

## INDEX OF AUTHORS' NAMES, 1929.

### A.

- Aggarwal, Joti S., Nand L. Darbari,** and **Jñanendra N. Rây**, phthalazines Part I., 1941.
- Allmand, Arthur J.**, on the connexion between absorbed energy and velocity in photochemical reactions of the I<sup>0</sup> 5 type, 1557.
- Allmand, Arthur J.**, and **Walter W. Webb**, the photolysis of potassium ferrioxalate solutions. Part I. Experimental, 1518.  
the photolysis of potassium ferrioxalate solutions. Part II. Discussion, 1531.
- Anderson, Cameron G., William Charlton,** and **Walter N. Haworth**, the constitution of glucose-monoacetone, glucose-diacetone, and of the derived 3:5:6-trimethyl glucose and 3 monomethyl glucose, 1329.
- Anderson, Cameron G., William Charlton,** **Walter N. Haworth,** and **Vincent S. Nicholson**, the constitution of  $\alpha$ - and  $\beta$ -fructose-diacetones; the alleged oxidative degradation of the derived monomethyl and tetramethyl fructose, 1337.
- Andrew, Leslie W.** See **Dalziel L. Hammick**.
- Angell, Frederick G., Robert G. James,** and **William Wardlaw**, complex bromides of quinquevalent molybdenum, 2578.
- Anslow, Winston K., and Harold King**, the constitution of the red isomeride of creatinine picrate responsible for Jaffé's colour reaction, 1210.  
the synthesis of glycine, 2463.
- Aubel, Edmond van**, the viscosity of ether at low temperatures, 1111.
- Avery, John,** and **Edmund L. Hirat**, the structure of normal monosaccharides. Part VI. 2:3-4-Trimethyl rhamnolactone, 2466.
- Ayling, Ernest E.**, the chlorination of phthalic acid in alkaline solution, 253.

### B.

- Bailey, Charles R., and Kun-Hou Lih**, the infra-red emission spectra of flames in nitrous oxide, 51.

- Baines, Harry**, a volumetric method for determining silver in the presence of halides and cyanides, 2037.  
the argenthiosulphuric acids and their derivatives. Part I. The preparation of the sodium salts and the isolation of monoargentomonothiosulphuric acid, 2763.
- Baker, Herbert B.**, manipulation in intensive drying, 1661.
- Baker, John W.**, the mechanism of tautomeric interchange and the effect of structure on mobility and equilibrium. Part IV. Further evidence relating to the mechanism of acid catalysis in the mutarotation of nitrogen derivatives of tetraacetylglucose, 1205.  
the nature of the alternating effect in carbon chains. Part XXXI. The directive influence of  $\psi$ -acid systems in aromatic substitution; nitration of  $\psi$ -acidic phenylnitromethanes and their salts, 2257.
- Baker, John W., and Christopher K. Ingold**, the nature of the alternating effect in carbon chains. Part XXX. The nitration of phenylbromocyanonitromethane, with special reference to an alleged example of intramolecular *meta*-rearrangement, 423.
- Baker, Julian L., and Henry F. E. Hulton**, amylases of the cereal grains—oats, 1655.
- Baker, Wilson**, some substances derived from the anhydrocatechin tetramethyl ethers, 1593.
- Baker, Wilson,** and **(Miss) Frances M. Eastwood**, colloidal phenoxides. Part I. The relation between constitution and colloidal properties in benzo- $\gamma$ -pyrones, 2897.
- Baker, Wilson, Ryzabubo Nodzu,** and **Robert Robinson**, anthoxanthins. Part X. The synthesis of gossypetin and of quercetagenin, 74.
- Baker, Wilson, Alfred Pollard,** and **Robert Robinson**, synthetical experiments in the isoflavone group. Part V. A new general method applicable to the synthesis of derivatives of 7-hydroxyisoflavone, 1468.

- Baker, Wilson, and Robert Robinson**, synthetical experiments in the iso-flavone group. Part IV. A synthesis of 2-methylirigenol, 152.
- Balaban, Isidore E.**, 3:4-methylenedioxyphenylarsinic acid, 1088.  
the nitration of 3-hydroxy-1:4-benzisoxazine and its 7- and 8-acetamido-derivatives, 2607.
- Baldwin, Alfred W.**, attempts to find new anti-malarials. Part III. Some substituted aminoalkylaminoquinolines, 2959.
- Bangham, Donald H., and Douglas R. Lewis**, the effect of gases on the electric charges developed by heated metals, 1140.
- Barber, Harry J.**, diphenylaminearsinic acids. Part I. Derivatives of diphenylamine-4-arsinic acid, 471.  
some derivatives of arylthioarsinous acids, 1020.  
thiolacetamide as a reagent for identifying arsenic acids, 1024.  
nitration of halogenophenylarsinic acids, 2333.
- Bardhan, Jogendra C.**, the chemistry of 1:3-dicarbonyl compounds. Part I. The mechanism of the cyanoacetamide and cyanoacetic ester condensations, 2223.
- Barger, George, and Robert Robinson**, attempts to find new anti-malarials; introduction, 2947.
- Barker, Thomas V.** See *John Read*.
- Barnett, Edward de B., and Norman F. Goodway**, the synthesis of meso-alkyl and meso-aryl anthracene derivatives. Parts V. and VI., 20, 1754.  
9-benzhydrylanthrone and isodanthranlyl, 813.
- Barrett, Herbert S. B., William H. Perkin, jun., and Robert Robinson**, harmine and harmaline. Part X. The synthesis of 7- and 8-methoxyketotetrahydro- $\beta$ -carbolines and the constitution of acetylharmaline, 2942.
- Bassett, Harold L., and (Miss) Katherine F. Taylor**, the reactions of a mixture of ethyl ether, acetyl bromide, and naphthol, 1568.
- Bastow, S. H.** See *A. L. McAulay*.
- Bell, Ernest V., and George M. Bennett**, stereoisomerism of disulphoxides and related substances. Part IV. Di- and tri-sulphoxides of trimethylene tri-sulphide, 15.
- Bell, Ernest V., George M. Bennett, and Frederick G. Mann**, the isomeric trithioacetaldehydes, 1462.
- Bell, Frank**, the nitration of  $\beta$ -naphthylamine, 2784.  
the interaction of nitroamines with sulphonyl chlorides, 2787.
- Bennett, George M., and Frederick Heathcoat**, some derivatives of the aliphatic glycols, 268.
- Bennett, George M., Frederick Heathcoat, and Arthur N. Mosses**, the influence of the sulphur atom on the reactivity of adjacent atoms or groups. Part III.  $\delta$ - and  $\epsilon$ -Chloro-sulphides, 2567.
- Bennett, George M., and Walter L. Pratt**, 2:4-dinitrobenzaldehyde as a reagent, 1465.
- Bennett, George M., and William B. Waddington**, studies in the penthian series. Part II. Penthian-4-one, 2829.  
studies in the penthian series. Part III. Stereoisomeric derivatives of some penthianols, 2832.
- Bennett, George M., and Gervase H. Willis**, the structure of organic molecular compounds, 256.
- Bennett, George M.** See also *Ernest V. Bell*.
- Best, Rupert J., and Alwyn B. Cox**, studies of a Bredig silver hydrosol, 2727.
- Bhattacharya, Mandal.** See *David H. Peacock*.
- Bills, Edwin J.** See *James C. Duff*.
- Blount, Bertie K., William H. Perkin, jun., and Sydney G. P. Plant**, stereoisomerism in polycyclic systems. Part VI., 1975.
- Bodenstein, Max, William Jost, and Gerhard Jung**, the influence of the intensity of illumination on the velocity of the photochemical union of bromine and hydrogen, 1153.
- Bone, William A.**, notes on intensive drying of gaseous media, 1664.
- Boon, Alfred A., and Hugh B. Nisbet**, some reactions of *mm'*-dinitrobenzil, 1901.
- Bose, Atul C., and William Doran**, studies in the sterol group. Part V. The constitution of cholesterolene, 2244.
- Bowen, Edmund J., and Alexander C. Cavell**, experiments on the oxidation of phosphorus vapour, 1920.
- Bowen, Edmund J., and Edwin T. Yarnold**, the photochemical oxidation of ethyl alcohol by potassium dichromate. Part II., 1648.
- Boyd, David E., and G. J. C. Vineall**, the reaction between magnesium phenyl bromide and phenyl glycide, 1622.

