

# INDEX OF SUBJECTS, 1941.

## A.

- Acetanilide**, 3-fluoro-, and 3-fluoronitro-, 768.  
**Acetic acid**, chloro-,  $\beta$ -bromoethyl ester, 191.  
*trichloro-*, formation of, from perchloroethylene, 145.  
**Acetoacetic acid**, ethyl ester, 2:5-*dichlorophenyl*-hydrazone, 286.  
**Aceto- $\gamma$ -heptylamides**, 266.  
**Acetone**, vapour, photodecomposition of, 590.  
**Acetone**, cyano-, *mono-* and *di-*chlorophenylhydrazones, 286.  
**Acetone anhydroglucose**, phenylphenylmethylsazone, 754.  
**1:2-Acetone glucofururonamide**, 343.  
**1:2-Acetone glucofururonolactone**, 343.  
**1:2-Acetone 5-methyl 3:6-anhydroglucofuranose**, 94.  
**Acetophenone**, 2:4:5- and 2:4:6-*trichloro-*, 799.  
*o*-iodo-, and its semicarbazone, 490.  
*N*-**Acetyl 4:6-benzylidene  $\alpha$ -methylglucosaminide**, 51.  
*N*-**Acetyl 4:6-benzylidene 3-methyl  $\alpha$ -methylglucosaminide**, 51.  
**4'-Acetyl- $\alpha$ - $\beta$ -diethylstilbene**, 4-hydroxy-, 747.  
**3-Acetyl- $\Delta^3$ -dihydrothiopyran**, and its semicarbazone, 407.  
**4'-Acetyl- $\alpha$ -methyl- $\beta$ -ethylstilbene**, 4-hydroxy-, and its acetyl derivative, 747.  
*N*-**Acetyl 3-methyl  $\alpha$ -methylglucosaminide**, 51.  
**2-Acetyl-1-methylpyrrolidine**, 337.  
**1-Acetyl-piperidine-4-carboxylic acid**, ethyl ester, 45.  
**2-Acetyl-1-thionaphthen**, 5-chloro-3-hydroxy-, and its 1:1-dioxide, and 3-hydroxy-, acetyl derivative, 189.  
**Acids**, *di*basic, dialkyl gold derivatives of, 102.  
 stereoisomeric, dissociation constants and stereochemistry of, 490.  
*monocarboxylic*, strengths of, influence of solvent on, 550.  
**Acridine**, 2:8-*diamino-*, diacyl derivatives, 124.  
**Acridines**, synthesis and reactions of, 121, 484.  
**Acyl iodides**, 368.  
**Address**, presidential, 220.  
**Alcohols**,  $\beta\gamma$ -unsaturated, addition of, to the active methylene group, 507.  
**Aldehydes**, molecular volumes and parachors of, 307.  
 spectra of, absorption, and of their semicarbazones, 20.  
*p*-**Aldehydophenyltrimethylammonium salts**, and their derivatives, 350.  
**4-Aldehydo-*m*-5-xyleneol**, 2-chloro-, and its oxime, 549.  
**Alkali organic compounds**, action of, with benzonitrile, 323.  
**Alkaline-earth chlorides**, coagulation by, of sodium oleate emulsions, 352.  
**Alkaloids**, belladonna, 331.  
 cinchona, modified, 77.  
**Alkyl halides**, dipole moments of, 864.  
 tellurides, oxidation of, 70.  
**Amidines**, 777.  
**Amines**, secondary, preparation of, 39.  
 $\alpha$ -**Amino-sulphonic acids**, 75.  
