

# INDEX OF AUTHORS, 1958

## A

- Abbot, M. T. J., Grove, John Frederick, and McCloskey, P.** Some constituents of the broad bean, 1699.
- Abel, E. W.** Formation and properties of a dipyridine-germanium tetrachloride adduct, 3746.
- Abel, E. W., Bennett, M. A., Burton, R., and Wilkinson, G.** Transition-metal complexes of seven-membered ring systems. Part I. The cycloheptatriene-metal complexes and related compounds, 4559.
- Abel, E. W., Gerrard, W., and Lappert, M. F.** Dephenylation reactions of phenylboron acids and esters, 1451.
- Abel, E. W., Gerrard, W., Lappert, M. F., and Shafferman, R.** Back-co-ordination from oxygen to boron in organoboron compounds, 2895.
- Abel, E. W., Hargreaves, G. B., and Wilkinson, G.** Tetra-carbonyl halides of rhenium, 3149.
- Abo-Ouf, A. A.** See **Khalifa, M.**, 3740.
- Acheson, R. M., Taylor, G. A., and Tomlinson, M. L.** The synthesis of some benzimidazoles, 3750.
- Adamson, D. W., Barrett, P. A., Billinghurst, J. W., and Jones, T. S. G.** Aminoalkyl tertiary carbinols and derived products. Part VI. The stereochemistry of some 1-phenyl-1-2'-pyridylprop-1-enes, and of some 3-(tertiary amino)-1-phenyl-1-2'-pyridylprop-1-enes carrying additional substituents, 312.
- Addison, C. C., and Hathaway, B. J.** The vapour pressure of anhydrous copper nitrate, and its molecular weight in the vapour state, 3099.
- Addison, C. C., and Sheldon, J. C.** The ultraviolet absorption spectrum of dinitrogen tetroxide in organic solvents, 3142.
- Addison, C. C., and Smith, B. C.** Volume changes on mixing organic liquids with dinitrogen tetroxide: comparison with sulphur dioxide systems, 3664.
- Ahmed, S. R., and Hall, D. M.** Steric effects in 2:2'-bridged diphenyls with a heterocyclic bridging ring. Part I. Optically active dihydrobenzazepines, 3043.
- Ahrland, S., Chatt, J., Davies, N. R., and Williams, A. A.** The relative affinities of co-ordinating atoms for silver ion. Part I. Oxygen, sulphur, and selenium. Part II. Nitrogen, phosphorus, and arsenic, 264, 276.  
The relative affinities of an amine, an organic phosphine, and a sulphide for cadmium ion, 1403.
- Ali, M. E., and Owen, L. N.** Alicyclic glycols. Part XIV. The tetralin-2:3-diols and the cyclohex-4-ene-1:2-diols. Part XV. Some lactols and lactones derived from the cyclohex-4-ene-1:2-diols. Part XVI. Decalin 2:3-ketols. Part XVII. The decalin-2:3-diols, 1066, 1074, 2111, 2119.
- Allan, A. W., Sneed, R. P. A., and Colvin, J.** Alicyclic diketones and diols. Part I. *cis*- and *trans*-2:2:5:5-Tetramethylcyclohexane-1:3-diol, 557.
- Allison, G. F., and Cheesman, G. H.** A hydrate of potassium dichloroiodide, 1177.
- Allison, W. R., Logan, W. R., Newbold, G. T., and Ross, T. J.** Phthalans. Part II. Ultraviolet and infrared spectra, 4311.
- Allport, D. C., and Bu'Lock, J. D.** The pigmentation and cell-wall material of *Daldinia* sp., 4090.
- Alner, D. J., and Smeeth, A. G.** Complex formation involving silver and the 2-hydroxyethylamines, 4207.
- Ames, G. R., and Davey, W.** cycloHexane-1:3-diones. Part III. Alkaline hydrolysis of ethyl 2:4-dioxo-6-styrylcyclohexanecarboxylate. Part IV. The synthesis of further terphenyl derivatives, 911, 1794.
- Amin, El S.** Characterisation of thiols by means of their *p-p'*-nitrophenylazobenzoyl derivatives, 4769.
- Anderson, D. M. W.** See **Simpson, J.**, 2378.
- Anderson, F. B., Hirst, E. L., Manners, D. J., and Ross, A. G.** The constitution of laminarin. Part III. The fine structure of insoluble laminarin, 3233.
- Andrews, K. J. M., and Barber, W. E.** The synthesis of 6-dimethylamino-9- $\beta$ -D-ribofuranosylpurine-5' phosphate, 2768.
- Andrews, P., and Hough, L.** The biosynthesis of polysaccharides. Part I. The composition of plum-leaf polysaccharides. Part II. Incorporation of  $^{14}\text{C}$  into plum-leaf polysaccharides during photosynthesis, 4476, 4483.
- Angus, A. B., and Bacon, R. G. R.** Thiocyanogen chloride. Part I. Chemical evidence for the existence of the monomeric compound in solutions in organic solvents, 774.
- Angyal, S. J., and Gilham, P. T.** Cyclitols. Part VIII. Elimination of vicinal sulphonyloxy-groups by iodine ion, 375.
- Ansell, M. F., and Brown, S. S.** Reduced cyclic compounds. Part IV. The intramolecular acylation of some olefinic acids. Part VI. The preparation and cyclisation of *trans*-8-phenyloct-5-enoic and *trans*-7-1'-naphthylhept-4-enoic acid, 2955, 3956.
- Ansell, M. F., and Gadsby, B.** Reduced cyclic compounds. Part V. The preparation of 5:6-dihydro-3-methyl-4H-pyran and its conversion into 4-methylhex-*trans*-4-en-1-ol, 3388.
- Ansell, M. F., and Selleck, M. E.** Reduced cyclic compounds. Part III. The preparation and cyclodehydration of some unsaturated tertiary alcohols, 1167.
- Ansell, M. F., and Thomas, D. A.** The reaction of chlorine with tetrahydro-2-methylenefuran, 1163.
- Arbuckle, A. W., and Greenwood, C. T.** Physicochemical studies on starches. Part XIII. The fractionation of oat and wheat starches. Part XIV. The effect of acid on wheat-starch granules, 2626, 2629.
- Arcus, C. L., and Barrett, G. C.** Heterocyclic analogues of fluorene: indeno(1':2'-4:5)thiazoles from 2-bromoindan-1-one, 2740.
- Arcus, C. L., and Bennett, G. J.** Intermediates in the conversion of pinonic acid into carboxylic compounds, 3180.
- Arcus, C. L., and Evans, J. V.** Reactions of organic azides. Part VIII. Kinetics of the rearrangement of 9-azido-fluorene in sulphuric-acetic acid, 789.
- Arcus, C. L., and Hallgarten, P. A.** The decomposition of 2-nitro-1-phenylethyl sulphones at an alumina surface, 4214.
- Arcus, C. L., and Schaffer, R. E.** *m*-Hydrazinostyrene, 2428.
- Armstrong, J. J., Baddiley, J., Buchanan, J. G., Carss, B., and Greenberg, G. R.** Isolation and structure of ribitol phosphate derivatives (teichoic acids) from bacterial cell walls, 4344.
- Armstrong, R. S., Aroney, M., Le Fèvre, C. G., Le Fèvre, R. J. W., and Smith, M. R.** Molecular polarisability. Dependence of apparent molar Kerr constants at infinite dilution on the medium in which they are measured, 1474.
- Arnall, P.** Three new coal-tar bases, 1702.
- Arnold, R. B., Johnson, A. W., and Mauger, A. B.** The structure of viridogrisein (etamycin), 4466.
- Aroney, M., and Le Fèvre, R. J. W.** Molecular polarisability. Application of the N-H and N-C link polarisabilities to the conformations of tertiary amines, piperidine, and morpholine, 3002.
- Aroney, M.** See also **Armstrong, R. S.**, 1474.
- Arthur, H. R., Halsall, T. G., and Smith, R. D.** The chemistry of triterpenes and related compounds. Part XXXIII. The isolation of ergosta-7:22-dien-3-one from *Fomes fomentarius*, 2603.

- Asatoor, A., and Dalglish, C. E.** The use of adsorption for isolation of aromatic substances, 1498.  
Florisil as an adsorbent for basic substances, 1717.
- Ash, A. S. F., and Wragg, W. R.** Synthesis of the 3-2'-aminopropyl- and 3-2'-aminobutyl-derivatives of 5-hydroxyindole, and an alternative synthesis of 5-hydroxytryptamine, 3887.
- Ashley, J. N., Collins, R. F., Davis, M., and Sirett, N. E.** The chemotherapy of schistosomiasis. Part I. Derivatives and analogues of  $\alpha\omega$ -di-(*p*-aminophenoxy)alkanes, 3298.
- Ashworth, P. J., Jones, E. R. H., Mansfield, G. H., Schlögl, K., Thompson, J. M., and Whiting, M. C.** Researches on acetylenic compounds. Part LIX. The synthesis of three polyacetylenic antibiotics, 950.
- Aspinall, G. O., Auret, B. J., and Hirst, E. L.** Gum ghatti (Indian gum). Part II. The hydrolysis products obtained from the methylated degraded gum and the methylated gum. Part III. Neutral oligosaccharide formed on partial acid hydrolysis of the gum, 221, 4408.
- Aspinall, G. O., and Cañas-Rodríguez, A.** Sisal pectic acid, 4020.
- Aspinall, G. O., and Das Gupta, P. C.** The constitution of jute hemicellulose I, 3627.
- Aspinall, G. O., and Ferrier, R. J.** Cereal gums. Part III. The constitution of an araboxylan from barley flour, 638.  
The synthesis of 2-*O*- $\beta$ -D-xylopyranosyl-L-arabinose and its isolation from the partial hydrolysis of esparto hemicellulose, 1501.
- Aspinall, G. O., Hirst, E. L., and Ramstad, E.** The constitution of larch  $\epsilon$ -galactan, 593.
- Aspinall, G. O., and McKay, J. E.** The hemicelluloses of European larch (*Larix decidua*). Part I. The constitution of a xylan, 1059.
- Aspinall, G. O., Rashbrook, R. B., and Kessler, G.** The mannans of ivory nut (*Phylephas macrocarpa*). Part II. The partial acid hydrolysis of mannans A and B, 215.
- Auret, B. J.** See **Aspinall, G. O.**, 221, 4408.
- Austin, W. C., Potter, M. D., and Taylor, E. P.** Potential trypanocides. The action of polymethylene dihalides on 4-aminoquinoline, 1489.
- Aveston, J., Everest, D. A., and Wells, R. A.** Adsorption of gold from cyanide solutions by anionic resins, 231.
- Ayerst, G. G., and Schofield, K.** *cis*- and *trans*-3:4-cyclo-Pentanopiperidine, 4097.
- Aynsley, E. E.** The oxyfluorides of manganese and iodine, 2425.
- Aynsley, E. E., and Campbell, W. A.** Reactions of ammonia with nickel(II) cyanide, 1723.  
Complexes of thiourea containing tellurium, 3290.
- Aynsley, E. E., and Hair, M. L.** Per-rhenyl fluoride, 3747.
- Ayres, D. C., and Raphael, R. A.** *trans*-cycloHeptane-1:2-dicarboxylic acid and its conversion into *trans*-bicyclo-[5:3:0]decan-9-one, 1779.

## B

- Bachelard, H. S., and Trikojus, V. M.** Some synthetic cysteinyl peptides, 4541.
- Bacon, R. G. R., and Irwin, R. S.** Thiocyanogen chloride. Part II. Some physical properties of its solutions, 778.
- Bacon, R. G. R., Irwin, R. S., Pollock, J. McC., and Pullin, A. D. E.** Chemical and infrared spectral evidence for the structure of thiocyanogen trichloride, 764.
- Bacon, R. G. R., and Lindsay, W. S.** Cyclisations with hydrazine. Part I. The preparation of phenanthrene compounds and of pyrene from aldehydes. A variation in reductions of the Wolff-Kishner type. Part II. Conversion of 2:2'-diacyldiphenyls into compounds of the phenanthrene and of 4:5:6:7-dibenzo-1:2-diazocine series, 1375, 1382.
- Bacon, R. G. R.** See also **Angus, A. B.**, 774.
- Baddar, F. G., El-Assal, L. S., and Baghos, V. B.** 1-Phenyl-naphthalenes. Part IV. The cyclisation of methyl hydrogen *cis*- and *trans*- $\gamma$ -*o*-methoxyphenyl- and ethyl hydrogen *cis*- and *trans*- $\gamma$ -*p*-methoxyphenyl- $\gamma$ -phenylitaconate to the corresponding 1-phenyl-naphthalenes, 986.
- Baddeley, G., and Cooke, J. R.** Interdependence of molecular conformation and conjugation in aromatic ethers. Part II, 2797.
- Baddeley, G., and Gordon, M.** Relationship between hyperconjugation and conformation. Part III. Ethyl alcoholysis of some derivatives of diphenylmethyl chloride, 4379.
- Baddeley, G., Rasburn, J. W., and Rose, R.** The effect of conformation on the rate of unimolecular solvolysis of aralkyl chlorides, 3168.
- Baddeley, G., Varma, S., and Gordon, M.** Relation between hyperconjugation and conformation. Part II. The ethyl alcoholysis of some homologues of diphenylmethyl chloride, 3171.
- Baddeley, G., and Vickers, M. A.** Interdependence of conformation and conjugation in aromatic ethers. Part III, 4665.
- Baddiley, J., Buchanan, J. G., Hayes, D. H., and Smith, P. A.** Synthesis of 1- $\beta$ -D-ribofuranosyl-4(5)-glyoxalinalyiacetic acid, a metabolite of histamine, 3743.
- Baddiley, J., Buchanan, J. G., and Letters, R.** The separation and characterisation of the 2':5'- and 3':5'-diphosphate and the 2':3':5'-triphosphate of adenosine, 1000.
- Baddiley, J., Buchanan, J. G., and Osborne, G. O.** The preparation of 7- and 9-glucopyranosyl and -xylopyranosyl derivatives of 8-azaxanthine (5:7-dihydroxy- $\nu$ -triazolo[*d*]pyrimidine), 1651.  
The preparation of 7- and 9-ribofuranosyl derivatives of 8-azaxanthine. A note on the preparation of 9-glucopyranosylxanthine, 3606.
- Baddiley, J., Buchanan, J. G., and Sanderson, A. R.** Synthesis of cytidine diphosphate glycerol, 3107.
- Baddiley, J.** See also **Armstrong, J. J.**, 4344.
- Badger, G. M., and Buttery, R. G.** The formation of aromatic hydrocarbons at high temperatures. Part IV. The pyrolysis of styrene, 2458.
- Badger, G. M., Buttery, R. G., Kimber, R. W. L., Lewis, G. E., Moritz, A. G., and Napier, I. M.** The formation of aromatic hydrocarbons at high temperatures. Part I. Introduction, 2449.
- Badger, G. M., and Christie, B. J.** Polynuclear heterocyclic systems. Part XII. Further examples of the Elbs reaction with heterocyclic ketones, 913.
- Badger, G. M., Christie, B. J., Rodda, H. J., and Pryke, J. M.** Polynuclear heterocyclic systems. Part XIII. The reaction of ethyl diazoacetate with naphthalene and its heterocyclic analogues, 1179.
- Badger, G. M., and Kimber, R. W. L.** The formation of aromatic hydrocarbons at high temperatures. Part II. An examination of "Schroeter tar." Part III. The pyrolysis of 1-4'-phenylbutyl-naphthalene, 2453, 2455.
- Badger, G. M., and Moritz, A. G.** Intramolecular hydrogen bonding in 8-hydroxyquinolines, 3437.
- Badger, G. M., Rodda, H. J., and Sasse, J. M.** The reaction of ethyl diazoacetate with thionaphthen, 4777.
- Baghos, V. B.** See **Baddar, F. G.**, 986.
- Bagnall, K. W., Robertson, D. S., and Stewart, M. A. A.** The polonium nitrates, 3633.
- Bagnall, K. W., Robinson, P. S., and Stewart, M. A. A.** New methods of preparing polonium metal, 3426.
- Bailey, R. W., Barker, S. A., Bourne, E. J., Grant, P. M., and Stacey, M.** Immunopolysaccharides. Part IX. The enzymic synthesis of trisaccharides containing the  $\alpha$ -1:2-glucosidic linkage, 1895.
- Baker, J. A.** The mechanism of *N*-acylation of 2-mercapto-glyoxalines, 2387.
- Baker, W., Barton, J. W., and McOmie, J. F. W.** Diphenylenes. Part II. Syntheses of substituted diphenylenes and of related diphenyls. Part III. Substitution in the nucleus, 2658, 2666.
- Baker, W., Buggle, K. M., McOmie, J. F. W., and Watkins, D. A. M.** Attempts to prepare new aromatic systems. Part VII. 15:16-Dihydro-15:16-diazapyrene. The synthesis of di(pyridine-2:6-dimethylene), 3594.
- Baker, W., Curtis, R. F., McOmie, J. F. W., Olive, L. W., and Rogers, V.** An anomalous Barbier-Wieland degradation, 1007.
- Ball, D. H., and Jones, J. K. N.** The acid-catalysed reversion of D-xylose, 33.  
A synthesis of 3-*O*- $\beta$ -D-galactopyranosyl-D-galactose, 905.

- Ballantine, J. A., Barrett, C. B., Beer, R. J. S., Eardley, S., Robertson, A., Shaw, B. L., and Simpson, T. H.** The chemistry of bacteria. Part VII. The structure of violacein, 755.
- Ballantine, J. A., Beer, R. J. S., and Robertson, A.** Michael addition of 1-methyloxindole and dimethyl acetylenedicarboxylate, 4779.
- Ballard, D. G. H., and Bamford, C. H.** Stereochemical aspects of the reactions between  $\alpha$ -N-carboxyamino-acid anhydrides and primary and secondary bases, 355.
- Bamford, C. H.** See **Ballard, D. G. H.**, 355.
- Bannister, E., and Fowles, G. W. A.** Reactions of tin(IV) halides with ammonia derivatives. Part I. The reaction of tin(IV) chloride with liquid ammonia. Part II. The reaction of liquid ammonia with tin(IV) bromide, diammonium hexabromostannate(IV), and tin(IV) iodide, 751, 4374.
- Barakat, M. Z., Shehab, S. K., and El-Sadr, M. M.** Some anilinoquinones and N-substituted 2-hydroxy-1:4-naphthaquinone imines, 901.
- Barber, W. E.** See **Andrews, K. J. M.**, 2768.
- Barclay, G. A., and Barnard, A. K.** Complexes of bivalent and tervalent cobalt with a terdentate and a quadridentate amine, 2540.
- Barker, C. C., Emmerson, R. G., and Periam, J. D.** Triphenylene: an examination of modified Mannich syntheses, and an improvement of the Rapson synthesis, 1077.
- Barker, S. A., Bourne, E. J., Bruce, G. T., and Stacey, M.** Immunopolysaccharides. Part XI. Structure of an *Acetobacter capsulatum* dextran, 4414.
- Barker, S. A., Bourne, E. J., Fleetwood, J. G., and Stacey, M.** Catalytic oxidation of carbohydrates. Some properties of potassium  $\alpha$ -D-glucopyranuronate 1-(dipotassium phosphate), 4128.
- Barker, S. A., Bourne, E. J., Grant, P. M., and Stacey, M.** Immunopolysaccharides. Part VIII. Enzymic synthesis of 6-O- $\alpha$ -D-glucopyranosyl-3-O-methyl-D-glucose by *Beta-coccus arabinosaceus*, 601.
- Barker, S. A., Bourne, E. J., Pinkard, R. M., Stacey, M., and Whiffen, D. H.** The stereoisomers of 2:4-dimethyl-1:3-dioxolan, 3232.
- Barker, S. A., Bourne, E. J., Salt, E., and Stacey, M.** Production of mannitol by a *Lactobacillus* causing ropiness in cider, 2736.
- Barker, S. A., Foster, A. B., Siddiqui, I. R., and Stacey, M.** Structure of the capsular polysaccharide of *Aerobacter aerogenes* (N.C.T.C. 418), 2358.
- Barker, S. A., Foster, A. B., Stacey, M., and Webber, J. M.** Amino-sugars and related compounds. Part IV. Isolation and properties of oligosaccharides obtained by controlled fragmentation of chitin, 2218.
- Barker, S. A., Gómez-Sánchez, A., and Stacey, M.** Studies of *Aspergillus niger*. Part X. Polyol and disaccharide production from acetate, 2583.
- Barker, S. A., Heidelberger, M., Stacey, M., and Tipper, D. J.** Immunopolysaccharides. Part X. The structure of the immunologically specific polysaccharide of *Pneumococcus* type XIV, 3468.
- Barker, S. A.** See also **Bailey, R. W.**, 1895.
- Barltrop, J. A., and Rogers, N. A. J.** Experiments on the synthesis of diterpenes. Part I. A total synthesis of ( $\pm$ )-totarol, 2566.
- Barnard, A. K.** See **Barclay, G. A.**, 2540.
- Barnard, M.** See **Bonner, T. G.**, 4176, 4181.
- Barrer, R. M., and Langley, D. A.** Reactions and stability of chabazite-like phases. Part I. Ion-exchanged forms of natural chabazite. Part II. Ion-exchanged forms of some synthetic species. Part III. Intracrystalline water, 3804, 3811, 3817.
- Barrer, R. M., and Meier, W. M.** Salt-inclusion complexes of zeolites, 299.
- Barrer, R. M., and Reay, J. S. S.** Sorption by  $\text{NH}_4^+$ - and  $\text{Cs}^+$ -montmorillonites, and ion fixation, 3824.
- Barrett, C. B.** See **Ballantine, J. A.**, 755.
- Barrett, G. C., and Buu-Hoi, Ng. Ph.** Carcinogenic nitrogen compounds. Part XXV. Steric hindrance to cyclisation of 6-aminochrysenes and its derivatives, 2946.
- Barrett, G. C.** See also **Arcus, C. L.**, 2740, and **Buu-Hoi, Ng. Ph.**, 4308.
- Barrett, P. A.** Aminoalkyl tertiary carbinols and derived products. Part VII. A new synthesis of 1-arylpyrrocolines, 325.
- Barrett, P. A., and Chambers, K. A.** Aminoalkyl tertiary carbinols and derived products. Part VIII. Some 1-alkyl- and 1:2-cycloalkano-pyrrocolines, 338.
- Barrett, P. A.** See also **Adamson, D. W.**, 312.
- Barry, V. C., Belton, J. G., O'Sullivan, J. F., and Twomey, D.** The oxidation of derivatives of *o*-phenylenediamine. Part V. N<sup>3</sup>-Substituted derivatives of anilinoaposafranine (rimino-compounds) and related compounds. Part VI. Reductive acylation of anilinoaposafranines and related compounds, 859, 4495.
- Barry, W. J.** Fission of di-(3-methyl-1:5-diphenyl-4-pyrazolyl) disulphide by chlorine, 1171.
- Bartley, W. G., and Wardlaw, W.** The alkali-metal zirconium ennea-alkoxides,  $\text{MZr}_2(\text{OR})_9$ , 422.
- Barton, D. H. R., Bhati, A., de Mayo, P., and Morrison, G. A.** The constitution and synthesis of anisoxide, 4393.
- Barton, D. H. R., de Mayo, P., and Orr, J. C.** Triterpenoids. Part XXIV. Further investigations on the constitution of zeorin, 2239.
- Barton, D. H. R., de Mayo, P., and Shaq, M.** Photochemical transformations. Part II. The constitution of lumisantonin. Part V. The constitutions of photosantonin acid and derivatives, 140, 3314.
- Barton, D. H. R., and Kende, A. S.** Photochemical transformations. Part III. The constitution of a steroid irradiation product, 688.
- Barton, D. H. R., and King, J. F.** The generalised diaxial  $\rightarrow$  diequatorial rearrangement, 4398.
- Barton, D. H. R., and Levisalles, J. E. D.** Sesquiterpenoids. Part XI. The constitution of geigerin, 4518.
- Barton, D. H. R., and Narayanan, C. R.** Sesquiterpenoids. Part X. The constitution of lactucin, 963.
- Barton, D. H. R., and Scott, A. I.** The constitutions of geodin and erdin, 1767.
- Barton, D. H. R., and Taylor, W. C.** Photochemical transformations. Part IV. The photochemistry of prednisone acetate, 2500.
- Barton, J. W.** See **Baker, W.**, 2658, 2666.
- Bartram, C. A., Harrison, D., and Short, W. F.** Anils. Part I. Syntheses of 9-phenylphenanthridine, 1158.
- Bartram, C. A., Oxley, P., Peak, D. A., and Nicholson, J. S.** *o*-Hydroxybenzenesulphonamide, 2903.
- Bassett, H.** The phosphates of calcium. Part V. Revision of the earlier space diagram, 2949.
- Bassilios, H. F.** See **Makar, S. M.**, 2437.
- Bateman, L., and Glazebrook, R. W.** Synthesis of thiacycloalk-2-enes, 2834.
- Bateman, L., Glazebrook, R. W., and Moore, C. G.** The reaction of sulphur and sulphur compounds with olefinic substances. Part IX. The reaction of sulphur with 2:6-dimethylocta-2:6-diene, 2846.
- Bateman, L., Glazebrook, R. W., Moore, C. G., Porter, M., Ross, G. W., and Saville, R. W.** The reaction of sulphur and sulphur compounds with olefinic substances. Part VIII. The reaction of sulphur with mono-olefins, 2838.
- Bateman, L., Moore, C. G., and Porter, M.** The reaction of sulphur and sulphur compounds with olefinic substances. Part XI. The mechanism of interaction of sulphur with mono-olefins and 1:5-dienes, 2866.
- Bateman, L., and Shipley, F. W.** Catalytic hydrogenation of unsaturated sulphides and sulphones, 2888.
- Battersby, A. R., and Binks, R.** Pavine. Part III. Related synthetic work, 4333.
- Battersby, A. R., and Yeowell, D. A.** Pavine. Part II. The structure of isopavine, 1988.
- Baughan, E. C.** See **Porter, G. B.**, 744.
- Bax, C. M., Katritzky, A. R., and Sutton, L. E.** N-Oxides and related compounds. Part VIII. The electric dipole moments of a series of 4-substituted pyridine-boron trichloride complexes. Part IX. The electric dipole moments of pyridine- and trimethylamine-boron trihydride and trihalide complexes, 1254, 1258.
- Bayles, J. W., and Chetwyn, A.** The acid-base function in non-aqueous solution. Part I. The equilibria between mono-, di-, or tri-*n*-butylamine and 2:4-dinitrophenol in chlorobenzene, 2328.

