatetraene by sodium and alcohols. Part V. Selective reduction by metals and alkalis or acids, 312, 1808.
- Jones, W. O., and Withey, D. S., cyclooctatetraene derivatives. Part VI. Preparation of barbituric acids, 3490.

K.

- Kacker, I. K. See Zaheer, S. H., 3360.
- Katritzky, A. R., the tuberculostatic activity of pyridine-acid hydrazides, 4038.
- Kaye, B. F. See Cummins, J. A., 1414.
- Keller, M. See Coleby, B., 66.
- Kelly, P. See Swan, G. A., 416.
- Kelly, W. See Clar, E., 1108.
- Kendall, J. D. See Duffin, G. F., 408.
- Kenner, G. W., Todd, Sir A., and Webb, R. F., nucleotides. Part XXIX. Synthetic uridine-diphosphate-glucose (UDPG), 2843.
- Kenner, G. W., Todd, Sir A., Webb, R. F., and Weymouth, F. J., nucleotides. Part XXVIII. A synthesis of uridine-5'-triphosphate (UTP), 2288.
- Kenner, G. W. See also Christie, S. M. H., 46.
- Kenner, J., and Richards, G. N., the degradation of carbohydrates by alkali. Part III. 3-O-Methyl derivatives of glucose and fructose. Part IV. 1-O-Methylfructose, glucose, and fructose. Part VII. 5-O-Benzyl- and 2:5-O-benzylidene-2-deoxy-D-ribose, 278, 1784, 3277.
- Kenner, J. See also Corbett, W. M., 1789, 3274, 3281.
- Kent, P. W. See Whitehouse, M. W., 2315.
- Kenyon, J. See Balfe, M. P., 965, 1366, Davies, A. G., 3474, and Ellison, L., 779.
- Kerridge, D. H. See Addison, C. C., 2861.
- Kerridge, K. A. See Beckett, A. H., 2948.
- Ketley, A. D. See de la Mare, P. B. D., 1290.
- Khalafalla, S. E. See El Wakad, S. E. S., 4276.
- Kidd, D. See Campbell, N., 2154.
- Kidd, D. A. A., and Walker, J., the action of sodium in liquid ammonia on phaeanthine, OO'-dimethylcurine, and OO'-dimethylisocondondrindine, 669.
- Kidd, D. A. A. See also King, F. E., 1039.
- Kidd, J. M. See Haszeldine, R. N., 4228.
- Kierstead, R. W. See Baker, B. W., 1804.
- King, F. E., and Booth, H., synthetic and stereochemical investigations of reduced cyclic bases. Part IV. The constitutions of the exhaustive methylation products of *trans*-octahydro-N-methylindole and of *cis*- and *trans*-decahydro-N-methylisoquinoline, 3798.
- King, F. E., and Bottomley, W., the chemistry of extractives from hardwoods. Part XVII. The occurrence of a flavan-3:4-diol (melacacidin) in *Acacia melanoxylon*, 1399.
- King, F. E., Clark-Lewis, J. W., Kidd, D. A. A., and Smith, G. R., syntheses from phthalimido-acids. Part IV. *p*-Glycylaminobenzoic acid and derivatives, 1039.
- King, F. E., Clark-Lewis, J. W., and Smith, G. R., syntheses from phthalimido-acids. Part V. Amides of glycine, DL-alanine, and L-glutamic acid with amphetamine, benzo-caine, and procaine. Part VI. Further products from phthalyl-DL-aspartic anhydride, and the preparation of phthalylglycyl-DL-asparagine and -DL-serine, 1044, 1046.

- King, F. E., Housley, J. R., and King, T. J.**, the chemistry of extractives from hardwoods. Part XVI. Coumarin constituents of *Fagara macrophylla*, *Zanthoxylum flavum*, and *Chloroxylon swietenia*, 1392.
- King, F. E., and King, T. J.**, the synthesis of alkylphenathrenes relevant to the investigations on methyl vinhaticoate, 1373.
- King, F. E., King, T. J., and Ross, J. M.**, the chemistry of extractives from hardwoods. Part XVIII. The constitution of arjunolic acid, a triterpene from *Terminalia arjuna*, 3995.
- King, F. E., King, T. J., and Stokes, P. J.**, the chemistry of extractives from hardwoods. Part XIX. The structures of further new flavones occurring in ayan (*Distemonanthus benthamianus*). Part XX. Distemonanthin, a new type of flavone pigment from *Distemonanthus benthamianus*, 4587, 4594.
- King, G.**, a quantitative study of the autoxidation products of elaidic acid, 2114.
- King, J., and Ramage, G. R.**, synthesis of 9 : 18-diazaiso-violanthrone, 936.
- King, T. J.** See King, F. E., 1373, 1392, 3995, 4587, 4594.
- Kinsley, D. A., and Plant, S. G. P.**, the Friedel-Crafts reaction in the carbazole series. Part IV. Phenylacetyl compounds, 1341.
- Kipling, J. J.** See Blackburn, A., 3819.
- Kirk, D. N.** See Adams, W. J., 2209.
- Klyne, W.**, methyl 3β-iodochol-5-enate, 2644.
- Klyne, W., and Stokes, W. M.**, the molecular rotations of polycyclic compounds. Part III. Polycyclic alcohols and their derivatives, 1979.
- Knappe, A. A.** See Heertjes, P. M., 18, 1868.
- Knott, E. B.**, the electrophilic reactivity of alkoxyalkylidene derivatives of heterocyclic keto-methylene compounds, 1482.
- The nucleophilic reactivity of alkylidene derivatives of cyclic keto-methylene compounds, 1490.
- Kobe, K. A.** See Barduhn, A. J., 1651.
- Komzak, A. A.** See Atkinson, M. R., 4508.
- Kondo, H.** See Humber, L. G., 4622.
- Kosolapoff, G. M.**, dipole moments of the lower dialkyl alkyl-phosphonates, 3222.
- Kotera, K.** See Humber, L. G., 4622.
- Krakaner, E.** See Bergmann, E. D., 1064.
- Kruger, S., and Mann, F. G.**, xanthones and thioxanthones. Part V. The preparation and properties of 9-thia-2-aza-anthrone and 9-thia-4-aza-anthrone, 3905.
- Kum-Tatt, L.** See Huang, R. L., 2570.
- Kurzer, F., and Powell, J. R.**, cyanamides. Part VII. Synthesis of arenesulphonylmelamines and arenesulphonylammelides, 4152.
- L.**
- Lacey, R. N.**, derivatives of acetoacetic acid. Part I. The reaction of diketen with 1 : 2- and 1 : 3-ketols to give γ- and δ-lactones. Part II. The rearrangement of 3-acyl-2 : 5-dihydrofuran-2-one derivatives to furan-3-carboxylic acids. Part III. The pyrolysis of acetoacetates of ethynylcarbinols. Part IV. A new route to α-acetyl tetronic acids. Part V. The reaction of diketen with thioureas, amidines, guanidines, and S-substituted thioureas. Part VI. A synthesis of 1 : 3-oxazine derivatives employing diketen. Part VII. α-Acetyl tetrameric acids. Part VIII. The synthesis of coumarins from aryl acetoacetates, 816, 822, 827, 832, 839, 845, 850, 854.
- Ladbury, J. E., and Turner, E. E.**, the formation of α-xylene through 4 : 5-dimethylenecyclohexene, 3885.
- Laidlaw, R. A.**, wood saponins. Part I. A preliminary investigation of the saponins from morabukea [*Mora gonggrijpii* (Kleinh.) Sandwith], 752.
- Laidlaw, R. A.** See also Harwood, V. D., 2364.
- Laird, W.** See Grigor, J., 2333.
- Lake, J. S.** See Cymerman-Craig, J., 1874.
- Lamberton, A. H.** See Holstead, C., 2391.
- Lamberton, J. A.** See Hanson, K. R., 4238.
- Lamchen, M., Pugh, W., and Stephen, A. M.**, hydrazine. Part IX. Condensation products of aldehydes and ketones with salts of some substituted Δ²-pyrazolines and hydrazines, 2429.
- Some salts of secondary amines and of their condensation products with carbonyl compounds, 4418.
- Landauer, S. R.** See Coe, D. G., 2281.
- Lane, E. S., and Williams, C.**, 2 : 3-diaminoanisole, 2977. The action of organolithium compounds on quinoxaline. Molecular-compound formation involving the quinoxaline ring system, 4106.
- Large, N. R., Stubbs, F. J., and Hinshelwood, Sir C.**, the kinetics of the reduction by titanous chloride of azobenzene and 4-aminoazobenzene, 2736.
- Largier, J. F.** See Holliman, F. G., 738.
- Lark, P. D.** See Werner, R. L., 1152.
- Laville, J. R., and Waters, W. A.**, the homolytic nitration of quinoline with pernitrous acid, 400.
- Lavit, D.** See Buu-Hoi, Ng. Ph., 1034.
- Laws, G. F.** See Barton, D. H. R., 52.
- Lawson, A.**, the decarboxylative acylation of succinic acid derivatives. Part I. Benzamidosuccinic acid, 3363.
- Lawson, A.** See also Bullerwell, R. A. F., 3283.
- Lawson, G. J., and Stacey, M.**, immunopolysaccharides. Part I. Preliminary studies of a polysaccharide from *Azotobacter chroococcum*, containing a uronic acid, 1925.
- Lawson, W.**, estrogenic activity of some derivatives of isoflavan and isoflavanol, 4448. Estrogenic activity of certain para-substituted phenols, 4696.
- Laxton, J. W.** See Dippy, J. F. J., 1470, 4102.
- Leandri, G., and Tundo, A.**, electronic spectra of some aromatic mercury compounds, 3377.
- Lecocq, J., and Todd, Sir A.**, studies on phosphorylation. Part XII. Selective anionic dealkylation of neutral esters of phosphoric and thiophosphoric acids, 2381.
- Lee, T. B.** See Clemo, G. R., 2417.
- Leedham, K., and Haszeldine, R. N.**, addition of free radicals to unsaturated systems. Part VIII. The direction of radical-addition to alkyl- and perfluoroalkyl-acetylenes, 1634.
- Leedham, K.** See also Haszeldine, R. N., 1261, 2040.
- Lee Kum-Tatt.** See Huang, R. L., 2570.
- Leese, C. L., and Rydon, H. N.**, the preparation of 2 : 3-diaminopyridine, 4039.
- Le Févre, C. G., and Le Févre, R. J. W.**, molecular polarisability. Its anisotropy in aliphatic and aromatic structures, 1577.
- Le Févre, R. J. W., Sousa, J. B., and Werner, R. L.**, infra-red spectra of certain quinone diazides, 4686.
- Le Févre, R. J. W., and Sullivan, E. P. A.**, the influence of molecular shape upon dielectric relaxation times, 2873.
- Le Févre, R. J. W.** See also Buckingham, A. D., 1646, and Le Févre, C. G., 1577.
- Leisten, J. A.** See Gillespie, R. J., 1, 7.
- Lemin, A. J.** See Djerasi, C., 2346.
- Lesslie, M. S.** See Beaven, G. H., 131.
- Lewis, F. A., and Ubbelohde, A. R.**, mechanisms of removal of hydrogen from palladium-hydrogen by oxidation, 1710.
- Lewis, G. E.** See Badger, G. M., 1888.
- Lewis, J.** See Addison, C. C., 2861.
- Lewis, J. W.** See Coldham, M. W. G., 4528.
- Leyshon, D. M.** See Cullinane, N. M., 2942.
- Libman, D. D., Nineham, A. W., and Slack, R.**, tetrazolium compounds. Part II. Azo-derivatives, 1565.
- Libman, D. D., Pain, D. L., and Slack, R.**, some derivatives of pyridinecarboxyhydrazides, 1328.
- Linacre, J. K.** See Hickling, A., 711.
- Lindars, F. J.** See Bell, R. P., 4601.
- Lindsey, A. S.** See Aebi, A., 4659, and Hales, J. L., 3145.
- Linnell, W. H.** See Askam, V., 2435, 4691, and Coles, L. E., 2617.
- Linstead, R. P., and Whalley, M.**, 1 : 2-dicarboxylic acids. Part II. The diastereoisomeric αα'-dimethylsuccinic acids and their derivatives. Effect of conformation on stability, 3722.
- Linstead, R. P.** See also Baker, B. W., 1804, Bounds, D. G., 448, 4219, Braude, E. A., 3544, 3548, 3564, 3569, 3574, 3578, 3586, 3595, Clark, P. F., 2490, Elvidge, J. A., 442, and Ficken, G. E., 3730.
- Lisle, D. B.** See Challenger, F., 1760.