- Boyle, (Miss) Mary.** See *Tom S. Moore.*
- Bradfield, Alan E., and Brynmor Jones,** two apparent cases of liquid crystal formation, 2660.
- Bradfield, Alan E., Brynmor Jones, and Kennedy J. P. Orton,** the halogenation of phenolic ethers and anilides. Part I. The bromination of ethers in 50% acetic acid, 2810.
- Bradfield, Alan E., and Kennedy J. P. Orton,** the transformation of phenyl-nitroamines into nitroanilines. Part I., 915.
- Bradfield, Alan E., and Albert F. Williams,** the solubility of certain anilides in water-acetic acid mixtures, 2542.
- Brady, Oscar L., and Navnitlal M. Chokshi,** the isomerism of the oximes. Part XXXIV. The dissociation constants of isomeric oximes and their influence on the production of the isomerides in alkaline solution, 946.  
the isomerism of the oximes. Part XXXVI. The methylation of aldoximes and ketoximes, 2271.
- Brady, Oscar L., James N. E. Day, and Cedric V. Reynolds,** the reduction of nitro-compounds in pyridine solution, 2264.
- Brady, Oscar L., and Frank H. Peakin,** the action of semicarbazide hydrochloride and of 2:4-dinitrophenylhydrazine hydrochloride on aldoximes and their derivatives, 478.  
the isomerism of the oximes. Part XXXV. The amidoximes, 2267.
- Bretscher, Egon.** See *H. Gordon Rule.*
- Briggs, Samuel H. C.,** the preparation of some metallic chromates, 242.  
chromatocobaltiammines. Part II. The dichromatotetrammincobaltates and the maximum co-ordination number of cobalt, 685.
- Briscoe, Henry V. A., John B. Peel, and Percy L. Robinson,** carbon sulphidoselenide, 56.  
the effect of intensive drying on certain physical properties of benzene, 368.  
the reactions of the halogens with carbon sulphidoselenide, 1048.
- Briscoe, Henry V. A., John B. Peel, and John R. Rowlands,** the interaction of carbon tetrabromide with sulphur and selenium, 1766.
- Briscoe, Henry V. A., John B. Peel, and George W. Young,** mercury compounds of thiophen and selenophen, 2589.
- Briscoe, Henry V. A.** See also *Leonard A. Sayce.*
- Bruin, Pieter.** See *Andreas Smits.*
- Bryans, Frank, and Frank L. Pyman,** the nitration of benzylpyridines and the oxidation of benzylpiperidines, 549.
- Burch, William J. N.** See *Robert H. A. Plimmer.*
- Burgess, Henry.** See *Gilbert T. Morgan.*
- Burgess, Stanley G., and Harold Hunter,** investigations on the dependence of rotatory power on chemical constitution. Part XXXIV. Borotartaric acid, 2838.
- Burkhardt, George N., and Harold Wood,** nitroarylsulphuric acids and their reduction products, 141.
- Burstall, Francis H.** See *Gilbert T. Morgan.*
- Burton, Harold,** mobile anion tautomerism. Part III. A comparison of the activation of three carbon anionotropic systems by alkyl and by aryl groups, 455.
- Burton, Harold, and Christopher K. Ingold,** the modes of addition to conjugated unsaturated systems. Part II. The reduction of conjugated unsaturated acids by metals dissolving in aqueous media, 2022.
- Bury, Charles R.** See *John Grindley.*

## C.

- Callow, Robert K., and John M. Gulland,** some phenanthrene derivatives, 2424.
- Callow, Robert K., John M. Gulland, and Robert D. Haworth,** synthetical experiments on the aporphine alkaloids. Part V. Laurotetanine; syntheses of 2:3:6:7- and 3:4:6:7-tetramethoxyaporphines, 658.  
synthetical experiments on the aporphine alkaloids. Part VI. *iso*Thebaine; attempted syntheses of 3:4:5-trimethoxyaporphine, 1444.
- Callow, Robert K., and Edward Hope,** isatin anils. Part I. The isomerism of isatin-2-anil, 1191.
- Callow, Robert K.** See also *John M. Gulland.*
- Campbell, Alan N.,** the existence of liquid racemates, 1111.
- Campbell, (Miss) Ishbel G. M.** See *John Read.*
- Carter, John S., and Charles R. Hoskins,** the solubility of iodine in solutions of halides, 580.
- Carter, Peter G.** See *John Read.*

- Caspari, William A.**, dimorphism in the aliphatic dicarboxylic acid series (azelaic acid), 2709.
- Cavell, Alexander C.** See **Edmund J. Bowen**.
- Chakravarti, Satyendra N.**, and **William H. Perkin, jun.**, a synthesis of isooipianic acid, 193.  
synthesis of 3:10-dimethoxytetrahydroprotoberberine, 196.
- Challenger, Frederick**, and **Louis Klein**, the formation of *l*-malic acid from fumaric acid by *Aspergillus niger*, 1644.
- Challenger, Frederick, Louis Klein**, and **Thomas K. Walker**, the production of kojic acid from pentoses by *Aspergillus oryzae*, 1498.
- Challenger, Frederick**, and **Arnold T. Peters**, the nitration of benzyl derivatives of certain phosphorus, arsenic, and antimony compounds, 2610.
- Chapman, A. Chaston**, on the individuality of humulene, 359.
- Chapman, Arthur W.**, a new method for preparing substituted diphenylamines, 569.  
dynamic isomerism involving mobile hydrocarbon radicals. Part I. The triarylbenzenylamidines, 2133.
- Chapman, David L.**, and **Philip P. Grigg**, the mean life of the catalyst postulated in the photochemical union of chlorine and hydrogen, 2426.
- Charlton, William**. See **Cameron G. Anderson**.
- Chattaway, Frederick D.**, and **William G. Humphrey**, the action of *o*-phenylenediamines upon dihydroxytartaric acid, 645.
- Chattaway, Frederick D.**, and **Harry Irving**, the action of potassium cyanide on chloroaldehydes, 1038.
- Chattaway, Frederick D.**, and **Edwin G. Kellett**, compounds of the thioparaldehyde type derived from chloral, 2908.
- Chattaway, Frederick D.**, and **George D. Parkes**, nicotine tetrachloroiodide, 1314.  
the estimation of nicotine, 2817.
- Chatterjee, Bibhucharan**, attempts to find new anti-malarials. Part IV.  $\beta$ -Benziminazolylethylamine and  $\beta$ -5(or 6)-ethoxybenziminazolylethylamine, 2965.
- Child, Reginald**, and **Frank L. Pyman**, bases containing two isoquinoline rings, 2010.
- Chokshi, Navmittal M.** See **Oscar L. Brady**.
- Clay, Hubert**. See **Herbert H. Hodgson**.
- Clemo, George R., Robert D. Haworth**, and **Eric Walton**, the constitution of santonin. Part I. The synthesis of *dl*-santonin us acid, 2368.
- Clemo, George R.**, and **Richard Raper**, the lupin alkaloids. Part II., 1927.
- Cobb, John W.** See **F. J. Dent**.
- Cohen, Aaron**, and **Samuel Smiles**, a synthesis of isonaphthathioxin, 209.
- Cooper, Kenneth E.** See **Herbert H. Hodgson**.
- Copisarow, Maurice**, 2-substituted derivatives of *p*-cresol, 251.  
salicylaldehyde and its methyl ether, 588.
- Coulson, Edward A.** See **Gilbert T. Morgan**.
- Cowdrey, Geoffrey W.** See **Arthur Fairbourne**.
- Cox, Alwyn B.** See **Rupert J. Best**.
- Creedon, Timothy V.** See **Joseph Reilly**.
- Cullinane, Nicholas M.**, and **David Philpott**, synthesis of some phenyl styryl ketones and related compounds, 1761.

## D.

- Dann, Arthur T.**, the dinitration of *m*-dichlorobenzene, 2460.
- Dann, Arthur T.**, and **William Davies**, the reactions of nitrosulphonyl chlorides. Part I. The reaction of hydrazine hydrate with *o*-nitrosulphonyl chlorides, 1050.
- Darbari, Nanda L.** See **Joti S. Aggarwal**.
- Davies, John S. H.** See **John W. C. Phillips**.
- Davies, Walter C.**, and **William J. Jones**, tertiary phosphines containing the *n*-butyl radical, 33.
- Davies, Walter C., Percy L. Pearse**, and **William J. Jones**, tertiary phosphines containing the higher alkyl radicals, 1262.
- Davies, William**, and **Ralph A. R. Down**, the preparation of *p*-azoxyanisole and derivatives, 586.
- Davies, William**. See also **Arthur T. Dann**.
- Dawson, Harry M., Charles R. Hoskins**, and **Jerse E. Smith**, acid and salt effects in catalysed reactions. Part XXI. The catalytic effects associated with oxalic acid in the first and second stages of dissociation, 1884.
- Dawson, Harry M.**, and **William Lowson**, acid and salt effects in catalysed reactions. Part XIX. The catalytic activity of chloroacetic acid in the hydrolysis of ethyl acetate, 393.

- Dawson, Harry M.**, and **William Lowson**, acid and salt effects in catalysed reactions. Part XX. The ionisation of acids in salt solutions, 1217.
- Dawson, Harry M.**, and **Jesse E. Smith**, acid and salt effects in catalysed reactions. Part XXII. The influence of inert salts on the secondary dissociation of dibasic acids, 2530.
- Day, James N. E.** See **Oscar L. Brady**.
- Dent, F. J.**, and **John W. Cobb**, the equilibrium  $\text{CO}_2 + \text{C} \rightleftharpoons 2\text{CO}$ , 1903.
- Deulofeu, Venancio**, formation of *l*-threose, 2458.
- Deulofeu, Venancio**, and **Raúl J. Selva**, the degradation of *l*-arabinose, 225.
- Dickins, Alfred H.**, **Wilfred E. Hugh**, and **George A. R. Kon**, the chemistry of the three-carbon system. Part XX. *cyclopentylideneacetone* and *cyclopentylidenemethyl ethyl ketone*, 572.
- Dickinson, Robert**, the influence of colloids on the precipitation of salts, 358.
- Dickinson, William P.**, and **Philip G. Marshall**, the isomeric monohydroxyphenylalanines. Part I. A new synthesis of the *o*- and *m*-isomerides and a comparison of their properties with those of tyrosine, 1495.
- Dickinson, William P.** See also **Dalziel L. Hammick**.
- Donnan, Frederick G.**, physical chemistry in the science of biology, 1387.
- Donnelly, Reginald P.**, the combination of hydrogen and oxygen on the surface of nickel, 2438.
- Donnelly, Reginald P.**, and **Cyril N. Hinshelwood**, the combination of hydrogen and oxygen on the surface of platinum, 1727.
- Doran, William.** See **Atul C. Bose**.
- Down, Ralph A. R.** See **William Davies**.
- Drew, Harry D. K.**, non-existence of isomerism among the dialkyltelluronium dihalides, 560.
- Drew, Harry D. K.**, and **Charles R. Porter**, the micro-estimation of selenium and tellurium in organic compounds, 2091.
- Driscoll, John O'L.** See **Graham C. Gibson**.
- Drumm, Peter J.** See **Joseph Reilly**.
- Duff, James C.**, the solubilities of *o*- and *p*-nitrophenols in aqueous methyl-alcoholic solutions at 25° and 40°; formation of  $\beta$ -*p*-nitrophenol, 2789.
- Duff, James C.**, and **Edwin J. Bills**, basic chlorides and addition compounds from metallic chlorides and hexamethylenetetramine; exceptional behaviour of nickel chloride, 411.
- Dunn, John S.**, the oxidation of tungsten: evidence for the complexity of tungstic oxide,  $\text{WO}_3$ , 1149.
- Dyson, George M.**, **Robert F. Hunter**, and **Charles Soyka**, aminobenzthiazoles. Part XI. The synthesis of 5:4'-disubstituted 1-anilinobenzthiazoles from nuclear-substituted thio-carbanilides, 458.