**Ammonium group**, quaternary, directive power of, and of carboxyl group, 562.  
 **$\beta$ -Amylase**, polysaccharide associated with, 856.  
**7-*n*-Amyl-3:4-cyclohexenocoumarin**, 5-hydroxy-, and its acetate, 171.  
**7-*n*-Amyl-3:4-cyclopentenocoumarin**, 5-hydroxy-, and its acetate, 172.  
*p*-**tert.-Amylphenol**, 3-bromo-, substituted benzyl ethers of, 363.  
*n*-**Amyltellurinic acid**, 71.  
*n*-**Amyltelluroacetic acid**, ethyl ester, and its dibenzoate, 71.  
 **$\beta$ -Amyradienol-II**, 37.  
 **$\beta$ -Amyradienonol**, and its esters, 39.  
 **$\beta$ -Amyradienyl-I acetate**, oxidation of, with selenium dioxide, 35.  
 $\alpha$ -**Amyranonyl benzoate**, bromo-, 319.  
 $\beta$ -**Amyranonyl acetate**, bromo-, 319.  
*iso*- $\alpha$ -**Amyrenonyl benzoate**, 319.  
*iso*- $\beta$ -**Amyrenonyl acetate**, 319.  
**Analysis**, of metals of copper and tellurium groups, 786.  
 qualitative semimicro-, 72, 786.  
**Androgallactose phenylmethylphenylsazone**, and its derivatives, 753.  
**Anethole**, condensation of, after heating, 672.  
**Aneurin**, 428.  
**Anhydrocarnarine-*N*-methyloxindole**, 623.  
**Anhydroglucose phenylphenylmethylsazone diacetate**, 754.  
**3:6-Anhydroglucose**, properties of, 88.  
**3:6-Anhydro- $\alpha$ -methylglucofuranoside**, 96.  
**3:6-Anhydromethylhexosides from methylhexopyranoside sulphates**, 830.  
**Anhydrophthalimide-*N*-methyloxindole**, 621.  
**Anilides**, halogenation of, 267, 358.  
**Aniline**, 3-fluoro-6-nitro-, 768.  
**Anisole**, 3-fluoro-2:6- and -4:6-*dinitro-*, 793.  
 2:3:5-*tri*hydroxy-, triacetyl derivative, 661.  
**3-Anisyl-4-*p*-carboxyphenylhexan-3-ol**, 746.  
**3-Anisyl-4-*p*-cyanophenylhexan-3-ol**, 746.  
**2-*p*-Anisyl-7-methyltetral-1-one**, 112.  
 $\alpha$ -*p*-**Anisyl- $\gamma$ - $\beta$ -naphthylbutyric acid**, 112.  
 $\alpha$ -*p*-**Anisyl- $\gamma$ -phenylbutyric acid**, 112.  
**2-*p*-Anisyltetral-1-one**, and its oxime, 112.  
 $\alpha$ -*p*-**Anisyl- $\gamma$ -*p*-tolylbutyric acid**, 112.  
 $\alpha$ -**Anisyl- $\beta$ -veratrylpropionic acid**, and its methyl ester, 579.  
**Annual General Meeting**, hundredth, 193.  
**Anthracene-maleic anhydride adduct**, dimethyl ester, 142.  
**Anthraquinone**, spectra of, absorption, and of its derivatives, 159.  
**Aromatic compounds**, side-chain reactions with, 796.  
 substitution in, 608, 793.  
**Aryl halides**, dipole moments of, 864.  
**Arylazo- $\beta$ -naphthylamines**, decomposition of, by alcoholic hydrochloric acid, 755.  
**Arylazo-oximes**, metallic derivatives of, 823.  
**1-Aryl-3-methylpyrazoles**, 5-amino-, 285.  
**2-Aryltetral-1-ones**, formation of, from chalkone dibromides, 111.  
**Atmosphere**, determination in, of nitrogen peroxide and ozone, 519.  
**Atomic weights**, report on, 146.  
 table of, 152.