- L**ister, J. H., Ramage, G. R., and Coates, E., hydropteridines. Part II. Formyl derivatives of some 5 : 6 : 7 : 8-tetrahydropteridines, 4109.
Little, J. S., Smith, A. G., Taylor, W. I., and Thomas, B. R., condensation of α -keto-acids with 2-3' : 4'-dihydroxyphenyl-ethylamine, 2836.
Little, J. S., Taylor, W. I., and Thomas, B. R., 2 : 3-dihydro-1-methyl-7-phenylindole, 4036.
Littlejohn, A. C., and Smith, J. W., the relation between configuration and conjugation in diphenyl derivatives. Part IV. The dipole moments of the 2 : 2'-dihalogeno- and 2 : 2'- and 3 : 3'-dinitro-diphenyls, 2552.
Liveris, M. See Briner, G. P., 1265.
Liversedge, F. See Burawoy, A., 4481.
Lloyd, D., and Rowe, F., azulenes. Part II. Application of the pinacone reduction to the synthesis of 1-substituted azulenes, 4222.
Lloyd, E. T. See Cullinane, N. M., 3894.
Lobo, L. C. See Hey, D. H., 2248.
Loder, J. W. See Cymerman-Craig, J., 237.
Long, A. G. See Elks, J., 451.
Long, G. See Caldin, E. F., 3737.
Long, L. H., and Dollimore, D., the chemistry of boron. Part IV. The boron chlorobromides, 4457.
Long, R. F., and Morrison, A. L., the synthesis of 4-deoxy-pyridoxine phosphates, 3854.
Longstaff, J. V. L., and Singer, K., the kinetics of oxidation by nitrous acid and nitric acid. Part I. Oxidation of formic acid by nitrous acid. Part II. Oxidation of formic acid in aqueous nitric acid, 2604, 2610.
Lord, G., and Woolf, A. A., the cyanogen halides. Part III. Their heats of formation and free energies, 2546.
Loudon, J. D., and Razdan, R. K., rearrangements of chromanones and dihydrocoumarins by aluminium chloride, 4299.
Loudon, J. D., and Steel, D. K. V., 3 : 6-dicyanocatechol, 1163.
Loudon, J. D., and Summers, L. A., ortho-hydroxylation of phenols. Part IV. Pyrogallols, 1134.
Loudon, J. D. See also Cook, J. W., 530, 568, 4041, 4176, 4234.
Lovell, B. J. See Bladon, P., 125.
Lowe, E. J. See Corbridge, D. E. C., 493, 4555.
Luthey, N. G. See Barker, G. R., 4206.
Lutz, A. W., and Reid, E. B., clovene and β -caryophyllene alcohol, 2265.
Lutz, P. G. See Briner, G. P., 1265.
Lynch, B. M., and Pausacker, K. H., the oxidation of phenylhydrazones. Parts II, III, and IV, 1131, 1650, 3340.
Lyons, B. J. See Davles, A. G., 3474.
Lythgoe, B. See Brough, J. N., 4069.
- M.**
- Macbeth, A. K.**, and Robertson, W. G. P., *p*-menthane-2 : 3-diols. Part III. Reductions of diosphenol with aluminium isopropoxide and with lithium aluminium hydride, 701.
Macbeth, A. K. See also Hewgill, F. R., 699, and Jefferies, P. R., 705.
McClosky, P. See Cook, J. W., 4176.
Maccoll, A. See Craig, D. P., 332, 354.
McCormick, J. E. See Barry, V. C., 3692.
MacDonald, S. F., colouring matters of the aphidiidae. Part XI. Pigments from *Hamamelites* species, 2378.
McGookin, A. See Buckle, A. L. J., 3981, and Cavill, G. W. K., 4573.
McGowan, J. C., derivatives of the coloured compounds formed by condensation of furfuraldehyde with aromatic amines. The compounds of furfuraldehyde with two molecules of aromatic amines, 4032.
McHugh, D. J. See Cavill, G. W. K., 2785.
McIntosh, A. O., Robertson, J. M., and Vand, V., the crystal structure and molecular shape of 3 : 4.5 : 6-dibenzophenanthrene, 1661.
McIntyre, J. See Atkinson, C. M., 2023.
McKean, L. C., and Spring, F. S., the structure of the acetate $C_{32}H_{46}O_8$ (O_6 acetate) derived from β -amyrin, 1989.
McKenna, J. See Bailey, B., 967.
Mackie, A., and Cutler, A. A., preparation of phenothiazine derivatives as possible anthelmintics, 2577.
Mackie, A., and Misra, A. L., preparation of rhodanine derivatives as possible anthelmintics, 3919.
 Preparation of thiazoles and benzothiazoles as possible anthelmintics, 4430.
Maclagan, N. F. See Billimoria, J. D., 3257.
Maclean, D., and Spring, F. S., steroids. Part X. 7- and 11-Oxo-steroids from 22 : 23-dibromo-7 ξ : 11 α -dihydroxy-ergost-8-en-3 β -yl acetate, 328.
Maclean, D. See also Grigor, J., 2333.
MacMillan, J., griseofulvin. Part IX. Isolation of the bromo-analogue from *Penicillium griseofulvum* and *Penicillium nigricans*, 2535.
MacMillan, J., Mulholland, T. P. C., Dawkins, A. W., and Ward, G., griseofulvin. Part VIII. Syntheses of the alkaline rearrangement products, 429.
McOmie, J. F. W. See Baker, W., 1476, and Pollard, F. H., 3435.
Maddock, A. G., and Coelho, F. P., the retention of cobalt-60 in vitamin B₁₂, 4702.
Magrath, D. I. See Brown, D. M., 1442, 1448.
Maguire, M. H., and Shaw, G., synthetic plant hormones. Part II. Some glucosides and aldehydes, 3669.
Mahomed, R. S. See Aspinall, G. O., 1731, 1734.
Maisey, R. F. See Bradley, W., 247, 272, 274.
Makovky, A. See Glasner, A., 1606.
Malden, P. J. See Herington, E. F. G., 2643.
Mann, F. G., Millar, I. T., and Stewart, F. H. C., the preparation and properties of 2-phenylisophosphindoline. A new class of co-ordinated metallic compounds, 2832.
Mann, F. G., and Senior, A., triethylenediamine (1 : 4-diaza-bicyclo[2 : 2 : 2]octane) and hexaethylenetetramine. Part II. The properties of 1 : 2 : 2 : 4 : 5 : 5-hexamethylpiperazine, 4476.
Mann, F. G., and Stewart, F. H. C., the preparation of *o*-, *m*-, and *p*-alkoxy- and -phenoxy-methylbenzyl chlorides, 2819.
 The action of magnesium and of Grignard reagents on certain benzyl ethers. Part I. The action of magnesium on *o*-, *m*-, and *p*-alkoxy- and -phenoxy-methylbenzyl chlorides. Part II. The action of Grignard reagents on *o*-, *m*-, and *p*-methoxy- and -phenoxy-methylbenzyl chlorides, 2826, 4127.
Mann, F. G. See Allison, J. A. C., 403, Braunholtz, J. T., 651, and Kruger, S., 3905.
Manners, D. J., α -1 : 4-glucosans. Part II. The molecular structure of the liver glycogen from a case of von Gierke's disease, 3527.
Manners, D. J. See also Bell, D. J., 1145, 1891.
Mansfield, G. H. See Eglinton, G., 3197, and Jones, E. R. H., 3208.
Marei, A. E. See Awad, W. I., 4538.
Marrian, D. H., 2 : 3-dimethyl-1 : 4-naphthaquinol bis(dihydrogen phosphate), 760.
Marshall, B. M. See Cavill, G. W. K., 4573.
Marshall, P. G. See Barnes, J. H., 1159.
Martin, F. S., the distribution of ruthenium tetroxide between carbon tetrachloride and aqueous alkali, acid, and neutral salt solutions, 2564.
Martin, R. L., the activation energy of electrical conductivity in fused electrolytes, 3246.
Mason, S. F., purine studies. Part II. The ultra-violet absorption spectra of some mono- and poly-substituted purines, 2071.
Mathias, A. P. See Baddiley, J., 2723, 2803.
Mathieson, W. See Coles, L. E., 2617.
Mattock, G., the complex-forming behaviour of tin, germanium, and titanium with some dibasic carboxylic acids, 989.
Maxted, E. B., and Ball, G. T., the reversibility of the adsorption of catalyst poisons. Part III. Adsorption and desorption of thionaphthen and thionaphthol on platinum, 2778.
 The form of catalyst poisoning curves, 3947.
Mayne, J. E. O., and Menter, J. W., the mechanism of inhibition of the corrosion of iron by sodium hydroxide solution. Part II, 99.
 The mechanism of inhibition of the corrosion of iron by solutions of sodium phosphate, borate, and carbonate, 103.
Mazur, Y., and Spring, F. S., steroids. Part XII. The structures of cholegenin and isocholegenin, 1223.
Mazur, Y. See also Antia, N. J., 1218.