- Baylis, R. L., Bevan, T. H., and Malkin, T.** The synthesis of cephalin (phosphatidylethanolamine) and batyl, chimyl, glycol, and alkyl analogues, 2962.
- Beard, C., and Hickinbottom, W. J.** Molecular rearrangements. Part II. 2:6-Disubstituted *N*-chloroacetanilides, 2982.
- Beard, J. A. T.** See **Katritzky, A. R.**, 2182, 3721.
- Beckwith, A. L. J., Norman, R. O. C., and Waters, W. A.** Free-radical reactions of 9:10-diphenylanthracene, 171.
- Beer, R. T. S., Gradwell, W. T., and Oates, W. J.** The conversion of certain  $\alpha$ -disubstituted *N*-phenylglycines into 4-oxo-1-phenyl- $\Delta^2$ -pyrrolines, 4693.
- Beer, R. J. S.** See also **Ballantine, J. A.**, 755, 4779.
- Belcher, R., Bhasin, R. L., Shah, R. A., and West, T. S.** Submicro-methods for the analysis of organic compounds. Part V. The determination of sulphur, 4054.
- Belcher, R., Bhatti, M. K., and West, T. S.** Submicro-methods for the analysis of organic compounds. Part III. Determination of *N*-methyl groups and the simultaneous determination of alkoxy and *N*-methyl groups, 2393.
- Belcher, R., Hoyle, W., and West, T. S.** The synthesis of *vic*-dioximes from symmetrical ketones, 2743.
- Belcher, R., Leonard, M. A., and West, T. S.** The preparation and analytical properties of *NN*-di(carboxymethyl)-aminomethyl derivatives of some hydroxyanthraquinones, 2390.
- Belcher, R., Lyle, S. J., and Stephen, W. I.** The preparation of some new substituted naphthylamines and naphthidines, 3243.  
Substituted benzidines and related compounds as reagents in analytical chemistry. Part XV. Some new 3:3'-disubstituted naphthidines, 4454.
- Belcher, R., Nutten, A. J., and Stephen, W. I.** Substituted benzidines and related compounds as reagents in analytical chemistry. Part XIV. 3-Bromo- and 3:3'-dibromobenzidine as redox indicators, 2336.
- Belcher, R., Shah, R. A., and West, T. S.** Submicro-methods for the analysis of organic compounds. Part IV. The determination of iodine and bromine, 2998.
- Bell, E. A.** Reactions of amino-acids with acetic acid, 2423.
- Bell, F.** Some derivatives of *tert*-butylbenzene, 120.
- Bell, I., Jones, E. R. H., and Whiting, M. C.** Researches on acetylenic compounds. Part LXI. The synthesis of three polyacetylenic esters, 1313.
- Bell, I., Madroñero, R., and Whiting, M. C.** Researches on acetylenic compounds. Part LXII. The interaction of amines and the stereoisomers of 5-chlorohex-3-en-1-yne, 3195.
- Bell, R. P., and McDougall, A. O.** The kinetics of the base-catalysed decomposition of benzyl *tert*-butyl peroxide, 1697.
- Bell, R. P., and Ramsden, E. N.** Kinetics of the bromination of some aromatic amines, 161.
- Bell, R. P., and Rawlinson, D. J.** Kinetics of the acid and alkaline hydrolysis of potassium ethoxycarbonylmethanesulphonate, 4387.
- Bell, R. P., Rivlin, V. G., and Waters, W. A.** Acid-catalysis of glycol fission by lead tetra-acetate, 1696.
- Bell, R. P., and Smith, M. J.** Deuterium exchange in the aldol condensation of acetaldehyde, 1691.
- Bell, R. P., and Vogelsson, D. C.** Kinetics of the reaction between 2-ethoxycarbonyl-2-iodocyclohexanone and iodide ions, 243.
- Bellamy, L. J., Gerrard, W., Lappert, M. F., and Williams, R. L.** Infrared spectra of boron compounds, 2412.
- Bellamy, L. J., and Williams, R. L.** Infrared spectra and polar effects. Part VIII. The frequencies and stabilities of olefinic systems. Part IX. Field effects in  $\alpha$ -halogenated aldehydes and acid chlorides, 2463, 3465.
- Belton, J. G.** See **Barry, V. C.**, 859, 4495.
- Benn, M. H., Owen, L. N., and Creighton, A. M.** Cytotoxic compounds. Part I. *p*-(*NN*-Di-2'-chloroethyl- and *p*-(*NN*-di-2'-bromoethyl-amino)thiophenol, 2800.
- Bennett, G. J.** See **Arcus, C. L.**, 3180.
- Bennett, M. A.** See **Abel, E. W.**, 4559.
- Bennett, R. N., Deans, A. A., Harris, J. G. H., Ritchie, P. D., and Shim, J. S.** Studies in pyrolysis. Part XIII. Competitive alkyl-oxygen and acyl-oxygen scission in the pyrolysis of esters;  $\alpha$ -disubstituted cyanomethyl carboxylates, 4508.
- Bergmann, E. D., and Cohen, S.** Organic fluorine compounds. Part IX. The preparation of fluoroacetone and 1:3-difluoroacetone, 2259.
- Bergmann, E. D., and Katz, D.** Vinylanthracenes, and the polymerization of the 9-isomer, 3216.
- Bethell, D., and Gold, V.** Aromatic alkylation. Part I. The kinetics of the acid-catalysed aralkylation by diaryl-methanols in acetic acid solution. Part II. Diaryl-methylation reactions in the solvent systems  $ZnCl_2-CH_3-CO_2H$  and  $ZnCl_2-HCl-CH_3-CO_2H$ , 1905, 1930.
- Bethell, D., Gold, V., and Satchell, D. P. N.** Indicator measurements in the solvent systems  $ZnCl_2-CH_3-CO_2H$  and  $ZnCl_2-HCl-CH_3-CO_2H$ , 1918.
- Betts, B. E., and Davey, W.** Chalcones and related compounds. Part VII. Catalysed exchange of hydrogen cyanide between acetone cyanohydrin and chalcones, 4193.
- Bevan, T. H.** See **Baylis, R. L.**, 2962.
- Bevington, J. C., and Ghanem, N. A.** The mechanisms of inhibition and retardation in radical polymerizations. Part IV. The effects of diphenylpicrylhydrazine and a condensation product of acetone with phenylhydroxylamine upon the sensitized polymerization of styrene, 2254.
- Bhasin, R. L.** See **Belcher, R.**, 4054.
- Bhati, A.** See **Barton, D. H. R.**, 4393.
- Bhatti, M. K.** See **Belcher, R.**, 2393.
- Bien, S., and Ginsburg, D.** The structure of bornesitol, 3189.
- Billinghurst, J. W.** See **Adamson, D. W.**, 312.
- Binks, R.** See **Battersby, A. R.**, 4333.
- Birch, A. J., Blance, G. E., and Smith, H.** Studies in relation to biosynthesis. Part XVIII. Penicillic acid, 4582.
- Birch, A. J., English, R. J., Massy-Westrop, R. A., Slaytor, M., and Smith, H.** Studies in relation to biosynthesis. Part XIV. The origin of the nuclear methyl groups in mycophenolic acid, 365.
- Birch, A. J., English, R. J., Massy-Westrop, R. A., and Smith, H.** Studies in relation to biosynthesis. Part XV. Origin of terpenoid structures in mycelianamide and mycophenolic acid, 369.
- Birch, A. J., Fitton, P., Pride, E., Ryan, A. J., Smith, H., and Whalley, W. B.** Studies in relation to biosynthesis. Part XVII. Sclerotiorin, citrinin, and citromyccetin, 4576.
- Birch, A. J., Hughes, G. A., and Smith, H.** Hydroaromatic steroid hormones. Part VII. ( $\pm$ )-17 $\alpha$ -Ethinyl-17 $\alpha$ -hydroxy-d-homo-18:19-bisnorandrost-4-en-3-one, 4774.
- Birch, A. J., Massy-Westrop, R. A., Rickards, R. W., and Smith, H.** Studies in relation to biosynthesis. Part XIII. Griseofulvin, 360.
- Birch, A. J., Milligan, B., Smith, E., and Speake, R. N.** Some stereochemical studies of lignans, 4471.
- Birch, A. J., and Moye, C. J.** Studies in relation to biosynthesis. Part XVI. The synthesis of lumiflavin from non-benzenoid precursors, 2622.
- Birch, A. J., Pride, E., and Smith, H.** Hydroaromatic steroid hormones. Part VI. Some d-homo-analogues lacking ring B, 4688.
- Birch, A. J., Ryan, A. J., and Smith, H.** Studies in relation to biosynthesis. Part XIX. The biosynthesis of helminthosporin, 4773.
- Blackadder, D. A., and Hinshelwood, Sir C.** The kinetics of the decomposition of the addition compounds formed by sodium bisulphite and a series of aldehydes and ketones. Part I. Part II. General discussion of energy-entropy relations, 2720, 2728.
- Blackall, E. L., Hughes, E. D., Ingold, Sir C., and Pearson, R. B.** Nitration at nitrogen and oxygen centres. Part II. Kinetics and mechanism of the conversion of alcohols, glycols, and glycerol into their nitric esters, 4366.
- Bladon, P.** The Michael reaction of 3 $\beta$ -acetoxy-pregna-5:16-dien-20-one and malonic ester, 3723.
- Bladon, P., Cornforth, J. W., and Jaeger, R. H.** Electrolytic reduction of some  $\alpha$ , $\beta$ -unsaturated steroid ketones, 863.
- Blair, J., Logan, W. R., and Newbold, G. T.** Phthalans. Part I. The preparation of phthalan-4-carboxylic acid, 304.
- Blance, G. E.** See **Birch, A. J.**, 4582.
- Blears, J. G., and Haworth, R. D.** The constituents of natural phenolic resins. Part XXIV. A synthesis of galgravin, 1985.

- Bleazard, W., and Rothstein, E. The reaction between aromatic compounds and derivatives of tertiary acids. Part XI. Friedel-Crafts reactions with optically active acid chlorides, 3789.
- Blinic, R., and Hadzi, D. Infrared spectra and hydrogen bonding in the nickel-dimethylglyoxime and related complexes, 4536.
- Bond, G. C. The catalytic hydrogenation of unsaturated hydrocarbons. Part I. The kinetics of the hydrogenation of acetylene over a nickel-pumice catalyst. Part II. Reaction between dideuteroacetylene and hydrogen over a nickel-pumice catalyst, 2705, 4288.
- Bond, G. C., and Mann, R. S. The catalytic hydrogenation of unsaturated hydrocarbons. Part III. The kinetics of the hydrogenation of acetylene over various types of nickel catalyst, 4738.
- Bonner, T. G., and Barnard, M. The cyclodehydration of anils. Part III. The alternative hydrolytic reaction. Part IV. Substituent effects, 4176, 4181.
- Bonner, T. G., Clayton, J. M., and Williams, G. The effect of the salt  $\text{Ph}_3\text{CSnCl}_5$  on the stannic chloride-catalysed polymerisation of styrene, 1705.
- Bonner, T. G., and Lockhart, J. C. The denitration of nitroguanidines in strong acids. Part I. The correlation of rate constants with the acidity function,  $H_0$ , and activities of solvent entities. Part II. Absorption spectra and  $pK_a$  values of certain nitroguanidines, 3852, 3858.
- Booth, H., and King, F. E. Synthetic and stereochemical investigations of reduced cyclic bases. Part VI. A new synthesis of *trans*-octahydroindole and a re-investigation of its Hofmann methylation products, 2688.
- Booth, H., King, F. E., and Parrick, J. Synthetic and stereochemical investigations of reduced cyclic bases. Part V. The exhaustive methylation of some partially reduced cyclic bases, 2302.
- Borecki, C., Michalski, J., and Musierowicz, S. Organophosphorus compounds of sulphur and selenium. Part X. Action of sulphuryl chloride on alkyl hydrogen alkylphosphonothioates and dialkylphosphinothioic acids. Synthesis of *P*-alkoxy-*P*-alkyloxophosphoranesulphenyl chlorides, 4081.
- Bose, A. N., and Hinshelwood, Sir C. The benzylation of substituted anilines in different solvents, 4085.
- Bottomley, G. A., and Reeves, C. G. The virial coefficients of carbon disulphide, diethyl ether, and *n*-hexane, 3794.
- Bottomley, G. A., and Remington, T. A. The virial coefficients of cyclohexane, carbon disulphide, and carbon tetrachloride vapours, 3800.
- Bourne, E. J., Burdon, J., and Tatlow, J. C. Studies of trifluoroacetic acid. Part XIV. Reaction of acyl trifluoroacetates with 1:6-di-*O*-benzoyl-2:4:3:5-di-*O*-methylene-*D*-glucitol, 1274.
- Bourne, E. J., Stacey, M., Tatlow, J. C., and Worrall, R. Studies of trifluoroacetic acid. Part XV. Further investigations on the reactions of acyl trifluoroacetates with hydroxy-compounds, 3268.
- Bourne, E. J., Tatlow, J. C. E. M., Tatlow, J. C., and Worrall, R. Studies of trifluoroacetic acid. Part XVI. The use of 1:3:2:4-di-*O*-ethylidene-6-*O*-trifluoroacetyl-*D*-glucitol in the synthesis of some 5- and 6-substituted *D*-glucitols, 3945.
- Bourne, E. J. See also Bailey, R. W., 1895, and Barker, S. A., 601, 2736, 3232, 4128, 4414.
- Bowen, E. J., and Sahu, J. The fluorescence of acridine and acridone solutions, 3716.
- Boyd, A. N., Southern, P. F., and Waters, W. A. Properties and reactions of free alkyl radicals in solution. Part X. Further studies of tertiary hydroxylamines, 2056.
- Boyd, G. V. *pseudo*Azulenenes. Part I. Some derivatives of cyclopenta[*b*]pyran, 1978.
- Boylard, E., and Manson, D. The reaction of chlorosulphonic acid with aminophenols, 532.
- Boylard, E., and Sims, P. The oxidations of aromatic amines. Part VII. The action of persulphate on some aromatic amines, 4198.
- Brackman, D. S., and Plesch, P. H. The cationic oligomerisation of the stilbenes, 3563.
- Bradley, D. C. Thallous *tert*-amyloxide, 4780.
- Bradley, D. C., Chakravarti, B. N., Chatterjee, A. K., Wardlaw, W., and Whitley, A. Niobium and tantalum mixed alkoxides, 99.
- Bradley, D. C., Kay, L. J., Swanwick, J. D., and Wardlaw, W. Germanium esters. Part II. Intermolecular forces and liquid structure, 3656.
- Bradley, D. C., Multani, R. K., and Wardlaw, W. Structural chemistry of the alkoxides. Part X. Primary alkoxides of trivalent iron. Part XI. Branched-chain alkoxides of iron(III), 126, 4153.
- Some chloride alkoxides of quadrivalent vanadium and quinquevalent molybdenum, 4647.
- Bradley, D. C., Prevedorou, C. C. A., Swanwick, J. D., and Wardlaw, W. Parachors and molecular structure of some metal alkoxides, 1010.
- Bradley, D. C., Sinha, R. N. P., and Wardlaw, W. Chloroalkoxides of titanium, zirconium, cerium, and thorium, 4651.
- Bradley, D. C., and Swanwick, J. D. Vapour pressures of metal alkoxides. Part I. Titanium tetra-*tert*-butoxide and amyloxide, 3207.
- Bradley, D. C. See also El-Aggan, A. M., 2092, 4643.
- Bragg, P. D., and Hough, L. The oxidation of proline, hydroxyproline, and *N*-methylglycine with periodate, 4050.
- Brain, E. G., and Finar, I. L. The Hunsdiecker reaction in the pyrazole series, 2435.
- Dipyrazolyls from *C*-acetylpyrazoles, 2486.
- Braithwaite, R. S. W., Holt, P. F., and Hughes, A. N. Polycyclic cinnoline derivatives. Part I. Reduction of 2:2'-dinitrodiaryls and related compounds, 4073.
- Brand, J. C. D., and Stevens, I. D. R. Mechanism and stereochemistry of the addition of nitrogen dioxide to olefins, 629.
- Braude, E. A., and Turner, D. W. Anionotropic systems. Part VI. The rearrangement of 1-phenylallyl *p*-nitrobenzoate in chlorobenzene. Tracer studies, 2404.
- Braude, E. A., Turner, D. W., and Waight, E. S. Anionotropic systems. Part V. A kinetic investigation of the rearrangement of 1-phenylallyl esters in non-aqueous solvents, 2396.
- Braude, E. A., Webb, A. A., and Sultanbawa, M. U. S. Studies in the vitamin D field. Part III. Approaches to derivatives of 5-hydroxy-2-methylcyclohexanone. Part IV. The synthesis of some ring *a* derivatives, 3328, 3336.
- Braunholtz, J. T., Ebsworth, E. A. V., Mann, F. G., and Sheppard, N. An infrared absorption band of the *N*-methyl group in the region of 2800  $\text{cm}^{-1}$ , 2780.
- Braunholtz, J. T., and Mann, F. G. The structure and properties of certain polycyclic indolo- and quinolino-derivatives. Part X. Some applications of the Friedländer reaction, and further studies of the quinolino-bases prepared from cyclic keto-amines. Part XI. Derivatives of 4:5:6:7-tetrahydro-1-methyl-4-oxo-2:3-benzazepine, 3368, 3377.
- Briggs, L. H., and Brooker, E. G. *Solanum* alkaloids. Part XII. Solasodamine, a new tetrasaccharide derivative of solasodine, from *S. auriculatum*, *S. sodomaicum*, and *S. marginatum*, 1419.
- Briggs, L. H., and Cambie, R. C. *Solanum* alkaloids. Part XIII. The examination of the alkaloids from seven *Solanum* species, 1422.
- Broadhead, G. D., Osgerby, J. M., and Pauson, P. L. Ferrocene derivatives. Part V. Ferrocenolaldehyde, 650.
- Brooker, E. G. See Briggs, L. H., 1419.
- Brooks, G. T. The synthesis of  $^{14}\text{C}$ -labelled 1:2:3:4:10:10-hexachloro-6:7-epoxy-1:4:4a:5:6:7:8:8a-octahydro-*exo*-1:4-*exo*-5:8-dimethanonaphthalene (endrin), 3693.
- Brooks, S. G., Evans, R. M., Green, G. F. H., Hunt, J. S., Long, A. G., Mooney, B., and Wyman, L. J. Use of 20-oximes and 20-semicarbazones in making cortisol and 4:5 $\alpha$ -dihydrocortisol, 4614.
- Brown, B. R., and Cummings, W. Polymerisation of flavans. Part II. The condensation of 4'-methoxyflavan with phenols, 4302.
- Brown, B. R., Somerfield, G. A., and Weitzman, P. D. J. The synthesis of benzofurans, 4305.
- Brown, C. P., and Mathieson, A. R. The kinetics of catalytic polymerisations. Part XI. Polymerisation of  $\alpha$ -methylstyrene catalysed by the chloroacetic acids. Part XII. Heat and mechanism of polymerisation of  $\alpha$ -methylstyrene catalysed by the chloroacetic acids, 3445, 3507.

- Brown, D. H., and Mair, J. A.** Heteropolytungstic acids and heteropolytungstates. Part III. 12-Tungstozincic acid and its salts, and some 12-tungsto-3-zincates, 2597.
- Brown, D. J.** Some 2-substituted linear naphthiminazoles, 1974.
- Brown, D. M., Hall, G. E., and Higson, H. M.** Phospholipids. Part III. The hydrolysis of the *cis*- and the *trans*-isomer of glycerol 1-(2-hydroxycyclohexyl phosphate) and related compounds, 1360.
- Brown, D. M., Parihar, D. B., Reese, C. B., and Todd, Sir A.** Deoxynucleosides and related compounds. Part VII. The synthesis of 2'-deoxyuridine and of thymidine, 3035.
- Brown, D. M., Parihar, D. B., and Todd, Sir A.** Deoxynucleosides and related compounds. Part VIII. Some further transformations of  $O^2$ : 2'-cycloauridine, 4242.
- Brown, D. M., Parihar, D. B., Todd, Sir A., and Varadarajan, S.** Deoxynucleosides and related compounds. Part VI. The synthesis of 2-thiouridine and of 3'-deoxyuridine, 3028.
- Brown, M. P., and Fowles, G. W. A.** Hexamethyl compounds of silicon, germanium, and tin, 2811.
- Brown, R. D., Coller, B. A. W., and Heffernan, M. L.** The mechanism of the coupling of diazonium salts with heterocyclic compounds. Part III. Indazole, 1776.
- Brown, S. S.** See **Ansell, M. F.**, 2955, 3956.
- Brown, U. M., Carter, P. H., and Tomlinson, M.** Formyl compounds. Part II, 1843.
- Brownstein, S., Bunton, C. A., and Hughes, E. D.** The rearrangement of aromatic *N*-nitroamines. Part II. Isotopic test for intramolecular character in the nitro-transfers from side-chain to *ortho*- and *para*-positions, 4354.
- Bruce, G. T.** See **Barker, S. A.**, 4414.
- Bruce, I. C. L., Giles, C. H., and Jain, S. K.** Studies in hydrogen-bond formation. Part VII. Reactions between carbohydrates and proteins in water and their relation to transfer of carbohydrates across red-cell membranes, 1610.
- Bryce, W. A. J., Cowie, J. M. G., Greenwood, C. T., and Jones, I. G.** Physicochemical studies on starches. Part XV. The action of  $\beta$ -amylase on glycogen as shown by molecular-weight distribution, 3558.
- Bryce, W. A. J., Greenwood, C. T., and Jones, I. G.** Physicochemical studies on starches. Part XVI. The molecular weight and apparent molecular-weight distribution of rabbit-liver glycogen, 3845.
- Bryce, W. A. J., Greenwood, C. T., Jones, I. G., and Manners, D. J.** Physicochemical studies on starches. Part XII. The molecular weight of glycogens in aqueous solution, 711.
- Bryce-Smith, D., and Cox, G. F.** Formation of free radicals during the preparation of organomagnesium compounds in a hydrocarbon solvent, 1050.
- Buchanan, C., and Tucker, S. H.** Attempts to prepare optically active tervalent nitrogen compounds. Part III. Attempted resolution of 6-substituted 1:9-phenylene-carbazoles (3-substituted indolo[3, 2, 1-*jk*]carbazoles), 2750.
- Buchanan, J. G.** The behaviour of derivatives of 3:4-anhydrogalactose towards acidic reagents. Part I. Part II, 995, 2511.
- Buchanan, J. G.** See also **Armstrong, J. J.**, 4344, and **Baddley, J.**, 1000, 1651, 3107, 3606, 3743.
- Buckle, E. R., Gard, J. A., and Taylor, H. F. W.** Tricalcium silicate hydrate, 1351.
- Buckley, R. P., Rembaum, A., and Szwarc, M.** Addition of methyl radicals to quinones. Part II. The reaction centre, 3442.
- Buggle, K. M.** See **Baker, W.**, 3594.
- Bullock, E., Johnson, A. W., Markham, E., and Shaw, K. B.** A synthesis of coproporphyrin III, 1430.
- Bu'Lock, J. D.** See **Allport, D. C.**, 4090.
- Buncel, E., and Davies, Alwyn G.** Peroxides of elements other than carbon. Part I. The preparation and reactions of peroxy-silanes, 1550.
- Bunton, C. A., de la Mare, P. B. D., Greaseley, P. M., Llewellyn, D. R., Pratt, N. H., and Tillett, J. G.** Nucleophilic displacements in organic sulphites. Part I. The positions of bond fission in the hydrolyses of some 1:2- and 1:3-cyclic sulphites, 4751.
- Bunton, C. A., de la Mare, P. B. D., Lennard, A., Llewellyn, D. R., Pearson, R. B., Pritchard, J. G., and Tillett, J. G.** Nucleophilic displacements in organic sulphites. Part III. Comparison of alkaline and acidic hydrolyses of trimethylene sulphite and related compounds, 4761.
- Bunton, C. A., de la Mare, P. B. D., and Tillett, J. G.** Nucleophilic displacements in organic sulphites. Part II. The acid-catalysed hydrolysis of ethylene sulphite and of trimethylene sulphite, 4754.
- Bunton, C. A., and Hadwick, T.** Tracer studies in ester hydrolysis. Part VI. The hydrolysis of methyl trifluoroacetate, 3248.
- Bunton, C. A., Hadwick, T., Llewellyn, D. R., and Pocker, Y.** Tracer studies in alcohols. Part III. Intermediates in the pinacol-pinacone rearrangement, 403.
- Bunton, C. A., Israel, G., Mhala, M. M., and Williams, D. L. H.** Tracer studies in ester hydrolysis. Part VII. The hydrolysis of 9-fluorenyl acetate, 3718.
- Bunton, C. A., Llewellyn, D. R., Oldham, K. G., and Vernon, C. A.** The reactions of organic phosphates. Part I. The hydrolysis of methyl dihydrogen phosphate. Part II. The hydrolysis of  $\alpha$ -D-glucose 1-(dihydrogen phosphate), 3574, 3588.
- Bunton, C. A., Llewellyn, D. R., and Wilson, I.** Tracer studies on alcohols. Part IV. The oxygen exchange and racemisation of 4-methoxydiphenylmethanol, 4747.
- Bunton, C. A., and Stedman, G.** Oxygen exchange between nitric acid and water. Part IV. The nitration of 2-mesitylthanesulphonic acid, 2420.
- The absorption spectra of nitrous acid in aqueous perchloric acid, 2440.
- Bunton, C. A.** See also **Brownstein, S.**, 4354.
- Burdon, J.** See **Bourne, E. J.**, 1274.
- Burn, D., Ellis, B., and Petrow, V.** The structure of rusco-genin, 795.
- Burnell, R. H.** Ring expansion. Part III. The isomerisation of dibenzylidene derivatives of cyclohexanones, 1307.
- Burstall, M. L., and Gibson, M. S.** The reduction of *N*-phenyl-hydroxylamine with lithium aluminium hydride, 3745.
- Burton, R.** See **Abel, E. W.**, 4559.
- Butler, K., Lawrence, D. R., and Stacey, M.** The synthesis of some galactaric (mucic) acid derivatives, 740.
- Buttery, R. G.** See **Badger, G. M.**, 2449, 2458.
- Buttler, F. G., and Taylor, H. F. W.** The system  $\text{CaO}-\text{Al}_2\text{O}_3-\text{H}_2\text{O}$  at 5°, 2103.
- Buu-Hoi, Ng. Ph.** Thiophen derivatives. Part XII. Some derivatives of 2-ethylthiophen, 2418.
- Buu-Hoi, Ng. Ph., Jacquignon, P., and Loc, T. B.** Carcinogenic nitrogen compounds. Part XXIV. The synthesis of indole and quinoline compounds from cyclic ketones, 738.
- Buu-Hoi, Ng. Ph., and Lavit, D.** Thiophen derivatives. Part XI. Substitution in 2-thenaldehyde, 1721.
- Buu-Hoi, Ng. Ph., Saint-Ruf, G., Jacquignon, P., and Barrett, G. C.** Carcinogenic nitrogen compounds. Part XXVI. Nitrogen-heterocyclic compounds derived from some polycyclic arylamines, 4308.
- Buu-Hoi, Ng. Ph., Xuong, Ng. D., and Suu, V. T.** New *NN'*-di-substituted thioureas and ureas of biological interest, 2815.
- Buu-Hoi, Ng. Ph.** See also **Barrett, G. C.**, 2946, **Lamy, J.**, 4202, and **Saint-Ruf, G.**, 48, 1773.