## E.

- Eastwood, (Miss) Frances M.** See **Wilson Baker**.
- Eccott, Eustace N.**, and **Reginald P. Linstead**, investigations of the lower olefinic acids. Part I. *n*-Hexenoic acids, 2153.
- Elson, Leslie A.**, **Charles S. Gibson**, and **John D. A. Johnson**, 10-chloro-5:10-dihydrophenarsazine and its derivatives. Part VIII. The bromination of 10-chloro-5:10-dihydrophenarsazine and some of its derivatives, 1080.
- monohalogenomononitrotoluenes; arsenical compounds derived from 3-bromo-4-nitrotoluene, 2735.
- Elson, Leslie A.**, **Charles S. Gibson**, and **John L. Simonsen**, the oxidation of  $\alpha$ -terpinene with benzoylhydroperoxide, 2732.
- Emeléus, Harry J.**, the light emission from the phosphorescent flames of ether, acetaldehyde, propaldehyde, and hexane, 1733.
- the phosphorescent flame of arsenic, 1846.
- Evans, Ulrick R.**, the passivity of metals. Part II. The breakdown of the protective film and the origin of corrosion currents, 92.
- the mechanism of corrosion, 111.
- Evans, Ulrick R.**, and **John Stockdale**, the passivity of metals. Part III. The quantity and distribution of the superficial oxide, 2651.
- Everett, John G.**, trypanocidal activity and chemical constitution. Part I. New sulphur derivatives of aromatic organic arsenicals, 670.
- Exell, H. C.** See **G. C. Holliday**.

## F.

- Fairbourne, Arthur**, the partial esterification of polyhydric alcohols. Part VIII. The proposed standards of reference in work on the configuration of glycerol derivatives, 1151.

- Fairbourne, Arthur**, the partial esterification of polyhydric alcohols. Part IX. The discovery of the first true 8-ether of glycerol, 2232.
- Fairbourne, Arthur**, and **Geoffrey W. Cowdrey**, the partial esterification of polyhydric alcohols. Part VII. The unreliability of proofs of the structure of disubstituted glycerols, 129.
- Farmer, Ernest H.**, and **William D. Scott**, properties of conjugated compounds. Part VI. The dibromination products of cyclic butadienes, 172.
- Farmer, Ernest H.**, and **Frank L. Warren**, properties of conjugated compounds. Part VII. The additive formation of cyclohexenes, 897.
- Fenton, Geoffrey W.**, and **Christopher K. Ingold**, influence of poles and polar linkings on the course pursued by elimination reactions. Part IV. Further experiments on the olefinic degradation of sulphones, 2338.
- influence of poles and polar linkings on the course pursued by elimination reactions. Part V. The mechanism of thermal decomposition of quaternary phosphonium hydroxides, 2342.
- Fisher, (Miss) Nellie I.** See **Harry L. Riley**.
- Flürscheim, Bernhard**, and **Eric L. Holmes**, hexa-aminobenzene, 330.
- Friend, John A. N.**, the hydrates of lithium sulphate and their solubility in water between  $-16^{\circ}$  and  $+103^{\circ}$ , 2330.
- the solubility of potassium selenate in water between  $0^{\circ}$  and  $100^{\circ}$ , 2782.
- Friend, John A. N.**, **John E. Townley**, and **Reece H. Vallance**, the solubility of sodium ferrocyanide in water between  $0^{\circ}$  and  $104^{\circ}$ , 2326.
- G.**
- Gane, Richard**, and **Christopher K. Ingold**, electrometric titration curves of dibasic acids. Part III. Substituted malonic acids, 1691.
- Garner, Frederick B.**, and **Samuel Sugden**, the parachor and chemical constitution. Part XIII. Some compounds of titanium and tin, 1298.
- Garner, William E.**, and **A. M. King**, alternation in the heats of crystallisation of the normal monobasic fatty acids. Part IV., 1849.
- Garner, William E.**, and **F. Roffey**, effect of the addition of hydrogen and water on the radiation emitted from the carbon monoxide flame, 1123.
- Ghosh, Bhupendra N.**, the effect of proteins on the coagulation of bentonite suspensions by electrolytes, 2285.
- the action of sodium hydroxide on stannic oxide sol. Parts I. and II., 2290, 2298.
- scattering of light by stannic oxide sols, 2526.
- the electrokinetic potential and its relation to the rate of coagulation of colloids. Part I., 2693.
- Gibson, Charles S.**, and **John D. A. Johnson**, 10-chloro-5:10-dihydrophenarsazine and its derivatives. Part VII. The synthesis of the 1-methyl and 3-methyl homologues, 767.
- 10-chloro-5:10-dihydrophenarsazine and its derivatives. Part IX. The synthesis of nitromethyldiphenylamine-6'-arsinic acids and their conversion into nitromethyl derivatives of 10-chloro-5:10-dihydrophenarsazine; constitution of 10-chloro-5:10-dihydrophenarsazine, 1229.
- 10-chloro-5:10-dihydrophenarsazine and its derivatives. Part X. The 1- and/or 3-methyl derivatives; the condensation of arsenic chloride and phenyl-*m*-tolylamine, 1473.
- substances of the phenarsazine type containing the acenaphthene nucleus, 1621.
- 10-chloro-5:10-dihydrophenarsazine and its derivatives. Part XI. Mono-, di-, and tri-methyl derivatives, 2743.
- Gibson, Charles S.**, and **Barnett Levin**, nor-*d*- $\psi$ -ephedrine, a convenient base for the resolution of externally compensated acids; resolution of *dl*-benzenesulphonylalanine and of *dl*-*N*-phenylalanineamide-4-arsinic acid, 2754.
- compounds of the tryparsamide type. Part II. Resolution of *dl*-*N*-2-methylphenylalanineamide-4-arsinic acid, 2759.
- Gibson, Charles S.**, **John D. A. Johnson**, and **Barnett Levin**, compounds of the tryparsamide type. Part I. Resolution of *N*-phenylalanine-4-arsinic acid and of its amide, 479.

- Gibson, Charles S.**, and **John L. Simonson**, Indian turpentine from *Pinus longifolia*, Roxb. Part V. The oxidation of *d*- $\Delta^3$ -carene with Beckmann's chromic acid mixture, 305.  
the oxidation of *d*- $\Delta^4$ -carene with Beckmann's chromic acid mixture, 909.  
the constitution of Guareschi's cyanobutadiene acids; an attempt to synthesise *B*-isopropylglutaconic acid, 1074.
- Gibson, Charles S.** See also **Leslie A. Elson**.
- Gibson, Graham C.**, **John O'L. Driscoll**, and **William J. Jones**, equilibrium between alcohols and salts. Part III., 1440.
- Gilbert, Frank L.** See **Thomas M. Lowry**.
- Gilbert, Lionel F.**, and (*Miss*) **Miriam Levi**, the boric acids, 527.
- Glass, John V. S.**, and **Cyril N. Hinshelwood**, the unimolecular decomposition of some ethers in the gaseous state, 1804.  
homogeneous catalysis of a gaseous reaction; kinetics of the catalytic decomposition of isopropyl ether, 1815.
- Glasstone, Samuel**, studies of electrolytic polarisation. Part VII. Complex cyanides: (*a*) silver, 690.  
studies of electrolytic polarisation. Part VIII. Complex cyanides: (*b*) copper, 702.
- Goodway, Norman F.** See **Edward de B. Barnett**.
- Graymore, John**, the action of aromatic acid chlorides on vinylidiacetoneamine, 587.
- Gregory, Cecil E.** See **Herbert B. Watson**.
- Grey, Egerton C.**, the iodometric estimation of iron, 35.
- Grigg, Philip P.** See **David L. Chapman**.
- Grindley, John**, and **Charles R. Bury**, the densities of butyric acid-water mixtures, 679.
- Groves, Leslie G.**, and **Eustace E. Turner**, the nitration of 4-chloro-4'-bromobenzophenone and -diphenylsulphone, and the attempted nitration of 4-chloro-4'-bromodiphenyl, 509.
- Groves, Leslie G.**, **Eustace E. Turner**, and (*Miss*) **Gladys I. Sharp**, the scission of diaryl ethers and related compounds by means of piperidine. Part II. The nitration of 2:4:4'-trichlorodiphenyl ether, and of 2:4-dichlorophenyl *p*-toluenesulphonate and benzoate, 512.
- Gull, Herbert C.**, and **Eustace E. Turner**, orientation effects in the diphenyl series. Part VII. The effect of substituents in one nucleus on the ratio of ortho:para nitration in the other; the nitration of 2- and 4-nitro- and of 2:4- and 2:4'-dinitro-diphenyl and of diphenyl-4-carboxylic acid, 491.
- Gulland, John M.**, **Robert D. Haworth**, **Cyril J. Virden**, and **Robert K. Callow**, synthetical experiments on the aporphine alkaloids. Part VII. Attempted synthesis of apomorphine dimethyl ether, 1666.
- Gulland, John M.**, **Robert Robinson**, **James Scott**, and **Sidney Thornley**, 6:7-dimethoxyisatin, 5:6-methylene-dioxyisatin and the nuclear degradation of 3:4-methylenedioxyquinoline, 2924.
- Gulland, John M.**, and **Cyril J. Virden**, anhydro-compounds derived from 2-nitro-3:4-dimethoxyphenylacetoneitrile and certain  $\psi$ -bases, 1791.
- Gulland, John M.** See also **Robert K. Callow**.