- M**eadow, *M.*, and Whaley, *W. M.*, 2 : 6-bis-2'-hydroxyethyl-naphthalene, 1161.
 Some derivatives of phenanthrene, 1162.
- Meakins, *G. D.* See Henbest, *H. B.*, 800.
- Meetham, *A. R.* See Cox, *J. D.*, 265.
- Mehta, *A. C.*, and Seshadri, *T. R.*, synthetical experiments in the benzopyrone series. A synthesis of 6-methyliso-flavones, 3823.
- Mehta, *H. V.* See Giles, *C. H.*, 4360.
- Melhuish, *H. W.*, and Metcalf, *W. S.*, the quenching of the fluorescence of anthracene. The transition from strong to weak quenching, 976.
- Melville, *H. W.*, and Richards, *S.*, the photochemical autoxidation of isopropylbenzene, 944.
- Menter, *J. W.* See Mayne, *J. E. O.*, 99, 103.
- Metcalf, *W. S.*, the quenching of the fluorescence of anthracene gas, 2485.
- Metcalf, *W. S.* See also Melhuish, *H. W.*, 976.
- Michelson, *A. M.*, and Todd, *Sir A.*, nucleotides. Part XXIII. Mononucleotides derived from deoxycytidine. Note on the structure of cytidylic acids *a* and *b*, 34.
- Michelson, *A. M.* See also Andersen, *W.*, 1882.
- Milburn, *A. H.*, and Truter, *E. V.*, the components of wool wax. Part II. Synthesis of the acids and alcohols of the iso- and the (+)-anteiso-series, 3344.
- Millar, *I. T.* See Mann, *F. G.*, 2832.
- Miller, *J.* See Briner, *G. P.*, 1265, 4682.
- Millidge, *A. F.* See Gasson, *E. J.*, 2161, 2170, and Graham, *A. R.*, 2180.
- Milligan, *B.* See Jefferies, *P. R.*, 705.
- Minkoff, *G. J.* See Brand, *J. C. D.*, 2970.
- Misra, *A. L.* See Mackie, *A.*, 3919, 4430.
- Mitchell, *J. W.* See Elton, *G. A. H.*, 741.
- Mitchell, *P. W. D.* See Barry, *V. C.*, 3692, 4020, and Braude, *E. A.*, 3578, 3595.
- Mitchell, *S.* See Hope, *A. J. N.*, 4215.
- Mitchell, *W. E. A.*, and Percival, *E. E.*, the periodate oxidation of methylfructoses, 1423.
- Monk, *C. B.* See Evans, *W. P.*, 550.
- Moore, *C. G.*, and Saville, *R. W.*, the reactions of amines and sulphur with olefins. Part I. The reaction of diethylamine and sulphur with cyclohexene. Part II. The reaction of diethylamine and sulphur with trialkylethylenes, 2082, 2089.
- Moore, *R. F.*, and Waters, *W. A.*, some products formed from phenolic inhibitors during the autoxidation of cumene, 243.
- Morgan, *J. W. W.* See Honeyman, *J.*, 744.
- Morgan, *W. H. D.* See Bell, *F.*, 1716.
- Morley, *H. V.* See Bullerwell, *R. A. F.*, 3283.
- Morris, *D. S.*, and Smith, *S. D.*, analogues of chloramphenicol. Part I, 1680.
- Morris, *D. S.* See also Evans, *D. D.*, 1687, and Franklin, *C. S.*, 1683.
- Morrison, *A. L.* See Andrews, *K. J. M.*, 1638, 3483, and Long, *R. F.*, 3854.
- Morrison, *T. J.*, and Johnstone, *N. B.*, solubilities of the inert gases in water, 3441.
- Moser, *C. M.*, calculations on the electronic spectra of *trans*-butadiene by a semi-empirical molecular-orbital approximation, 3455.
- Moser, *C. M.* See also Coulson, *C. A.*, 3108.
- Mukerjee, *S. K.* See Ahluwalia, *V. K.*, 3988.
- Mulcahy, *M. F. R.*, and Watt, *I. C.*, the kinetics of oxidation of benzaldehyde. Part III. Note on the reaction catalysed by benzoyl peroxide, 2971.
- Mulholland, *T. P. C.*, and Ward, *G.*, gibberellic acid. Part II. The structure and synthesis of gibberene, 4676.
- Mulholland, *T. P. C.* See also MacMillan, *J.*, 429.
- Mulley, *R. D.* See Abramovitch, *R. A.*, 4263.
- Munday, *D. A.* See Burton, *H.*, 1456.
- Munro, *D. J.* See Bacon, *R. G. R.*, 2275.
- Murray, *J.* See Johns, *R. B.*, 198.

N.

- Nagarajan, *K.* See Govindachari, *T. R.*, 2537, 2801, 3785.
- Nagdy, *K. A.* See Hey, *D. H.*, 1204.

Nam, *Ng. H.*, Buu-Hoi, *Ng. Ph.*, and Xuong, *Ng. D.*, thiophen derivatives of biological interest. Part V. 2-Styryl-thiophen, 1 : 2-diaryl-1-2'-thienylethylenes, and similar compounds, 1690.

Nancollas, *G. H.* See Davies, *C. W.*, 1112.

Narasimhan, *N. S.* See Govindachari, *T. R.*, 1847.

Narayanaswamy, *S.*, Rangaswami, *S.*, and Seshadri, *T. R.*, chemistry of pongamol. Part II, 1871.

Naylor, *P.*, and Whiting, *M. C.*, researches on polyenes. Part II. The synthesis of cosmene, 4006.

Neale, *A. J.* See Baker, *J. W.*, 3225.

Neale, *E.*, and Williams, *L. T. D.*, the heats of formation of phosphorus trichloride, sulphuryl chloride, and thionyl chloride, 2156.

Neely, *W. B.* See Barker, *S. A.*, 2395.

Nelson, *S. M.*, and Pink, *R. C.*, solutions of metal soaps in organic solvents. Part IV. Direct-current conductivity in solutions of some metal oleates in toluene, 4412.

Nelson, *W. E.* See Hawkins, *E. G. E.*, 4704.

Nery, *R.* See Davies, *A. G.*, 2204.

Nesbitt, *P.*, and Sykes, *P.*, *N*-methylthiamine, 3057.

The stability of the disulphides of thiamine analogues, 4581. The oxidation of thiamine and its analogues with potassium ferricyanide, 4585.

Neuberger, *A.*, and Scott, *J. J.*, the synthesis of δ -succinamidovaleric acid and related compounds, 1820.

Neuberger, *A.* See also Dalgliesh, *C. E.*, 3407.

Newbold, *G. T.* See Blair, *J.*, 1836, 3935, Brown, *J. J.*, 1076, Grigor, *J.*, 2333, and Johnson, *F.*, 1302.

Nicholls, *G. A.* See Briggs, *L. H.*, 3940.

Nicholson, *G. R.*, Szwarc, *M.*, and Taylor, *J. W.*, the heats of formation of diacetyl and of benzyl methyl ketone in the vapour phase, 2767.

Nicholson, *J. S.* See Brodrick, *C. I.*, 3857.

Nickon, *A.* See Barton, *D. H. R.*, 4665.

Nield, *P. G.* See Baddeley, *G.*, 4684.

Nineham, *A. W.*, Pain, *D. L.*, and Slack, *R.*, tetrazolium compounds. Part III. Styryl derivatives, 1568.