## C

- Cadogan, J. I. G., Hey, D. H., and Sanderson, W. A.** Organic peroxides. Part II. The decomposition of bisdiphenylmethyl peroxide, 4498.
- Callow, R. K., and Massy-Beresford, P. N.** Steroidal saponins: the isomerisation of normal to *iso*-saponin, 2645.
- Cambie, R. C.** See **Briggs, L. H.**, 1422.
- Cameron, A., Giles, C. H., and MacEwan, T. H.** Researches on monolayers. Part VII. Reactions of casein with dyes and other aromatic solutes and their relation to adsorption by protein fibres, 1224.
- Campbell, A., Franklin, C. S., Morgan, E. N., and Tivey, D. J.** 5-Alkylacridines. Part I. Synthesis of 5-methylacridine and certain substituted analogues, 1145.
- Campbell, A., and Morgan, E. N.** 5-Alkyl-1:2-benzacridines. Synthesis of 5-methyl-1:2-benzacridine, 1711.
- Campbell, I. G. M., and White, A. W.** The stereochemistry of triarylstibines. Part II. Synthesis of unsymmetrically substituted triarylstibines and optical resolution of *p*-carboxyphenyl-1-naphthylphenylstibine, 1184.

- Campbell, N., and Reid, K. F. The synthesis and properties of 2-azafuoranthene, 4743.
- Campbell, W. A. See Aynsley, E. E., 1723, 3290.
- Campiglio, A. See Pratesi, P., 2069.
- Cañas-Rodríguez, A. See Aspinall, G. O., 4020.
- Cariello, C. See Malatesta, L., 2323.
- Caroti, G. See Sacconi, L., 4257.
- Carruthers, W., and Gray, J. D. 1:2:3:4:5:6- and 1:2:3:4:5:7-Hexamethylnaphthalene, 1280.
- Carss, B. See Armstrong, J. J., 4344.
- Carter, P. H. See Brown, U. M., 1843.
- Cass, R. C., Fletcher, S. E., Mortimer, C. T., Quincey, P. G., and Springall, H. D. Heats of combustion and molecular structure. Part IV. Aliphatic nitroalkanes and nitric esters. Part VI. The structure of some cyclic ethers of *o*-dihydroxybenzene, 958, 2595.
- Cass, R. C., Fletcher, S. E., Mortimer, C. T., Springall, H. D., and White, T. R. Heats of combustion and molecular structure. Part V. The mean bond energy term for the C-O bond in ethers, and the structures of some cyclic ethers, 1406.
- Castañer, J., and Pascual, J. Isomerisation of phenylpropargyldenemalonic acid to  $\gamma$ -benzylidene- $\alpha$ -carboxybutenolide, 3962.
- Cavell, E. A. S. Effect of solvent composition on the kinetics of reactions between ions and dipolar molecules. Part I, 4217.
- Cavill, G. W. K., Dean, F. M., Keenan, J. F. E., McGookin, A., Robertson, A., and Smith, G. B. Dibenzob[*b,d*]pyrans and related products, 1544.
- Chakravarti, B. N. See Bradley, D. C., 99.
- Chakravarti, R. N., and Dasgupta, B. The structure of aegelin, 1580.
- Chambers, K. A. See Barrett, P. A., 338.
- Chan, W. R., Forsyth, W. G. C., and Hassall, C. H. The constitution of the leucoanthocyanidin, peltogynol, 3174.
- Chang, C. T. See Chen, F. C., 146.
- Chang Shih, Hey, D. H., and Williams, G. H. Homolytic aromatic substitution. Part XIV. Ratio of isomerides formed in the arylation of nitrobenzene with *p*-chlorophenyl and *p*-bromophenyl radicals. Part XV. Ratio of isomerides formed in the arylation of chlorobenzene and bromobenzene with *p*-nitrophenyl radicals. Part XVI. Relative rates of *p*-bromophenylation of nitrobenzene and *p*-nitrophenylation of bromobenzene. Derivation and discussion of partial rate factors, 1885, 2600, 4403.
- Chapman, D. An infrared spectroscopic examination of some anhydrous sodium soaps, 784.
- Infrared spectra and the polymorphism of glycerides. Part IV. Myristopalmitins and myristostearins. Part V. 1:2-Diglycerides, 3186, 4680.
- Chatt, J., Duncanson, L. A., and Venanzi, L. M. The transmission of electronic effects through a palladium atom, 3203.
- Chatt, J., Gamlen, G. A., and Orgel, L. E. The visible and ultraviolet spectra of some platinum ammines, 486.
- Chatt, J. See also Ahrland, S., 264, 276, 1403.
- Chatterjee, A. K., Menzies, R. C., Steel, J. R., and Youdale, F. N. Chelate derivatives of trimethylplatinum, 1706.
- Chatterjee, A. K. See also Bradley, D. C., 99.
- Chaudhuri, A. C. See Nasipuri, D., 2579, 2734, 4299.
- Cheeseman, G. W. H. Quinoxalines and related compounds. Part IV. The fine structure of the 2- and 3-hydroxyquinoxalines and 2-amino- and 2-mercapto-quinoxaline, 108.
- Cheesman, G. H. See Allison, G. F., 1177.
- Chen, F. C., and Chang, C. T. Synthesis of 7-halogenoflavone and related compounds, 146.
- Cheng, C. C. See Lynch, B. M., 2973.
- Chetwyn, A. See Bayles, J. W., 2328.
- Christie, B. J. See Badger, G. M., 913, 1179.
- Clar, E., and Speakman, J. C. The crystal structures of some analogues of perylene, 2492.
- Clar, E., and Stewart, D. G. 2:3:5:6:8:9-Tribenzoperinaphthene, 23.
- Clar, E., and Willicks, W. 2:3-Benzorubicene, rubicene, and their derivatives, 942.
- Clar, E., and Zander, M. 1:2-Benzocoronene and naphtho-(2':3'-1:2)coronene, 1577.
- 1:12:2:3:10:11-Tribenzoperylene, 1861.
- Clark, H. C., and Emeléus, H. J. Chemical reactions with vanadium, niobium, and tantalum pentafluorides, 190.
- Clark, J., and Ramage, G. R. Glyoxalinopyrimidines. Part II, 2821.
- Clark, V. M., Johnson, A. W., Sutherland, I. O., and Todd, Sir A. Chemistry of the vitamin B<sub>12</sub> group. Part VII. The products of chronic acid oxidation, 3283.
- Clark, V. M., Kirby, G. W., and Todd, Sir A. Studies on phosphorylation. Part XVIII. Base-inhibited hydrogenolysis in the selective debenzoylation of phosphoric and phosphoramidic esters, 3039.
- Clarke, C. B., and Pinder, A. R. Decahydroisoquinolines and related compounds. Part II. Some further examples of abnormal ultraviolet absorption, 1967.
- Clark-Lewis, J. W., and Korytnyk, W. Flavan derivatives. Part I. The absolute configuration of (+)-dihydroquercetin, 2367.
- Clark-Lewis, J. W., and Mitsuno, M. The identity of gleditsin and mollisacacidin, 1724.
- Clay, P. G., Johnson, G. R. A., and Weiss, J. Chemical action of ionising radiations in solution. Part XXI. The action of <sup>60</sup>Co  $\gamma$ -radiation on aqueous solutions of ethylene at different pressures, 2175.
- Clayton, J. M. See Bonner, T. G., 1705.
- Cocker, W., McMurry, T. B. H., Mabrouk, L., and Williamson, W. R. N. Attempts to synthesise  $\alpha$ -(1:2:3:4-tetrahydro-1:5-dihydroxy-6:8-dimethyl-2-naphthyl)propionic lactone, 2899.
- Coffey, R. S., and Johnson, A. W. Synthetic experiments in the cycloheptatrienone series. Part VII, 1741.
- Cohen, S. See Bergmann, E. D., 2259.
- Coller, B. A. W. See Brown, R. D., 1776.
- Collins, D. J., and Graymore, J. The basicity of dihydrothiazetidines, dihydrothiazines, and tetrahydrothiadiazines, 2893.
- Collins, R. F. See Ashley, J. N., 3298.
- Collis, M. J., Gintz, F. P., Goddard, D. R., Hebden, E. A., and Minkoff, G. J. Nitryl chloride. Part I. Its preparation and the properties of its solutions in some organic solvents, 438.
- Collis, M. J., and Goddard, D. R. The chemistry of nitryl chloride. Part III. The reaction with naphthalene, anisole, phenol, and *p*-diethoxybenzene, 1952.
- Collis, M. J. See also Gintz, F. P., 445.
- Colvin, J. See Allan, A. W., 557.
- Comrie, A. M., and Stenlake, J. B. Pyridine-4-sulphonic acid, 1853.
- Antituberculosis agents. Part III. Pyridine-4-sulphonamides and -sulphonhydrazides, 3514.
- Comyns, A. E., Gatehouse, B. M., and Wait, E. The chemistry of the uranyl acetylacetonate complex, 4655.
- Comyns, A. E. See also Gatehouse, B. M., 3965.
- Connor, T. M., and Richards, R. E. Nuclear resonance spectra of some peroxy-salts, 289.
- Cooke, J. R. See Baddeley, G., 2797.
- Coombs, M. M. The acid-catalysed self-condensation of 9-methylfluoren-9-ol: 9-azido-9-methylfluorene and related compounds, 3454.
- Acid-stable organic azides, and the Schmidt reaction with heterocyclic ketones, 4200.
- Cooper, C. J., and Stonehill, H. I. Fading and tendering activity in anthraquinonoid vat dyes. Part IV. Polarographic oxidation of leuco-dyes. Part V. Photo-dehalogenation and -oxidation of leuco-solutions. Part VI. The coulometry of the polarographic oxidation of leuco-dyes, 3341, 3353, 3362.
- Cooper, F. C. *o*-Cyanophenylhydrazine and 3-aminoindazole, 4212.
- Corbett, R. E., and McDowall, M. A. Extractives from the New Zealand Myrtaceae. Part III. Triterpene acids from the bark of *Leptospermum scoparium*, 3715.
- Corbett, R. E., and Speden, R. N. The volatile oil of *Pseudowintera colorata*. Part II. The structure of cyclocolorone, 3710.
- Corish, P. J., and Davison, W. H. T. Infrared spectra and crystallinity. Part V. Dimethyl and diethyl esters of  $\omega$ -dicarboxylic acids, 927.
- Cornforth, J. W. Self-condensation of acetamidoacetaldehyde and of aminoacetone, 1174.
- A short synthesis of 3-methylfuran, 1310.



- Cornforth, J. W., and Firth, M. E.** Identification of two chromogens in the Elson-Morgan determination of hexosamines. A new synthesis of 3-methylpyrrole. Structure of the "pyrrolenepthalides," 1091.
- Cornforth, J. W.** See also **Bladon, P.**, 863.
- Corran, J. A., and Whalley, W. B.** 1:7:10- and 1:6:10-trimethylphenanthrene, 4719.
- Courtney, J. L., Gascoigne, R. M., and Szumer, A. Z.** Terpenes of the friedelane series. Part III. The course of the friedelene-oleanene rearrangement, 881.
- Cowie, J. M. G., Fleming, I. D., Greenwood, C. T., and Manners, D. J.** Physicochemical studies on starches. Part IX. The mechanism of the  $\beta$ -amylolysis of amylose and the nature of the  $\beta$ -limit dextrin, 697.
- Cowie, J. M. G.** See also **Bryce, W. A. J.**, 3558.
- Cowley, A., Fairbrother, F., and Scott, N.** The halides of niobium (columbium) and tantalum. Part V. Diethyl ether complexes of the pentachlorides and pentabromides; the solubility of tantalum pentoxide in ether, 3133.
- Cowperthwaite, M., and Warhurst, E.** Pyrolysis of phenylmercuric iodide, 2429.
- Cox, G. F.** See **Bryce-Smith, D.**, 1050.
- Cox, J. D., and Gundry, H. A.** Heats of combustion. Part II. The six lutidines, 1019.
- Cox, R. A., and Peacocke, A. R.** Electrometric titration of the sodium salts of deoxyribonucleic acids. Part VI. The forward-titration curve, 4117.
- Cox, R. A., and Swallow, A. J.** The chlorination and bromination of hydrocarbons under influence of high-energy radiation and other initiating agents, 3727.
- Crabb, T. A., and Schofield, K.** Synthetical studies relating to colchicine. Part I. Some derivatives of 1:2-benzocyclohept-1-en-4-one, 4276.
- Craig, D. P., and Walsh, J. R.** Calculations of the crystal spectra of benzene and naphthalene, 1613.
- Creighton, A. M.** See **Benn, M. H.**, 2800.
- Cremlyn, R. J. W., Kenner, G. W., Mather, J., and Todd, Sir A.** Studies on phosphorylation. Part XVI. Iodides as debenzylating and dealkylating agents, 528.
- Crofts, P. C., and Fox, I. S.** Unsymmetrical dialkylphosphinic acids, 2995.
- Crofts, P. C., Markes, J. H. H., and Rydon, H. N.** Bis-*o*-phenylene pyrophosphite: a new reagent for peptide synthesis. Part I. The preparation of some *o*-phenylene pyrophosphites, 4250.
- Cromartie, R. I. T., Harley-Mason, J., and Wannigama, D. G. P.** Some derivatives of 3:4:3':4'-tetramethoxydiphenyl, 1982.
- Crombie, L., and Griffin, B. P.** Lipids. Part VII. Synthesis of 8-hydroxyoctadec-*cis*-11- and *trans*-11-en-9-ynoic acid: the status of natural 8-hydroxyximenic acid, 4435.
- Crombie, L., and Mackenzie, K.** The reaction between 3-chloro-3-methylbutyne and methyl sodioacetate, 4417.
- Cross, B. E., Grove, John Frederick, MacMillan, J., and Mulholland, T. P. C.** Gibberelic acid. Part VII. The structure of gibberic acid, 2520.
- Crowder, J. R., Grundon, M. F., and Lewis, J. R.** Bisbenzylisoquinolines. Part II. The synthesis of 5-(2-aminoethyl)-4'-carboxy-2:3-dimethoxydiphenyl ether, 2142.
- Cullinane, N. M., and Edwards, B. F. R.** The Fries rearrangement. Part IV. Study of the reversibility of the reaction. Part V. Effect of the ring substituent and the acyl group, 434, 2926.  
Preparation of ketones by cleavage of 2:4-dinitrophenylhydrazones, 1311.
- Cummings, W.** See **Brown, B. R.**, 4302.
- Cummings, W. A. W.** Some new sulphur-containing diacids, 2058.
- Curtis, R. F.** See **Baker, W.**, 1007.
- Cymerman-Craig, J.** See **Stone, P. J.**, 52.
- Dalglish, C. E.** See also **Asatoor, A.**, 1498, 1717.
- Daly, J. J., and Wheatley, P. J.** The stereochemistry of molecules containing the  $N=C=N$  group: the structure of the monomethiodide of bis-*p*-dimethylaminophenylcarbodiimide, 1939.
- Dalziel, J., Gill, N. S., Nyholm, R. S., and Peacock, R. D.** Technetium. Part I. The preparation and properties of potassium hexahalogenotechnetates, 4012.
- Daniels, M., and Weiss, J.** Chemical action of ionising radiations in solution. Part XXII. The radiation chemistry of arsenite solutions: the action of X-rays (200 kv) on aqueous solutions of arsenite, 2467.
- Dasgupta, B.** See **Chakravarti, R. N.**, 1580.
- Das Gupta, P. C.** See **Aspinall, G. O.**, 3627, and **Greenwood, C. T.**, 703, 707.
- Davey, W., and Tivey, D. J.** Chalcones and related compounds. Part IV. Addition of hydrogen cyanide to chalcones. Part V. Addition of nitro-compounds to chalcones. Part VI. Addition of cyanoacetic esters to chalcones, 1230, 2276, 2606.
- Davey, W.** See also **Ames, G. R.**, 911, 1794, and **Betts, B. E.**, 4193.
- Davidge, H., Davies, Alwyn G., Kenyon, J., and Mason, R. F.** The oxidation of phenolic ethers with peroxyacetic acid, 4569.
- Davidson, J. M., and French, C. M.** The existence of an organic cation containing boron, 114.
- Davies, Alwyn G.** Organic peroxides. Part VIII. The stereochemistry and mechanism of the preparation and reduction of 1-methyl-1-phenylpropyl hydroperoxide, 3474.
- Davies, Alwyn G., Edwin, E. E., and Kenyon, J.** The optical stability of (+)-methyl 9-aminofluorene-2-carboxylate, 1950.
- Davies, Alwyn G., and Feld, R.** Organic peroxides. Part IX. A stereochemical study of the formation of alkyl hydroperoxides from hydrogen peroxide, 4637.
- Davies, Alwyn G., and Moodie, R. B.** Peroxides of elements other than carbon. Part II. The formation of boron peroxides by nucleophilic substitution, 2372.
- Davies, Alwyn G.** See also **Buncel, E.**, 1550, and **Davidge, H.**, 4569.
- Davies, B. L.** See **Woodcock, D.**, 4723.
- Davies, C. W., and Thomas, G. O.** The conductivity of some salts in ethanol-water mixtures, 3660.
- Davies, D. I., Hey, D. H., and Williams, G. H.** Homolytic aromatic substitution. Part XIII. The reaction of benzoyl peroxide with naphthalene, 1878.
- Davies, E. D., and Tillet, J. G.** Nucleophilic displacements in organic sulphites. Part IV. The effects of added salts on the solubility of ethylene sulphite, 4766.
- Davies, J. S. H., Lamb, F., and Suschitzky, H.** Studies in the xanthone series. Part II. Preparation and reactions of 1-formyl-2-hydroxyxanthone, 1790.
- Davies, M., and Jones, W. J.** The infrared spectrum of thioformamide, 955.
- Davies, N. R.** See **Ahrland, S.**, 264, 276, 1403.
- Davies, W., and Middleton, S.** Cyclodehydration processes. Part I. Benzofuran derivatives formed by cyclisation of  $\omega$ -aryloxyacetophenones, 822.
- Davis, M.** A search for new trypanocides. Part V. Some derivatives of 10-phenyl-4:9-diazaphenanthrene, 828.  
Search for chemotherapeutic amidines. Part XV. 2-Methoxy- and 2-hydroxy-derivatives of 1:5-di-*p*-aminophenoxypentane, 907.
- Davis, M.** See also **Ashley, J. N.**, 3298.
- Davis, M. A., and Hickinbottom, W. J.** Reactions of unsaturated compounds. Part XIV. The oxidation of 2:2:4:6:6-pentamethylhept-3-ene, 2205.
- Davison, W. H. T.** See **Corish, P. J.**, 927.
- Davoll, J.** The synthesis of the *v*-triazolo[d]pyrimidine analogues of adenosine, inosine, guanosine, and xanthosine, and a new synthesis of guanosine, 1593.
- Dawber, J. G., and Wyatt, P. A. H.** The vapour pressures of nitric acid solutions. Part III. The deuterium oxide-dinitrogen pentoxide system, 3636.
- Dayagi, S.** See **Patai, S.**, 3058.
- Dean, F. M., Francis, T., and Manunapichu, K.** Spirans. Part II. The preparation and ozonolysis of derivatives of 3-ethylidenegris-2'-ene. Anomalous enolisation in  $\beta$ -oxoesters, 4551.



- Dean, F. M., Steelink, C., and Tetaz, J. The reactive methyl group of ethyl  $\beta$ -ethoxycrotonate, 3386.
- Dean, F. M. See also Cavill, G. W. K., 1544.
- Deans, A. A. See Bennett, R. N., 4508.
- Dearnaley, D. P. See Katritzky, A. R., 2182.
- de la Mare, P. B. D., and Galandauer, S. The kinetics and mechanisms of addition to olefinic substances. Part V. Products of the reaction between bromine chloride and propene in water, 36.
- de la Mare, P. B. D., Harvey, J. T., Hassan, M., and Varma, S. The kinetics and mechanisms of aromatic halogen substitution. Part VII. Some experiments relating to the halogenation of toluene and *tert*-butylbenzene, 2756.
- de la Mare, P. B. D., and Hassan, M. The kinetics and mechanisms of aromatic halogen substitution. Part VI. Some observations relating to substitution *meta*- to principally *ortho*-*para*-directing substituents; and to steric inhibition of tautomeric electron release from the acetamido-group, 1519.
- de la Mare, P. B. D., Hughes, E. D., Merriman, P. C., Pichat, L., and Vernon, C. A. Kinetics and mechanisms of nucleophilic displacement in allylic systems. Part IX. Bimolecular substitution with rearrangement in the reaction of 1-*tert*-butylallyl chloride with ethoxide ion, 2563.
- de la Mare, P. B. D. See also Bunton, C. A., 4751, 4754, 4761.
- Del Re, G. A simple MO-LCAO method for the calculation of charge distributions in saturated organic molecules, 4031.
- de Mayo, P. See Barton, D. H. R., 140, 2239, 3314, 4393.
- de Ruyter van Steveninck, A. W. Acidity-dependence of decomposition of cumene hydroperoxide, 2066.
- Devitt, P. F., Philbin, E. M., and Wheeler, T. S. Structure and synthesis of Kostanecki and Tambor's compound, m. p. 120°, 510.
- Dewar, M. J. S., Ganellin, C. R., and Pettit, R. The tropylium ion. Part III. Oxidation of *cyclohepta*-2:4:6-trienecarboxylic acid, 55.
- Dewar, M. J. S., and James, A. N. The thermal decomposition of 3:5-dibromobenzene 1:4-diazo-oxide, 917.  
A further study of the thermal decomposition of 3:5-dibromobenzene 1:4-diazo-oxide, 4265.
- Dewar, M. J. S., Kubba, V. P., and Pettit, R. New hetero-aromatic compounds. Part I. 9-Aza-10-boraphenanthrene. Part II. Boron compounds isoconjugate with indole, 2:3-benzofuran, and thionaphthen, 3073, 3076.
- Dewar, M. J. S., and Lucken, E. A. C. Chemical applications of nuclear quadrupole resonance spectroscopy. Part I. Some chloro-derivatives of nitrogen heterocycles, 2653.
- Dewar, M. J. S., and Urch, D. S. Electrophilic substitution. Part XII. The nitration of diphenylmethane, fluorene, diphenyl ether, dibenzofuran, diphenylamine, and carbazole; relative reactivities and partial rate factors, 3079.
- D'Eye, R. W. M. The thorium dioxide-thorium tetrafluoride system, 196.
- Dick, G. P. G., Livingston, D., and Wood, H. C. S. Pteridine derivatives. Part VI. Aminolysis of a pteridone, 3730.
- Dicker, D. W., and Whiting, M. C. Synthetical studies on terpenoids. Part I. The synthesis of squalene, 1994.
- Dickinson, F., Hill, R., and Muray, J. *cis*- and *trans*-2:3-Dichlorohexafluorobut-2-ene, 1441.
- Dobson, N. A., and Raphael, R. A. The synthesis of DL-baikainin, 3642.
- Downing, D. F., and Woodcock, D. The oxidation of some naphthalene derivatives with peracetic acid, 531.
- Doyle, F. P., Holland, D. O., Mamalis, P., and Norman, A. Thiazolidines. Part V. Synthesis of  $\beta$ -alkylcysteines, 4605.
- Doyle, F. P., Mehta, M. D., Sach, G. S., and Pearson, J. L. Pharmacodynamic compounds. Part I. Some antispasmodics derived from substituted 2-pyrrolidinylalkanols, 4458.
- Drayson, F. K., Lewis, J. W., and Polgar, N. Experiments relating to pthiocerol. Part III. Degradative studies of a  $C_{11}$  oxidation product of pthiocerol, 430.
- Driver, J. E., and Lai, T. F. Condensations of the xylenols with carbon tetrahalides, 3009.  
Solvated triphenylmethane derivatives containing bromine, 3219.
- Drummond, J. L., and Welch, G. A. The preparation and properties of some plutonium compounds. Part VIII. Plutonium(IV) sulphate, 3218.
- Dry, L. J., Poynton, M., Thompson, M. E., and Warren, F. L. The alkaloids of the Amaryllidaceae. Part IV. The alkaloids of *Brunsvigia cooperi* Baker, 4701.
- Duncanson, L. A., Gerrard, W., Lappert, M. F., Pyszora, H., and Shafferman, R. The infrared spectra and structures of some acyloxy-derivatives of boron, 3652.
- Duncanson, L. A., Grove, John Frederick, and Jeffs, P. W. Griseofulvin. Part XIII. Homologues of griseofulvin and 7-chloro-4:6:4'-trimethoxy-6'-methylgris-3'-ene-3:2'-dione, 2929.
- Duncanson, L. A. See also Chatt, J., 3203.
- Dunn, A. S., and Hanrahan, A. Vapour pressure of *N,N'*-diphenylacetamide, 534.
- Dyall, L. K., and Pausacker, K. H. Oxidations with iodobenzene diacetate. Part VIII. A kinetic study of the oxidation of benzpinacol, 3950.