## H.

- Hague, Ernest N.**, and **Richard V. Wheeler** [with **Thomas M. Lowry**], the mechanism of thermal decomposition of the normal paraffins, 378.
- Hamer, (Miss) Frances M.**, cyanine dyes from quaternary salts of methyl- $\alpha$ - and  $\beta$ -naphthathiazoles, 2598.
- Hammick, Dalziel L.**, and **Leslie W. Andrew**, the determination of the parachors of substances in solution, 754.
- Hammick, Dalziel L.**, and **William P. Dickinson**, preparation of quin-aldinyl chloride and ethyl quin-aldinyl-acetoacetate, 214.
- Hampton, Horace A.**, **Waller N. Haworth**, and **Edmund L. Hirst**, polysaccharides. Part IV. The constitution of xylan, 1739.
- Hardaere, Richard W.**, and **Arthur G. Perkin**, reduction products of the hydroxyanthraquinones. Part X., 180.
- Hardy, Douglas V. N.**, the introduction of the triphenylmethyl group into phenols. Part II., 1000.  
an improved calcium chloride tube, 1108.
- Harrington, Charles R.**, and **William McCartney**, synthesis of an isomeride of thyroxine, and of related compounds, 892.

- Hatt, Harold H.**, the production of pinacols in the reaction between a carboxylic ester and a Grignard reagent, 1623.  
the formation of triphenylmethylphosphinic acid from triphenylmethoxyphosphorus dichloride. Part II. The mechanism of the reaction, 2412.
- Haworth, Robert D.**, the constitution of linolic acid, 1456.
- Haworth, Robert D.** See also *Robert K. Callow, George R. Clemo, and John M. Gulland.*
- Haworth, Walter N., Edmund L. Hirst, and Ernest J. Miller**, the development of a novel form of stereoisomerism in the sugar series. Part I. The third variety of triacetyl methylrhannoside, 2469.
- Haworth, Walter N., Edmund L. Hirst, and John I. Webb**, polysaccharides. Part V. Glycogen, 2479.
- Haworth, Walter N., and Charles W. Long**, the conversion of tetramethyl  $\gamma$ - and  $\delta$ -gluconolactones into the corresponding mannonolactones, and of the trimethyl  $\gamma$ - and  $\delta$ -xylonolactones into the corresponding lyxonolactones, 345.
- Haworth, Walter N., and Stanley Feat**, synthesis of 1-2:3:4:6-tetramethyl  $\delta$ -gluconolactone and of 1-2:3:4:6-tetramethyl  $\delta$ -mannonolactone from 1-2:3:5-trimethyl arabofuranose, 350.
- Haworth, Walter N., and Charles R. Porter**, isolation of crystalline  $\alpha$ - and  $\beta$ -ethylglucofuranosides ( $\gamma$ -ethylglucosides) and other crystalline derivatives of glucofuranose, 2796.
- Haworth, Walter N.** See also *Cameron G. Anderson, and Horace A. Hampton.*
- Hay, (Miss) Kathleen.** See *James W. McBain.*
- Haythornthwaite, Alan**, the chemotherapy of some bromine derivatives of phenylarsinic acids and arsenobenzenes, 1011.
- Heap, Tom, and Robert Robinson**, anthoxanthins. Part IX. Syringetin, 67.
- Heathcoat, Frederick.** See *George M. Bennett.*
- Hedges, Ernest S.**, an enquiry into the cause of periodic phenomena in electrolysis, 1028.  
periodic structures from interacting gases, 1848.  
the formation of periodic structures by salting-out and by coagulation, 2779.
- Heilbron, Isidor M., and Francis Irving**, the intermolecular condensation of styryl ketones. Part III. Further examples of the ready formation of bis-(styryl ketones), 931.  
styrylpyrylium salts. Part XI. The determination of the reactive group in ketones of the type  $\text{CH}_2=\text{CO}\cdot\text{CH}_2\text{R}$  by means of the benzo- $\beta$ -naphthaspiropyran colour change, 936.
- Heilbron, Isidor M., Frank Johnstone, and Frank S. Spring**, studies in the sterol group. Part VI. Dihydroergosterol and the formation of isomerides, 2248.
- Heilbron, Isidor M., William M. Owens, and Ian A. Simpson**, the unsaponifiable matter from the oils of elasmobranch fish. Part V. The constitution of squalene as deduced from its degradation products, 873.
- Heilbron, Isidor M., and Wilfred A. Sexton**, studies in the sterol group. Part III. The acetylation and catalytic hydrogenation of ergosterol, 921.  
studies in the sterol group. Part VII. preliminary note on the isolation of zymosterol, 2255.
- Heilbron, Isidor M., Wilfred A. Sexton, and Frank S. Spring**, studies in the sterol group. Part IV. The existence of isomeric ergosterols, 926.
- Heilbron, Isidor M., and Frank S. Spring**, studies in the sterol group. Part VIII. The reactions of isoergosterol, 2807.
- Heilbron, Isidor M., and Albert Thompson**, the unsaponifiable matter from the oils of elasmobranch fish. Part VI. The constitution of squalene as deduced from a study of the decahydro-squalenes, 883.
- Henderson, George G., Robert O. O. McCrone, and John M. Robertson**, the chemistry of the caryophyllene series. Part II. Clovene and isoclovene, 1368.
- Henderson, Stanley T.**, the quinoxaline synthesis: some derivatives of 2:3-dimethylquinoxaline, 466.
- Henley, William J. E., and Samuel Sugden**, the parachor and chemical constitution. Part XI. Arsenic and selenium compounds, 1058.
- Hepburn, Jack R. I.**, the formation of Liesegang rings as a periodic coagulation phenomenon, 213.
- Hickinbottom, Wilfred J.**, glucosides. Part II. The preparation of  $\alpha$ -glucosides from  $\beta$ -glucosyl chlorides, 1676.



- Hill, Douglas W.**, and **Frank L. Pyman**, the constitution of the glycerophosphates, 2236.
- Hinkel, Leonard E.**, and **William L. Madel**, substituted aromatic aldehydes in Hantzsch's pyridine condensation. Part I. Methoxy-, chloro-, and hydroxy-benzaldehydes, 750.
- Hinshelwood, Cyril N.** See **Reginald P. Donnelly**, and **John V. S. Glass**.
- Hirst, Edmund L.** See **John Avery**, **Horace A. Hampton**, and **Walter N. Haworth**.
- Hobson, Ralph P.**, a micro-method for determining semicarbazones and its application to the analysis of ketones, 1384.
- Hodgson, Herbert H.**, and **Hubert Clay**, the nitrosation of phenols. Part VII. Resorcinol monomethyl ether and *m*-cresol, 2775.
- Hodgson, Herbert H.**, and **Kenneth E. Cooper**, colour and constitution. Part IV. The absorption spectra of nitrophenylhydrazones in alcohol and in alcoholic potassium hydroxide, 231.
- Hodgson, Herbert H.**, and **Thomas A. Jenkinson**, the influence of substituents on the Reimer-Tiemann reaction. Parts I. and II., 469, 1639.
- Hodgson, Herbert H.**, and **Arnold Ker-shaw**, the nitrosation of phenols. Part VI. Further study of the nitrosation of *m*-chlorophenol, 1553. halogenation of anisole derivatives, 2917.
- Hodgson, Herbert H.**, and **Joseph Nixon**, the Reimer-Tiemann reaction with *m*-fluorophenol and the nitration of 4-fluoro-2-hydroxy- and 2-fluoro-4-hydroxy-benzaldehydes, 1632. the direct dibromination of *m*-bromophenol, 2424.
- Holliday, G. C.**, and **H. C. Exell**, the thermal decomposition of methane. Part I. Decomposition in silica bulbs, 1066.
- Holmes, Eric L.** See **Bernhard Flür-sheim**.
- Holroyd, Ronald**, and **Richard V. Wheeler**, studies in the composition of coal; plant entities as oil-yielding constituents, 633.
- Hope, Edward.** See **Robert K. Callow**.
- Hoskins, Charles R.** See **John S. Carter**, and **Harry M. Dawson**.
- Houssa, Armand J. H.**, **Joseph Kenyon**, and **Henry Phillips**, the relative configurations of *d*- $\beta$ -octanol and its dextrorotatory halides; the interconversion of the optically active  $\beta$ -octanols by a new method, 1700.
- Houssa, Armand J. H.**, and **Henry Phillips**, some reactions of *d*- $\beta$ -octyl chlorocarbonate of interest from the standpoint of the Walden inversion, 2510.
- Howell, Owen R.**, molecular structure in solution. Part IV. The densities, viscosities, and electrical conductivities of aqueous solutions of cobalt chloride and hydrochloric acid at different temperatures, 162.
- Howells, William J.**, the binary system carbamide-ammonium nitrate; molecular association in each component, 910.
- Hugh, Wilfred E.**, **George A. R. Kon**, and **Thomas Mitchell**, the chemistry of the three-carbon system. Part XXI. Some cycloheptane compounds, 1435.
- Hugh, Wilfred E.** See also **Alfred H. Dickins**.
- Hughes, Edward D.**, and **Herbert B. Watson**, the reaction of bromine with aliphatic acids. Part III.  $\alpha$ - and  $\gamma$ -Ketonic acids, 1945.
- Hughes, Owen L.**, and **Thomas H. Mead**, the solubility of sodium thiocyanate in water and in organic solvents, 2282.
- Hughesdon, Reginald S.** See **John Read**.
- Hulton, Henry F. E.** See **Julian L. Baker**.
- Humphrey, William G.** See **Frederick D. Chattaway**.
- Humphreys, Cecil W.** See **James W. McBain**.
- Hunter, Harold.** See **Stanley G. Burgess**.
- Hunter, Robert F.**, and **William E. Pride**, aminobenzthiazoles. Part XII. The mobility of 1-amino-3:5-dimethylbenzthiazole; a case of complete reactivity in the aminothiazole form, 943.
- Hunter, Robert F.** See also **George M. Dyson**.
- Hurtley, William R. H.**, replacement of halogen in orthobromobenzoic acid, 1870.