Nineham, *A. W.* See also Libman, *D. D.*, 1565.

Norymerski, *J. K.*, note: effect of solvent on the optical rotation of some steroid α -ketols, 762.

Nutten, *A. J.* See Belcher, *R.*, 2543.

Nyholm, *R. S.* See Craig, *D. P.*, 332, 354, and Figgis, *B. N.*, 12.

O.

O'Colla, *P.*, and O'Sullivan, *J.*, the dehydrochlorination of isomeric hexachlorocyclohexanes (benzene hexachlorides), 3735.

Odell, *A. L.* See Clark, *H. C.*, 63.

Ongley, *P. A.*, solubility and chromatography of hydroxybenzoic acids, 3634.

Orgel, *L. E.* See Craig, *D. P.*, 332, 354.

Orr, *S. F. D.* See Booth, *J.*, 598.

Osbond, *J. M.* See Cornforth, *J. W.*, 907.

Osborne, *G. O.* See Evans, *A. G.*, 3803.

Osdene, *T. S.* See Felton, *D. G. I.*, 2895.

O'Sullivan, *J.* See O'Colla, *P.*, 3735.

O'Sullivan, *W. I. A.* See Philbin, *E. M.*, 4174.

Oughton, *J. F.* See Elks, *J.*, 463.

Overend, *W. G.*, Shafizadeh, *F.*, Stacey, *M.*, and Vaughan, *G.*, deoxy-sugars. Part XXVII. The catalytic oxidation of some derivatives of 2-deoxy-D-hexoses, 3633.

Overend, *W. G.*, and Vaughan, *G.*, branched-chain sugars. Part II. The action of Grignard reagents on 1 : 2-3 : 4-di-O-isopropylidene-6-O-toluene-p-sulphonyl- α -D-galactose, 2155.

Overend, *W. G.* See also Allerton, *R.*, 3629, and Foster, *A. B.*, 3367, 3625.

Owen, *L. N.* See Harding, *J. S.*, 1528, 1536.

P.

Packer, *R. K.* See Gregg, *S. J.*, 3887.

Page, *J. E.* See Barton, *D. H. R.*, 2715, and Cookson, *R. C.*, 4028.

Paget, *H. P.* See Staveley, *L. A. K.*, 1992.

Pai, *B. R.* See Govindachari, *T. R.*, 1847, 2801.

- Pain, D. L. See Cottrell, H. J., 2968; Libman, D. D., 1328, and Nineham, A. W., 1568.
- Palit, S. R., and Venkateswarlu, V., solubilization of water in non-polar solvents by detergent mixtures, 2129.
- Parker, R. E. See Chapman, N. B., 2109.
- Parker, S. H. See Eshorn, C., 939.
- Parke, E. A. See Atkinson, M. R., 4256, 4508.
- Partridge, M. W. See Cooper, F. C., 3429, and Hardman, R., 3878.
- Passerini, R., the near-ultra-violet absorption spectra of some heterocyclic compounds. Part I. Benzoxazoles, 2256.
- Passerini, R. See also Cerniani, A., 2261, and Chierici, L., 3249.
- Pasternak, C. A. See Whitehouse, M. W., 2315.
- Patel, D. K. See Adams, W. J., 1825, 2209, 4688.
- Paterson, J., and Spring, F. S., steroids. Part IX. 22 : 23-Dichloroergosta-7 : 9(11)-dien-3 β -yl acetate (ergosteryl-D acetate 22 : 23-dichloride), 325.
- Paul, R. C. See Emeléus, H. J., 881.
- Pausacker, K. H., and Scroggie, J. G., oxidations with lead tetra-acetate. Part II. The oxidation of primary aromatic amines, 4003.
- Oxidations with phenyl iodosoacetate. Part IV. The oxidation of substituted o-nitroanilines, 4499.
- Pausacker, K. H. See also Barlin, G. B., 3122, and Lynch, B. M., 1131, 1650, 3340.
- Payne, D. S., the fluorination of organochlorodisiloxanes, 2143.
- Peacock, R. D. See Hepworth, M. A., 1197.
- Peak, D. A. See Bristow, N. W., 616.
- Peal, W. J. See Hey, D. H., 185, 2648.
- Pearce, R. S. See Badger, G. M., 3151.
- Peat, S., Whelan, W. J., Hobson, P. N., and Thomas, G. J., the enzymic synthesis and degradation of starch. Part XIX. The action of R-enzyme on glycogen, 4440.
- Percival, E. E. See Charalambous, G., 2443, and Mitchell, W. E. A., 1423.
- Percival (the late), E. G. V. See Hirst, E. L., 189.
- Perlin, A. S. See Hirst, E. L., 2822.
- Perold, G. W. See Barton, D. H. R., 3689.
- Perry, H. J. H. See Grindon, M. F., 3531.
- Peters, D. See Hickinbottom, W. J., 4400.
- Petrow, V., and Sturgeon, B., some quinoline-5 : 8-quinones, 570.
- Petrow, V. See also Adams, W. J., 1825, 2209, 4688; Cooley, G., 1813, and Edwards, W. G. H., 2853.
- Pettit, M. R., and Tatlow, J. C., further investigations of trifluoromethylphenyl derivatives, 1071.
- Studies of trifluoroacetic acid. Part XI. The reactions of diazonium trifluoroacetates with aromatic compounds to give diaryls, 1941.
- 8-Hydroxy-5-trifluoromethylquinoline, 3852.
- Pettit, R. See Dewar, M. J. S., 1617, 1625.
- Pexton, F. W. See Bradley, W., 4432, 4436.
- Philbin, E. M., O'Sullivan, W. I. A., and Wheeler, T. S., studies in the Baker-Venkataran transformation. The Auwers synthesis of 2-acyclocoumaran-3-ones, 4174.
- Phillipps, C. S. G. See Griffiths, J. H., 3446, and James, D. H., 1066.
- Phillips, G. H. See Cornforth, J. W., 907, and Elks, J., 1739.
- Phillips, R. J. See Gerrard, W., 1148.
- Pinchas, S., and Samuel, D., a characteristic infra-red absorption of the triphenylmethyl group, 863.
- Pinder, A. R., and Smith, H., the reduction of some methyl phenyl ketones, the corresponding carbinols, and 2-methyl-2-phenyl-1 : 3-dioxolans with sodium or potassium and alcohol in liquid ammonia, 113.
- Pindred, H. K. See Haworth, R. D., 3617.
- Pink, R. C. See Nelson, S. M., 4412.
- Pinnington, A. R. See Irving, H., 3782.
- Plant, S. C. P. See Coldham, M. W. G., 4528, and Kinsley, D. A., 1341.
- Pocker, Y. See de la Mare, P. B. D., 2930.
- Polgar, N., constituents of the lipids of tubercle bacilli. Part III. Mycolipenic acid. Part IV. Mycoceranic acid, 1008, 1011.
- Polgar, N. See also Chauley, J. D., 1003.
- Pollard, F. H., McOmie, J. F. W., and Stevens, H. M., the analysis of inorganic compounds by paper chromatography. Part VI. Further studies on the separation and detection of lanthanons, 3435.
- Polya, J. B. See Atkinson, M. R., 141, 3319, 4256, 4508.
- Poole, V. D. See Daglish, A. F., 2627.
- Pope, P. M., and Woodecock, D., synthesis of plant-growth regulators. Part III. ω -2-Naphthoxyalkanecarboxylic acids, 1721.
- Poppeldorf, F., and Holt, S. J., reactions of thiols and thioethers. Part I. An analogue of the Mannich reaction involving thiols, formaldehyde, and active methylene or methylenide compounds. Part II. Some reactions of sulphur analogues of Mannich bases, 1124, 4094.
- Porter, G. B., tetramethylammonium amalgam, 760.
- Potts, K. T., 1 : 2 : 4-triazoles. Part I. A synthesis of 3 : 5-disubstituted 1 : 2 : 4-triazoles, 3461.
- Potts, K. T., and Saxton, J. E., methylation of indoles, 2641.
- Powell, H. M., Tilden lecture : the chemistry of intermolecular compounds, 2658.
- Powell, J. R. See Kurzer, F., 4152.
- Pretorius, Y. Y. See Horn, D. H. S., 1460.
- Price, A. J. See Baker, W., 2042.
- Primavesi, G. R. See Gasson, E. J., 2161.
- Pritchard, G. O., Pritchard, H. O., and Trotman-Dickenson, A. F., the reactions of methyl radicals with acetone, diethyl ketone, and di-tert.-butyl peroxide, 1425.
- Pritchard, H. O., Sowden, R. G., and Trotman-Dickenson, A. F., the thermal decomposition of tert.-butylamine, 546.
- Pritchard, H. O. See also Clark, D., 2633, and Pritchard, G. O., 1425.
- Pritchard, J. G. See de la Mare, P. B. D., 1644, 3910, 3990.
- Prydal, B. S. See Arcus, C. L., 4018.
- Pugh, W., hydrazine. Part VII. Some halogeno-antimonites and -bismuthites of hydrazine, 1385.
- Hydrazine. Part VIII. Some salts of 3 : 5 : 5-trimethyl- Δ^2 -pyrazoline and of 3 : 5 : 5-trimethyl-1-isopropylidene- Δ^2 -pyrazolinium ion. (With notes on the optical properties of the crystals. By H. C. G. Vincent), 2423.
- Pugh, W. See also Lamchen, M., 2429, 4418.
- Purnell, J. H., and Bowden, S. T., miscibility phenomena in ternary systems containing diphenyl ether, water, and an aliphatic alcohol or acid, 539.
- Purnell, J. H. See also Bowden, S. T., 535.
- Q.
- Quayle, J. R. See Brown, B. R., 107.
- R.
- Raitt, J. S. See Barrer, R. M., 4641.
- Ralph, B. J. See Cort, L. A., 3713.
- Ramachandran, K. See Zaheer, S. H., 3360.
- Ramage, G. R., and Whitehead, R., the caryophyllenes. Part X. Oxides from the caryophyllenes, 4336.
- Ramage, G. R., Whitehead, R., and Wilson, B., the caryophyllenes. Part XI. The structure of caryophyllene nitrosoite, 4341.
- Ramage, G. R. See also Clarke, P., 4345, King, J., 936, and Lister, J. H., 4109.
- Randles, J. E. B., Tatlow, J. C., and Tedder, J. M., studies of trifluoroacetic acid. Part IX. The electrical conductivities of the ternary system, trifluoroacetic anhydride-acetic anhydride-water, 436.
- Rangarajan, T. See Baliah, V., 3068.
- Rangaswami, S. See Narayanaswamy, S., 1871.
- Rao, N. S. See Zaheer, S. H., 3360.
- Raper, R. See Clemo, G. R., 2693.
- Rasmussen, S. E. See Everett, D. H., 2812.
- Raymakers, P. See Burawoy, A., 82.
- Razdan, R. K. See Cook, J. W., 4041, 4234, and London, J. D., 4299.
- Reed, H. W. B., the catalytic cyclic polymerisation of butadiene, 1931.
- Reed, R. I., and Thorlley, M. B., the formation of ketones. Part II. The formation of some substituted cyclopentanones by the Dieckmann reaction, 2148.
- Rees, C. W. See Chapman, N. B., 1190.