## E

- Eardley, S. See Ballantine, J. A., 755.
- Earl, N. J. See Katritzky, A. R., 2182.
- Ebsworth, E. A. V., and Emeléus, H. J. The preparation and donor properties of some silylamines, 2150.
- Ebsworth, E. A. V., Onyszchuk, M., and Sheppard, N. The infrared spectra of the methylsilyl halides and related compounds, 1453.
- Ebsworth, E. A. V. See also Braunholtz, J. T., 2780.
- Eddy, B. P., Fleming, I. D., and Manners, D. J.  $\alpha$ -1:4-Glucosans. Part IX. The molecular structure of a starch-type polysaccharide from *Dunaliella bioculata*, 2827.
- Edgar, O. B., and Johnson, D. H. High-temperature (300—350°) reactions of *cyclopentanone* and some of its derivatives with ammonia and aliphatic amines, 3925.
- Edwards, B. F. R. See Cullinane, N. M., 434, 1311, 2926.
- Edwards, T. E. See Peat, S., 586, 3862.
- Edwin, E. E. See Davies, Alwyn G., 1950.
- Eglinton, G., King, F. E., Lloyd, G., Loder, J. W., Marshall, J. R., Robertson, A., and Whalley, W. B. The chemistry of fungi. Part XXXV. A preliminary investigation of ergofavin, 1833.
- Eisner, U., and Erskine, R. L. The light absorption of pyrroles. Part II. Infrared spectra, 971.
- Eisner, U., and Gore, P. H. The light absorption of pyrroles. Part I. Ultraviolet spectra, 922.
- El-Agga, A. M., Bradley, D. C., and Wardlaw, W. The conductances of some chlorides in ethanol. Part I. Hydrochloric acid, caesium chloride, magnesium chloride, and lanthanum chloride. Part II. Electrolytic behaviour of zirconium chloride ethoxides, 2092, 4643.
- El-Assal, L. S. See Baddar, F. G., 986.
- Elkashaf, M. A., and Nosseir, M. H. Action of organo-magnesium halides on diaryl disulphides, 2893.
- El Khadem, H., and El-Shafei, Z. M. The scope and mechanism of carbohydrate osotriazole formation. Part II. The action of oxidising agents on osazones and osotriazoles, 3117.
- El Khadem, H., and Mohammed, Y. S. Constituents of the leaves of *Psidium guajava*, L. Part II. Quercetin, avicularin, and guaiajaverin, 3320.
- Elkobaisi, F. M., and Hickinbottom, W. J. The *C*-benzylation of phenols by use of sodium hydride, 2431.
- Elks, J., Philipps, G. H., and Wall, W. F. The preparation of  $\alpha$ -fluoro-analogues of cortisol acetate and prednisolone acetate from 11:20-diketones of the 5 $\alpha$ -series, 4001.
- Elliott, T. H. The melting points of *cis*- and *trans*-*cyclohexane*-1:2-diol di-*p*-nitrobenzoates, 3752.
- Ellis, B., Patel, D., and Petrow, V. Modified steroid hormones. Part VIII. Some 16-bromo- and 16-chloro-derivatives of testosterone, 800.
- Ellis, B., Petrow, V., and Wedlake, D. 16 $\alpha$ -Carboxyprogesterone, 3748.
- Ellis, B. See also Burn, D., 795.
- Elmore, D. T. Infrared spectra of some 2-thiohydantoins: the nature of the "thioureide" band, 3489.

- Elmore, D. T., and Ogle, J. R. Acyl isothiocyanates. Part II. Reactions of aroyl isothiocyanates with amines and amino-acids in aqueous solution, 1141.
- El-Sadr, M. M. See Barakat, M. Z., 901.
- El-Shafei, Z. M. See El Khadem, H., 3117.
- Embaby, H. K., and Moussa, A. A. Effect of various anions on thickness and active-oxygen content of nickel oxide layers formed by repeated anodic-cathodic cycling; the specific effect of chloride ions and its dependence on the nature of the substrate, 4027.
- Embaby, H. K. See also Moussa, A. A., 2481.
- Emel us, H. J., and Kettle, S. F. A. Sodium derivatives of stannane, 2444.
- Emel us, H. J., and Onyszczuk, M. The reaction of methyl-disiloxanes and 1:1-dimethyldisilthiane with boron and hydrogen halides, 604.
- Emel us, H. J., and Rao, G. S. Complexes of titanium and zirconium halides with organic ligands, 4245.
- Emel us, H. J., and Smith, J. D. Substitution compounds of tris(trifluoromethyl)phosphine with nickel carbonyl, 527.
- Emel us, H. J., and Smythe, L. E. Preparation and properties of dimethylodisilane, 1:1':2:2'-tetramethyl-disiloxane and -disilthiane, 609.
- Emel us, H. J. See also Clark, H. C., 190, Dale, J. W., 2939, and Ebsworth, E. A. V., 2150.
- Emmerson, R. G. See Barker, C. C., 1077.
- Emmott, P., and Livingstone, R. Naphtho(2':3'-2:3)furan-4-one, 4629.
- English, R. J. See Birch, A. J., 365, 369.
- Ennor, K. S., and Honeyman, J. Sugar nitrates. Part V. Removal of nitrate groups, 2586.
- Ennor, K. S., Honeyman, J., Shaw, C. J. G., and Stening, T. C. The preparation of some esters of methyl 4:6-O-benzylidene- $\alpha$ -D-altroside, 2921.
- Erskine, R. L. See Eisner, U., 971.
- Evans, A. G., Jones, P. M. S., and Thomas, J. H. The activation of carbon-carbon double bonds by cationic catalysts. Part VI. Effect of substituents on the dimerisation of 1:1-diarylethylenes catalysed by trichloroacetic acid, 4563.
- Evans, D. W. S. Hydrolysis of ethyl 3-oxo-octadecanoate, 4784.
- Evans, E. A. <sup>14</sup>C-Labelled polycyclic aromatic hydrocarbons. Part IV. A synthesis of 1:2:3:4-dibenz[9-<sup>14</sup>C]anthracene and the attempted synthesis of 1:2:3:4:5:6-tribenzanthracene, 3737.
- Evans, J. M. See Peat, S., 3868.
- Evans, J. V. See Arcus, C. L., 789.
- Evans, R. See Irving, H., 3540.
- Evans, R. M., Green, G. F. H., Hunt, J. S., Long, A. G., Mooney, B., and Phillips, G. H. Preparation of cortisol acetate and 21-acetoxy-17 $\alpha$ -hydroxypregna-4:9-diene-3:20-dione from 5 $\alpha$ -steroids, 1529.
- Evans, R. M. See also Brooks, S. G., 4614.
- Evans, W. C., and Wellendorf, M. (-)-3 $\alpha$ :6 $\beta$ -Ditigloyloxytropene, a new alkaloid, from the roots of *Datura*, 1991.
- Everest, D. A. See Aveston, J., 231.
- Everett, D. H., and Hyne, J. B. The dissociation constants of the isomeric (-)-ephedrinium and (+)-*psi*-ephedrinium ions in water from 0° to 60°, 1636.
- F**
- Fairbrother, F., and Nixon, J. F. The solubility of anhydrous aluminium bromide in pent-2-ene, 3224.
- Fairbrother, F., Robinson, D., and Taylor, J. B. Water-soluble complexes of niobium (columbium) and tantalum. Part II. The dissolution of niobic and tantalic acids in amine solutions, 2074.
- Fairbrother, F. See also Cowley, A., 3133.
- Fanshawe, R. S. See Simpson, J., 3323.
- Fear, E. J. P., Thrower, J., and Veitch, J. Organic fluorine compounds. Part V. The instability of some sodium 1:1-di-*H*-perfluoroalkoxides and its effect on the yields of fluoro-ethers, 1322.
- Feitelson, B. N., and Rothstein, R. 5-Nitro- and 5-amino-2-benzylbenzimidazole, 2426.
- Feld, R. See Davies, Alwyn G., 4637.
- Feldman, U. See Rona, P., 1737.
- Fells, I., and Moelwyn-Hughes, E. A. The kinetics of the hydrolysis of methylene dichloride, 1326.
- Ferrier, R. J. See Aspinall, G. O., 638, 1501.
- Few, A. V., Gilby, A. R., Ottewill, R. H., and Parreira, H. C. Dodecylquinolinium bromide, 1712.
- Ficken, G. E., Linstead, R. P., Stephen, E., and Whalley, M. Conjugated macrocycles. Part XXXI. Catalytic hydrogenation of tetrazaporphins, with a note on its stereochemical course, 3879.
- Fielding, H. C., Robertson, A., Travers, R. B., and Whalley, W. B. The chemistry of fungi. Part XXXIII. The oxidation of sclerotioramine and the structure of sclerotiorin, 1814.
- Figgis, B. N., and Nyholm, R. S. A convenient solid for calibration of the Gouy magnetic susceptibility apparatus, 4190.
- Finar, I. L. The preparation and properties of some 2:3-benzo-1:4-diazepines, 4094.
- Finar, I. L., and Hurlock, R. J. The Skraup reaction with aminopyrazoles, 3259.
- Finar, I. L., and Simmonds, A. B. The reaction between aroylacetones and arylhydrazines, 200.
- Finar, I. L. See also Brain, E. G., 2435, 2486.
- Firth, M. E. See Cornforth, J. W., 1091.
- Fischer, A., Mitchell, W. J., Ogilvie, G. S., Packer, J., Packer, J. E., and Vaughan, J. The kinetics of alkaline hydrolysis of substituted ethyl 1-naphthoates, 1426.
- Fisher, N., Franklin, C. S., Morgan, E. N., and Tivey, D. J. 5-Alkylacridines. Part II. Dialkylaminoalkylacridines, 1411.
- Fitton, P. See Birch, A. J., 4576.
- Fleetwood, J. G. See Barker, S. A., 4128.
- Fleming, I. D. See Cowie, J. M. G., 697, and Eddy, B. P., 2827.
- Fletcher, S. E. See Cass, R. C., 958, 1406, 2595.
- Flowers, R. H., Gillespie, R. J., Oubridge, J. V., and Solomons, C. Solutions in sulphuric acid. Part XXIV. Electrical conductivity, cryoscopic, and density measurements on solutions in dideuteriosulphuric acid, 667.
- Fogg, P. G. T. Solvation of calcium nitrate and of lithium perchlorate in acetone solution measured by an ultrasonic method, 4111.
- Ford, B. M. See McGowan, J. C., 1149.
- Ford, M. C., and Mackay, D. Decomposition reactions of heterocyclic diacyl peroxides. Part III. 5-Methyl-1-phenyl-1:2:3-triazole-4-carbonyl peroxide. Part IV. Nicotinoyl peroxide, 1290, 1294.
- Ford, M. C., and Rust, R. A. Some unsymmetrical azonitriles, 1297.
- Forsyth, W. G. C. See Chan, W. R., 3174.
- Foster, A. B., and Horton, D. Amino-sugars and related compounds. Part III. Acid reversion of 2-acetamido-2-deoxy-D-glucose (*N*-acetyl-D-glucosamine), 1890.
- Foster, A. B. See also Barker, S. A., 2218, 2358.
- Fowell, P. A., and Mortimer, C. T. The heat of formation of trimethylgallium, 3734.
- Fowles, G. W. A., and McGregor, W. R. Amine compounds of the transition metals. Part III. The reaction of some transition-metal chlorides with anhydrous ethylenediamine and propylenediamine, 136.
- Fowles, G. W. A., and Nicholls, D. The reaction between ammonia and transition-metal halides. Part IV. The reaction of ammonia with vanadium(IV) chloride, 1687.
- Fowles, G. W. A. See also Bannister, E., 751, 4374, and Brown, M. P., 2811.
- Fox, I. S. See Crofts, P. C., 2995.
- Francis, T. See Dean, F. M., 4551.
- Frankel, M., and Knobler, Y. Synthesis of poly-*O*-phenyl-DL-homoserine, 3733.
- Frankel, M. See also Knobler, Y., 1629, 1632.
- Franklin, C. S. See Campbell, A., 1145, and Fisher, N., 1411.
- Frearson, P. M., and Stern, E. S. Some new analogues of pethidine. Part II. Alkoxyalkylmorphethidines. Part III. 1-Aryloxyalkylmorphethidines, and close analogues, 3062, 3065.
- French, C. M. See Davidson, J. M., 114.
- Friend, J. A., and Nunn, E. K. Substitution reactions in the triethylenediaminecobalt(III) ion, 1567.

## G

- Gadsby, B. See Ansell, M. F., 3388.
- Galandauer, S. See de la Mare, P. B. D., 36.
- Galt, R. H. B., Loudon, J. D., and Sloan, A. D. B. Extrusion of sulphur. Part III. Polycyclic 1:4-thiazepines, 1588.
- Gamlen, G. A. See Chatt, J., 486.
- Ganellin, C. R., and Pettit, R. Rearrangements of some cyclooctatetraene derivatives, 576.
- Ganellin, C. R. See also Dewar, M. J. S., 55.
- Gard, J. A. See Buckle, E. R., 1351.
- Gardiner, J. G., and Percival, E. Methyl ethers of L-fucose, 1414.
- Gardner, J. N. See Katritzky, A. R., 2192, 2198.
- Gascoigne, R. M. Entropy changes in isomerisations, 876.
- Gascoigne, R. M. See also Courtney, J. L., 881.
- Gaspert, B., Halsall, T. G., and Willis, D. Studies in the synthesis of terpenes. Part III. The synthesis of 6-acetoxy-5:5:9-trimethyl-trans-decal-1-one, 624.
- Gatehouse, B. M., and Comyns, A. E. Infrared spectra of uranyl nitrate hydrates and rubidium uranyl nitrate, 3965.
- Gatehouse, B. M., Livingstone, S. E., and Nyholm, R. S. The infrared spectra of some simple and complex carbonates, 3137.
- Gatehouse, B. M. See also Comyns, A. E., 4655.
- Gelles, E., and Hay, R. W. The interaction of transition-metal ions with oxaloacetic acid. Part I. The rôle of chelate compounds in the decarboxylation, 3673.
- Gelles, E., and Salama, A. The interaction of transition-metal ions with oxaloacetic acid. Part II. Thermodynamics of chelation. Part III. Kinetics of the catalysed decarboxylation, 3683, 3689.
- Gerrard, W., Lappert, M. F., and Shaffer, R. The chemistry of certain acyloxyboron compounds and boron chelates, 3648.
- Gerrard, W. See also Abel, E. W., 1451, 2895, Bellamy, L. J., 2412, and Duncanson, L. A., 3652.
- Ghaly, H. A. See Moussa, A. A., 1269.
- Ghanem, N. A. See Bevington, J. C., 2254.
- Ghizlandi, V. See Pratesi, P., 2069.
- Gibson, M. S. See Burstall, M. L., 3745.
- Gilby, A. R. See Few, A. V., 1712.
- Giles, C. H. See Bruce, I. C. L., 1610, and Cameron, A., 1224.
- Gilham, P. T. See Anghal, S. J., 375.
- Gill, E. W., and Ing, H. R. Furan and tetrahydrofuran compounds analogous to ganglion-blocking agents of the 3-oxapentane-1:5-bis-trialkylammonium series, 4728.
- Gill, N. S. See Dalziel, J., 4012.
- Gillespie, R. J., Grimison, A., Ridd, J. H., and White, R. F. M. Deuteration of glyoxaline studied by nuclear magnetic resonance, 3228.
- Gillespie, R. J. See also Flowers, R. H., 667.
- Ginsburg, D. See Bien, S., 3189.
- Gintz, F. P., Goddard, D. R., and Collis, M. J. Nitryl chloride. Part II. The reaction with alkylbenzenes, 445.
- Gintz, F. P. See also Collis, M. J., 438.
- Given, P. H. Polarography of conjugated systems in dimethylformamide, 2684.
- Given, P. H., Peover, M. E., and Schoen, J. M. Polarography of some aromatic carbonyl compounds in dimethylformamide, 2674.
- Given, P. H., and Schoen, J. M. Polarographic reduction of carbonyl groups in solvent extracts of coals, 2680.
- Glazebrook, R. W. See Bateman, L., 2834, 2838, 2846.
- Glover, E. E., and Jones, G. Quinolizines. Part I. Synthesis of some indolo[2,3-a]quinolizine and benz[*g*]indolo[2,3-a]quinolizine derivatives. Part II. A synthesis of alkyl- and of aryl-quinolizinium salts, 1750, 3021.
- Goddard, D. R. The chemistry of nitryl chloride. Part IV. Addition to styrene, ethylene, and propene, 1955.
- Goddard, D. R. See also Collis, M. J., 438, 1952, and Gintz, F. P., 445.
- Gold, J. The application of infrared spectroscopy to a study of some reaction intermediates and products of the autoxidation of long-chain olefins, 934.
- Gold, V. See Bethell, D., 1905, 1918, 1930.
- Goldberg, A. A., and Wragg, A. H. Xanthenes: cyclisation of 3'-substituted 2-carboxydiphenyl ethers, 4227.
- Reactivity of xanthenes bearing 1- and 3-chloro-substituents towards nucleophilic reagents, 4234.
- Golden, J. H., and Linstead, R. P. 1:2-Dicarboxylic acids. Part IV. The  $\alpha$ -ethyl- $\alpha$ -methylsuccinic acids and their derivatives, 1732.
- Golden, J. H., Linstead, R. P., and Whitham, G. H. Chlorophyll and related compounds. Part VII. The structure of bacteriochlorophyll, 1725.
- Golomb, A., and Ritchie, P. D. Studies in pyrolysis. Part XIV. The pyrolysis of 2:2-dimethyltrimethylene dibenzoate, 4515.
- Gómez-Sánchez, A. See Barker, S. A., 2583.
- Goodwin, T. H. Calculated bond lengths in some cyclic compounds. Part V. 1:2:7:8-13:14-tribenzocyclooctadeca-1:7:13-triene-3:5:9:11:15:17-hexayne and diphenyldiacetylene, 3893.
- Gopinath, K. W., Govindachari, T. R., Nagarajan, K., and Purushothaman, K. K. Synthesis of some 1:2- and 7:8-benzophenanthridines, 504.
- Gordon, M. See Baddeley, G., 3171, 4379.
- Gore, P. H. See Eisner, U., 922.
- Govindachari, T. R., Nagarajan, K., and Parthasarathy, P. C. Action of acidic reagents on 2:4:5-trimethoxybenzyl and 2-methoxy-4:5-methylenedioxybenzyl alcohol, 912.
- Govindachari, T. R., Nagarajan, K., and Ramadas, C. V. Synthesis of ( $\pm$ )-crebanine, 983.
- Govindachari, T. R., Pai, B. R., and Sundararajan, V. N. Application of the Bruckner method to the synthesis of phenanthridine derivatives. Part II, 1715.
- Govindachari, T. R., and Rajappa, S. A common precursor of conhydrine and pseudoconhydrine, 1306.
- Govindachari, T. R. See also Gopinath, K. W., 504.
- Gowan, J. E., Lynch, M. F., O'Connor, N. S., Philbin, E. M., and Wheeler, T. S. The synthesis of isoflavones, 2495.
- Gowenlock, B. G., Jones, P. P., and Ovenall, D. W. Organomercury groups. Part II. Electron resonance measurements, 535.
- Gradwell, W. T. See Beer, R. J. S., 4693.
- Gramshaw, J. W., Johnson, A. W., and King, T. J. The synthesis of flavan-2:3-diols (dihydro- $\alpha$ :2-dihydroxychalcones), 4040.
- Grant, P. M., Ward, R. B., and Whiffen, D. H. Electron spin resonance spectra of the carboxyhydroxymethyl radical trapped after  $\gamma$ -irradiation of glycolic acid, 4635.
- Grant, P. M. See also Bailey, R. W., 1895, and Barker, S. A., 601.
- Grant, W. K., and Speakman, J. C. The crystal structure of 2:3-dihydro-2:3-methylene-1:4-naphthaquinone, 3753.
- Gray, C. H., and Nicholson, D. C. The chemistry of the bile pigments. The structures of stercobilin and d-urobilin, 3085.
- Gray, G. W. Mesomorphism and chemical constitution. Part X. The 2-*p-n*-alkoxybenzylideneaminophenanthrenes and evidence for the planarity of the diphenyl ring system in the mesomorphic state, 552.
- Gray, J. D. See Carruthers, W., 1280.
- Gray, P., and Pratt, M. W. T. The thermodynamic functions of methyl nitrite and the potential barrier to free rotation, 3403.
- Gray, P., and Rathbone, P. Dissociation of liquid dinitrogen tetroxide; Henry's law coefficients, heats and entropies of solution, and the thermodynamics of homolytic dissociation in the pure liquid, 3550.
- Graymore, J. See Collins, D. J., 2893.
- Grdenić, D., and Markušić, B. Trismethylmercurisulphonium nitrate and dichromate, 2434.
- Greaseley, P. M. See Bunton, C. A., 4751.
- Green, A. L., Sainsbury, G. L., Saville, B., and Stansfield, M. The reactivity of some active nucleophilic reagents with organophosphorus anticholinesterases, 1583.
- Green, B., Harris, A., and Whalley, W. B. The relation between dextro- and isodextro-pimaric acid, 4715.
- Green, G. F. H. See Brooks, S. G., 4614, and Evans, R. M., 1529.
- Green, J. See McHale, D., 1600, and Mamalis, P., 1850.
- Green, M., and Hudson, R. F. The preparation of optically active phosphorus compounds, 3129.
- Green, M. L. H., Pratt, L., and Wilkinson, G. Biscyclopentadienylrhenium hydride, 3916.
- Green, M. L. H., and Wilkinson, G.  $\pi$ -cyclopentadienylrhenium carbonyl compounds, 4314.
- Greenberg, G. R. See Armstrong, J. J., 4344.

- Greenwood, C. T., and Das Gupta, P. C.** Physicochemical studies on starches. Part X. The molecular weight of the water-soluble polysaccharides of sweet corn, *Zea mays*. Part XI. The granular starch of sweet corn, *Zea mays*, 703, 707.
- Greenwood, C. T.** See also **Arbuckle, A. W.**, 2626, 2629, **Bryce, W. A. J.**, 711, 3558, 3845, and **Cowie, J. M. G.**, 697.
- Greenwood, N. N., and Wade, K.** Addition compounds of gallium trichloride. Part V. Ionic 1:1 and 1:2 complexes with pyridine. Part VI. Complexes with piperidine, 1663, 1671.
- Greenwood, N. N., and Worrall, I. J.** Electrical conduction in fused gallium dichloride and gallium dibromide, 1680.
- Greenwood, N. N.** See also **Woodward, L. A.**, 1505.
- Gregg, S. J., and Stock, R.** Thermogravimetric analysis of ammonium phosphomolybdate *in vacuo*, 910.
- Griffin, B. E., and Todd, Sir A.** Nucleotides. Part XLIV. Thymidine-5' pyrophosphate and triphosphate, 1389.
- Griffin, B. P.** See **Crombie, L.**, 4435.
- Griffith, W. P., Lewis, J., and Wilkinson, G.** Some nitric oxide complexes of iron and copper, 3993.
- Griffiths, V. S., Lawrence, K. S., and Pearce, M. L.** The conductivity of silver salts in non-aqueous and mixed solvents. Part VII, 3998.
- Griffiths, V. S., and Pearce, M. L.** The conductivity of silver salts in non-aqueous and mixed solvents. Part VI, 1557.
- Grimson, A.** See **Gillespie, R. J.**, 3228.
- Grove, John Frederick, Jeffs, P. W., and Mulholland, T. P. C.** Gibberellic acid. Part V. The relation between gibberellin A<sub>1</sub> and gibberellic acid, 1236.
- Grove, John Frederick.** See also **Abbot, M. T. J.**, 1699, **Cross, B. E.**, 2520, and **Duncanson, L. A.**, 2929.
- Grundon, M. F.** See **Crowder, J. R.**, 2142.
- Grundy, M. E., Wei-Hwa Hsu, and Rothstein, E.** The reaction between aromatic compounds and derivatives of tertiary acids. Part X. Elimination of carbon monoxide from some highly alkylated acetyl chlorides, 581.
- Gundry, H. A.** See **Cox, J. D.**, 1019.
- H**
- Hadwick, T.** See **Bunton, C. A.**, 403, 3248.
- Hadzi, D.** See **Bilic, R.**, 4536.
- Hahn, G.** See **Kamal, A.**, 555.
- Haines, R. M., and Waters, W. A.** Properties and reactions of alkyl free radicals in solution. Part XI. Further water-soluble radicals, 3221.
- Hair, M. L., and Robinson, P. L.** Complexes of octavalent ruthenium and osmium with phosphorus trifluoride, 106.
- Hair, M. L.** See also **Aynsley, E. E.**, 3747.
- Hall, D. M.** See **Ahmed, S. R.**, 3043.
- Hall, G. E.** See **Brown, D. M.**, 1360.
- Hall, J. R.** See **Woodward, L. A.**, 1505.
- Hallam, B. F., and Pauson, P. L.** Metal derivatives of conjugated dienes. Part I. Butadiene- and cyclohexadiene-iron tricarbonyls, 642.
- Ferrocene derivatives.** Part IV. Indenyl- and tetrahydroindenyl-iron carbonyls, 646.
- Hallgarten, P. A.** See **Arcus, C. L.**, 4214.
- Halmann, M., and Pinchas, S.** The isotope effect of <sup>18</sup>O on the infrared spectrum of benzophenone, 1703.
- The <sup>18</sup>O effect on the infrared absorption of triphenylphosphine oxide, and the structure of triphenylphosphine oxide hydrate, 3264.
- Halmann, M.** See also **Lapidot, A.**, 1713.
- Halsall, T. G.** See **Arthur, H. R.**, 2603, and **Gaspert, B.**, 624.
- Hancock, P., and Mayne, J. E. O.** An electrometric method for measuring the thickness of the air-formed oxide film on pure iron and mild steel, 4167.
- The effect of inhibitors of the corrosion of iron on the air-formed film, 4172.
- Hands, A. R., and Katritzky, A. R.** N-Oxides and related compounds. Part XI. Mononitration of 2-, 3-, and 4-phenyl- and 2- and 4-benzyl-pyridine 1-oxide, 1754.
- Hands, A. R.** See also **Katritzky, A. R.**, 2195, 2202, 3165.
- Hanger, W. G., Howell, W. C., and Johnson, A. W.** Actinomycin. Part VI. The structure and synthesis of actinomycinol, 496.
- Hanrahan, A.** See **Dunn, A. S.**, 534.
- Hag, S., and Whelan, W. J.** The chemical synthesis of polysaccharides. Part II. The chemical synthesis of nigerose, 1342.
- Hardie, R. L., and Thomson, R. H.** Phenylation with diazoaminobenzenes, 1286.
- Harding, M. M.** The crystal structure of the mercury dithione complex, 4136.
- Hardman, R., and Partridge, M. W.** Cyclic amidines. Part VI. 5- and 7-Substituted 2-amino-4-hydroxyquinolines, 614.
- Hargreaves, G. B., and Peacock, R. D.** Higher complex fluorides of tungsten, 2170.
- The magnetic properties of the quinquevalent complex fluorides of molybdenum, tungsten, and rhenium, 3776.
- Higher complex fluorides of molybdenum, 4390.
- Hargreaves, G. B.** See also **Abel, E. W.**, 3149.
- Hargreaves, M. K., and Richardson, P. J.** The titration and the apparent dissociation constants of weak acids in mixed aqueous solvents, 3111.
- Harley-Mason, J., and Ingleby, R. F. J.** Hydroxytryptamines. Part IV. Synthesis and reactions of 2-3'-oxindolylethylamines, 3639.
- Oxidative dimerisation of oxindoles, 4782.
- Harley-Mason, J., and Laird, A. H.** The dimer of *o*-benzoquinone, 1718.
- Harley-Mason, J.** See also **Cromartie, R. I. T.**, 1982.
- Harper, D. C.** See **Hudson, R. F.**, 1356.
- Harris, A., Robertson, A., and Whalley, W. B.** The chemistry of fungi. Part XXXI. The structure of rosenonolactone. Part XXXII. Rosonolactone, a metabolite of *Trichothecium roseum* Link, 1799, 1807.
- Harris, A.** See also **Green, B.**, 4715.
- Harris, C. M., Livingstone, S. E., and Stephenson, N. C.** The preparation and structure of halogen-bridged anionic complexes of bivalent palladium and platinum, 3697.
- Harris, G. S.** Reactions of halogenobistrifluoromethylphosphines with amines and ammonia; and their behaviour with phosphine and hydrogen sulphide, 512.
- Harris, G. S., and Payne, D. S.** The vapour density and dissociation pressure of phosphorus pentabromide, 3732.
- Harris, J. G. H.** See **Bennett, R. N.**, 4508.
- Harrison, D.** See **Bartram, C. A.**, 1158.
- Harrison, I. T., and Lythgoe, B.** Calciferol and its relatives. Part III. Partial synthesis of calciferol and of epicalciferol. Part IV. A non-photochemical synthesis of a model *cis*-triene, 837, 843.
- Harvey, D. G.** The synthesis of 5-iodotryptophan and some derivatives, 3760.
- Harvey, J. T.** See **de la Mare, P. B. D.**, 2756.
- Harvey, W. E.** Some derivatives of isopentylbenzene, 2060.
- Hassall, C. H.** See **Chan, W. R.**, 3174.
- Hassan, M.** See **de la Mare, P. B. D.**, 1519, 2756.
- Haszeldine, R. N.** See **Dale, J. W.**, 2939.
- Hathaway, B. J.** See **Addison, C. C.**, 3099.
- Hathway, D. E.** Autoxidation of polyphenols. Part IV. Oxidative degradation of the catechin-autoxidation polymer, 520.
- Haworth, R. D., and Turner, A. F.** Synthesis of some angularly bridged cyclic systems. Part I. Perhydrobenz[d]-indole, 1240.
- Haworth, R. D.** See also **Blears, J. G.**, 1985.
- Hay, J. E., and Haynes, L. J.** Bergenin, a C-glycopyranosyl derivative of 4-O-methylgallic acid, 2231.
- Hay, R. W.** See **Gelles, E.**, 3673.
- Hayes, A., Kenner, G. W., and Williams, N. R.** Pyrroles and related compounds. Part I. Syntheses of some unsymmetrical pyrrolylmethylpyrroles (pyrromethanes), 3779.
- Hayes, D. H.** See **Baddiley, J.**, 3743.
- Haynes, L. J., and Jamieson, J. W. M.** Tetric acids and related compounds. Part IV. Friedel-Crafts reaction and Fries rearrangement, 4132.
- Haynes, L. J.** See also **Hay, J. E.**, 2231.
- Head, A. J., Kember, N. F., Miller, R. P., and Wells, R. A.** Ion-exchange properties of cellulose phosphate, 3418.
- Heaney, H., Heinekey, D. M., Mann, F. G., and Millar, I. T.** Cyclic diarsines. Part V. Diphenyl derivatives containing seven-, eight-, nine-, and ten-membered diarsine ring systems, 3838.