## I.

- Ingham, John W.**, the apparent hydration of ions. Part III. The densities and viscosities of saturated solutions of ammonium chloride in hydrochloric acid, 2059.
- Ingold, Christopher K.**, and **Joe A. Jessop**, influence of poles and polar linkings on the course pursued by elimination reactions. Part VI. 1:1-Elimination in the degradation of quaternary ammonium hydroxides, 2357.

- Ingold, Christopher K.**, and *Eugene Rothstein*, influence of poles and polar linkings on tautomerism in the simple three-carbon system. Part I. Experiments illustrating prototropy and anionotropy in trialkylpropenylammonium derivatives, 8.
- Ingold, Christopher K.**, and *Charles W. Shoppee*, the mobility of symmetrical triad (prototropic) systems. Part IV. Mobility in the simple three-carbon system terminated by aryl groups, 447.
- the mobility of symmetrical triad (prototropic) systems. Part V. A new triad system (methyleneazomethine), 1199.
- Ingold, Christopher K.** See also *John W. Baker*, *Harold Burton*, *Gioffrey W. Fenton*, and *Richard Gane*.
- Irving, Francis**, styrylpyrylium salts. Part XII. *spiro*Pyrans derived from 9-methyl- and 9 ethyl-xanthylium salts, 1093.
- Irving, Francis.** See also *Isidor M. Heilbron*.
- Irving, Harry.** See *Frederick D. Chattaway*.
- Iyengar, Mysore S.** See *Mysore G. S. Rao*.
- J.
- Jackson, (Miss) Jane H.** See *Ernest W. McClelland*.
- Jackson, Kenneth S.**, *Alexander S. Russell*, and *Jack L. Merrill*, the electrolytic deposition of tungsten at a mercury cathode, 2394.
- James, Robert G.** See *Frederick G. Angell*.
- Jenkinson, Thomas A.** See *Herbert H. Hodgson*.
- Jessop, Gilbert.** See *Thomas M. Lowry*.
- Jessop, Joe A.** See *Christopher K. Ingold*.
- Johnson, John D. A.** See *Leslie A. Elson*, and *Charles S. Gibson*.
- Johnstone, Frank.** See *Isidor M. Heilbron*.
- Jones, Brynmor.** See *Alan E. Bradfield*.
- Jones, Cyril W. H.**, the decomposition of methane. Part I., 419.
- Jones, Cyril W. H.**, *William J. Price*, and *Harry W. Webb*, nitrosyl-sulphuric acid. Part II., 312.
- Jones, David C.**, the systems *n*-butyl alcohol-water and *n*-butyl alcohol-acetone-water, 799.
- Jones, William J.** See *Walter C. Davies*, and *Graham C. Gibson*.
- Jost, William.** See *Max Bodenstein*.
- Jung, Gerhard.** See *Max Bodenstein*.
- K.
- Kandiah, Arupillai**, and *Reginald P. Linstead*, the chemistry of the three-carbon system. Part XXII. The preparation and interconversion of isomeric unsaturated nitriles, 2139.
- Kawakami, Yasota.** See *James W. McBain*.
- Kay, Herbert D.**, the enzymic synthesis of  $\beta$ -hydroxyethyl dihydrogen phosphate, 524.
- Kellett, Edwin G.** See *Frederick D. Chattaway*.
- Kentish, William S.**, *N*-methyl derivatives of 2-phenylnaphthylene-1:3-diamine, 1169.
- Kenyon, Joseph.** See *Armand J. H. Houssa*.
- Kermack, William O.**, and *James F. Smith*, preparation of *o*-nitroacetophenone, 814.
- Kerr, Robert N.**, the influence of the polarity of the solvent on the velocity of a reaction, 239.
- Kershaw, Arnold.** See *Herbert H. Hodgson*.
- King, A. M.** See *William E. Garner*.
- King, Albert T.**, constitutional influences on the conversion of azonaphthols into their azo-sulphites and their bearing on the structure of  $\alpha$ - and  $\beta$ -naphthol, 601.
- King, Harold**, diethyl ether. Part I. The products of its autoxidation, 738.
- King, Harold.** See also *Winston K. Anslow*.
- King, Herbert J. S.**, researches on amines. Part III. Derivatives of cupric nitrite, 2593.
- Kipping, Frederic B.**, the stereoisomeric 2:3:5:6-tetramethylpiperazines. Part I., 2889.
- Kipping, Frederic S.**, and *Arthur G. Murray*, organic derivatives of silicon. Part XXXVIII. The formation of tri- and tetra-phenylsilicane and complex synthetical products from octaphenyl-cyclosilicetetraene, 360.
- Kipping, Frederic S.**, *Arthur G. Murray*, and *John G. Maltby*, organic derivatives of silicon. Part XL. Attempts to prepare unsaturated compounds from phenylsilicon trichloride, 1180.
- Kipping, Frederic S.** See also *Arthur K. Steele*, and *Reginald A. Thompson*.
- Klein, Louis.** See *Frederick Challenger*.
- Kon, George A. R.**, and *Reginald P. Linstead*, catalytic influences in three-carbon tautomerism. Part I. Sodium alkylloxides, 1269.

**Kon, George A. R.** See also *Alfred H. Dickens*, and *Wilfred E. Hugh*.

## L.

**Lange, Wilhelmus de.** See *Roland H. Purcell*.

**Lawson, Alexander.** See *Thomas S. Patterson*.

**Lebedev, Serguey V.,** and *Anastasia O. Yakubchik*, the catalytic hydrogenation of different types of unsaturated compounds. Part IV. The hydrogenation of conjugated systems: piperic acid, 220.

**Le Fèvre, Raymond J. W.,** corrections in the chemistry of diphenyl derivatives of the "Kaufler" type, and the formation of dibenzocotiazines, 733.

the orienting influence of oxonium oxygen; the nitration of 2-phenylbenzopyrylium perchlorate and ferrichloride, 2771.

**Legg, Vernon H.,** and *Richard V. Wheeler*, plant cuticles. Part I. (cont.). Modern plant cuticles, 2444.

plant cuticles. Part II. Fossil plant cuticles, 2449.

**Leslie, (Miss) Mary S.,** and *Eustace E. Turner*, the isomerism of derivatives of 2-phenylnaphthylene-1:3-diamine, 1512.

**Levi, (Miss) Miriam.** See *Lionel F. Gilbert*.

**Levin, Barnett.** See *Charles S. Gibson*.

**Lewis, Douglas R.** See *Donald H. Bangham*.

**Lewis, J. Stanley,** low-temperature oxidation of hydrocarbons. Part I. The pressure-temperature curves of amylene-oxygen mixtures, 759.

**Lih, Kun-Hou.** See *Charles R. Bailey*.

**Linstead, Reginald P.,** the chemistry of the three-carbon system. Part XXIII. The influence of substituent groups on the tautomeric change, 2498.

**Linstead, Reginald P.** See also *Eustace A. Eccott, Arupillai Kandiah,* and *George A. R. Kon*.

**Lloyd, William V.** See *Thomas M. Lowry*.

**Long, Charles W.** See *Walter N. Haworth*.

**Lowry, Thomas M.,** the rotatory dispersion of organic compounds. Part XVIII. Potassium boro-tartrate, 2853.

the rotatory dispersion of organic compounds. Part XIX. The validity of Drude's equation, 2858.

**Lowry, Thomas M.,** and *Frank L. Gilbert*, studies of valency. Part XIII. Further experiments on the molecular structure of the quadrivalent derivatives of tellurium, 2076.

studies of valency. Part XIV. An optically active telluronium salt: phenyl-*p*-tolylmethyltelluronium iodide, 2867.

**Lowry, Thomas M.,** and *Gilbert Jessop*, the properties of the chlorides of sulphur. Part II. Molecular extinction coefficients, 1421.

**Lowry, Thomas M.,** and *William V. Lloyd*, the properties of nicotine and its derivatives. Part I. Molecular extinction coefficients, 1376.

the properties of nicotine and its derivatives. Part II. Optical rotatory power and rotatory dispersion, 1771.

**Lowry, Thomas M.** See also *Ernest N. Hague*.

**Lowson, William.** See *Harry M. Dawson*.

**Lunt, Robert IV.,** and *Leonard S. Mumford*, the decomposition of carbon monoxide in the silent electric discharge. Part III., 1711.

**Lyche, Ralph T.** See *Claus N. Riiber*.

## M.

**Mabbott, Ernest E.,** obituary notice of, 2969.

**McAulay, A. L.,** and *S. H. Bastow*, the electrical behaviour of surfaces of corroding iron, 85.

**McBain, James W.,** and *(Miss) Kathleen Hay*, the alkalinity of soap solutions as measured by indicators, 589.

**McBain, James W., Cecil W. Humphreys,** and *Yasota Kawakami*, the rates of saponification of various commercial oils, fats, and waxes and pure triglycerides by aqueous alkali, 2185.

**McCartney, William.** See *Charles R. Harington*.

**McClelland, Ernest W.,** the formation of thionaphthindole, 1588.

**McClelland, Ernest W.,** and *Leonard A. Warren*, the formation and stability of the 2-*o*-thiophenyl-4:5-dihydroglyoxalines, 2621.

**McClelland, Ernest W., Leonard A. Warren,** and *(Miss) Jane H. Jackson*, the formation and stability of the 2-thio-1:2-dihydrobenzisothiazoles, 1582.