- Rees, P. S., Tong, D. P., and Young, G. T., amino-acids and peptides. Part XI. The kinetics of the self-condensation of glycylglycylglycine methyl ester, 662.
- Rees, R. W., and Shoppee, C. W., steroids. Part VIII. 3 : 5-cycloErgosta-7 : 9(11) : 22-trien-6 β -ol (*i*-dihydroergosterol), 3422.
- Rees, R. W. See also Cremlyn, R. J. W., 3790.
- Reid, E. B., and Sause, H. W., Michael condensations with substituted sorbic esters. Part I. Methyl β -isobutenyl- $\alpha\alpha$ -dimethoxycarbonylglutarate, 516.
- Reid, E. B., and Siegel, J. R., the reduction of some carbonyl compounds with sodium borohydride, 520. Experiments with 5 : 6-dihydro-4-hydroxy-6-phenyl-2-pyrone. Part II. The basic hydrolysis of an α -bromo- and an $\alpha\alpha$ -dibromo- β -keto- δ -lactone, 525.
- Reid, E. B. See also Lutz, A. W., 2265.
- Reid, K. C. See Roger, R., 3453.
- Reid, W. W. See Jones, J. K. N., 1361.
- Richards, E. L. See Fletcher, J. R., 1953, and Hough, L., 295.
- Richards, G. N., the preparation of 2-deoxy-D-ribose, 3638. The action of Grignard reagents on anhydro-sugars of ethylene oxide type. Part III. The behaviour of methyl 2 : 3-anhydro-4 : 6-O-benzylidene- α -D-mannoside towards methyl-, ethyl-, and phenyl-magnesium iodide, 4511.
- Richards, G. N. See also Kenner, J., 278, 1784, 3277.
- Richards, R. E. See Deeley, C. M., 3697, and Eggleston, B. C., 941.
- Richards, S. See Melville, H. W., 944.
- Ricketts, C. R., the preparation and structure of a synthetic polyglucose, 4031.
- Ridgwell, S. See Hall, D. M., 2498.
- Rigg, T. See Farmer, F. T., 3248.
- Riggs, N. V. See Barlin, G. B., 3122, 3125.
- Ritchie, A. C. See Buchanan, C., 4523.
- Rivett, D. E. A. See Clingman, A. L., 1088.
- Roberts, G., and Shoppee, C. W., steroids and Walden inversion. Part XV. The mechanism and stereochemical course of some Grignard carboxylations and oxygens, 3418.
- Roberts, G., Shoppee, C. W., and Stephenson, R. J., steroids and Walden inversions. Part XIII. The epimeric cholest-5-ene-3-carboxylic acids and the epimeric cholestan-3-carboxylic acids. Part XIV. 5-Hydroxycholestan-3 β -carboxylic acid and related compounds, 2705, 3178.
- Roberts, J. C. See Dean, F. M., 1432.
- Roberts, L. E. J., the oxides of uranium. Part V. The chemisorption of oxygen on UO_2 and on UO_2-ThO_2 solid solutions, 3332.
- Roberts, L. E. J. See also Anderson, J. S., 3324.
- Robertson, A., Venkateswarlu, V., and Whalley, W. B., the pigments of "dragon's blood" resin. Part V. Some flavans, 3137.
- Robertson, A., and Whalley, W. B., the chemistry of the "insoluble red woods." Part V. Pterocarpin and an oxidation product of homopteroecarpin. Part VI. Santalin and santarubin, 1440, 2794.
- Robertson, A. See also Beer, R. J. S., 1947, 2679, 3672, 4139, Buckle, A. L. J., 3981, Cavill, G. W. K., 4573, Cort, L. A., 3713, Dean, F. M., 1432, 4565, and Hanson, K. R., 4238.
- Robertson, J. M. See McIntosh, A. O., 1661.
- Robertson, J. S. M. See Greenwood, C. T., 3769.
- Robertson, P. W., the kinetics of aromatic halogen substitution. Part X. The intermediates involved in halogenation in acetic acid solution, 1267.
- Robertson, W. G. P. See Macbeth, A. K., 701.
- Robins, P. A., and Walker, J., studies on the Diels-Alder reaction. Part III. The stereochemistry of perhydro-1 : 4-dioxophenanthrene and related compounds, 3960.
- Robinson, C. H. See Barton, D. H. R., 3045.
- Robinson, P. L. See Aynaley, E. E., 1119, Hepworth, M. A., 1197, 4269, Heslop, R. B., 1271, Hetherington, G., 3512, and Hub, D. R., 2640.
- Robinson, Sir R., and Thomas, A. F., the alkaloids of *Picralima nitida*, Stapf, Th. and H. Durand. Part I. The structure of akuanimmigine. Part II. Some investigations concerning the structure of pseudoakuanimmigine, 3479, 3522.
- Robinson, Sir R. See also Anet, F. A. L., 1242.
- Robson, A. C., and Coffey, S., the amination of anthraquinone with hydroxylamine in sulphuric acid, 2372.
- Robson, I. K. M. See Gasson, E. J., 2170.
- Rodda, H. J. See Badger, G. M., 3151, 4162.
- Roger, R., Reid, K. C., and Wood, R., studies in stereochemical structure. Part XI. Heterocyclic compounds from benzoin, 3453.
- Roger, R., and Shepherd, D. M., elimination of water from glycols. Dehydration of racemic 1 : 4-glycols derived from acenaphthene, 812.
- Roger, R., and Wood, R., studies in stereochemical structure. Part X. Optically active desyl chloride, 811.
- Rohan, T. A. See Davies, A. G., 3474.
- Roitt, I. M. See Dunn, J. R., 580.
- Rose, F. L., 1 : 2 : 4 : 6-tetra-azaindenes and 1 : 4 : 6-triazain-dan-2-ones from 5-aminopyrimidines, 4116.
- Rose, J. B. See Barr, D. A., 3766.
- Rosenfelder, W. J., the methanolysis of some acetyl derivatives of cevine, 2638.
- Rosenfelder, W. J., and Ginsburg, D., studies in the alicyclic series. Part III. Michael condensation of 1-acetylcyclo-alkenes with cycloalkanones, 2955.
- Rosenkranz, G. See Amendolla, C., 1226, and Djerassi, C., 2346.
- Ross, I. G. See Craig, D. P., 1589.
- Ross, J. M. See King, F. E., 3995.
- Ross, W. A. See Holding, A. F. LeC., 145.
- Rossotti, H. S. See Irving, H., 2904, 2910.
- Rowe, F. See Lloyd, D., 4232.
- Royer, R. See Demersman, P., 2720, 4193.
- Roylance, J., Tatlow, J. C., and Worthington, R. E., the reactions of highly fluorinated organic compounds. Part VII. 1 : 2-Dichlorodecafluorocyclohexane and derived compounds, 4426.
- Rudloff, E. von. See Horn, D. H. S., 177.
- Russell, P. B., the *cis*- and *trans*-2-benzylcyclohexanols: the reduction of 2-benzylidene- and 2-benzyl-cyclohexanones, 1771. The effects of substitution on the ultra-violet absorption spectra of phenylpyrimidines, 2951.
- Rutt, A. See Baker, W., 2042.
- Rydon, H. N. See Cave-Browne-Cave (the late), J. E., 3866, Coe, D. G., 2281, and Leese, C. L., 4039.
- S.
- Saad, E. See Tadros, W., 1155.
- Saad, M. A. See Bradley, D. C., 1091, 2002, 3488.
- Sacconi, L., chemical reactions of complexes. Part VI. Dinuclear dihydrazide-nickel complexes, 1326.
- Sacconi, L., and Giannoni, G., investigations on the co-ordinative power of uranyl. Part I. The preparation and properties of uranyl complexes of certain β -diketones. Part II. Absorption spectra of the complexes with β -diketones, 2368, 2751.
- Sakla, A. B. See Tadros, W., 1116, 2351.
- Saleh, F. A. See Hilal, O. M., 2635.
- Saleh, W. See Soliman, G., 1506.
- Salmon, J. E. See Everest, D. A., 2438, and Jameson, R. F., 28, 4013.
- Samuel, D. See Anbar, M., 3603, Dostrovsky, I., 658, and Pinchas, S., 863.
- San Marco, M. See Dicastro, G., 4157.
- Sansom, B. F. See Acheson, R. M., 3742.
- Sasse, W. H. F. See Badger, G. M., 4162.
- Sastri, V. D. N. See Zaheer, S. H., 3360.
- Satchell, D. P. N. See Bryce-Smith, D., 2743.
- Saunders, B. C. See Hughes, G. M. K., 4630.
- Saunders, J. See Eley, D. D., 1668, 1672, 1677.
- Sause, H. W. See Reid, E. B., 516.
- Savage, W. E. See Beer, R. J. S., 3672, and Hanson, K. R., 4238.
- Saville, R. W. See Glazebrook, R. W., 2094, and Moore, C. G., 2082, 2089.
- Saxton, J. E. See Potts, K. T., 2641.
- Sayer, G. C. See Bowers, A., 3070.
- Schlittler, E. See Anet, F. A. L., 1242.
- Schmidt, G. M. J. See Harnik, E., 3288, 3295, and Herbstein, F. H., 3302, 3314.
- Schofield, K., miscellaneous quinazoline derivatives, 4034.