- Heath, D. F.** Reactions of ethylthioethyl *OO*-dimethyl phosphorothioates in water, 1643.
- Heddon, E. A.** See **Collis, M. J.**, 438.
- Heffernan, M. L.** See **Brown, R. D.**, 1776.
- Heidelberger, M.** See **Barker, S. A.**, 3468.
- Heinekey, D. M.** See **Heaney, H.**, 3838.
- Henbest, H. B., Meakins, G. D., and Wrigley, T. I.** A second carbonyl band in the spectra of hydroxy-esters, 2633.
- Henbest, H. B., Smith, M., and Thomas, A.** Aspects of stereochemistry. Part X. The preparation and hydration of a ditertiary vicinal epoxide of the decalin series, 3293.
- Henderson, M. E., Hough, L., and Painter, T. J.** Mannose-containing polysaccharides. Part V. The isolation of oligosaccharides from lucerne and fenugreek galactomannans, 3519.
- Hendry, J. A., Rose, F. L., and Walpole, A. L.** Potential tumour-inhibitors based on diazomethane, 1134.
- Hepworth, M. A., Robinson, P. L., and Westland, G. J.** Complex fluorides of quadrivalent osmium and iridium and the corresponding free acids, 611.
- Herbert, A. E. J., and Tomlinson, M.** The synthesis of 1 : 9-9' : 1'-dicarbazolylene, and related experiments, 4492.
- Herington, E. F. G.** Reactions of disodium pentacyanoamminoferrate with aromatic amines. Part II. The preparation and properties of compounds containing the pentacyano-(*p*-anilinoanilino)ferrate ion. Part III. The preparation of 2 : 7-dimethylphenazine from *p*-toluidine, 4683, 4771.
- Hey, D. H., and Husain, A.** The aporphine series. Part IV. The synthesis of ( $\pm$ )-stephanine, 1876.
- Hey, D. H.** See also **Cadogan, J. I. G.**, 4498, **Davies, D. I.**, 1878, and **Chang Shih**, 1885, 2600, 4403.
- Hickinbottom, W. J.** See **Beard, C.**, 2982, **Davis, M. A.**, 2205, and **Elkobaishi, F. M.**, 2431.
- Higginson, W. C. E.** See **Shimi, I. A. W.**, 260.
- Higson, H. M.** See **Brown, D. M.**, 1360.
- Hill, R.** See **Dickinson, F.**, 1441.
- Hill, R. D., and Meakins, G. D.** Infrared absorption of NMe and NMe<sub>2</sub> groups in amines, 760.
- Hinshelwood, Sir C.** See **Blackadder, D. A.**, 2720, 2728, **Bose, A. N.**, 4085, and **McCarthy, B. J.**, 2269.
- Hinton, R. C., Mann, F. G., and Millar, I. T.** The reaction of 3-bromo-4-iodotoluene with magnesium and lithium, 4704.
- Hirst, E. L., Percival, E., and Williams, R. S.** The structure of *Brachycthon diversifolium* gum (*Sterculia caudata*), 1942.
- Hirst, E. L.** See also **Anderson, F. B.**, 3233, and **Aspinall, G. O.**, 221, 593, 4408.
- Hitchcock, C. H. S., and Mann, F. G.** The synthesis of derivatives of 1 : 4-diphenyldiethylenediphosphine, 2081.
- Hogg, M. A. P., and Spice, J. E.** Some properties of solid carbon monosulphide, 4196.
- Holker, J. S. E., Robertson, A., Taylor, J. H., Holker, K. U., and Williamson, W. R. N.** Picrotoxin. Part VII. The chemistry of anhydro-picrotin, 2987.
- Holker, K. U.** See **Holker, J. S. E.**, 2987.
- Holland, D. O., and Mamalis, P.** Thiazolidines. Part I. Some reactions of 4-benzylidene-2-thiothiazolid-5-one with glycine derivatives. Part II. Some reactions of 5-phenyl-2-thiothiazolidine-4-carboxylic acid. Part III. The reaction of 2-methylthio-5-phenylthiazoline-4-carboxylic acid with thionyl chloride and phosphorus pentachloride. Part IV. Further reactions of 2-methylthio-5-phenylthiazoline-4-carboxylic acid, 4584, 4588, 4596, 4601.
- Holland, D. O.** See **Doyle, F. P.**, 4605.
- Holliday, A. K., and Pass, G.** The reaction of tetramethyllead and trimethyllead chloride with alkali metals in liquid ammonia, 3485.
- Holt, P. F.** See **Braithwaite, R. S. W.**, 4073.
- Holt, S. J., Kellie, A. E., O'Sullivan, D. G., and Sadler, P. W.** Vibrational frequency correlations in heterocyclic molecules. Part IV. Indoxyl derivatives, 1217.
- Homer, R. F.** The synthesis of 2 : 4'-dipyridyl and some derivatives, 1574.
- Honeyman, J., and Stening, T. C.** Sugar nitrates. Part IV. Reactions of nitrates and sulphonates with sodium methoxide in methanol and some sodium salts, 537.
- Honeyman, J.** See also **Ennor, K. S.**, 2586, 2921.
- Horton, D.** See **Foster, A. B.**, 1890.
- Hough, L., Taylor, T. J., Thomas, G. H. S., and Woods, B. M.** The oxidation of monosaccharides by periodate with reference to the formation of intermediary esters, 1212.
- Hough, L.** See also **Andrews, P.**, 4476, 4483, **Bragg, P. D.**, 4050, and **Henderson, M. E.**, 3519.
- Howard, G. A., and Slater, C. A.** The chemistry of hop constituents. Part XII. The structure of humulinone, 1460.
- Howe, R., and McQuillin, F. J.** The steric course of alkylation of enols from some cyclohexanones and of hydrogenation of selin-4-ene-3-ones in neutral and alkaline solution, 1194.
- The hydroxylation of some  $\alpha\beta$ -unsaturated ketones by molecular oxygen, 1513.
- Howell, F. H., and Taylor, D. A. H.** The synthesis of some substituted hexahydro-12-methyl-2-oxophenanthrenes, 1248.
- Howell, W. C.** See **Hanger, W. G.**, 496.
- Hoyle, W.** See **Belcher, R.**, 2743.
- Huang, R. L.** The cleavage of diaryl ethers by Grignard reagents in the presence of cobaltous chloride. Part III. Fluorine-containing diphenyl ethers, 3725.
- Huang, R. L., and Singh, S.** The relative stabilising influences of substituents on free alkyl radicals. Part IV. Selective hydrogen-abstraction by free *tert*-butoxy-radicals, 891.
- Huang, R. L., and Williams, P.** The relative stabilising influences of substituents on free alkyl radicals. Part V. Selective bromination by *N*-bromosuccinimide, 2637.
- Hudson, R. F., and Harper, D. C.** The reactivity of esters of quinquivalent phosphorus towards anions, 1356.
- Hudson, R. F.** See also **Green, M.**, 3129.
- Hughes, A. N.** See **Braithwaite, R. S. W.**, 4073.
- Hughes, E. D., Ingold, Sir C., and Pearson, R. B.** Nitration at nitrogen and oxygen centres. Part I. Kinetics and mechanism of the conversion of secondary amines into nitroamines, 4357.
- Hughes, E. D., Ingold, Sir C., and Ridd, J. H.** Nitrosation, diazotisation, and deamination. Part I. Principles, background, and method for the kinetic study of diazotisation. Part II. Second- and third-order diazotisation of aniline in dilute perchloric acid. Part IV. Hydrogen-ion catalysis in the diazotisation of *o*-chloroaniline in dilute perchloric acid. Part VI. Comparative discussion of mechanisms of *N*- and *O*-nitrosation with special reference to diazotisation, 58, 65, 77, 88.
- Hughes, E. D., and Ridd, J. H.** Nitrosation, diazotisation, and deamination. Part III. Zeroth-order diazotisation of aromatic amines in carboxylic acid buffers. Part V. Catalysis by anions of strong acids in the diazotisation of aniline and of *o*-chloroaniline in dilute perchloric acid, 70, 82.
- Hughes, E. D.** See also **Blackall, E. L.**, 4366, **Brownstein, S.**, 4354, and **de la Mare, P. B. D.**, 2563.
- Hughes, G. A.** See **Birch, A. J.**, 4774.
- Hughes, G. M. K.** The preparation of the five 2-methyl- $\alpha$ -phenylpentanes, 3703.
- Hull, R.** The synthesis of kinetin and some related heterocyclic compounds, 2746.
- Pyrimidines. Part III. The synthesis and some reactions of 5-ethynylpyrimidines, 3742.
- The condensation of 4 : 5-diaminopyrimidines and sugar lactones, 4069.
- Hunt, J. S.** See **Brooks, S. G.**, 4614, and **Evans, R. M.**, 1529.
- Hunt, S. E., Jones, J. I., Lindsey, A. S., Killoh, D. C., and Turner, H. S.** Mechanism of the Kolbe-Schmitt reaction. Part II. Influence of the alkali metal, 3152.
- Hunt, S. E., and Lindsey, A. S.** Metallation and carboxylation of chrysene, 2227.
- Hunter, R. F., Parken, E. R., and Short, E. M.** The unsaturation and tautomeric mobility of heterocyclic compounds. Part XII. The methylation of 6 : 4'-disubstituted and 4'-substituted 2-anilinothiazoles, 1561.
- Hurlock, R. J.** See **Finar, I. L.**, 3259.
- Husain, A.** See **Hey, D. H.**, 1876.
- Hutchinson, M. H., and Sutton, L. E.** The electric dipole moments of a vinylic series, 4382.
- Hyne, J. B.** See **Everett, D. H.**, 1636.

## I

- Ing, H. R. See Gill, E. W., 4728.  
 Ingleby, R. F. J. See Harley-Mason, J., 3639, 4782.  
 Ingold, Sir C. See Blackall, E. L., 4366, and Hughes, E. D., 58, 65, 77, 88, 4357.  
 Irvine, D. H. The oxidation of the trispyridylsodium(II) ion by the peroxydisulphate ion in aqueous solution, 2166.  
 Irving, H., Shelton, R., and Evans, R. Steric hindrance in analytical chemistry. Part IV. Some sterically hindered complexes, 3540.  
 Irving, R. J., and Magnusson, E. A. Metal carbonyl compounds. Part IV. An infrared spectroscopic investigation of some platinum(II) and palladium(II) carbonyl compounds, 2283.  
 Irwin, R. S. See Bacon, R. G. R., 764, 778.  
 Ishak, M. S. See Tadros, W., 2631, 4210.  
 Israel, G. See Bunton, C. A., 3718.  
 Ittyerah, P. I., and Mann, F. G. Cyclic keto-amines. Part III. The reactions of substituted 1:2:3:4-tetrahydro-4-oxoquinolines and of 1:6-dioxojulolidines, 467.

## J

- Jackman, G. B., Robertson, A., Travers, R. B., and Whalley, W. B. The chemistry of fungi. Part XXXIV. Rotiorin, a metabolite of *Penicillium sclerotiorum* van Beyma, 1825.  
 Jackson, R. A., and Waters, W. A. Properties and reactions of free alkyl radicals in solution. Part XII. Evidence for radical-catalysis of hydrogen transfer, 4632.  
 Jacquignon, P. See Buu-Hoi, Ng. Ph., 738, 4308, and Saint-Ruf, G., 48, 1773.  
 Jaeger, R. H. See Eladon, P., 863.  
 Jain, S. K. See Bruce, I. C. L., 1610.  
 Jámor, B. Problems involved in the polarography of triphenyltetrazolium chloride, 1604.  
 James, A. N. See Dewar, M. J. S., 917, 4265.  
 Jamieson, J. W. M. See Haynes, L. J., 4132.  
 Jeffs, P. W. See Duncanson, L. A., 2929, and Grove, John Frederick, 1236.  
 Jemmett, A. E., Tucker, S. H., and Wellings, I. Synthesis of fluoranthenes. Part XIII. Synthesis of 3-methoxy-fluoranthene, 2794.  
 Jenkins, R. H. See Shoppee, C. W., 1657, 3048.  
 Jewers, K., and McKenna, J. Stereochemical investigations of cyclic bases. Part II. Hofmann degradation of some cyclic quaternary ammonium salts, 2209.  
 Jillot, B. A., and Williams, R. J. P. Further complexes of ferrous dimethylglyoxime, 462.  
 Johncock, P., Kohnstam, G., and Speight, D. The decomposition of ionized cyanates in aqueous solution. Part II. Kinetic studies on the isomerisation of alkylammonium cyanates, 2544.  
 Johnson, A. W., King, T. J., and Turner, J. R. New transformation products of nicotine, 3230.  
 Johnson, A. W., and McCaldin, D. J. The reaction of ninhydrin with cyclic  $\alpha$ -imino-acids, 817.  
 Johnson, A. W., Markham, E., Price, R., and Shaw, K. B. The synthesis of tri- and tetra-alkylpyrroles, 4254.  
 Johnson, A. W. See also Arnold, R. B., 4466, Bullock, E., 1430, Clark, V. M., 3283, Coffey, R. S., 1741, Gramshaw, J. W., 4040, and Hanger, W. G., 496.  
 Johnson, D. H. The synthesis of *N*-alkyl-2-oxocyclopentane-carboxyamides, 1624.  
 Johnson, D. H. See also Edgar, O. B., 3925.  
 Johnson, G. R. A. See Clay, P. G., 2175.  
 Jones, B., and Watkinson, J. G. The alkaline hydrolysis of nuclear-substituted ethyl cinnamates. The cumulative effects of substituents, 4064.  
 Jones, Emrys R. H., and Mann, F. G. The synthesis and structure of 10-phenylarsacidone, 294.  
 The synthesis of 1-arylsarsindolines, 1719.  
 Jones, E. R. H., Meakins, G. D., and Stephenson, J. S. Studies in the steroid group. Part LXXI. The preparation and reactions of 9 $\alpha$ -methylergostane derivatives, 2156.  
 Jones, E. R. H., Skattebøl, L., and Whiting, M. C. Researches on acetylenic compounds. Part LX. The synthesis of three natural polyacetylenic hydrocarbons, 1054.

- Jones, E. R. H. See also Ashworth, P. J., 950, and Bell, I., 1313.  
 Jones, G., and Law, H. D. The reaction of organolithium compounds with some halogeno-acetals, 3631.  
 Jones, G. See also Glover, E. E., 1750, 3021.  
 Jones, I. G. See Bryce, W. A. J., 711, 3558, 3845.  
 Jones, J. B., and Pinder, A. R. Some synthetic investigations in isocoumarin chemistry, 2612.  
 Jones, J. G., Poole, J. B., Tomkinson, J. C., and Williams, R. J. P. The relationship between proton dissociation constants and the stability constants of complex ions, 2001.  
 Jones, J. I. See Hunt, S. E., 3152.  
 Jones, J. K. N., and Nicholson, W. H. The acid-catalysed reversion of L-arabinose and of D-mannose, 27.  
 Jones, J. K. N. See also Ball, D. H., 33, 905.  
 Jones, P. M. S. See Evans, A. G., 4563.  
 Jones, P. P. See Gowenlock, B. G., 535.  
 Jones, R. A., and Katritzky, A. R. Tautomeric pyridines. Part I. Pyrid-2- and -4-thione, 3610.  
 Jones, R. A. See also Katritzky, A. R., 3165.  
 Jones, T. S. G. See Adamson, D. W., 312.  
 Jones, W. J. See Davies, M., 955.

## K

- Kale, M. N., Maccoll, A., and Thomas, P. J. Studies in the pyrolysis of organic bromides. Part XI. The maximally inhibited rate of decomposition of *sec*-butyl bromide, 3016.  
 Kamal, A., and Hahn, G. Chaksine. Part I, 555.  
 Katritzky, A. R. Infrared absorption of heteroaromatic and benzenoid six-membered, monocyclic nuclei. Part V. The correlation of intensities of CC and CN ring stretching frequencies with charge disturbance in the ring, 4162.  
 Katritzky, A. R., and Gardner, J. N. *N*-Oxides and related compounds. Part XIII. Infrared spectra of 4-substituted pyridine 1-oxides, 2192.  
 Infrared studies of heterocyclic compounds. Part I. 4-Substituted pyridines, 2198.  
 Katritzky, A. R., and Hands, A. R. *N*-Oxides and related compounds. Part XIV. Infrared spectra of 2-substituted pyridine 1-oxides, 2195.  
 Infrared studies of heterocyclic compounds. Part II. 2-Monosubstituted pyridines, 2202.  
 Katritzky, A. R., Hands, A. R., and Jones, R. A. Infrared studies of heterocyclic compounds. Part III. 3-Monosubstituted pyridines, 3165.  
 Katritzky, A. R., and Lagowski, J. M. Infrared absorption of heteroaromatic and benzenoid six-membered, monocyclic nuclei. Part IV. Monosubstituted benzenes, 4155.  
 Katritzky, A. R., and Monro, A. M. *N*-Oxides and related compounds. Part VII. Per-acid oxidation of some conjugated pyridines. Part X. The hydrogenation of some pyridine 1-oxides, 150, 1263.  
 Katritzky, A. R., Monro, A. M., and Beard, J. A. T. *N*-Oxides and related compounds. Part XV. Ultraviolet spectra of 2'-(carbamoyl- and ethoxycarbonyl)-vinylpyridines and their 1-oxides, 3721.  
 Katritzky, A. R., Monro, A. M., Beard, J. A. T., Dearnaley, D. P., and Earl, N. J. *N*-Oxides and related compounds. Part XII. Infrared spectra of some carbonyl compounds, 2182.  
 Katritzky, A. R. See also Bax, C. M., 1254, 1258, Hands, A. R., 1754, and Jones, R. A., 3610.  
 Katz, D. See Bergmann, E. D., 3216.  
 Kay, L. J. See Bradley, D. C., 3656.  
 Keenan, J. F. E. See Cavill, G. W. K., 1544.  
 Keene, B. R. T., and Schofield, K. 5-Methyl-3:4-benzofluorene, 1080.  
 The ring-expansion of 3:4-benzofluorenone by hydrazoic acid, 2609.  
 Kellie, A. E. See Holt, S. J., 1217.  
 Kelly, W. See Dalgliesh, C. E., 3726.  
 Kember, N. F. See Head, A. J., 3418.  
 Kempa, R., and Lee, W. H. The dipole moments of some cyclic carbonates, 1936.  
 Kende, A. S. See Barton, D. H. R., 688.