- McCrone, Robert O. O.** See *George G. Henderson*.
- MacGillivray, W. Eoghan.** See *H. Gordon Rule*.
- McGregor, Thomas.** See *Robert Wright*.
- Mackenzie, John E., and James P. Quin,** compounds of hydroxides of the alkaline earths with sugars, 951.
- Mackie, Alexander.** See *John B. Shoesmith*.
- Macmaster, James C., Alfred Russell, and Alfred W. Stewart,** Tesla-luminescence spectra. Part VI. Some phenolic compounds and their ethers, 2401.
- Macmillan, William G., and Thomas H. Reade,** elimination of the nitroso-group from nitrosoamines, 585.  
the formation of *N*-nitrosoamines from tertiary amines. Part I. The conversion of derivatives of dimethylaniline by nitrous acid into the corresponding nitrosoamines and monomethylanilines, 2863.
- Madden, Denis.** See *Joseph Reilly*.
- Madel, William R.** See *Leonard E. Hinkel*.
- Maitland, Peter, and Stanley H. Tucker,** the condensation of fluorene with acetone. Part I. The action of magnesium 9-fluorenyl bromide on (a) acetone, (b) diacetone alcohol; the question of two forms of 9-isopropylidene-fluorene, 2559.
- Maltby, John G.,** the classification of the sugars. Part II., 2769.
- Maltby, John G.** See also *Frederic S. Kipping*.
- Mann, Frederick G.,** the cobaltic derivatives of  $\beta\beta'\beta''$ -triaminotriethylamine, 409.  
the stability of complex metallic salts, 651.
- Mann, Frederick G.** See also *Ernest V. Bell*.
- Manning, Alexander B.,** the determination of unsaturated and aromatic hydrocarbons in light oils and motor spirits, 1014.
- Marsh, Joseph K.,** the order of fractionation of rare-earth bromates, and a search for illinium, 2387.
- Marshall, Philip G.** See *William P. Dickinson*.
- Mason, Frederick A.,** the action of phosphoric oxide on  $\beta$ -anilinobutyral, 1560.
- Matthews, Frances E.,** obituary notice of, 2970.
- Maxwell, George B., and Richard V. Wheeler,** the inflammation of mixtures of the olefines and air in a closed spherical vessel, 245.
- Mayes, Horace A., and Eustace E. Turner,** the nitration of phenylcyclohexane and of its *p*-halogeno-derivatives, 500.
- Mead, Thomas H.** See *Owen L. Hughes*.
- Menon, Kottiazath N., and John L. Simonsen,** the electrolytic reduction of the imides of cyclic acids (preliminary note), 302.
- Merrill, Jack L., and Alexander S. Russell,** the electrolytic deposition of molybdenum at a mercury cathode, 2389.
- Merrill, Jack L.** See also *Kenneth S. Jackson*.
- Miles, John B.** See *H. Gordon Rule*.
- Miller, (Miss) Christina C.,** the slow oxidation of phosphorus. Part I. The inhibition of the glow of phosphorus by phosphorous oxide, 1823.  
the slow oxidation of phosphorus. Part II. The oxidation products of phosphorus and phosphorous oxide, 1829.
- Miller, Ernest J.** See *Walter N. Haworth*.
- Millott, John O'N.** See *Edmund B. R. Prideaux*.
- Minsas, Josef.** See *Claus N. Riiber*.
- Mitchell, Thomas.** See *Wilfred E. Hugh*.
- Mitchell, Vivian E. S., and James R. Partington,** the influence of ethyl ether and of dimethylpyrone on the availability of hydrogen chloride in alcoholic solution, 1562.
- Moir, James,** obituary notice of, 2972.
- Monypenny, (Miss) Mary W., and Alfred Russell,** the fluorescence spectra of the vapours of fluorobenzene and *p*-fluorotoluene, 2436.
- Moore, Tom S., (Miss) Mary Boyle, and (Miss) Vera M. Thorn,** *N*-substituted derivatives of piperazine and ethylenediamine. Part I. The preparation of *N*-monosubstituted derivatives, 39.
- Morgan, Gilbert T., and Henry Burgess,** interaction of tellurium tetrachloride and dimethylaniline, 1103.  
interactions of basic tellurium chloride and the cresols, 2214.
- Morgan, Gilbert T., and Francis H. Burstall,** heterocyclic systems containing selenium. Part I. *cyclo*-Selenobutane (tetrahydro-selenophen), 1096.  
heterocyclic systems containing selenium. Part II. *cyclo*-Selenopentane, 2197.

- Morgan, Gilbert T.**, and **Edward A. Coulson**, synthesis of anthracene homologues. Part I. 2:6- and 2:7-Dimethylantracenes, 2203.  
synthesis of anthracene homologues. Part II. 2:3:6-Trimethylantracene, 2551.
- Mosses, Arthur N.** See **George M. Bennett**.
- Mumford, Leonard S.** See **Robert W. Lunt**.
- Mumford, Stanley A.**, and **John W. C. Phillips**, the evaluation and interpretation of parachors, 2112.
- Mumford, Stanley A.** See also **John W. C. Phillips**.
- Murray, Arthur G.** See **Frederic S. Kipping**.

## N.

- Nicholson, Vincent S.** See **Cameron G. Anderson**.
- Nisbet, Hugh B.** See **Alfred A. Boon**.
- Nixon, Joseph.** See **Herbert H. Hodgson**.
- Nodzu, Ryuzaburo.** See **Wilson Baker**.
- Norrish, Ronald G. W.**, photochemical equilibrium in nitrogen peroxide. Part II. The dependence of quantum efficiency on wave-length, 1158.  
photochemical equilibrium in nitrogen peroxide. Part III. A comparison of the thermal, photochemical, and electrical decompositions, and a general theory of the change, 1604.  
photochemical equilibrium in nitrogen peroxide. Part IV. The relation between fluorescence and photochemical action, 1611.

## O.

- Orton, Kennedy J. P.** See **Alan E. Bradfield**.
- Osborne, Thomas B.**, obituary notice of, 2974.
- Ott, Edwin**, the decomposition of carbon monoxide in the silent electric discharge, 2422.
- Owens, William M.** See **Isidor M. Heilbron**.

## P.

- Parker, Thomas W.**, and **Percy L. Robinson**, the determination of available oxygen by the Bunsen method, 1106.
- Parke, George D.** See **Frederick D. Chattaway**.

- Partington, James R.**, the action of sulphur monochloride on antimony pentachloride, 2573.  
arsenic trichloride and sulphur chloride, 2577.
- Partington, James R.**, and **Albert F. Tipler**, potassium hexathionate, 1382.
- Partington, James R.** See also **Virian E. S. Mitchell**.
- Patterson, Thomas S.**, and **Alexander Lawson**, the influence of solvents and other factors on the rotation and the rotation-dispersion of optically active compounds. Part XXVII. Derivatives of lactic acid, 2042.
- Patterson, Thomas S.**, and **John Robertson**, the preparation of  $\alpha$ - and  $\beta$ -methylglucoside, 300.
- Patterson, Thomas S.**, and **George Thomson**, the polarimetric study of intramolecular rearrangement in inactive substances. Part VII., 1895.
- Patterson, Thomas S.**, and **Alexander R. Todd**, the action of phosphorus pentachloride on ethyl tartrate, 1768.  
the influence of solvents and of other factors on the rotation of optically active compounds. Part XXVIII. The rotation dispersion of mannitol and some of its derivatives; note on rotation dispersion curves, 2876.
- Peacock, David H.**, **Mandal Bhattacharya**, and **B. Lakshman Rao**, phenoxyethylaniline and related compounds. Part I., 1926.
- Peakin, Frank H.** See **Oscar L. Brady**.
- Pearse, Percy L.** See **Walter C. Davies**.
- Peat, Stanley.** See **Walter N. Haworth**.
- Peel, John B.** See **Henry V. A. Briscoe**.
- Pennycuik, Stuart W.**, colloidal platinum. Part V. The coagulation by electrolytes in acid solution, 618.  
colloidal platinum. Part VI. The behaviour of platinum sols in basic solution, 623.
- Percival, Edmund G. V.**, and **William Wardlaw**, new polynuclear coordination compounds of cobalt, 1317.  
cobalt with a covalency of four: a new series of complex compounds, 1505.  
polynuclear cobalt complexes containing cobalt in the anion, 2628.
- Perkin, Arthur G.**, and **Charles W. H. Story**, the migration of the acyl group in partly acylated phenolic compounds. Part II. Synthesis of anthragallol 1:2- and 1:3-dimethyl ethers, 1399.