- Schofield, R. K., and Taylor, A. W., the hydrolysis of aluminium salt solutions, 4445.
- Schulman, J. H. See Allan, A. J. G., 1238.
- Schwarz, J. C. P., the structure of the oxazoline derivatives of glucose and galactose, 2644.
- Scott, J. J. See Neuberger, A., 1820.
- Scroggie, J. G. See Pausacker, K. H., 4003, 4499.
- Seaman, H., Taylor, P. J., and Waters, W. A., addition of the amino-radical, $\cdot\text{NH}_2$, to benzene, toluene, and cyclohexene, 4690.
- Seaton, J. C. See Clemo, G. R., 2582.
- Sebba, F. See Holliman, F. G., 738.
- Seidler, J. H. See Badger, G. M., 2329.
- Sellman, P. G. See D'Eye, R. W. M., 3760.
- Senior, A. See Mann, F. G., 4476.
- Seshadri, T. R. See Aghoramurphy, K., 3065, Ahluwalia, V. K., 3988, Gupta, S. R., 3063, Mehta, A. C., 3823, and Narayanaswamy, S., 1871.
- Shafizadeh, F. See Overend, W. G., 3633.
- Sharpe, A. G. See Cox, B., 1798.
- Shaw, B. L., and Whiting, M. C., researches on polyenes. Part I. The synthesis of corticocin, 3217.
- Shaw, B. L. See also Eglinton, G., 1860, and Jones, E. R. H., 3212.
- Shaw, G., and Sugowdz, G., isoaxazolones. Part VI. The hydrogenation of 5-aminoisoaxazoles. A new synthesis of pyrimidines, 665.
- Shaw, G. See also Maguire, M. H., 3669.
- Shaw, R. A. See Eaborn, C., 2027.
- Shepherd, D. M. See Roger, R., 812.
- Shoppee, C. W., and Stephenson, R. J., steroids and Walden inversion. Part XII. The epimeric 3-cholesterylacetic and 3-cholestanylacetic acids, 2230.
- Shoppee, C. W. See also Cremlyn, R. J. W., 3515, 3790, 3794, Fudge, A. J., 958, James, D. R., 4224, Rees, R. W., 3422, and Roberts, G., 2705, 3178, 3418.
- Short, W. F. See Bristow, N. W., 616, and Brodrick, C. I., 3857.
- Shoukri, A. S. See Coles, L. E., 2617.
- Siegel, J. R. See Reid, E. B., 520, 525.
- Simes, J. J. H. See Cort, L. A., 3713.
- Simonetta, M., and Favini, G., kinetics and mechanism of side-chain reactions in some substituted phenethyl chlorides and benzyl chlorides, 1840.
- Simpson (the late), J. C. E. See Atkinson, C. M., 165, 1381, 2023.
- Simpson, T. H., and Beton, J. L., anthoxanthins. Part I. Selective methylation and demethylation, 4065.
- Sims, P. See Boyland, E., 980.
- Singer, K. See Longstaff, J. V. L., 2604.
- Singer, S. S. See Davies, T., 2304.
- Singh, B. See Zaheer, S. H., 3360.
- Skellon, J. H. See Feuill, A. J., 3414.
- Skinner, H. A., and Smith, N. B., thermochemistry of organoborou compounds. Part IV. Dimethylaminochloroboranes. Part V. Ethoxychloroboranes, 2324, 3930.
- Skinner, J. M., Stewart, G. M. D., and Speakman, J. C., the crystal structure of the acid salts of some monobasic acids. Part III. Potassium hydrogen dibenzoate, 180.
- Slack, R. See Cottrell, H. J., 2968, Libman, D. D., 1328, 1565, and Nineham, A. W., 1568.
- Slater, S. N. See Fletcher, J. R., 1953.
- Sleight, J. P. See Jones, B., 1775.
- Smith, A. G. See Little, J. S., 2636.
- Smith, D. C. C. See Barker, G. R., 2151.
- Smith, G. F. Indoles. Part I. The formylation of indole and some reactions of 3-formylindole, 3842.
- Smith, G. R. See King, F. E., 1039, 1044, 1046.
- Smith, H. See Pinder, A. R., 113.
- Smith, J. C. See Evans, R. F., 798.
- Smith, J. W. See Littlejohn, A. C., 2552.
- Smith, N. B. See Skinner, H. A., 2324, 3930.
- Smith, P. L. See Gray, P., 769.
- Smith, S. See Cardwell, H. M. E., 2012.
- Smith, S. D. See Evans, D. D., 1687, Franklin, C. S., 1683, and Morris, D. S., 1680.
- Smyth, I. F. B. See Crawford, M., 3464.
- Snow, G. A., mycobactin. A growth factor for *Mycobacterium johnsei*. Part II. Degradation and identification of fragments. Part III. Degradation and tentative structure, 2588, 4080.
- Soanes, P. W. See Chapman, N. B., 2109.
- Soliman, G., and El-Kholy, I. E.-S., the pyrone series. Part I. 2 : 6-Diaryl-4-pyrone, 1755.
- Soliman, G., and Saleh, W., constituents of the seeds of *Cordia olitorius*, L. Part II. Isolation of β -sitosterol and cordchorolic acid, 1506.
- Soliman, G., and Youssef, A. H. A., synthesis in the naphthalene series. Part V. Action of sulphuric acid on substituted ethyl γ -phenylacetocetates, 4655.
- Solomon, D. H. See Cavill, G. W. K., 3943.
- Sondheimer, F. See Amendolla, C., 1226, and Djerassi, C., 2346.
- Soper, F. G. See Ellis, A. J., 1750.
- Sousa, J. B. See Driver, J. E., 985, and Le Févre, R. J. W., 4686.
- Sowden, R. G. See Pritchard, H. O., 546.
- Sparke, M. B. See Hickinbottom, W. J., 2529, 2533.
- Speakman, J. C. See Downie, T. C., 787, and Skinner, J. M., 180.
- Spickett, R. G. W., and Timmis, G. M., the synthesis of compounds with potential antifolic acid activity. Part I. 7-amino- and 7-hydroxy-pteridines, 2887.
- Spinner, E. See Burawoy, A., 3752.
- Spring, F. S. See Allan, G. G., 1546, Antia, N. J., 1218, Grigor, J., 2333, Johnson, F., 1302, Johnston, J. D., 1566, McKean, L. C., 1989, Maclean, D., 328, Mazur, Y., 1223, and Paterson, J., 325.
- Springall, H. D., and White, T. R., heats of combustion and molecular structure. Part II. The mean bond energy term for the carbonyl system in certain ketones, 2764.
- Stacey, G. J. See Carrington, H. C., 1017.
- Stacey, M. See Barclay, K. S., 1501, Barker, S. A., 171, 2395, Belcher, R., 3846, Bourne, E. J., 2006, Buxton, M. W., 366, Foster, A. B., 3367, Lawson, G. J., 1925, and Overend, W. G., 3633.
- Staveley, L. A. K., and Hogg, M. A. P., a dilatometric study of the transition in methyl alcohol, 1013.
- Staveley, L. A. K., Warren, J. B., Paget, H. P., and Dowrick, D. J., some thermodynamic properties of compounds of the formula MX_4 . Part II. Tetra-alkyl compounds, 1992.
- Staveley, L. A. K. See also Davies, T., 2304, and De Nordwall, H. J., 224.
- Steel, D. K. V. See Cook, J. W., 530, and Loudon, J. D., 1163.
- Steele, B. R. See Hazeldine, R. N., 923, 2040, 3747.
- Stenlake, J. B. See Edwards, D., 3272.
- Stephen, A. M. See Lamchen, M., 2429, 4418.
- Stephen, W. I. See Belcher, R., 2543.
- Stephens, R. See Barker, S. A., 3468, 4211, 4550, and Bourne, E. J., 4009.
- Stephenson, E. F. M., heterocyclic nitrogen compounds. Part IV. Further condensations with aldehydic acids and diamines, 2354.
- Stephenson, O., the condensation of epichlorohydrin with monohydric phenols and with catechol, 1571.
- Stephenson, R. J. See Roberts, G., 2705, 3178, and Shoppee, C. W., 2230.
- Stern, E. S. See Hall, R. H., 3388.
- Stevens, H. M. See Pollard, F. H., 3435.
- Stewart, C. E. See Giles, C. H., 4360.
- Stewart, E. T., bond orders in dibenzo[cd,lm]perylene, 1643.
- Stewart, F. H. C. See Mann, F. G., 2819, 2826, 2832, 4127.
- Stewart, G. M. D. See Skinner, J. M., 180.
- Stimson, V. R., and Watson, E. J., the kinetics of alkyl-oxygen fission in ester hydrolysis. *tert*-Butyl 2 : 4 : 6-trimethylbenzoate in aqueous ethanol, 2848.
- Stirling, C. J. M. See Hey, D. H., 2747.
- Stock, J. A. See Bergel, F., 2409.
- Stokes, P. J. See King, F. E., 4587, 4594.
- Stokes, W. M. See Klyne, W., 1979.
- Stuart-Webb, I. A. See Adams, W. J., 1825, 2209.
- Stubbs, F. J. See Large, N. R., 2736.
- Stubbs, H. W. D., and Tucker, S. H., synthesis of fluoranthenes. Part XIII. Spectroscopic examination of fluoranthene derivatives, 227.
- Sturgeon, B. See Petrow, V., 570.
- Subramanian, R. V. R. See Giles, C. H., 4360.
- Sugowdz, G. See Shaw, G., 665.
- Sullivan, E. P. A. See Le Févre, R. J. W., 2873.
- Summers, G. H. R. See Fudge, A. J., 958.