## L

- Kenner, G. W., Reese, C. B., and Todd, Sir A.** Nucleotides. Part XLIII. The use of cyanamide derivatives in pyrophosphate synthesis. Syntheses of  $P^1$ -adenosine-5'  $P^2$ -uridine-5' pyrophosphate and of cytidine-5' pyrophosphate, 546.
- Kenner, G. W., Thomson, P. J., and Turner, J. M.** Peptides. Part VIII. Cyclic peptides derived from leucine and glycine, 4148.
- Kenner, G. W.** See also **Cremlyn, R. J. W.**, 528, and **Hayes, A.**, 3779.
- Kent, P. W.** See **Taylor, N. F.**, 872.
- Kenwright, R., Robinson, P. L., and Trenwith, A. B.** The kinetics of the oxidation of ethane by nitrous oxide, 660.
- Kenyon, J.** See **Davidge, H.**, 4569, and **Davies, Alwyn G.**, 1950.
- Kessler, G.** See **Aspinall, G. O.**, 215.
- Kettle, S. F. A.** See **Emelús, H. J.**, 2444.
- Khalifa, M., and Abo-ouf, A. A.** *p*-Hydrazophenetole, 3740.
- Kidd, D. A. A.** Alkaloids of *Rauwolfia* species. Part IV. *Rauwolfia cambodiana* Pierre, 2432.
- Killoh, D. C.** See **Hunt, S. E.**, 3152.
- Kimber, R. W. L.** See **Badger, G. M.**, 2449, 2453, 2455.
- King, F. E., King, T. J., and Uprichard, J. M.** A proof of the constitution of cassanic acid based on its derivation from vouacapenic acid, 3428.
- King, F. E., King, T. J., and White, J. D.** The stereochemistry of arjunolic acid, 2830.
- King, T. E.** See also **Booth, H.**, 2302, 2688, and **Eglinton, G.**, 1833.
- King, G.** The autoxidation of *trans*-11-oxoheptadec-9-ene-1-carboxylic acid and *trans*-11-oxoheptadec-8-ene-1-carboxylic (12-oxoelaidic) acid, with some observations on the autoxidation of elaidic acid, 1485.
- King, J. F.** See **Barton, D. H. R.**, 4398.
- King, T. J.** See **Gramshaw, J. W.**, 4040, **Johnson, A. W.**, 3230, and **King, F. E.**, 2830, 3428.
- Kinsley, D. A., and Plant, S. G. P.** The synthesis and structure of some pyrroloindoles, 1.
- Kipling, J. J., and Peakall, D. B.** Adsorption by oxide gels from liquid mixtures containing nitrogenous bases, 184.  
Adsorption on oxide gels from binary liquid mixtures: some activity coefficients of materials at surfaces, 3899.
- Kirby, G. W.** See **Clark, V. M.**, 3039.
- Kirk, D. N., and Petrow, V.** Modified steroid hormones. Part IX. The 2- and 4-chloro-derivatives of 17 $\beta$ -propiionoxyandrosta-1:4-dien-3-one and -1:4:6-trien-3-one, 1334.
- Kirkbride, B. J., and Wyatt, P. A. H.** Solubility and heat of solution of 2:4:6-trinitrotoluene in sulphuric acid at 25°, 2100.
- Klyne, W., and Palmer, S.** Urinary steroids and related compounds. Part II. 11:17-Disubstituted androstanes carrying no substituent at position 3, 4545.
- Knobler, Y., and Frankel, M.** Improved preparation of intermediates for the syntheses of  $\alpha$ -aminobutyric acid derivatives having functional  $\gamma$ -substituents, 1629.  
Synthesis of DL-canaline and some of its derivatives, 1632.
- Knobler, Y.** See also **Frankel, M.**, 3733.
- Knox, G. R., and Pauson, P. L.** Ferrocene derivatives. Part VII. Some sulphur derivatives, 692.
- Knox, J. H., Trotman-Dickenson, A. F., and Wells, C. H. J.** Reactions of methylene with isobutene, 2897.
- Kohnstam, G.** See **Johncock, P.**, 2544.
- Koliński, R., Piotrowska, H., and Urbański, T.** The stereochemistry of some 1:5-diazacyclooctane derivatives, 2319.
- Korytnyk, W.** See **Clark-Lewis, J. W.**, 2367.
- Kosanovic, D.** See **Liler, M.**, 1084.
- Kubba, V. P.** See **Dewar, M. J. S.**, 3073, 3076.
- Kubota, T., and Matsuura, T.** The synthesis of ( $\pm$ )-ipomeamarone [( $\pm$ )-ngaione] and its steric isomers, 3667.
- Kunchur, N. R., and Truter, M. R.** A detailed refinement of the crystal and molecular structure of thiourea, 2551.  
The crystal structure of dichlorobisthiourea-zinc, 3478.
- Kurzer, F., and Taylor, S. A.** Thiadiazoles. Part VI. 5-Amino-3-hydroxy-1:2:4-thiadiazole derivatives, 379.
- Kurzer, F., and Tertiuk, W.** Urea and related compounds. Part V. Some sulphenylthioureas, 1571.
- Lacey, R. N., and Ward, W. R.** Derivatives of acetoacetic acid. Part IX. The reaction of diketene with carbodiimides, 2134.
- Lagowski, J. M.** See **Katritzky, A. R.**, 4155.
- Lai, T. F.** See **Driver, J. E.**, 3009, 3219.
- Laird, A. H.** See **Harley-Mason, J.**, 1718.
- La Manna, A.** See **Pratesi, P.**, 2069.
- Lamb, F.** See **Davies, J. S. H.**, 1790.
- Lamy, J., Lavit, D., and Buu-Hoï, Ng. Ph.** Thiophen derivatives. Part XIII. Some reactions of 3-methylthiophen, 4202.
- Land, H., and Waters, W. A.** Stages in oxidations of organic compounds by potassium permanganate. Part IX. Oxidation of allyl alcohol by manganic pyrophosphate, 2129.
- Langley, D. A.** See **Barrer, R. M.**, 3804, 3811, 3817.
- Lapidot, A., and Halmann, M.** *N*-Phosphourethane: synthesis and hydrolytic studies, 1713.
- Lappert, M. F.** Cyclic organic boron compounds. Part I. Preparation, characterisation, and stability of esters of metabolic acid. Part II. Chemical properties of *n*-butyl metaborate, 2790, 3256.
- Lappert, M. F.** See also **Abel, E. W.**, 1451, 2895, **Bellamy, L. J.**, 2412, **Duncanson, L. A.**, 3652, and **Gerrard, W.**, 3648.
- Lavit, D.** See **Buu-Hoï, Ng. Ph.**, 1721, and **Lamy, J.**, 4202.
- Law, H. D.** See **Jones, G.**, 3631.
- Lawley, H. G.** See **Peat, S.**, 724, 729.
- Lawrance, D. R.** See **Butler, K.**, 740.
- Lawrence, K. S.** See **Griffiths, V. S.**, 3998.
- Lawson, A., and Stevens, J. C.** Preparation of cyanamide, 2903.
- Lawton, D., and Powell, H. M.** The structure of molecular compounds. Part XII. Molecular compounds of tri-*c*-thymotide, 2339.
- Lee, W. H., and Millen, D. J.** Electrical conductances of solutions in nitric acid. Part II. Solutions of alkali-metal nitrates. Transport numbers and ionic conductances of  $\text{NH}_4^+$ ,  $\text{K}^+$ ,  $\text{NO}_2^+$ , and  $\text{NO}_3^-$  ions, 2248.
- Lee, W. H.** See also **Kempa, R.**, 1936.
- Lees, E. B., and Saville, B.** The solvolysis of acetic anhydride in 50% aqueous acetone catalysed by nitrite ion, 2262.
- Leese, C. L., and Timmis, G. M.** The synthesis of 4-aminopteridines as potential antimetabolites, 4104.  
Potential anti-purines. Part II. The synthesis of 6- and 9-substituted purines and 8-azapurines, 4107.
- Le Fèvre, C. G., Le Fèvre, R. J. W., and Parkins, G. M.** Molecular polarisability. The specific Kerr constants and polarisations of various polystyrenes dissolved in carbon tetrachloride, 1468.
- Le Fèvre, C. G., Le Fèvre, R. J. W., and Smith, M. R.** Molecular polarisability. The molar Kerr constants and dipole moments of *spiro*- and other derivatives of pentaerythritol, 16.
- Le Fèvre, C. G.** See also **Armstrong, R. S.**, 1474.
- Le Fèvre, R. J. W., and Rao, B. P.** Molecular polarisability. The anisotropies of seven monosubstituted benzenes and of nitromethane as solutes in carbon tetrachloride, 1465.
- Le Fèvre, R. J. W.** See also **Armstrong, R. S.**, 1474, **Aroney, M.**, 3002, and **Le Fèvre, C. G.**, 16, 1468.
- Lennard, A.** See **Bunton, C. A.**, 4761.
- Lewis, M. A.** See **Belcher, R.**, 2390.
- Letters, R.** See **Baddiley, J.**, 1000.
- Levisalles, J. E. D.** See **Barton, D. H. R.**, 4518.
- Lewis, G. E.** See **Badger, G. M.**, 2449.
- Lewis, J.** See **Griffith, W. P.**, 3993.
- Lewis, J. R.** See **Crowder, J. R.**, 2142.
- Lewis, J. W., and Polgar, N.** Experiments relating to phthiocerol. Part II. Synthesis of (+)-6-methoxy-6-methyl-nonanoic acid, 102.
- Lewis, J. W.** See also **Drayson, F. K.**, 430.
- Liler, M., and Kosanovic, D.** Conductometric investigation of the rate of hydrolysis of nitriles in 100% sulphuric acid, 1084.
- Lindsay, W. S.** See **Bacon, R. G. R.**, 1375, 1382.
- Lindsey, A. S.** Hydrogenation of 4-hydroxyisophthalic acid, 3222.
- Lindsey, A. S.** See also **Hunt, S. E.**, 2227, 3152.



- Linnell, W. H., and Smith, H. J. Certain reactions of 4-methoxydiphenyl, 908.
- Linstead, R. P. See Ficken, G. E., 3879, and Golden, J. H., 1725, 1732.
- Lippert, E. L., and Truter, M. R. Preparation and some crystallographic properties of triamminoacetylenemagnesium carbide  $MgC_2 \cdot C_2H_2 \cdot 3NH_3$ , 2636.
- Livingston, D. See Dick, G. P. G., 3730.
- Livingstone, R., Miller, D., and Watson, R. B. Preparation of some naphthopyrans, 2422.
- Livingstone, R. See also Emmott, P., 4629.
- Livingstone, S. E. Metallic complexes of dimethyl-*o*-methylthiophenylarsine. Part I. Complexes of nickel and palladium, 4222.
- Livingstone, S. E. See also Gatehouse, B. M., 3137, and Harris, C. M., 3697.
- Llewellyn, D. R. See Bunton, C. A., 403, 3574, 3588, 4747, 4751, 4761.
- Lloyd, D., and Marshall, D. R. Diazepines. Part II. Some bromination experiments on dihydrodiazepines, 118.
- Lloyd, G. See Eglinton, G., 1833.
- Loc, T. B. See Buu-Hoi, Ng. Ph., 738.
- Loekhart, J. C. See Bonner, T. G., 3852, 3858.
- Loder, J. W. See Eglinton, G., 1833.
- Loewenthal, H. J. E. Syntheses in the colchicine series. Part II. Some tricyclic models, 1367.
- Logan, W. R. See Allison, W. R., 4311, and Blair, J., 304.
- Lombardo, G. See Sacconi, L., 848.
- Long, A. G. See Brooks, S. G., 4614, and Evans, R. M., 1529.
- Long, F. A., and Watson, D. Deuterium isotope and solvent effects in the base-catalyzed keto-enol transformation of methylacetylacetone (3-methylpentane-2 : 4-dione), 2019.
- Long, R. F. See Morrison, A. L., 211.
- Longworth, W. R., Plesch, P. H., and Rigbi, M. The interaction of metal chlorides with organic chlorides. Part I. Freezing-point phase diagrams of titanium tetrachloride with some alkyl chlorides, 451.
- Loudon, J. D. See Galt, R. H. B., 1588.
- Lowe, G., Torto, F. G., and Weedon, B. C. L. Studies in the polyene series. Part LIII. The synthesis of pseudocumyl analogues of  $\beta$ -ionone and vitamin A acid, 1855.
- Lucken, E. A. C. See Dewar, M. J. S., 2653.
- Lyle, S. J. See Belcher, R., 3243, 4454.
- Lynch, B. M., Robins, R. K., and Cheng, C. C. Potential purine antagonists. Part X. Purines and pyrazolo-pyrimidines: comparisons of ionisation, 2973.
- Lynch, M. F. See Gowan, J. E., 2495.
- Lyons, L. E. First-order calculation of factor group splittings in the electronic spectra of durene, ovalene, and phthalocyanine crystals, 1347.
- Lythgoe, B. See Harrison, I. T., 837, 843.
- M
- Mabrouk, L. See Cocker, W., 2899.
- McCaldin, D. J. See Johnson, A. W., 817.
- McCarthy, B. J., and Hinshelwood, Sir C. The action of two antibacterial agents on the growth of *Bact. lactis aerogenes*, 2269.
- McCloskey, P. The preparation of ( $\pm$ )- $\alpha$ - and ( $\pm$ )- $\beta$ -grisan-3 : 4'-diol and the resolution of the  $\alpha$ -isomer, 4732.
- McCloskey, P. See also Abbot, M. T. J., 1699.
- Maccoll, A. Gas-phase eliminations. Part I. The unimolecular gas-phase pyrolysis of some esters and analogous compounds, 3398.
- Maccoll, A. See also Kale, M. N., 3016.
- McConnell, J. D. M. Heats of adsorption of oxygen on solid solutions of uranium dioxide in thorium dioxide at  $-183^\circ$ , 947.
- McDougall, A. O. See Bell, R. P., 1697.
- McDowall, M. A. See Corbett, R. E., 3715.
- MacEwan, T. H. See Cameron, A., 1224.
- McFadyen, J. S. See Wragg, A. H., 3603.
- McGookin, A. See Cavill, G. W. K., 1544.
- McGowan, J. C., and Ford, B. M. Polymerizations of ethylene in the presence of titanium tetrachloride and certain metal alkyls, 1149.
- McGregor, W. R. See Fowles, G. W. A., 136.
- McHale, D., Mamalis, P., Green, J., and Marcinkiewicz, S. Tocopherols. Part I. Synthesis of 7-methyltocol ( $\eta$ -tocopherol), 1600.
- McHale, D. See also Mamalis, P., 1850.
- Machell, G., and Richards, G. N. The alkaline degradation of polysaccharides. Part III. Action of sodium hydroxide on amylose, 1199.
- Mackay, D. See Ford, M. C., 1290, 1294.
- McKay, J. E. See Aspinall, G. O., 1059.
- McKenna, J., and Slinger, J. B. Stereochemical investigations of cyclic bases. Part III. An example of Wagner-Meerwein elimination with a quaternary ammonium salt, 2759.
- McKenna, J. See also Jewers, K., 2209.
- Mackenzie, K. See Crombie, L., 4417.
- McLennan, G. See Reid, D. H., 1110.
- MacMillan, J. See Cross, B. E., 2520.
- McMurry, T. B. H. See Cocker, W., 2899.
- McOmie, J. F. W., and Tute, M. S. A new synthesis of clavatul and of sorbicillin, 3226.
- McOmie, J. F. W. See also Baker, W., 1007, 2658, 2666, 3594.
- McQuillin, F. J. See Howe, R., 1194, 1513.
- Madroñero, R. See Bell, I., 3195.
- Magnusson, E. A. See Irving, R. J., 2283.
- Maguire, M. H., Ralph, R. K., and Shaw, G. Purines, pyrimidines, and glyoxalines. Part X. Synthesis of uracil-6-phosphonic acid, an analogue of orotic acid, 2299.
- Maguire, M. H. See also Shaw, G., 2294.
- Mair, J. A. See Brown, D. H., 2597.
- Makar, S. M., Bassilios, H. F., and Salem, A. Y. Reaction of 1- and 2-methylnaphthalene with maleic anhydride, 2437.
- Malatesta, L., and Cariello, C. Platinum(0) compounds with triarylphosphines and analogous ligands, 2323.
- Malkin, T. See Baylis, R. L., 2962.
- Mamalis, P., McHale, D., Green, J., and Marcinkiewicz, S. Tocopherols. Part II. Synthesis of tocol, 1850.
- Mamalis, P. See also Doyle, F. P., 4605, Holland, D. O., 4584, 4588, 4596, 4601, and McHale, D., 1600.
- Mann, F. G., Millar, I. T., and Watson, H. R. The synthesis of 2-phenylisosphindoline, 2516.
- Mann, F. G., and Watson, H. R. The constitution of complex metallic salts. Part XVIII. The chelated metallic derivatives of *NNN'N'*-tetramethylethylenediamine and of 1 : 4-dimethylpiperazine, 2772.
- Mann, F. G., and Wilcox, T. J. The synthesis of indolo-(2' : 3'-1 : 2)- and indolo-(3' : 2'-1 : 2)-carbazole, 1525.
- Mann, F. G. See also Braunholtz, J. T., 2780, 3368, 3377, Henney, H., 3838, Hinton, R. C., 4704, Hitchcock, C. H. S., 2081, Ittyerah, P. I., 467, and Jones, Emrys R. H., 294, 1719.
- Mann, R. S. See Bond, G. C., 4738.
- Manners, D. J. See Anderson, F. B., 3233, Bryce, W. A. J., 711, Cowie, J. M. G., 697, and Eddy, B. P., 2827.
- Mansfield, G. H. See Ashworth, P. J., 950.
- Manson, D. See Boyland, E., 532.
- Manunapichu, K. See Dean, F. M., 4551.
- Marcinkiewicz, S. See McHale, D., 1600, and Mamalis, P., 1850.
- Marei, A. A., and Raphael, R. A. The synthesis of amino-acids from furfurylamine, 2624.
- Maričić, S., and Smith, J. A. S. A nuclear magnetic resonance study of the hydrates of molybdenum trioxide, 886.
- Markes, J. H. H. See Crofts, P. C., 4250.
- Markham, E. See Bullock, E., 1430, and Johnson, A. W., 4254.
- Markušić, B. See Grdenić, D., 2434.
- Marshall, D. R. See Lloyd, D., 118.
- Marshall, J. R. See Eglinton, G., 1833.
- Martin, B., and Waind, G. M. 2 : 2'-Dipyridyl complexes of cobalt, rhodium, and iridium. Part I. Trivalent rhodium and iridium complexes, 4284.
- Martin, P. E., and White, A. G. The heat of solution of plutonium trichloride, 2490.
- Martin, R. L., and Whitley, A. Magnetic studies with copper(II) salts. Part III. The constitution of copper(II) *n*-alkanoates in solution, 1394.
- Martin-Smith, M. Direct 5-hydroxylation of  $\beta$ 3-acetoxy-androstane-11 : 17-dione, 523.

- Mason, R. F.** See **Davidge, H.**, 4569.
- Mason, S. F.** The tautomerism of *N*-heteroaromatic hydroxy-compounds. Part III. Ionisation constants, 674.  
The ionic dissociation and reactivity of some arylmethyl chlorides, 808.  
The infrared spectra of *N*-heteroaromatic systems. Part I. The porphins, 976.  
The frequencies and intensities of the N-H stretching vibrations in primary amines, 3619.  
Reactivities of aromatic hydrocarbons. Part I. Bromination, 4329.
- Massy-Beresford, P. N.** See **Callow, R. K.**, 2645.
- Massy-Westrop, R. A.** See **Birch, A. J.**, 360, 365, 369.
- Mather, J.** See **Cremlyn, R. J. W.**, 528.
- Mathieson, A. R.** The relationship between the excess heat and volume of mixing, 4444.
- Mathieson, A. R., and Porter, M. R.** The effect of urea on the streaming birefringence and viscosity of sodium deoxyribonucleate, 1298.  
Fractional precipitation of nucleic acids by ethanol, 1301.
- Mathison, A. R.** See also **Brown, C. P.**, 3445, 3507.
- Matsuura, T.** See **Kubota, T.**, 3667.
- Mattok, G. L., and Phillips, G. O.** The reactivity of *O*-acylglycosyl halides. Part VI. Steric effects of neighbouring groups, 130.
- Mattok, G. L.** See also **Phillips, G. O.**, 3522.
- Mauger, A. B.** See **Arnold, R. B.**, 4466.
- Mayne, J. E. O.** See **Hancock, P.**, 4167, 4172.
- Meakins, G. D., and Stephenson, J. S.** Preparation of 3 $\beta$ -hydroxyergostan-7-one, 526.
- Meakins, G. D.** See also **Henbest, H. B.**, 2633, **Hill, R. D.**, 760, and **Jones, E. R. H.**, 2156.
- Mehta, M. D.** See **Doyle, F. P.**, 4458.
- Meier, W. M.** See **Barrer, R. M.**, 299.
- Melhuish, W. H., and Metcalf, W. S.** The quenching of the fluorescence of anthracene, 480.
- Menzies, I. A., and Owen, L. W.** The solubility of arsenious oxide in aqueous hydrochloric acid at 25°, 2064.
- Menzies, R. C.** See **Chatterjee, A. K.**, 1706.
- Merriman, P. C.** See **de la Mare, P. B. D.**, 2563.
- Mester, L., and Móczár, E.** Preparation of the formazan from *D*-galacturonic acid, 1699.
- Metcalf, W. S.** See **Melhuish, W. H.**, 480.
- Mhala, M. M.** See **Bunton, C. A.**, 3718.
- Michalski, J.** See **Borecki, C.**, 4081.
- Michelson, A. M.** Synthesis of nucleoside-5' pyrophosphates, 1957.  
An alternative synthesis of adenosine-2'(3') : 5' diphosphate, 2055.
- Middleton, S.** See **Davies, W.**, 822.
- Millar, I. T., Mortimer, C. T., and Springall, H. D.** The dipole moment of 5 : 5'-*spirobis*-1 : 3-dioxan: a correction, 536.
- Millar, I. T.** See also **Heaney, H.**, 3838, **Hinton, R. C.**, 4704, and **Mann, F. G.**, 2516.
- Millen, D. J., and Sinnott, K. M.** The microwave spectrum, structure, and dipole moment of nitril chloride, 350.
- Millen, D. J.** See also **Lee, W. H.**, 2248.
- Miller, D.** See **Livingstone, R.**, 2422.
- Miller, R. P.** See **Head, A. J.**, 3418.
- Milligan, B.** See **Birch, A. J.**, 4471.
- Millin, D. J., and Polgar, N.** Synthesis of mycolipenic acid, 1902.
- Millward, B. B., and Whiting, M. C.** Researches on polyenes. Part VI. The synthesis of *trans*-1-2'-phenanthrylbuta-1 : 3-diene, 903.
- Minkoff, G. J.** See **Collis, M. J.**, 438.
- Mitchell, W. J.** See **Fischer, A.**, 1426.
- Mitsuno, M.** See **Clark-Lewis, J. W.**, 1724.
- Mizuno, Y., and Simamura, O.** The effect of the nitro-group on the reactivity of the diphenyl nucleus in nitration. Competitive nitration of nitrodiphenyls and benzene by nitric acid in acetic anhydride, 3875.
- Móczár, E.** See **Mester, L.**, 1699.
- Moelwyn-Hughes, E. A.** See **Fells, I.**, 1326.
- Mohammed, Y. S.** See **El Khadem, H.**, 3320.
- Monro, A. M.** See **Katritzky, A. R.**, 150, 1263, 2182, 3721.
- Montgomery, H. A. C., and Turnbull, J. H.** Phosphoramidic halides: phosphorylating agents derived from morpholine, 1963.
- Moodie, R. B.** See **Davies, Alwyn G.**, 2372.
- Moody, G. J.** See **Phillips, G. O.**, 3522, 3534.
- Mooney, B.** See **Brooks, S. G.**, 4614, and **Evans, R. M.**, 1529.
- Moore, C. G., and Porter, M.** Some reactions of 1 : 2-epithio-octane, 2062.  
An exchange reaction of arenesulphenyl chlorides with organic disulphides, 2890.
- Moore, C. G.** See also **Bateman, L.**, 2838, 2846, 2866.
- Morgan, E. D., and Polgar, N.** Studies in the synthesis of mycolic acid, 4077.
- Morgan, E. N.** See **Campbell, A.**, 1145, 1711, and **Fisher, N.**, 1411.
- Morgan, K. J.** The alkylation of mercaptobenzothiazole, 854.
- Moritz, A. G.** See **Badger, G. M.**, 2449, 3437.
- Morris, D. F. C.** The possible instability of solid anhydrous argentic nitrate, 2634.
- Morrison, A., and Mulholland, T. P. C.** Gibberellic acid. Part VIII. Synthesis of methyl ( $\pm$ )- $\alpha$ - and - $\beta$ -3 : 5-dimethoxycarbonyl-6-(2-methoxycarbonyl-6-methylphenyl)-3-methylhexanoate. Part X. 7-Hydroxy-1-methylfluorene, 2536, 2702.
- Morrison, A. L., and Long, R. F.** The photolysis of pyridoxal phosphate, 211.
- Morrison, G. A.** See **Barton, D. H. R.**, 4393.
- Mortimer, C. T.** See **Cass, R. C.**, 958, 1406, 2595, **Fowell, P. A.**, 3734, and **Millar, I. T.**, 536.
- Moussa, A. A., Embaby, H. K., and Sammour, H. M.** Depolarisation by oxygen and by hydrogen peroxide at graphite cathodes in alkaline solutions, 2481.
- Moussa, A. A., Sammour, H. M., and Ghaly, H. A.** Differential capacity measurements in aqueous and methanolic ammonium chloride, ammonium fluoride, and hydrochloric acid in relation to anion adsorption, 1269.
- Moussa, A. A.** See also **Embaby, H. K.**, 4027, and **Sammour, H. M.**, 1762.
- Moye, C. J.** See **Birch, A. J.**, 2622.
- Mukherji, S. M., Sharma, R. K., and Vig, O. P.** Preparation of ethyl 1-methyl-2 : 4-dioxocyclohexane-1-carboxylate, 4770.
- Mulholland, T. P. C.** Gibberellic acid. Part IX. The structure of *allogibberic* acid, 2693.
- Mulholland, T. P. C.** See also **Cross, B. E.**, 2520, **Grove, John Frederick**, 1236, and **Morrison, A.**, 2536, 2702.
- Mulley, B. A.** Non-ionic surface-active agents. Part II. The synthesis of some polyoxyethylene glycol monohexyl ethers, 2065.
- Multani, R. K.** See **Bradley, D. C.**, 126, 4153, 4647.
- Murray, J.** See **Dickinson, F.**, 1441.
- Musierowicz, S.** See **Borecki, C.**, 4081.

## N

- Nagarajan, K.** See **Gopinath, K. W.**, 504, and **Govindachari, T. R.**, 912, 983.
- Nair, V. S. K., and Nancollas, G. H.** Thermodynamics of ion association. Part IV. Magnesium and zinc sulphates. Part V. Dissociation of the bisulphate ion, 3706, 4144.
- Nancollas, G. H.** See **Nair, V. S. K.**, 3706, 4144.
- Nandi, U. S.** See **Saha, N. G.**, 7, 12.
- Napier, I. M.** See **Badger, G. M.**, 2449.
- Narayanan, C. R.** See **Barton, D. H. R.**, 963.
- Nasipuri, D.** Studies in polycyclic systems. Part I. A new synthesis of picene. Part III. A synthesis of 1 : 2 : 9-trimethylpicene, 2618, 4192.
- Nasipuri, D., and Chaudhuri, A. C.** Synthetic studies in the diterpene series. Part I. Synthesis of some degradation products of methyl totaryl ether, 2579.  
Studies in polycyclic systems. Part IV. Synthesis of some degradation products of dextropimaric acid and related diterpenoids, 4299.
- Nasipuri, D., Chaudhuri, A. C., and Roy, J.** Studies in polycyclic systems. Part II. Synthesis of some chrysene and hydrochrysene derivatives, 2734.
- Naylor, P., Ramage, G. R., and Schofield, F.** 7-Hydroxy-chroman and its 6-acetyl compound, 1190.
- Newbold, G. T.** See **Allison, W. R.**, 4311, and **Blair, J.**, 304.
- Nicholls, D.** See **Fowles, G. W. A.**, 1687.