- Perkin, Arthur G.** See also *Richard W. Hardacre*.
- Perkin, William H., jun.**, the early history of the synthesis of closed carbon chains, 1347.
- Perkin, William H., jun.**, and *Robert Robinson*, strychnine and brucine. Part VIII. The action of hydriodic acid on strychnidine; dihydrostrychnidine (B) and substances derived therefrom, 964.
- Perkin, William H., jun.** See also *Herbert S. B. Barrett*, *Bertie K. Blount*, and *Satyendra N. Chakravarti*.
- Perkins, Thomas R.**, cadmium and beryllium peroxides, 1687.
- Peters, Arnold T.** See *Frederick Challenger*.
- Phelps, Harold J.**, the adsorption of fumaric and maleic acids by pure charcoals, 1724.
- Phillips, Henry.** See *Armand J. H. Houssa*.
- Phillips, John W. C., John S. H. Davies,** and *Stanley A. Mumford*, observations on the chlorination products of  $\beta\beta'$ -dichlorodiethyl sulphide. Part II., 535.
- Phillips, John W. C.** See also *Stanley A. Mumford*.
- Phillips, Montague A.**, the formation of 1-substituted benzimidazoles, 2820.
- Philpott, David.** See *Nicholas M. Cullinane*.
- Piper, Stephen H.**, an X-ray examination of some salts of the fatty acids, 234.
- Plant, Sydney G. P.**, derivatives of dihydropentindole. Part II., 2493.
- Plant, Sydney G. P.,** and *Reginald J. Rosser*, stereoisomerism in substituted 1:2:3:4-tetrahydroquinolines. Part I., 1861.
- Plant, Sydney G. P.,** and *Kenneth H. Rutherford*, derivatives of tetrahydrocarbazole. Part VIII. Formation and reactions of nitric acid addition products, 1970.
- Plant, Sydney G. P.** See also *Bertie K. Blount*.
- Plimmer, Robert H. A.,** and *William J. N. Burch*, esters of phosphoric acid. Part I. Phosphates of cetyl alcohol, cholesterol, chloroethyl alcohol, and ethylene glycol, 279.
- esters of phosphoric acid. Part II. The action of ethyl metaphosphate on alcohols, ammonia, and some amino-compounds, 292.
- Pollard, Alfred.** See *Wilson Baker*.
- Porter, Charles R.** See *Harry D. K. Drew*, and *Walter N. Haworth*.
- Pratt, Walter L.** See *George M. Bennett*.
- Price, Leslie S.** See *Thomas W. J. Taylor*.
- Price, William J.** See *Cyril W. H. Jones*.
- Pride, William E.** See *Robert F. Hunter*.
- Prideaux, Edmund B. R.,** and *John O'N. Millott*, the action of hydrogen fluoride on compounds of selenium and tellurium. Part III. Solubilities of tellurium dioxide and oxyfluorides, 2703.
- Pugh, William,** germanium. Part IV. The solubility of germanium dioxide in acids and alkalis, 1537.
- germanium. Part V. The hydrolysis of sodium germanate and the dissociation constants of germanic acid, 1994.
- germanium. Part VI. An improved method of extracting germanium from germanite, 2540.
- Purcell, Ronald H.,** and *Wilhelmus de Lange*, the vapour density and pressure of ammonium iodide, 275.
- Pyman, Frank L.** See *Frank Bryans*, *Reginald Child*, and *Douglas W. Hill*.

## Q.

- Qudrat-i-Khuda, Muhammad,** studies in keto-lactol tautomerism. Part I. Ring-chain tautomerism in  $\alpha$ -carboxy- $\gamma$ -acetyl- $\beta\beta$ -dimethylbutyric acid and a synthesis of  $\gamma$ -acetyl- $\beta\beta$ -dimethylbutyric acid, 201.
- studies in keto-lactol tautomerism. Part II. Influence of the cyclohexane ring on the tautomeric character of cyclohexane-1-acetone-1-malonic acid, a comparison with cyclopentane-1-acetone-1-malonic acid, and synthesis of the corresponding  $\delta$ -keto-monobasic acids, 713.
- studies in keto-lactol tautomerism. Part III. Influence of bulky substituents on the tautomerism of  $\alpha$ -carboxy- $\gamma$ -acetyl- $\beta$ -methyl- $\beta$ -ethyl-butyrac and - $\beta\beta$ -diethyl-butyrac acids, 1913.
- Quin, James P.** See *John E. MacKenzie*.

## R.

- Rao, B. Lakshman.** See *David H. Peacock*.

- Rao, Keshaviah A. N.**, studies in "strainless" rings. Part I.  $\beta$ -Substituted stereoisomeric decalins (decahydronaphthalenes), 1954.
- Rao, Mysore G. S.**, *Collurayana Srikantia*, and *Mysore S. Iyengar*, substitution in resorcinol derivatives. Part II. Bromo-derivatives of  $\beta$ -resorcyaldehyde and their orientation, 1578.
- Raper, Richard.** See *George R. Clemo*.
- Rây, Jñanendra N.**, 6(or) 8-nitro-1-phenylphthalazine, 2661.
- Rây, Jñanendra N.** See also *Joti S. Aggarwal*.
- Read, John**, (*Miss*) *Ishbel G. M. Campbell*, and *Thomas V. Barker*, the optically active diphenylhydroxyethylamines and isohydrobenzoinis. Part II., 2305.
- Read, John**, (*Miss*) *Catherine C. Steele*, and *Peter G. Carter*, researches in the menthone series. Part VI. The crystallisation of menthylamines with optically active acids, 23.
- Read, John**, and *Andrew J. Watters*, piperitone. Part X. The synthesis of certain menthadienes, menthenes, and menthanols, 2165.
- Read, John**, *Andrew J. Watters*, *George J. Robertson*, and *Reginald S. Hughesdon*, piperitone. Part IX. Some oxidation reactions of piperitone, 2068.
- Reade, Thomas H.**, the polarity of the halogens in solutions of pyridinium and allied dichloroiodides, 853.
- Reade, Thomas H.** See also *William G. Macmillan*.
- Reeves, H. Gordon**, methylation of *dl*-glyceraldehyde, 1327.
- Reilly, Joseph**, *Peter J. Drumm*, and *Timothy V. Creedon*, the nitration of phenylbenzylamine derivatives, 641.
- Reilly, Joseph**, and *Denis Madden*, the stability of diazonium salts of the triazole series, 815.
- Reynolds, Cedric V.** See *Oscar L. Brady*.
- Richardson**, (*Miss*) *Minnie*, and *Frederick G. Soper*, the effect of the cohesion of the medium on reaction velocity; the velocity of interaction of *N*-chloroacetanilide and hydrobromic acid in aqueous solutions, 1873.
- Riiber, Claus N.**, *Josef Minsaa*, and *Ralph T. Lyche*, on the modifications of galactose, 2173.
- Riley, Harry L.**, the dielectric constant of desiccated oxygen, 1026.
- Riley, Harry L.**, studies in complex salts. Part II. The preparation, properties and stability of some bisdicarboxylato copper salts, 1307.
- Riley, Harry L.**, and (*Miss*) *Nellie I. Fisher*, the electrolytic dissociation of some metal malonates. 2006.
- Roberts, Kenneth C.**, and *Samuel Smiles*, methoxy-derivatives of thioxanthone, 863, 1322.
- Robertson, Alexander**, synthesis of glucosides. Part II. The preparation of some galactosides, 1820.
- Robertson, Alexander**, and *Roy B. Waters*, synthesis of glucosides. Part III. Synthesis of glucosides of hydroxyxanthenes, 2239.
- Robertson, George J.** See *John Read*.
- Robertson, John.** See *Thomas S. Patterson*.
- Robertson, John M.** See *George G. Henderson*.
- Robinson, (Mrs.) Gertrude M.**, attempts to find new anti-malarials. Part I. Some pyrroloquinoline derivatives, 2947.
- Robinson, Percy L.** See *Henry V. A. Briscoe*, and *Thomas W. Parker*.
- Robinson, Robert**, and *Krishnasami Venkataraman*, anthoxanthins. Part VIII. A synthesis of morin and of 5:7:2':4'-tetrahydroxyflavone, 61.
- Robinson, Robert.** See also *Wilson Baker*, *George Barger*, *Herbert S. B. Barrett*, *John M. Gulland*, *Tom Heap*, and *William H. Perkin, jun.*
- Rördam, Hans N. K.**, the Walden inversion. Part II., 1282.
- Roffey, F.** See *William E. Garner*.
- Rosser, Reginald J.** See *Sydney G. P. Plant*.
- Rothstein, Eugene.** See *Christopher K. Ingold*.
- Rowlands, John R.** See *Henry V. A. Briscoe*.
- Rule, H. Gordon**, optical activity and the polarity of substituent groups. Part XIII. Note on the direct space effect in *d*-amyl derivatives, 2524.
- Rule, H. Gordon**, and *W. Eoghan MacGillivray*, optical activity and the polarity of substituent groups. Part X. Influence of ionisable groups on the rotatory power of *l*-menthyl benzoate, 401.
- Rule, H. Gordon**, *John B. Miles*, and *W. Eoghan MacGillivray*, optical activity and the polarity of substituent groups. Part XI. *sec.*- $\beta$ -Octyl esters of benzoic acids containing basic and acidic substituents, 2274.