- S**ummers, L. A. See Loudon, J. D., 1134.
Sutcliffe, F. K. See Bradley, W., 708.
Sutton, D. A. See Clingman, A. L., 1088, and Horn, D. H. S., 177.
Sutton, L. E. See Craig, D. P., 332, 354.
Swan, G. A., and Kelly, P., the absence of rearrangement in the conversion of benzene-*n*-diazoate into the iodiodiazoate, demonstrated by the use of isotopic nitrogen, 416.
Swan, G. A., and Wright, D., a study of the evolution of carbon dioxide during melanin formation, including the use of 2-(3 : 4-dihydroxyphenyl)[^{14}C]- and 2-(3 : 4-dihydroxyphenyl)[^{14}C]-ethylamine, 381.
Swan, G. A. See also Anderson, R. M., 2579, 2962.
Swayne, R. E. H. See Halsall, T. G., 1902.
Sy, M., Bui-Hoi, Ng. Ph., and Xuong, Ng. D., thiophen derivatives of biological interest. Part VI. The chemistry of 2-*tert*.butylthiophen, 1975.
Sykes, A. See Belcher, R., 3846, 4159.
Sykes, P. See Nesbitt, P., 3057, 4581, 4585.
Symons, M. C. R., the mechanism of decomposition of potassium permanganate in alkaline solution. Part II. The use of water enriched in ^{18}O as solvent, 3676.
Szabo, L. See Baddiley, J., 3826.
Szwarc, M. See Nicholson, G. R., 2767.
- T.**
- Tadros, W.**, butadienes and related compounds. Part II. Factors affecting the conversion of asymmetric di-*p*-substituted phenylethylenes on bromination into 1 : 1 : 4 : 4-tetra-arylbuta-1 : 3-dienes, 2966.
Tadros, W., Ekalius, L., and Sakla, A. B., reducing action of glycols in alkaline medium. Part I. Mechanism of formation of stilbenes from substituted benzaldehydes, 2351.
Tadros, W., and Saad, E., preparation of pentachlorothiophenol and some other sulphur compounds, 1155.
Tadros, W., and Sakla, A. B., quaternary ammonium salts. Part IV. Hydrolysis of the nitrile group before decomposition of the quaternary ammonium group. Preparation and decomposition of some quaternary ammonium salts, 1116.
Takagi, S. See Humber, L. G., 4622.
Takeda, K. See Humber, L. G., 4622.
Talisma, H. See Heertjes, P. M., 18, 1868.
Tarlton, E. J. See Barton, D. H. R., 3492.
Tatchell, A. R. See Howard, G. A., 2400.
Tatiow, J. C. See Belcher, R., 3846, 4159, Bourne, E. J., 2006, Buxton, M. W., 366, 1177, Evans, D. E. M., 3779, Pettit, M. R., 1071, 1941, 3852, Randles, J. E. B., 436, and Roylance, J., 4426.
Taylor, J. L. See Crombie, L., 2816.
Taylor, A. See Atkinson, C. M., 165, 1381.
Taylor, A. W. See Schofield, R. K., 4445.
Taylor, D. A. H. See Bartrop, J. A., 3399, 3403, and Elks, J., 1739.
Taylor, F. M. See Bircumshaw, L. L., 931.
Taylor, H. T. See Baddeley, G., 2405.
Taylor, J. A. See Ferguson, J., 3160.
Taylor, J. W. See Nicholson, G. R., 2767.
Taylor, P. J. See Seaman, H., 4690.
Taylor, W. I., 2 : 2' : 4 : 4' : 5 : 5'-hexamethoxydiphenyl, 2636.
Taylor, W. I. See also Ayer, W. A., 3505, Brandt, C. W., 3245, Burnell, R. H., 3486, 3636, Humber, L. G., 4622, and Little, J. S., 2636, 4036.
Tedder, J. M., the dielectric constant of trifluoroacetic anhydride and related compounds, 2646.
Tedder, J. M. See also Randles, J. E. B., 436.
Telfer, R. G. J. See Aspinall, G. O., 3519, and Harwood, V. D., 2364.
Theobald, R. S. See Goldberg, A. A., 2357, 2641.
Thitchener, C. R. See Bradley, W., 272.
Thomas, A. F. See Robinson, Sir R., 3479, 3522.
Thomas, B. R. See Barton, D. H. R., 903, Brandt, C. W., 3245, Humber, L. G., 4622, and Little, J. S., 2636, 4036.
Thomas, C. R. See Bassett, H. L., 1188.
Thomaa, G. H. See Elks, J., 451, 463.
Thomas, G. J. See Peat, S., 4440.
- Thompson, R.** See Addison, C. C., 1143.
Thomson, R. H. See Blackhall, A., 3916, and Bruce, D. B., 1428.
Thornley, M. B. See Read, R. I., 2148.
Timmis, G. M. See Felton, D. G. I., 2881, 2895, and Spickett, R. G. W., 2887.
Tipper, C. F. H. See Hay, J. E., 629.
Tisler, M. See Johns, R. B., 4605.
Tivey, D. J. See Bowman, R. E., 4548, and Evans, D. D., 1687.
Todd, Sir A. See Andersen, W., 1882, Brown, B. R., 107, 1280, Brown, D. M., 1442, 1448, Calderbank, A., 1285, Christie, S. M. H., 46, Kenner, G. W., 2288, 2843, Lecocq, J., 2381, and Michelson, A. M., 34.
Tolcher, P. See Gerrard, W., 3640.
Tomkins, F. C. See Finch, A., 2053.
Tomlinson, M. L. See Cummins, J. A., 1414.
Tong, D. P. See Rees, P. S., 662.
Toseland, P. A. See Elmore, D. T., 4533.
Trevett, M. E. See Cookson, R. C., 4028.
Trotman-Dickenson, A. F. See Clark, D., 2633, and Pritchard, H. O., 546, 1425.
Truswell, A. E. See Dawson, J. K., 558, 3922.
Truter, E. V. See Milburn, A. H., 3344.
Tsuda, Y. See Humber, L. G., 4622.
Tsukamoto, K. See Humber, L. G., 4622.
Tucker, S. H. See Stubbs, H. W. D., 227.
Tudball, J. K. See Cullinane, N. M., 3894.
Tundo, A. See Leandri, G., 3377.
Turnbull, J. H., and Wilson, W., reactions of diphenyl phosphates of Δ^5 -sterols, 2301.
Turnbull, J. H. See also Hudgell, A. W. D., 814.
Turner, C. See Burawoy, A., 82.
Turner, E. E. See Beaven, G. H., 131, Hall, D. M., 2498, and Ladbury, J. E., 3885.
Turpin, D. G. See Hey, D. H., 2471.
- U.**
- Ubbelohde, A. R.** See Holmes-Walker, W. A., 720, and Lewis, F. A., 1710.
Uyeo, S. See Humber, L. G., 4622.
- V.**
- Vallance, D. G. M.** See Chipalkatti, H. R., 4375.
Vance, E. See Grassie, N., 2122.
Vand, V. See McIntosh, A. O., 1661.
Vasey, C. H. See Boon, W. R., 3263.
Vaughan, G. See Foster, A. B., 3367, 3625, and Overend, W. G., 2155, 3633.
Vellins, C. E. See Burawoy, A., 90, 4481.
Venkateswarlu, V. See Palit, S. R., 2129, and Robertson, A., 3137.
Vernon, C. A., the kinetics and mechanisms of nucleophilic displacements in allylic systems. Part V. Reactivities of allylic halides by the S_N1 mechanism of hydrolysis. Part VIII. The reactivities of allylic chlorides towards bimolecular substitution without rearrangement, 423, 4462.
Vernon, C. A. See also de la Mare, P. B. D., 1290, 2504, 3679.
Vickery, R. C., lanthanon complexes with hydrazine-*NN*-diacetic acid, 385.
Lanthanon complexes with ethylenediaminetetra-acetic acid. Part IV, 1181.
Vincent, H. C. G. See Pugh, W., 2423.
Voss, D. See Baddeley, G., 418.
- W.**
- Waddan, D. Y.** See Balf, M. P., 1366.
Wagland, A. A. See Henbest, H. B., 728.
Waind, G. M., the solubility of ethyl acetate in some perchlorate and nitrate solutions, 2879.