- Nicholson, D. C. See Gray, C. H., 3085.  
 Nicholson, J. S. See Bartram, C. A., 2903.  
 Nicholson, W. H. See Jones, J. K. N., 27.  
 Nixon, J. F. See Fairbrother, F., 3224.  
 Norbury, J. M. See Simpson, J., 3323.  
 Norman, A. See Doyle, F. P., 4605.  
 Norman, R. O. C., Thompson, G. A., and Waters, W. A. The reactions of pyrene with free radicals and with sodium, 175.  
 Norman, R. O. C., and Waters, W. A. The action of the phenyl radical on anthracene and *meso*-substituted anthracenes, 167.  
 Norman, R. O. C. See also Beckwith, A. L. J., 171.  
 Nosseir, M. H. See Elkaschef, M. A., 2893.  
 Nunn, E. K. See Friend, J. A., 1567.  
 Nutten, A. J. See Belcher, R., 2336.  
 Nyholm, R. S., and Sutton, G. J. Studies in co-ordination chemistry. Part XV. Complexes of chromium with a di(tertiary arsine). Part XVI. Complexes of bivalent and trivalent manganese with a di(tertiary arsine). Part XVII. Complexes of ruthenium with a di(tertiary arsine). Part XVIII. Complexes of osmium with a di(tertiary arsine), 560, 564, 567, 572.  
 Nyholm, R. S. See also Dalziel, J., 4012, Figgis, B. N., 4190, and Gatehouse, B. M., 3137.
- O
- Oakes, V., and Rydon, H. N. Polyanaphthalenes. Part V. Some 2:4-disubstituted 1:5-naphthyridines. Part VI. Some derivatives of 4:10-dihydro-4-oxo-1:10-diazanaphthalene, 204, 209.  
 Oates, W. J. See Beer, R. J. S., 4693.  
 O'Connor, N. S. See Gowan, J. E., 2495.  
 Ogden, C. P. See Orville-Thomas, W. J., 1047.  
 Ogilvie, G. S. See Fischer, A., 1426.  
 Ogle, J. R. See Elmore, D. T., 1141.  
 Oldham, K. G. See Bunton, C. A., 3574, 3588.  
 Olive, L. W. See Baker, W., 1507.  
 O'Meara, D., and Richards, G. N. The alkaline degradation of polysaccharides. Part IV. Monosaccharide analogues of periodate oxycellulose. Part V. Periodate oxycellulose, 1204, 4504.  
 Onyszczuk, M. See Ebsworth, E. A. V., 1453, and Emelús, H. J., 604.  
 Orgel, L. E. Stereochemistry of metals of the B sub-groups. Part I. Ions with filled *d*-electron shells, 4186.  
 Orgel, L. E. See also Chatt, J., 486.  
 Orr, J. C. See Barton, D. H. R., 2239.  
 Orville-Thomas, W. J., Parsons, A. E., and Ogden, C. P., NH<sub>2</sub>-Stretching frequencies in primary amines, 1047.  
 Osborne, G. O. See Baddiley, J., 1651, 3606.  
 Osgerby, J. M., and Pauson, P. L. Ferrocene derivatives. Part VI. DL-Ferrocenylalanine, 656.  
 Osgerby, J. M. See also Broadhead, G. D., 650.  
 Ostle, D. M. See Wragg, A. H., 4057.  
 O'Sullivan, D. G. See Holt, S. J., 1217.  
 O'Sullivan, J. F. See Barry, V. C., 859, 4495.  
 Ottewill, R. H. See Few, A. V., 1712.  
 Oubridge, J. V. See Flowers, R. H., 667.  
 Ovenall, D. W. See Gowenlock, B. G., 535.  
 Owen, L. N. See Ali, M. E., 1066, 1074, 2111, 2119, and Benn, M. H., 2800.  
 Owen, L. W. See Menzies, I. A., 2064.  
 Owen, O. See Peat, S., 586.  
 Oxley, P. See Bartram, C. A., 2903.
- P
- Packer, J. See Fischer, A., 1426.  
 Packer, J. E. See Fischer, A., 1426.  
 Page, F. M., and Purnell, J. H. Physical properties of the lower dialkyl hydrogen phosphites, 621.  
 Pai, B. R. See Govindachari, T. R., 1715.  
 Painter, T. J. See Henderson, M. E., 3519.  
 Paiss, Y., and Stein, G. The mechanism of the reduction of some nicotinamide derivatives, 2905.  
 Palit, S. R. See Saha, N. G., 7, 12.  
 Palmer, S. See Klyne, W., 4545.  
 Paoletti, P. See Sacconi, L., 848, 4257.  
 Parihar, D. B. See Brown, D. M., 3028, 3035, 4242.  
 Parken, E. R. See Hunter, R. F., 1561.  
 Parker, W., Raphael, R. A., and Wilkinson, D. I. The structure and synthesis of bullatenone, 3871.  
 Parkins, G. M. See Le Fèvre, C. G., 1468.  
 Parreira, H. C. See Few, A. V., 1712.  
 Parrick, J. See Booth, H., 2302.  
 Parsons, A. E. See Orville-Thomas, W. J., 1047.  
 Parsons, A. M. See Philpott, P. G., 3018.  
 Parthasarathy, P. C. See Govindachari, T. R., 912.  
 Partridge, M. W., and Turner, H. A. Cyclic amidines. Part VII. Preparation of benzimidazoles from *N'*-aryl-*N*-hydroxyamidines, 2086.  
 Partridge, M. W. See also Hardman, R., 614.  
 Pascual, J. See Castañer, J., 3962.  
 Pass, G. See Holliday, A. K., 3485.  
 Patai, S., and Dayagi, S. The reaction of 2-keto-carboxylic acids and esters with aromatic compounds in sulphuric acid, 3058.  
 Patel, D. See Ellis, B., 800.  
 Paton, A. C., Spring, F. S., and Stevenson, R. Triterpenoids. Part LV. The stereochemistry of alcohols derived from glutinone (almusenone), 2640.  
 Pausacker, K. H. See Dyall, L. K., 3950.  
 Pauson, P. L. See Broadhead, G. D., 650, Hallam, B. F., 642, 646, Knox, G. R., 692, and Osgerby, J. M., 656.  
 Payne, D. S. See Harris, G. S., 3732.  
 Peacock, R. D., Welch, A. J. E., and Wilson, L. F. Three iodides of rhenium, 2901.  
 Peacock, R. D. See also Dalziel, J., 4012, and Hargreaves, G. B., 2170, 3776, 4390.  
 Peacock, A. R. See Cox, R. A., 4117.  
 Peak, D. A. See Bartram, C. A., 2903.  
 Peakall, D. B. See Kipling, J. J., 184, 3899.  
 Pearce, M. L. See Griffiths, V. S., 1557, 3998.  
 Pearson, J. L. See Doyle, F. P., 4458.  
 Pearson, R. B. See Blackall, E. L., 4366, Bunton, C. A., 4761, and Hughes, E. D., 4357.  
 Peat, S., Turvey, J. R., and Evans, J. M. Polysaccharides of baker's yeast. Part III. The presence of 1:6-linkages in yeast glucan, 3868.  
 Peat, S., Whelan, W. J., and Edwards, T. E. Polysaccharides of baker's yeast. Part II. Yeast glucan, 3862.  
 Peat, S., Whelan, W. J., Edwards, T. E., and Owen, O. Quantitative aspects of the acid reversion of glucose, 586.  
 Peat, S., Whelan, W. J., and Lawley, H. G. The structure of laminarin. Part I. The main polymeric linkage. Part II. The minor structural features, 724, 729.  
 Peover, M. E. See Given, P. H., 2674.  
 Percival, E. See Gardiner, J. G., 1414, and Hirst, E. L., 1942.  
 Periam, J. D. See Barker, C. C., 1077.  
 Perrin, D. D. Complex formation between ferric ion and glycine, 3120.  
 The stability of complexes of ferric ion and amino-acids, 3125.  
 Peters, A. T. See Peters, A. T., jun., 3497, and Wade, D. A., 3504.  
 Peters, A. T., jun., and Peters, A. T. New intermediates and dyes. Part VI. The chemistry of 2-*n*-butylantraquinone. Derived dyes for synthetic fibres, 3497.  
 Peters, D. Structure and properties of mesmeric systems. Part I. Resonance energies. Part II. The chemical reactivity of alternant and non-alternant hydrocarbons. Part III. Charge distribution and related properties in non-alternant hydrocarbons. Part IV. The chemical reactivity of non-alternant aza-heterocycles. Part V. The effect of substituents on the chemical reactivity of the (4 $\gamma$  + 2) non-alternant hydrocarbons, 1023, 1028, 1039, 3763, 3771.  
 Petrow, V., Stephenson, O., Thomas, A. J., and Wild, A. M. Preparation and hydrolysis of some derivatives of 1:3:4-thiadiazole, 1508.  
 Petrow, V. See also Burn, D., 795, Ellis, B., 800, 3748, and Kirk, D. N., 1334.  
 Pettit, R. See Dewar, M. J. S., 55, 3073, 3076, and Ganellin, C. R., 576.

- Philbin, E. M. See Devitt, P. F., 510, and Gowan, J. E., 2495.  
 Phillips, G. H. See Elks, J., 4001, and Evans, R. M., 1529.  
 Phillips, G. O., and Moody, G. J. Radiation chemistry of carbohydrates. Part II. Irradiation of aqueous solutions of dextran with gamma radiation, 3534.  
 Phillips, G. O., Moody, G. J., and Mattok, G. L. Radiation chemistry of carbohydrates. Part I. Action of ionising radiation on aqueous solutions of D-glucose, 3522.  
 Phillips, G. O. See also Mattok, G. L., 130.  
 Phillips, J. N. Strength of chloro-substituted phenoxyacetic and related phosphorus-containing acids, 4271.  
 Philpott, P. G., and Parsons, A. M. ( $\pm$ )-*allo*Yohimbone and ( $\pm$ )-3-*epiallo*yohimbone, 3018.  
 Pichat, L. See de la Mare, P. B. D., 2563.  
 Pinchas, S. See Halmann, M., 1703, 3264.  
 Pinder, A. R. See Clarke, C. B., 1967, and Jones, J. B., 2612.  
 Pinkard, R. M. See Barker, S. A., 3232.  
 Piotrowska, H. See Koliński, R., 2319.  
 Plant, S. G. P. See Kinsley, D. A., 1.  
 Plesch, P. H. See Brackman, D. S., 3563, and Longworth, W. R., 451.  
 Pocker, Y. The ionisation of triphenylmethyl chloride in nitromethane, 240.  
 Sulphide ratio in the decomposition of ethyldimethylsulphonium bromide, 525.  
 Ethoxide-hydroxide-ion competition in bimolecular nucleophilic substitutions in alkaline aqueous ethyl alcohol, 915.  
 Intermediates in allylic rearrangements. Part I. The anionotropy of 1- and 3-phenylallyl *p*-nitrobenzoate. Part II. Rates and mechanism of exchange and rearrangement in 1- and 3-phenylallyl benzoate, 4318, 4323.  
 Pocker, Y. See also Bunton, C. A., 403.  
 Polgar, N. See Drayton, F. K., 430, Lewis, J. W., 102, Millin, D. J., 1902, and Morgan, E. D., 4077.  
 Pollock, J. McC. See Bacon, R. G. R., 764.  
 Poole, J. B. See Jones, J. G., 2001.  
 Porter, G. B., and Baughan, E. C. Antimony halides as solvents. Part I. Cryoscopic data in antimony trichloride, 744.  
 Porter, M. See Bateman, L., 2838, 2866, and Moore, C. G., 2062, 2890.  
 Porter, M. R. See Mathieson, A. R., 1298, 1301.  
 Potter, M. D. See Austin, W. C., 1489.  
 Powell, H. M., and Wait, E. An addition compound of tetraethylammonium bromide and succinimide, 1866.  
 Powell, H. M. See also Lawton, D., 2339, Rayner, J. H., 3412, and Wait, E., 1872.  
 Poynton, M. See Dry, L. J., 4701.  
 Prasad, K. B., and Swan, G. A. The constitution of yohimbine and related alkaloids. Part X. The synthesis of some 12*H*-indolo[2:3-*a*]pyridocolinium salts, including flavocoryline and flavopereirine. Part XII. Some unsuccessful synthetic approaches to yohimbine and alstonine, 2024, 2045.  
 Pratesi, P., La Manna, A., Campiglio, A., and Ghizlandi, V. The configuration of adrenaline and of its *p*-hydroxyphenyl analogue, 2069.  
 Pratt, L. See Green, M. L. H., 3916.  
 Pratt, M. W. T. See Gray, P., 3403.  
 Pratt, N. H. See Bunton, C. A., 4751.  
 Prevedorou, C. C. A. See Bradley, D. C., 1010.  
 Price, R. See Johnson, A. W., 4254.  
 Price, S. J. W., and Trotman-Dickenson, A. F. Kinetics of the reaction of methyl radicals with toluene, 4205.  
 Pride, E. See Birch, A. J., 4576, 4688.  
 Pritchard, J. G. See Bunton, C. A., 4761.  
 Pryke, J. M. See Badger, G. M., 1179.  
 Pullin, A. D. E. See Bacon, R. G. R., 764.  
 Purnell, J. H. See Page, F. M., 621.  
 Purushothaman, K. K. See Gopinath, K. W., 504.  
 Pyszora, H. See Duncanson, L. A., 3652.
- Q
- Quartey, J. A. K. Synthesis of 2 $\alpha$ -methylcholest-4-en-3-one, 1710.  
 Quincey, P. G. See Cass, R. C., 958, 2595.
- R
- Rajappa, S. See Govindachari, T. R., 1306.  
 Ralph, R. K. See Maguire, M. H., 2299, and Shaw, G., 2294.  
 Ramadas, C. V. See Govindachari, T. R., 983.  
 Ramage, G. R. See Clark, J., 2821, and Naylor, P., 1190.  
 Ramsden, E. N. See Bell, R. P., 161.  
 Ramstad, E. See Aspinall, G. O., 593.  
 Randall, E. W., and Sutton, L. E. The electric dipole moments of 1:2-5:6-dibenzocyclooctadiene and *o*-xylene, 1266.  
 Rao, B. P. See Le Fèvre, R. J. W., 1465.  
 Rao, G. S. See Emeléus, H. J., 4245.  
 Raphael, R. A. See Ayres, D. C., 1779, Dobson, N. A., 3642, Marei, A. A., 2624, and Parker, W., 3871.  
 Rasburn, J. W. See Baddeley, G., 3168.  
 Rashbrook, R. B. See Aspinall, G. O., 215.  
 Rathbone, P. See Gray, P., 3550.  
 Rawlinson, D. J. See Bell, R. P., 4387.  
 Rayner, J. H., and Powell, H. M. Crystal structure of a hydrated nickel cyanide ammoniate, 3412.  
 Reay, J. S. S. See Barrer, R. M., 3824.  
 Reed, R. I. Electron impact and molecular dissociation. Part I. Some steroids and triterpenoids, 3432.  
 Reese, C. B. The tautomerism and steric properties of 9-substituted phenanthridines, 895.  
 The reaction of 9-chlorophenanthridine and related compounds with tertiary amines, 899.  
 Reese, C. B. See also Brown, D. M., 3035, and Kenner, G. W., 546.  
 Reeves, C. G. See Bottomley, G. A., 3794.  
 Reid, D. H., Stafford, W. H., and Stafford, W. L. The azulene series. Part IV. The synthesis and properties of 3-acylguaiazulenes, 1118.  
 Reid, D. H., Stafford, W. H., Stafford, W. L., McLennan, G., and Voigt, A. The azulene series. Part III. The synthesis and properties of 3-benzylideneguaiazulonium chloride, 1110.  
 Reid, D. H., Stafford, W. H., and Ward, J. P. The azulene series. Part II. The synthesis and properties of alkoxyazulenes, 1100.  
 Reid, K. F. See Campbell, N., 4743.  
 Rembaum, A. See Buckley, R. P., 3442.  
 Remington, T. A. See Bottomley, G. A., 3800.  
 Richards, A., and Stevens, T. S. Synthesis and properties of dehydropyridocolinium salts, 3067.  
 Richards, G. N. See Machell, G., 1199, and O'Meara, D., 1204, 4504.  
 Richards, R. E. See Connor, T. M., 289.  
 Richardson, P. J. See Hargreaves, M. K., 3111.  
 Rickards, R. W. See Birch, A. J., 360.  
 Ridd, J. H. See Gillespie, R. J., 3228, and Hughes, E. D., 58, 65, 70, 77, 82, 88.  
 Rigbi, M. See Longworth, W. R., 451.  
 Ritchie, P. D. See Bennett, R. N., 4508, and Golomb, A., 4515.  
 Rivlin, V. G. See Bell, R. P., 1696.  
 Roberts, L. E. J., Walter, A. J., and Wheeler, V. J. The oxides of uranium. Part IX. The decomposition of carbon monoxide on uranium and thorium dioxides, 2472.  
 Robertson, A. See Ballantine, J. A., 755, 4779, Cavill, G. W. K., 1544, Eglinton, G., 1833, Fielding, H. C., 1814, Harris, A., 1799, 1807, Holker, J. S. E., 2987, and Jackman, G. B., 1825.  
 Robertson, D. S. See Bagnall, K. W., 3633.  
 Robins, P. A., and Walker, J. A new and specific aromatisation reaction. Part III. Aromatisation of isolated 1:4-dioxocyclohexane rings, 409.  
 Robins, R. K. See Lynch, B. M., 2973.  
 Robinson, D. See Fairbrother, F., 2074.  
 Robinson, M. J. T. Experiments on the synthesis of substances related to the sterols. Part LIV. Degradative and synthetic studies on the A-ring of androst-4-ene-3:17-dione, 2311.  
 Robinson, P. L. See Hair, M. L., 106, Hepworth, M. A., 611, and Kenwright, R., 660.  
 Robinson, P. S. See Bagnall, K. W., 3426.  
 Rodda, H. J. See Badger, G. M., 1179, 4777.  
 Rogers, N. A. J. See Barltrop, J. A., 2566.  
 Rogers, V. See Baker, W., 1007.

- Rogers, V. W. See Woodcock, D., 685.  
 Rona, P., and Feldman, U. Homologous 9-anthryl-1'-naphthylalkanes and a new carbon-carbon cleavage occurring during reduction by lithium aluminium hydride, 1737.  
 Rose, F. L. See Hendry, J. A., 1134.  
 Rose, R. See Baddeley, G., 3168.  
 Ross, A. G. See Anderson, F. B., 3233.  
 Ross, G. W. The reaction of sulphur and sulphur compounds with olefinic substances. Part X. The kinetics of the reaction of sulphur with cyclohexene and other olefins, 2856.  
 Ross, G. W. See also Bateman, L., 2838.  
 Ross, T. J. See Allison, W. R., 4311.  
 Rossotti, F. J. C., and Rossotti, H. S. Hydroxyl stretching frequencies of some analogues of 8-hydroxyquinoline, 1304.  
 Rossotti, H. S. See Rossotti, F. J. C., 1304.  
 Rothstein, E. See Bleazard, W., 3789, and Grundy, M. E., 581.  
 Rothstein, R. See Feitelson, B. N., 2426.  
 Roy, J. See Nasipuri, D., 2734.  
 Russell, R. U., and Salmon, J. E. Condensed ions in aqueous solution. Part I. Ion-exchange behaviour of vanadate ions, 4708.  
 Rust, R. A. See Ford, M. C., 1297.  
 Ryan, A. J. See Birch, A. J., 4576, 4773.  
 Rydon, H. N. See Crofts, P. C., 4250, and Oakes, V., 204, 209.

## S

- Sacconi, L., Caroti, G., and Paoletti, P. Investigations on the co-ordinative power of uranyl. Part III. Infrared spectra of some complexes with  $\beta$ -diketones, 4257.  
 Sacconi, L., Lombardo, G., and Paoletti, P. Studies in coordination chemistry. Part III. The thermodynamics of interaction between heterocyclic bases and (diacetyl bisbenzoylhydrazone)nickel(II) in benzene, 848.  
 Sach, G. S. See Doyle, F. P., 4458.  
 Sadler, P. W. See Holt, S. J., 1217.  
 Saha, N. G., Nandi, U. S., and Palit, S. R. Azonitriles as initiators for polymerization of methyl methacrylate, 7. The effect of temperature on azonitriles as initiators in the polymerization of styrene, 12.  
 Sahu, J. See Bowen, E. J., 3716.  
 Sainsbury, G. L. See Green, A. L., 1583.  
 Saint-Ruf, G., Buu-Hoi, Ng. Ph., and Jacquignon, P. The synthesis of some hexa-, hepta-, and octa-cyclic hydrocarbons derived from fluorene, 48. Some new polycyclic derivatives of fluorene and carbazole, 1773.  
 Saint-Ruf, G. See also Buu-Hoi, Ng. Ph., 4308.  
 Sakla, A. B. See Tadros, W., 2631, 4210.  
 Salama, A. See Gelles, E., 3683, 3689.  
 Salem, A. Y. See Makar, S. M., 2437.  
 Salmon, J. E., and Wall, J. G. L. Aluminium phosphates. Part II. Ion-exchange and pH-titration studies of aluminium phosphate complexes in solution, 1128.  
 Salmon, J. E. See also Russell, R. U., 4708.  
 Salt, E. See Barker, S. A., 2736.  
 Sammour, H. M., and Moussa, A. A. Potential-pH dependence of the bismuth electrode in and out of contact with air, 1762.  
 Sammour, H. M. See also Moussa, A. A., 1269, 2481.  
 Sanderson, A. R. See Baddiley, J., 3107.  
 Sanderson, W. A. See Cadogan, J. I. G., 4498.  
 Sasse, J. M. See Badger, G. M., 4777.  
 Satchell, D. P. N. Indicator measurements in solutions of hydrochloric acid in acetic acid, 1916. The kinetics of hydrogen-isotope exchange reactions. Part VII. Aromatic hydrogen exchange in the solvent systems  $\text{ZnCl}_2\text{-CH}_3\text{-CO}_2\text{H}$  and  $\text{ZnCl}_2\text{-HCl-CH}_3\text{-CO}_2\text{H}$ . Part VIII. Hydrogen exchange between aromatic compounds and aqueous solutions of weak acids. Hammett's acidity function in such solutions, 1927, 3904. The depolymerisation of paraldehyde in the solvent system  $\text{ZnCl}_2\text{-CH}_3\text{-CO}_2\text{H}$ , 2052. Indicator measurements and hydrogen isotope exchange in the solvent systems  $\text{SnCl}_4\text{-CH}_3\text{-CO}_2\text{H}$  and  $\text{SnCl}_4\text{-HCl-CH}_3\text{-CO}_2\text{H}$ , 3910.  
 Satchell, D. P. N. See also Bethell, D., 1918.  
 Saunders, L., and Thomas, I. L. Diffusion studies with lysolecithin, 483.  
 Saville, B. See Green, A. L., 1583, and Lees, E. B., 2262.  
 Saville, R. W. The reactions of amines and sulphur with olefins. Part IV. The chemical and thermal decompositions of  $\text{NN}'$ -thiobisamines and their reactions with olefins, 2880.  
 Saville, R. W. See also Bateman, L., 2838.  
 Scaife, D. B., and Tyrrell, H. J. V. Equilibrium constants for the reaction between bromine and bromide ions at 5°, 25°, and 35° in aqueous medium of constant ionic strength and acidity, 386. Formation constants of  $\text{HgBr}_3^-$  and  $\text{HgBr}_4^{2-}$  at 5°, 25°, and 35° in aqueous medium of constant ionic strength and acidity, 392.  
 Schaffer, R. E. See Arcus, C. L., 2428.  
 Schlögl, K. See Ashworth, P. J., 950.  
 Schoen, J. M. See Given, P. H., 2674, 2680.  
 Schofield, F. See Naylor, P., 1190.  
 Schofield, K. 8-Aminoisoquinoline: a correction, 1312.  
 Schofield, K. See also Ayerst, G. G., 4097, Crabb, T. A., 4276, and Keene, B. R. T., 1080, 2609.  
 Schuler, B. O. G., Verbeek, A. A., and Warren, F. L. The indole alkaloids. Part II. Vobtusine and voacangine from *Voacanga dregei*, 4776.  
 Scott, A. I. See Barton, D. H. R., 1767.  
 Scott, N. See Cowley, A., 3133.  
 Selleck, M. E. See Ansell, M. F., 1167.  
 Shafferman, R. See Abel, E. W., 2895, Duncanson, L. A., 3652, and Gerrard, W., 3648.  
 Shafiq, M. See Barton, D. H. R., 140, 3314.  
 Shah, R. A. See Belcher, R., 2998, 4054.  
 Sharma, R. K. See Mukherji, S. M., 4770.  
 Sharp, D. W. A. Evidence for the existence of hydrogen dichloride ions,  $\text{HCl}_2^-$ , in organic compounds, 2558.  
 Shaw, B. L. See Ballantine, J. A., 755.  
 Shaw, C. J. G. See Ennor, K. S., 2921.  
 Shaw, G., and Warren, R. N. Purines, pyrimidines, and glyoxalines. Part VII. New syntheses of 2-thiouracils and 2-thiothymines. Part VIII. New syntheses of uracils and thymines, 153, 157.  
 Shaw, G., Warren, R. N., Maguire, M. H., and Ralph, R. K. Purines, pyrimidines, and glyoxalines. Part IX. Syntheses of uridine, 2-thiouridine, and some related compounds, 2294.  
 Shaw, G. See also Maguire, M. H., 2299.  
 Shaw, K. B. See Bullock, E., 1430, and Johnson, A. W., 4254.  
 Shaw, R. A. Compounds of silicon. Part III. Competitive reactions of chloro-, bromo-, and iodo-triethylsilanes with phenol, 521.  
 Shehab, S. K. See Barakat, M. Z., 901.  
 Sheldon, J. C. See Addison, C. C., 3142.  
 Shelton, R. See Irving, H., 3540.  
 Sheppard, N. See Braunholtz, J. T., 2780, and Ebsworth, E. A. V., 1453.  
 Shim, J. S. See Bennett, R. N., 4508.  
 Shimi, I. A. W., and Higginson, W. C. E. Kinetics of formation of ethylenediaminetetra-acetatocobalt(II) from the corresponding monoquo- and monohydroxo-complexes in aqueous solutions, 260.  
 Shipley, F. W. See Bateman, L., 2888.  
 Shoppee, C. W., Jenkins, R. H., and Summers, G. H. R. Steroids and Walden inversion. Part XXXIX. The halogenation of 5 $\alpha$ -cholestan-6-one and the pyrolysis of 5-chloro-5 $\alpha$ -cholestan-6-one. Part XL. The configurations of the bromination products of androstan-17-one, 1657, 3048.  
 Shoppee, C. W., and Sly, J. C. P. Aza-steroids. Part I. 3-Aza-A-homo-5 $\alpha$ - and -5 $\beta$ -cholestane, 3458.  
 Short, E. M. See Hunter, R. F., 1561.  
 Short, W. F. See Bartram, C. A., 1158.  
 Shorter, J. See Stanley, G., 246, 256.  
 Siddiqui, I. R. See Barker, S. A., 2358.  
 Simamura, O. See Mizuno, Y., 3875.  
 Simmonds, A. B. See Finar, I. L., 200.  
 Simpson, E. A., and Waind, G. M. The ultraviolet absorption spectra and stability constants of cuprous cyanide complexes, 1746.