- Rule, H. Gordon, John Spence, and Egon Bretscher**, optical activity and the polarity of substituent groups. Part XII. The direct space effects of *meta* and *ortho-para* directive substituents; *l*-menthyl esters of substituent naphthoic acids, 2516.
- Russell, Alexander S.**, the order of removal of metals from amalgams, 2398.
- Russell, Alexander S.** See also **Kenneth S. Jackson**, and **Jack L. Merrill**.
- Russell, Alfred**, and **Alfred W. Stewart**, Tesla-luminescence spectra. Part VII. Some aromatic aldehydes, 2407.
- Tesla-luminescence spectra. Part VIII. Some halogen-substituted derivatives of benzene, 2432.
- Russell, Alfred.** See also **James C. Macmaster**, and (*Miss*) **Mary W. Monypeny**.
- Rutherford, Kenneth H.** See **Sydney G. P. Plant**.
- S.**
- Sand, Henry J. S.**, a steam drying oven with detachable base, 214.
- Sandved, Karl**, the quaternary system lead acetate-lead chloride-acetic acid-water at 25°, 337.
- Sawyer, Edward W.** See (*Miss*) **Milliecent Taylor**.
- Sayce, Leonard A.**, the reaction between ferric oxide and hydrogen sulphide at temperatures between 120° and 830°, 2002.
- Sayce, Leonard A.**, and **Henry V. A. Briscoe**, the effect of a gas upon the pressure of a vapour, 1302.
- Scarborough, Harold A.**, substitution products of 1-nitro- and 1-acetamidodiphenyl ether, 2361.
- Scott, James.** See **John M. Gulland**.
- Scott, William D.** See **Ernest H. Farmer**.
- Selva, Ravi J.** See **Venancio Deulofeu**.
- Seshadri, Tiruventaka R.**, attempts to find new anti-malarials. Part II. Aminoalkylquinolinium salts and some related substances, 2952.
- Sexton, Wilfred A.** See **Isidor M. Heilbron**.
- Shah, Madhavlal S.**, the combustion of charcoal in oxygen, nitric oxide, and nitrous oxide. Part I. The adsorption of oxygen, 2661.
- the combustion of charcoal in oxygen, nitric oxide, and nitrous oxide. Part II. The effect of temperature, 2676.
- Sharp, (Miss) Gladys I.** See **Leslie G. Groves**.
- Shoosmith, John B.**, and **Alexander Mackie**, the nitration of *m*-acetamidotert.-butylbenzene, 476.
- Shoppee, Charles W.** See **Christopher K. Ingold**.
- Short, Wallace F.**, and **Martin L. Stewart**, the rearrangement of phenyl benzyl ethers, 553.
- Sidgwick, Nevil V.**, the volatility and structures of the azides and aliphatic diazo-compounds, 1108.
- Simonsen, John L.** See **Leslie A. Elson**, **Charles S. Gibson**, and **Kottiazath N. Menon**.
- Simpson, Ian A.** See **Isidor M. Heilbron**.
- Smiles, Samuel.** See **Aaron Cohen**, and **Kenneth C. Roberts**.
- Smith, James F.** See **William O. Kermack**.
- Smith, Jesse E.** See **Harry M. Dawson**.
- Smith, John W.**, the apparent influence of an electric field on the boiling point of benzene, 788.
- Smits, Andreas**, and **Emanuel Swart**, necessary procedures for the exact determination of vapour tension, 2724.
- Smits, Andreas**, **Emanuel Swart**, and **Pieter Bruin**, the influence of intensive drying on inner equilibria. Part V., 2712.
- Soper, Frederick G.** See (*Miss*) **Minnie Richardson**.
- Soyka, Charles.** See **George M. Dyson**.
- Spence, John.** See **H. Gordon Rule**.
- Spencer, Wilfred D.**, and **Bryan Topley**, chemical kinetics of the system  $\text{Ag}_2\text{CO}_3 \rightleftharpoons \text{Ag}_2\text{O} + \text{CO}_2$ , 2633.
- Spittle, Henry M.**, and **William Wardlaw**, complex oxalates of quadrivalent molybdenum, 792.
- Spring, Frank S.** See **Isidor M. Heilbron**.
- Srikantia, Collurayana.** See **Mysore G. S. Rao**.
- Stammberger, Paul**, a study of the vapour-pressure diminution of rubber jellies, 2318.
- Stedman, Edgar**, and (*Mrs.*) **Ellen Stedman**, the methylurethanes of the isomeric  $\alpha$ -hydroxyphenylethyldimethylamines and their miotic activity, 609.
- Stedman, (Mrs.) Ellen.** See **Edgar Stedman**.
- Steele, Arthur R.**, and **Frederic S. Kipping**, some derivatives of tri-*p*-tolylsilicane, 357.
- organic derivatives of silicon. Part XLI. Octa-*p*-tolylsilicotetrane, octa-*p*-tolylcyclosilicotetrane, and other products from di-*p*-tolylsilicon dichloride, 2545.



- Steele, (Miss) Catherine C.** See *John Read*.
- Stent, Howard B., Vira Subramaniam, and Thomas K. Walker,** the mechanism of the degradation of fatty acids by mould fungi. Part III., 1987.
- Stent, Howard B.** See also *Vira Subramaniam*.
- Stewart, Alfred W.** See *James C. Macmaster, and Alfred Russell*.
- Stewart, Martin L.** See *Wallace F. Short*.
- Stockdale, John.** See *Ulick R. Evans*.
- Story, Charles W. H.** See *Arthur G. Perkin*.
- Stringfellow, William A.,** the thermal decomposition of ammonia, with particular reference to the existence of active and inactive phases of ammonia, 1.
- Subramaniam, Vira, Howard B. Stent, and Thomas K. Walker,** the mechanism of the degradation of fatty acids by mould fungi. Part IV., 2485.
- Subramaniam, Vira.** See also *Howard B. Stent*.
- Sugden, (Miss) Ruth,** the ternary system mercuric chloride-mercuric iodide-water, 488.
- Sugden, Samuel,** the parachor and chemical constitution. Part X. Singlet linkages in chelated coordination compounds, 316. molecular volumes at absolute zero. Part III. Zero volumes, parachors, and molecular diameters, 1055.
- Sugden, Samuel, and Henry Wilkins,** the parachor and chemical constitution. Part XII. Fused metals and salts, 1291.
- Sugden, Samuel.** See also *Frederick B. Garner, and William J. R. Henley*.
- Swart, Emanuel.** See *Andreas Smits*.
- T.**
- Taylor, (Miss) Katherine F.** See *Harold L. Bassett*.
- Taylor, (Miss) Millicent, and Edward W. Sawyer,** the transference of water and its dependence on concentration in the electrolysis of sodium chloride solutions, 2095.
- Taylor, Thomas W. J.,** the preparation of quinaldinic acid, 1110.
- Taylor, Thomas W. J., and Leslie S. Price,** the action of nitrous acid on amino-compounds. Part III. Dimethylamine, *n*-propylamine, and glycine ethyl ester, 2052.
- Tcherniac, Joseph,** obituary notice of, 2976.
- Tewari, Jamuna D.,** dyes derived from cinchomeric acid, 1642.
- Thompson, Albert.** See *Isidor M. Heilbron*.
- Thompson, Reginald A., and Frederic S. Kipping,** organic derivatives of silicon. Part XXXIX. The action of sodium on phenoxychlorosilanes, 1176.
- Thomson, George.** See *Thomas S. Patterson*.
- Thorn, (Miss) Vera M.** See *Tom S. Moore*.
- Thornley, Sidney.** See *John M. Gulland*.
- Thorpe, Jocelyn F.,** presidential address, 834.
- Tipler, Albert F.** See *James R. Partington*.
- Todd, Alexander R.** See *Thomas S. Patterson*.
- Topley, Bryan.** See *Wilfred D. Spencer*.
- Townley, John E.** See *John A. N. Friend*.
- Tucker, Stanley H.** See *Peter Maitland*.
- Turner, Eustace E.** See *Leslie G. Groves, Herbert C. Gull, (Miss) Mary S. Lesslie, and Horace A. Mayes*.
- V.**
- Vallance, Reece H.** See *John A. N. Friend*.
- Veibel, Stig,** application of semicarbazones to the determination of ketones, 2423.
- Venkataraman, Krishnasami,** synthetical experiments in the chromone group. Part I. A new synthesis of 7:8-dihydroxy-2-methylchromone and 7:8-dihydroxyflavone, 2219.
- Venkataraman, Krishnasami.** See also *Robert Robinson*.
- Vineall, G. J. C.** See *David R. Boyd*.
- Viriden, Cyril J.** See *John M. Gulland*.
- Vogel, Arthur I.,** synthesis of cyclic compounds. Part V. The catalytic and the thermal decomposition of some normal dibasic acids; a contribution to the problem of the ease of formation of simple carbon rings, 721. the dissociation constants of organic acids. Part I. The primary dissociation constants of some alkyl malonic acids, 1476. the dissociation constants of organic acids. Part II. The primary dissociation constants of some cyclic 1:1-dicarboxylic acids, 1487.

## W.

- Waddington, William B.** See *George M. Bennett*.  
**Walker, Thomas K.** See *Frederick Challenger, Howard B. Stent, and Vira Subramaniam*.  
**Walton, Eric.** See *George R. Clemon*.  
**Ward, Allan M.**, investigations on the bivalency of carbon. Part II. The displacement of chlorine from desyl chloride; benzoin diethylacetal, 1541.  
**Wardlaw, William.** See *Frederick G. Angell, Edmund G. V. Percival, and Henry M. Spittle*.  
**Warren, Frank L.** See *Ernest H. Farmer*.  
**Warren, Leonard A.** See *Ernest W. McClelland*.  
**Waters, Roy B.** See *Alexander Robertson*.  
**Waters, William A.**, halogen substitution products of 4-aminobenzophenone, 2106.  
**Watson, Herbert B., and Cecil E. Gregory,** the interaction of bromine with acetic anhydride. Part V. Bromination and chlorination compared (*continued*); some properties of acetic chloroacetic anhydride, 1373.  
**Watson, Herbert B.** See also *Edward D. Hughes*.  
**Watters, Andrew J.** See *John Read*.  
**Webb, Harry W.** See *Cyril W. H. Jones*.  
**Webb, John I.** See *Walter N. Haworth*.  
**Webb, Walter W.** See *Arthur J. Allmand*.  
**Wheeler, Richard V.** See *Ernest N. Hague, Ronald Holroyd, Vernon H. Legg, and George B. Maxwell*.  
**Whitby, Lawrence,** the reaction between ferric sulphate solution and cuprous sulphide, 60.  
**Wilkins, Henry.** See *Samuel Sugden*.  
**Wiley, Eric J. B.,** on active nitrogen. Part V. The decay of the nitrogen after-glow, 228.  
**Williams, Albert F.** See *Alan E. Bradfield*.  
**Williams, David M.,** the photobromination of coumarin, 1383.  
**Willis, Gervase H.** See *George M. Bennett*.  
**Wood, Harold.** See *George N. Burkhardt*.  
**Wren, Henry, and Edward Wright,** studies in the phenylsuccinic acid series. Part IX. The resolution of *r*-diphenylsuccin- $\alpha$ - and  $\beta$ -naphthylamic acids into their optical antipodes, 136.  
 studies in the phenylsuccinic acid series. Part X. Racemisation phenomena observed during the action of water and bases on the optically active diphenylsuccinic anhydrides, 138.  
**Wright, Edward.** See *Henry Wren*.  
**Wright, Robert, and Thomas McGregor,** the effect of gases on the colour of iodine vapour, and the solvent action of various vapours on solid iodine, 1364.

## Y.

- Yakubchik, Anastasia O.** See *Serguey V. Lebedev*.  
**Yarnold, Edwin T.** See *Edmund J. Bowen*.  
**Young, George W.** See *Henry V. A. Briscoe*.