- Wait, E. See Anderson, J. S., 3324.
 Walker, H. A. See Goldberg, A. A., 2540.
 Walker, I. S. See Badger, G. M., 3151, 3238.
 Walker, J. See Kidd, D. A. A., 669, and Robins, P. A., 3960.
 Walker, T. See Barton, D. H. R., 747.
 Ward, E. R., and Coulson, T. M., 2 : 3-derivatives of naphthalene. Part II. Preparation of 2 : 3-dinitronaphthalene and 3-nitro-2-naphthylamine, 4545.
 Ward, E. R., Coulson, T. M., and Hawkins, J. G., reactions of aromatic nitro-compounds with alkaline sulphides. Part V. 2 : 3-, 2 : 6-, and 1 : 7-Dinitronaphthalenes, 2974.
 2 : 3-Derivatives of naphthalene. Part I. The nitration of N-acetyl-1,3-nitro-1-naphthylamine, 4541.
 Ward, E. R., and Hawkins, J. G., the nitration of β -nitro-naphthalene, 2975.
 Ward, G. See MacMillan, J., 429, and Mulholland, T. P. C., 4676.
 Ward, M., and Welch, G. A., the oxidation of americium to the sexavalent state, 4038.
 Wardlaw, W. See Bradley, D. C., 1091, 2002, 3488.
 Warnhoff, E. W. See Barton, D. H. R., 2715, 3689.
 Warren, J. B. See Staveley, L. A. K., 1992.
 Wassermann, A., proton-acceptor properties of carotene, 4329.
 Wassermann, A. See also Harkness, M. L. R., 1344.
 Waterhouse, P. See Brough, J. N., 4069.
 Waters, D. N., and Woodward, L. A., Raman effect and suggested complexity of the argentous ion in solution, 3250.
 Waters, W. A. See Drummond, A. Y., 2456, Dunn, J. R., 580, Gingras, B. A., 1920, 3508, Laville, J. R., 400, Moore, R. F., 243, and Seaman, H., 4690.
 Watkins, J. C. See Jack, J., 3684.
 Watson, C. C. See Fletcher, J. R., 1953.
 Watson, E. J. See Stimson, V. R., 2848.
 Watson, M. B., and Youngson, G. W., stereochemical studies. Part I. The relative configurations of (—)-aminophenylacetic acid (α -phenylglycine) and (—)-mandelic acid, 2145.
 Watt, I. C. See Mulcahy, M. F. R., 2971.
 Watts, H. See Eley, D. D., 1319.
 Weale, K. E., liquid-phase reactions at high pressures. Part VIII. The kinetics of an "ortho-effect" reaction at high pressures, 2959.
 Weaving, A. S. See Harborne, J. B., 1157.
 Webb, A. A. See Braude, E. A., 1049.
 Webb, M. See Barclay, K. S., 1501.
 Webb, R. F. See Kenner, G. W., 2288, 2843.
 Webster, W. See Gasson, E. J., 2161, 2170.
 Weedon, B. C. L., carotenoids and related compounds. Part V. Synthesis of corticocin, 4168.
 Weedon, B. C. L. See also Baker, B. W., 1804, Black, H. K., 1704, and Bounds, D. G., 448, 4219.
 Weisburger, E. K. See Weisburger, J. H., 758.
 Weisburger, J. H., and Weisburger, E. K., 2-acetamido-7-methoxyfluorene, 758.
 Weiss, J. See Coleby, B., 66, and Farmer, F. T., 3248.
 Welch, G. A. See Ward, M., 4038.
 Werner, R. L., and Lark, P. D., a statistical study of some olefinic absorption bands in the infra-red region, 1152.
 Werner, R. L. See also Ferguson, J., 3645, and Le Fèvre, R. J. W., 4686.
 West, B. O., studies on bond type in certain cobalt complex compounds. Part IV. The exchange reactions of quadridentate complexes. Part V. The exchange reactions of cobaltous 1 : 10-phenanthroline and tripyridyl complexes, 395, 578.
 Westland, G. J. See Hepworth, M. A., 4269.
 Weymouth, F. J. See Kenner, G. W., 2288.
 Whaley, W. M. See Meadow, M., 1161, 1162.
 Whalley, M. See Evans, E. A., 3642, and Linstead, R. P., 3722.
 Whalley, W. B., organic fluoro-compounds. Part VIII. Some indole derivatives, 1651.
 Whalley, W. B. See also Dean, N. B., 4638, and Robertson, A., 1440, 2794, 3137.
 Wheeler, T. S. See Philbin, E. M., 4174.
 Whelan, W. J. See Peat, S., 4440.
 Whelestone, J. See Davies, K. N., 865.
 Whifflen, D. H. See Barker, S. A., 171, 3468, 4211, and Circumshaw, L. L., 931.
 White, A. M. See Davies, A. G., 2200.
 White, D. E. See Jack, J., 3684.
 White, E. N. See Greenhow, E. J., 3116.
 White, T. R. See Springall, H. D., 2764.
 Whitehead, R. See Ramage, G. R., 4336, 4341.
 Whitehead, M. W., Kent, P. W., and Pasternak, C. A., acyclic derivatives of amino-sugars, 2315.
 Whitham, G. H. See Jones, E. R. H., 1865, 3201.
 Whiting, M. C. See Armitage, J. B., 147, Bates, E. B., 1854, Eglington, G., 1860, 3197, Jones, E. R. H., 1865, 3201, 3208, 3212, Nayler, P., 4006, and Shaw, B. L., 3217.
 Wiggins, L. F. See Dixon, S., 594.
 Wild, A. M. See Gasson, E. J., 2170.
 Wildy, J. See Bayne, S., 1147.
 Williams, A. A. See Chatt, J., 4403.
 Williams, A. E. See Irving, H., 3494.
 Williams, C. See Lane, E. S., 2977, 4106.
 Williams, G. See Heald, K., 357, 362.
 Williams, G. H. See Cadogan, J. I. G., 794, 3352, and Hey, D. H., 2747.
 Williams, L. T. D. See Neale, E., 2156.
 Williams, R. J. P. See Chalkley, D. E., 1718, and Irving, H., 3494.
 Williams, R. K. See Hay, J. E., 629.
 Williamson, W. See Goldberg, A. A., 2357.
 Wilshire, J. F. K. See Campbell, N., 867.
 Wilson, B. See Ramage, G. R., 4341.
 Wilson, R. R. See Antia, N. J., 1218.
 Wilson, W. See Hudgell, A. W. D., 814, and Turnbull, J. H., 2301.
 Winning, W. I. H., the thermal oxidation of hydrazine vapour, 926.
 Winter, E. R. S., exchange reactions of solid oxides. Part V. Dissociation of molecular oxygen at oxide surfaces: magnesium oxide and zinc oxide, 1522.
 The oxidation of copper and zinc, 3342.
 Winter, E. R. S. See also Barnard, J. A., 1517, and Houghton, G., 1509.
 Withey, D. S. See Jones, W. O., 3490.
 Wood, D. G. M. See Hickinbottom, W. J., 4400.
 Wood, G. W. See Henbest, H. B., 800.
 Wood, H. C. S. See Albert, A., 3832.
 Wood, R. See Roger, R., 811, 3453.
 Woodcock, D. See Pope, P. M., 1721.
 Woods, G. F. See Bladon, P., 125.
 Woodward, L. A. See Waters, D. N., 3250.
 Wooldridge, K. R. H. See Braude, E. A., 3586, 3595.
 Woolf, A. A., the cyanogen halides. Part II. The positive cyanogen ion, 252.
 Fluorosulphonic acid. Part I. Some properties of the aqueous solution, 2840.
 Chlorly fluoride and its derivatives, 4113.
 The heat of formation of auric and thallic fluorides, 4694.
 Wolff, A. A. See also Fairbrother, F., 1031, and Lord, G., 2546.
 Worrall, R. See Bourne, E. J., 2006.
 Worthington, R. E. See Roylance, J., 4426.
 Wright, D. See Swan, G. A., 381.
 Wright, J. W. See Clar, E., 1108.
 Wyatt, P. A. H., the cryoscopic behaviour of non-electrolytes in sulphuric acid, 2647.
 Wylam, C. B. See Hirst, E. L., 189.
 Wyman, L. J. See Elks, J., 1738.

X.

Xuong, Ng. D. See Buu-Hoi, Ng. Ph., 1034, Nam, Ng. H., 1690, and Sy, M., 1975.

Y.

Yajima, H. See Humber, L. G., 4622.
 Yanaihara, N. See Humber, L. G., 4622.
 Yoffe, A. D. See Anbar, M., 3603.
 Young, D. P. See Gasson, E. J., 2161, 2170, and Graham, A. R., 2180.
 Young, G. T. See John, W. D., 2870, and Rees, P. S., 662.

Young, J. R. See Evans, D. P., 1310, 1314.
Youngson, G. W. See Watson, M. B., 2145.
Youssef, A. H. A. See Soliman, G., 4655.

Z.

Zaheer, S. H., Singh, B., Bhushan, B., Bhargava, P. M., Kacker, I. K., Ramachandran, K., Sastri, V. D. N., and Rao, N. S., reactions of α -halogeno-ketones with aromatic compounds. Part I. Reactions of chloroacetone and 3-chlorobutanone with phenol and its ethers, 3360.

Lectures.

- Emeléus, H. J., Liversidge lecture: organometallic compounds containing fluorocarbon radicals, 2979.
Ingold, C. K., Presidential address: signs of a new pathway in reaction mechanism and stereochemistry, 2991.
Johnson, A. W., Tilden lecture: aromaticity in seven-membered ring systems, 1331.
Manske, R. H., Centenary lecture: the isoquinoline alkaloids, 2987.
Tiselius, A., Centenary lecture: some applications of the separation of large molecules and colloidal particles, 2650.