- Simpson, J., Taylor, D., and Anderson, D. M. W. Kinetics, mechanism, and chemistry of the thermal decomposition of ammonium dichromate, 2378.
- Simpson, J., Taylor, D., Fanshawe, R. S., Norbury, J. M., and Watson, W. J. The thermal decomposition of thallose bromate, 3323.
- Simpson, T. H. See Ballantine, J. A., 755.
- Sims, P. The oxidation of aromatic amines. Part VI. Persulphate oxidation of some carcinogenic aromatic amines, 44.
- Sims, P. See also Boyland, E., 4198.
- Singer, G. H. See Woodward, L. A., 716.
- Singh, S. See Huang, R. L., 891.
- Sinha, R. N. P. See Bradley, D. C., 4651.
- Sinnott, K. M. See Millen, D. J., 350.
- Sirett, N. E. See Ashley, J. N., 3298.
- Skattebøl, L. See Jones, E. R. H., 1054.
- Slater, C. A. See Howard, G. A., 1460.
- Slaytor, M. See Birch, A. J., 365.
- Slinger, J. B. See McKenna, J., 2759.
- Sloan, A. D. B. See Galt, R. H. B., 1588.
- Sly, J. C. P. See Shoppee, C. W., 3458.
- Smeeth, A. G. See Almer, D. J., 4207.
- Smith, B. C. See Addison, C. C., 3664.
- Smith, E. See Birch, A. J., 4471.
- Smith, G. B. See Cavill, G. W. K., 1544.
- Smith, H. See Birch, A. J., 360, 365, 369, 4576, 4582, 4688, 4773, 4774.
- Smith, H. J. See Linnell, W. H., 908.
- Smith, J. A. S. See Maričić, S., 886.
- Smith, J. D. See Emelús, H. J., 527.
- Smith, M. See Henbest, H. B., 3293.
- Smith, M. J. See Bell, R. P., 1691.
- Smith, M. R. See Armstrong, R. S., 1474, and Le Fèvre, C. G., 16.
- Smith, P.  $\beta$ -(3:4-Dihydroxy-5-methoxyphenyl)alanine, 3740.
- Smith, P. A. See Baddiley, J., 3743.
- Smith, R. D. See Arthur, H. R., 2603.
- Smithson, J. M., and Williams, R. J. P. A possible differentiation between ion-pairs and complexes, 457.
- Smythe, L. E. See Emelús, H. J., 609.
- Sneeden, R. P. A. See Allan, A. W., 557.
- Solomons, C. See Flowers, R. H., 667.
- Somerfield, G. A. See Brown, B. R., 4305.
- Southern, P. F. See Boyd, A. N., 2056.
- Speake, R. N. See Birch, A. J., 4471.
- Speakman, J. C. See Clar, E., 2492, and Grant, W. K., 3753.
- Speight, D. See Johncock, P., 2544.
- Speden, R. N. See Corbett, R. E., 3710.
- Spencer, E. Y., Todd, Sir A., and Webb, R. F. Studies on phosphorylation. Part XVII. The hydrolysis of methyl 3-(*OO*-dimethylphosphoryloxy)but-2-enoate, 2968.
- Spice, J. E. See Hogg, M. A. P., 4196.
- Spring, F. S. See Paton, A. C., 2640.
- Springall, H. D. See Cass, R. C., 958, 1406, 2595, and Millar, I. T., 536.
- Stacey, M. See Bailey, R. W., 1895, Barker, S. A., 601, 2218, 2358, 2583, 2736, 3232, 3468, 4128, 4414, Bourne, E. J., 3268, and Butler, K., 740.
- Stafford, W. H. See Reid, D. H., 1100, 1110, 1118.
- Stafford, W. L. See Reid, D. H., 1110, 1118.
- Stanley, G., and Shorter, J. Kinetics and mechanism of aromatic halogenation by hypohalous acids. Part III. Chlorination of *p*-anisic acid by hypochlorous acid in 75% acetic acid. Part IV. Chlorination of aromatic ethers by hypochlorous acid in 75% acetic acid, 246, 256.
- Stansfield, F. Bromination of *N*-phenylsnydnone, 4781.
- Stansfield, M. See Green, A. L., 1583.
- Staveley, L. A. K. See Tillotson, M. J. L., 3613.
- Stedman, G. See Bunton, C. A., 2420, 2440.
- Steel, J. R. See Chatterjee, A. K., 1706.
- Steelink, C. See Dean, F. M., 3386.
- Stein, G., and Swallow, A. J. The reduction of diphosphopyridine nucleotide and some model compounds by X-rays, 306.
- Stein, G. See also Paiss, Y., 2905.
- Stening, T. C. See Ennor, K. S., 2921, and Honeyman, J., 537.
- Stenlake, J. B. See Comrie, A. M., 1853, 3514.
- Stephen, E. See Ficken, G. E., 3879.
- Stephen, W. I. See Belcher, R., 2336, 3243, 4454.
- Stephenson, J. S. See Jones, E. R. H., 2156, and Meakins, G. D., 526.
- Stephenson, N. C. See Harris, C. M., 3697.
- Stephenson, O. See Petrow, V., 1508.
- Stern, E. S. See Frearson, P. M., 3062, 3065.
- Stevens, I. D. R. See Brand, J. C. D., 629.
- Stevens, J. C. See Lawson, A., 2903.
- Stevens, T. S. See Richards, A., 3067, and Wragg, A. H., 3603, 4057.
- Stevenson, R. See Paton, A. C., 2640.
- Stewart, D. G. See Clar, E., 23.
- Stewart, E. T. Energy levels of planar diphenyl, 4016.
- Stewart, M. A. A. See Bagnall, K. W., 3426, 3633.
- Stirling, C. J. M. Thiol-esters. Part II. The chlorination of 2-diethylaminoethyl thiolbenzoate and the rearrangement of 2-alkylaminoethyl thiolbenzoates, 4524.
- Intramolecular aminolysis of amides, 4531.
- Stock, R. See Gregg, S. J., 910.
- Stone, P. J., Cymerman-Craig, J., and Thompson, H. W. Vibrational frequencies of substituted ammonium ions, 52.
- Stonehill, H. I. See Cooper, C. J., 3341, 3353, 3362.
- Sultanbawa, M. U. S., and Veeravagu, P. Unsaturated systems. Part II. The reactivity of  $\alpha$ -chlorocrotonic and  $\alpha$ -chloro- $\beta$ -methylcrotonic acid, 4113.
- Sultanbawa, M. U. S. See also Braude, E. A., 3328, 3336.
- Summers, G. H. R. 3:5-cycloErgosta-7:22-dien-6 $\beta$ -ol and 3:5-cycloergosta-7:9(11):22-trien-6 $\beta$ -ol, 4489.
- Summers, G. H. R. See also Shoppee, C. W., 1657, 3048.
- Sundararajan, V. N. See Govindachari, T. R., 1715.
- Suschitzky, H. See Davies, J. S. H., 1790.
- Sutherland, I. O. See Clark, V. M., 3283.
- Sutton, G. J. See Nyholm, R. S., 560, 564, 567, 572.
- Sutton, L. E. See Bax, C. M., 1254, 1258, Hutchinson, M. H., 4382, and Randall, E. W., 1266.
- Suu, V. T. See Buu-Hoi, Ng. Ph., 2815.
- Swallow, A. J. See Cox, R. A., 3727, and Stein, G., 306.
- Swan, G. A. The constitution of yohimbine and related alkaloids. Part XI. A synthesis of sempervirine, 2038.
- Stereoisomeric 1:2:3:4:6:7:8:9-octahydro-1-hydroxypyridocolines, 2051.
- Swan, G. A., and Timmons, P. S. The chemical effects of  $\gamma$ -radiation on organic systems. Part I. The systems pyridine-bromobenzene and aniline-bromobenzene, 4669.
- Swan, G. A., and Wright, D. The chemical effects of  $\gamma$ -radiation on organic systems. Part II. The action of radiation on benzyl alcohol alone or mixed with acetone or bromobenzene, 4673.
- Swan, G. A. See also Prasad, K. B., 2024, 2045.
- Swanwick, J. D. A new double spoon gauge, 3214.
- Swanwick, J. D. See also Bradley, D. C., 1010, 3207, 3656.
- Sykes, K. W. The heat of formation of nickel carbonyl from combustion calorimetry, 2053.
- Sykes, W. O. The nitration product of 3:4-dihydro-4-methyl-3-oxo-4:7-phenanthroline, 825.
- Szumer, A. Z. See Courtney, J. L., 881.
- Szwarc, M. See Buckley, R. P., 3442.

## T

- Tadros, W., Sakla, A. B., and Ishak, M. S. Quaternary ammonium salts. Part V. The effect of different nucleophilic reagents on the mode of decomposition of quaternary ammonium salts, 2631.
- Reactions with asymmetric diarylethylenes. Part V. Conversion of 2:2-di-*p*-alkoxyphenylvinyl chloride or bromide in alkaline medium into the corresponding tolane, 4210.
- Tatlow, C. E. M. See Bourne, E. J., 3945.
- Tatlow, J. C. See Bourne, E. J., 1274, 3268, 3945.
- Taylor, D. See Simpson, J., 2378, 3323.
- Taylor, D. A. H. The isolation of solasodine from the berries of *Solanum macranthum*, 4216.
- 1-Ethyl-3-methylcyclopentadiene, 4779.
- Taylor, D. A. H. See also Howell, F. H., 1248.
- Taylor, E. P. Decamethylene dibromide, 2068.
- Taylor, E. P. See also Austin, W. C., 1489.

- Taylor, G. A. See **Acheson**, R. M., 3750.  
 Taylor, H. F. W. See **Buckle**, E. R., 1351, and **Buttler**, F. G., 2103.  
 Taylor, H. T. Preparation of unsaturated keto-acids from the interaction of ethylene and acid anhydrides, 3922.  
 Taylor, J. B. See **Fairbrother**, F., 2074.  
 Taylor, J. H. See **Holker**, J. S. E., 2987.  
 Taylor, N. F., and **Kent**, P. W. Fluorocarbohydrates. Part I. The synthesis of 6-deoxy-6-fluoro- $\alpha$ -D-galactose and 5-deoxy-5-fluoro- $\alpha$ -D-ribose, 872.  
 Taylor, S. A. See **Kurzer**, F., 379.  
 Taylor, T. J. See **Hough**, L., 1212.  
 Taylor, W. C. See **Barton**, D. H. R., 2500.  
 Tedder, J. M., and **Theaker**, G. The direct introduction of the diazonium group into aromatic nuclei. Part IV. The preparation of diazonium salts from phenols, 2573.  
 Terrey, H., and **Thabit**, J. The electrolytic determination of indium, 1303.  
 Tertniuk, W. See **Kurzer**, F., 1571.  
 Tetaz, J. See **Dean**, F. M., 3386.  
 Thabit, J. See **Terrey**, H., 1303.  
 Theaker, G. See **Tedder**, J. M., 2573.  
 Thomas, A. See **Henbest**, H. B., 3293.  
 Thomas, A. J. See **Petrow**, V., 1508.  
 Thomas, D. A. See **Ansell**, M. F., 1163.  
 Thomas, G. H. S. See **Hough**, L., 1212.  
 Thomas, G. O. See **Davies**, C. W., 3660.  
 Thomas, I. L. See **Saunders**, L., 483.  
 Thomas, J. H. See **Evans**, A. G., 4563.  
 Thomas, P. J. See **Kale**, M. N., 3016.  
 Thompson, G. A. See **Norman**, R. O. C., 175.  
 Thompson, H. W. See **Stone**, P. J., 52.  
 Thompson, J. M. See **Ashworth**, P. J., 950.  
 Thompson, M. E. See **Dry**, L. J., 4701.  
 Thomson, P. J. See **Kenner**, G. W., 4148.  
 Thomson, R. H. See **Hardie**, R. L., 1286.  
 Thrower, J. See **Fear**, E. J. P., 1322.  
 Tillett, J. G. See **Bunton**, C. A., 4751, 4754, 4761, and **Davies**, E. D., 4766.  
 Tillotson, M. J. L., and **Staveley**, L. A. K. The heats of ionization of ethylenediaminetetra-acetic acid and its dissociation as an ammonium-ion acid, 3613.  
 Timmis, G. M. Potential anti-purines. Part I. The synthesis of derivatives of 8-thiapurine (2-thia-1 : 3 : 4 : 6-tetra-azaindene) by a new reaction, 804.  
 Timmis, G. M. See also **Leese**, C. L., 4104, 4107.  
 Timmons, P. S. See **Swan**, G. A., 4669.  
 Tipper, D. J. See **Barker**, S. A., 3468.  
 Tittensor, E., and **Wibberley**, D. G. Methylnicotinic acids. Part II, 3161.  
 Tivey, D. J. See **Campbell**, A., 1145, **Davey**, W., 1230, 2276, 2606, and **Fisher**, N., 1411.  
 Todd, Sir A. See **Brown**, D. M., 3028, 3035, 4242, **Clark**, V. M., 3039, 3283, **Cremlyn**, R. J. W., 528, **Griffin**, B. E., 1389, **Kenner**, G. W., 546, and **Spencer**, E. Y., 2968.  
 Tomkinson, J. C., and **Williams**, R. J. P. The absorption spectra of some ferrous and ferric complexes, 1153.  
 Oxidation-reduction potentials of complex ions, 2010.  
 Tomkinson, J. C. See also **Jones**, J. G., 2001.  
 Tomlinson, M. See **Brown**, U. M., 1843, and **Herbert**, A. E. J., 4492.  
 Tomlinson, M. L. See **Acheson**, R. M., 3750.  
 Torto, F. G. See **Lowe**, G., 1855.  
 Travers, R. B. See **Fielding**, H. C., 1814, and **Jackman**, G. B., 1825.  
 Trenwith, A. B. See **Kenwright**, R., 660.  
 Trikojus, V. M. See **Bachelard**, H. S., 4541.  
 Trotman-Dickenson, A. F. See **Knox**, J. H., 2897, and **Price**, S. J. W., 4205.  
 Truter, M. R. See **Kunchur**, N. R., 2551, 3478, and **Lippert**, E. L., 2636.  
 Tuck, D. G. Solvent extraction studies. Part II. The system nitric acid-water-tri-*n*-butyl phosphate, 2783.  
 Tucker, S. H. Synthesis of fluoranthenes. Part XIII. Synthesis of benzo[1 : 2-*a*, 3 : 4-*a'*] and of benzo[1 : 2-*a*, 4 : 5-*a'*]diacenaphthylene, 1462.  
 Tucker, S. H. See also **Buchanan**, C., 2750, and **Jemmett**, A. E., 2794.  
 Turnbull, J. H. See **Montgomery**, H. A. C., 1963.  
 Turner, A. F. See **Haworth**, R. D., 1240.  
 Turner, D. W. See **Braude**, E. A., 2396, 2404.  
 Turner, H. A. See **Partridge**, M. W., 2086.  
 Turner, H. S. See **Hunt**, S. E., 3152.  
 Turner, J. M. See **Kenner**, G. W., 4148.  
 Turner, J. R. See **Johnson**, A. W., 3230.  
 Turney, T. A., and **Wright**, G. A. Nitrous acid equilibria in perchloric acid, 2415.  
 Turvey, J. R. See **Peat**, S., 3868.  
 Tute, M. S. See **McOmie**, J. F. W., 3226.  
 Twomey, D. See **Barry**, V. C., 859, 4495.  
 Tyrrell, H. J. V. See **Scaife**, D. B., 386, 392.

## U

- Uprichard, J. M. See **King**, F. E., 3428.  
 Urbański, T. See **Koliński**, R., 2319.  
 Urch, D. S. A rapid method for the calculation of the molecular-orbital secular equation, 4767.  
 Urch, D. S. See also **Dewar**, M. J. S., 3079.

## V

- Varadarajan, S. See **Brown**, D. M., 3028.  
 Varma, S. See **Baddeley**, G., 3171, and **de la Mare**, P. B. D., 2756.  
 Vaughan, J. See **Fischer**, A., 1426.  
 Veeravagu, P. See **Sultanbawa**, M. U. S., 4113.  
 Veitch, J. See **Fear**, E. J. P., 1322.  
 Venanzi, L. M. Tetrahedral nickel(II) complexes and the factors determining their formation. Part I. Bistriphenylphosphinenickel(II) compounds, 719.  
 Venanzi, L. M. See also **Chatt**, J., 3203.  
 Verbeek, A. A. See **Schuler**, B. O. G., 4776.  
 Vernon, C. A. See **Bunton**, C. A., 3574, 3588, and **de la Mare**, P. B. D., 2563.  
 Vickars, M. A. See **Baddeley**, G., 4665.  
 Vig, O. P. See **Mukherji**, S. M., 4770.  
 Vogelsong, D. C. See **Bell**, R. P., 243.  
 Voigt, A. See **Reid**, D. H., 1110.  
 von Klemperer, M. E. See **Warren**, F. L., 4574.

## W

- Waddington, T. C. The preparation of tetramethylammonium hydrogen dichloride and the structure of the hydrogen dichloride ion,  $\text{HCl}_2^-$ , 1708.  
 Infrared spectra, structure, and hydrogen-bonding in ammonium salts, 4340.  
 Thallous borohydride,  $\text{TlBH}_3$ , 4783.  
 Wade, D. A., and **Peters**, A. T. Acenaphthene series. Part VIII. Propionyl and *n*-propyl derivatives of acenaphthene and naphthalic anhydride, 3504.  
 Wade, K. See **Greenwood**, N. N., 1663, 1671.  
 Waight, E. S. See **Braude**, E. A., 2396.  
 Waind, G. M. See **Martin**, B., 4284, and **Simpson**, E. A., 1746.  
 Wait, E., and **Powell**, H. M. The crystal and molecular structure of tetraethylammonium iodide, 1872.  
 Wait, E. See also **Comyns**, A. E., 4655, and **Powell**, H. M., 1866.  
 Walker, J. See **Robins**, P. A., 409.  
 Wall, J. G. L. See **Salmon**, J. E., 1128.  
 Wall, W. F. See **Elks**, J., 4001.  
 Walpole, A. L. See **Hendry**, J. A., 1134.  
 Walsh, J. R. See **Craig**, D. P., 1613.  
 Walter, A. J. See **Roberts**, L. E. J., 2472.  
 Wannigama, D. G. P. See **Cromartie**, R. I. T., 1982.  
 Ward, J. P. See **Reid**, D. H., 1100.  
 Ward, R. B. See **Grant**, P. M., 4635.  
 Ward, W. R. See **Lacey**, R. N., 2134.  
 Wardlaw, W. See **Bartley**, W. G., 422, **Bradley**, D. C., 99, 126, 1010, 3656, 4153, 4647, 4651, and **El-Aggan**, A. M., 2092, 4643.  
 Warhurst, E. See **Cowperthwaite**, M., 2429.



- Warren, C. K., and Weedon, B. C. L. Carotenoids and related compounds. Part VI. Some conjugated polyene diketones, and their comparison with capsorubin. Part VII. Synthesis of canthaxanthin and echinenone, 3972, 3986.
- Warren, F. L., and von Klemperer, M. E. The *Senecio* alkaloids. Part XIII. The absolute configuration of heliotridane (1-methylpyrrolizidine) and the "necine" bases, 4574.
- Warren, F. L., and Watling, K. H. The *Euphorbia* resins. Part X. The structural difference between euphol and tirucalol, 179.
- Warren, F. L., and Wright, W. G. The alkaloids of the Amaryllidaceae. Part III. Hœmanthamine (natalensine), 4696.
- Warren, F. L. See also Dry, L. J., 4701, and Schuler, B. O. G., 4776.
- Warrener, R. N. See Shaw, G., 153, 157, 2294.
- Wassermann, A. Properties of ion pairs formed by proton transfer to methoxyphenylpolyenealdehydes, 1014. Polyenealdehydes as proton acceptors, 3228.
- Waters, W. A. See Beckwith, A. L. J., 171, Bell, R. P., 1696, Boyd, A. N., 2056, Haines, R. M., 3221, Jackson, R. A., 4632, Land, H., 2129, and Norman, R. O. C., 167, 175.
- Watkins, D. A. M. See Baker, W., 3594.
- Watkins, T. I. Trypanocides of the phenanthridine series. Part II. Pyrimidinyl-phenanthridines, 1443.
- Watkinson, J. G. See Jones, B., 4064.
- Watling, K. H. See Warren, F. L., 179.
- Watson, D. See Long, F. A., 2019.
- Watson, H. R. See Mann, F. G., 2516, 2772.
- Watson, R. B. See Livingstone, R., 2422.
- Watson, W. J. See Simpson, J., 3323.
- Webb, A. A. See Braude, E. A., 3328, 3336.
- Webb, R. F. See Spencer, E. Y., 2968.
- Webber, J. M. See Barker, S. A., 2218.
- Wedlake, D. See Ellis, B., 3748.
- Weedon, B. C. L. See Lowe, G., 1855, and Warren, C. K., 3972, 3986.
- Wei-Hwa Hsü. See Grundy, E., 581.
- Weiss, J. See Clay, P. G., 2175, and Daniels, M., 2467.
- Weitzman, P. D. J. See Brown, B. R., 4305.
- Welch, A. J. E. See Peacock, R. D., 2901.
- Welch, G. A. See Drummond, J. L., 3218.
- Wellendorf, M. See Evans, W. C., 1991.
- Wellings, I. See Jemmett, A. E., 2794.
- Wells, C. H. J. See Knox, J. H., 2897.
- Wells, R. A. See Aveston, J., 231, and Head, A. J., 3418.
- West, T. S. See Belcher, R., 2390, 2393, 2743, 2998, 4054.
- Westland, G. J. See Hepworth, M. A., 611.
- Whalley, M. See Ficken, G. E., 3879.
- Whalley, W. B. See Birch, A. J., 4576, Corran, J. A., 4719, Eglinton, G., 1833, Fielding, H. C., 1814, Green, B., 4715, Harris, A., 1799, 1807, and Jackman, G. B., 1825.
- Wheatley, P. J. See Daly, J. J., 1939.
- Wheeler, T. S. See Devitt, P. F., 510, and Gowan, J. E., 2495.
- Wheeler, V. J. See Roberts, L. E. J., 2472.
- Whelan, W. J. See Haq, S., 1342, and Peat, S., 586, 724, 729, 3862.
- Whiffen, D. H. See Barker, S. A., 3232, and Grant, P. M., 4635.
- White, A. G. See Martin, P. E., 2490.
- White, A. W. See Campbell, I. G. M., 1184.
- White, J. D. See King, F. E., 2830.
- White, R. F. M. See Gillespie, R. J., 3228.
- White, T. R. See Cass, R. C., 1406.
- Whitham, G. H. See Golden, J. H., 1725.
- Whiting, M. C. See Ashworth, P. J., 950, Bell, I., 1313, 3195, Dicker, D. W., 1994, Jones, E. R. H., 1054, and Millward, B. B., 903.
- Whitley, A. See Bradley, D. C., 99, and Martin, R. L., 1394.
- Wibberley, D. G. See Tittensor, E., 3161.
- Wild, A. M. See Petrow, V., 1508.
- Wiley, R. H. A revision of the structural assignments for the geometrical isomers of 3-methyl-5-phenylpentadienoic acid, 3831.
- Wilkinson, D. I. See Parker, W., 3871.
- Wilkinson, G. See Abel, E. W., 3149, 4559, Green, M. L. H., 3916, 4314, and Griffith, W. P., 3993.
- Wilkinson, S. 5-Methoxy-N-methyltryptamine: a new indole alkaloid from *Phalaris arundinacea* L., 2079.
- Willcox, T. J. See Mann, F. G., 1525.
- Williams, A. A. See Ahrland, S., 264, 276, 1403.
- Williams, D. L. H. See Bunton, C. A., 3718.
- Williams, G. See Bonner, T. G., 1705.
- Williams, G. H. See Davies, D. I., 1878, and Chang Shih, 1885, 2600, 4403.
- Williams, N. R. See Hayes, A., 3779.
- Williams, P. See Huang, R. L., 2637.
- Williams, R. J. P. See Jillot, B. A., 462, Jones, J. G., 2001, Smithson, J. M., 457, and Tomkinson, J. C., 1153, 2010.
- Williams, R. L. See Bellamy, L. J., 2412, 2463, 3465.
- Williams, R. S. See Hirst, E. L., 1942.
- Williamson, W. R. N. See Cocker, W., 2899, and Holker, J. S. E., 2987.
- Willicks, W. See Clar, E., 942.
- Willis, D. See Gaspert, B., 624.
- Wilson, I. See Bunton, C. A., 4747.
- Wilson, L. F. See Peacock, R. D., 2901.
- Wood, H. C. S. See Dick, G. P. G., 3730.
- Woodcock, D., and Davies, B. L. Synthesis of plant-growth regulators. Part V. (3-Substituted 2-naphthylxy)-*n*-alkane-carboxylic acids, 4723.
- Woodcock, D., and Rogers, V. W. Fungicidal activity and chemical constitution. Part V. Synthesis of some substituted quinolines, 685.
- Woodcock, D. See also Downing, D. F., 531.
- Woods, B. M. See Hough, L., 1212.
- Woodward, L. A., Greenwood, N. N., Hall, J. R., and Worrall, I. J. Raman spectrum and constitution of fused gallium dibromide, 1505.
- Woodward, L. A., and Singer, G. H. Raman spectra of the tetraiodogallate ( $\text{GaI}_4^-$ ) and tetraiodoindate ( $\text{InI}_4^-$ ) ions in aqueous solution, 716.
- Worrall, I. J. See Greenwood, N. N., 1680, and Woodward, L. A., 1505.
- Worrall, R. See Bourne, E. J., 3268, 3945.
- Wragg, A. H., McFadyen, J. S., and Stevens, T. S. The rearrangement of sulphinic esters, 3603.
- Wragg, A. H., Stevens, T. S., and Ostle, D. M. The rearrangement of amine oxides, 4057.
- Wragg, A. H. See also Goldberg, A. A., 4227, 4234.
- Wragg, W. R. See Ash, A. S. F., 3887.
- Wright, D. See Swan, G. A., 4673.
- Wright, G. A. See Turney, T. A., 2415.
- Wright, W. G. See Warren, F. L., 4696.
- Wrigley, T. I. See Henbest, H. B., 2633.
- Wyatt, P. A. H. See Dawber, J. G., 3636, and Kirkbride, B. J., 2100.
- Wyman, L. J. See Brooks, S. G., 4614.
- Wyness, K. G. The hydrolysis of simple amides catalysed by carboxylic acids, 2934.

## X

Xuong, Ng. D. See Buu-Hoi, Ng. Ph., 2815.

## Y

Yeomans, B., and Young, D. P. Reactions of organic peroxides. Part IX. Hydroperoxides of some alkyltetralins, 2288.

Yeowell, D. A. See Battersby, A. R., 1988.

Youdale, F. N. See Chatterjee, A. K., 1706.

Young, D. P. See Yeomans, B., 2288.

Young, E. H. P. The synthesis of 5-hydroxytryptamine (Serotonin) and related tryptamines, 3493.

Young, J. R. The thermal decomposition of keten, 2909.

## Z

Zander, M. See Clar, E., 1577, 1861.