*bicyclo*[1:2:2]-1-Azaheptones, attempted preparation of, 41.  
*cis*-Azobenzene, crystal structure of, 409.  
 Azobenzene-4-carboxylic acid, cestrone ester, 795.  
*cis*-Azo-compounds, 184.  
 Azo-groups as chelating group, 823.

## B.

Balance sheets, 203, 209.  
 Beckmann rearrangement, asymmetry during, 263.  
 Belladonna root, Bulgarian, alkaloids of, 331.  
 Bellardine, and its derivatives, 335.  
 Benzaldehyde, 2-chloro-5-nitro-, hydrazones of, 117.  
 Benzaniide, 2'-iodo-, 488.  
 Benzanthrones, 310.  
 Benzene, 1:2:3:4-tetrahydroxy-, derivatives of, 670.  
*pentahydroxy*-, derivatives of, 662.  
 Benzeneazoacetaldoxime, cobaltic complex, 824.  
 Benzeneazoanisaldoxime, cobaltic complex, 825.  
 Benzeneazobenzaldoxime, cobaltic complex, 825.  
 Benzeneazo-*N*-methyloxindole, *p*-nitro-, 622.  
 4-Benzeneazophenol, 3-fluoro-, and fluoronitro-derivatives, 646.  
 Benzeneazopiperonaldoxime, and its cobaltic complex, 824.  
 Benzeneazo-*p*-tolualdoxime, and its cobaltic complex, 824.  
 2-Benzenesulphonamidopyridine, 2-*p*-amino-, and its derivatives, and 5-nitro-2-*p*-amino-, and its acetyl derivative, 11.  
 6-hydroxy-2-*p*-amino-, 293.  
 2-Benzenesulphonamidoquinoline, 2-*p*-amino-, and its acetyl derivative, 11.  
 1-Benzenesulphonamidoisoquinoline, 1-*p*-amino-, and its acetyl derivative, 12.  
 Benzenesulphonic acid, *p*-amino-, and its derivatives, substituted pyridyl esters, 292.  
 Benzenesulphonyl chloride, *p*-amino-, acetyl derivative, condensation of, with 6-amino-2-hydroxypyridine, 291.  
 Benzfluorenes, conversion of, into benzanthrones, 310.  
 5:6-Benzhydrindene, and its picrate, 588.  
 Benzhydrol, 2:4:2':4'-tetraamino-, 487.  
 Benzidine transformation, 220, 608.  
 Benzimidazoles, 777.  
 Benzcyclooctatetraenes, 487.  
 Benzoic acid, sodium hydrogen salt, 262.  
 Benzoin, mandelohydrazones, isomeric, 647.  
 Benzointrile, action of, with alkali organic compounds, 323.  
 Benzonitrile, 2:4:5-trichloro-, 800.  
 Benzophenone, *d*initrocyano-, 281.  
 Benzopinacols, phenyl-substituted, pinacol-pinacolone rearrangement of, 478.  
 Benzoquinone, 2-fluoro-, preparation and properties of, 645.  
*N*-Benzoyl 4:6-benzylidene glucosamic acid, ethyl ester, 49.  
 Benzoylformic acid, *l*-menthyl ester, mutarotation of, in ethyl-alcoholic solution, 538.  
*N*-Benzoyl glucosamic acid, ethyl ester, 49.  
*N*-Benzoyl  $\alpha$ -methylglucosaminide, 49.  
 3-Benzoyl-4- and -6-acetoxy- $\Delta^5$ -cholestenes, and their derivatives, 87.  
 3-Benzoyloxy- $\Delta^4$ -cholestene, 6-chloro-, dehalogenation of, 83.  
 1-Benzoylpiperidine-4-carboxylic acid, ethyl ester, 45.  
 1:2-Benzthioxanthen, 7-nitro-, and its dioxide, 750.  
 1:2-Benzthioxanthen, 6-nitro-, and its dioxide, 750.  
 Benzylethylamine picrate, 41.

Benzylidenepyruvic acid, methyl ester and semicarbazone of, 722.  
 1-Benzyl-naphthalene, 1-*o*-amino-, 351.  
*N*-Benzyl-*m*-phenylenediamine, 2':4'-diamino- $\alpha$ -hydroxy-, 486.  
 Benzylpyridinium chloride,  $\alpha$ -cyano-, 506.  
 Bis- $\gamma$ -acetoxypropylsulphone, 406.  
 Bis-2:4:2':4'-tetraaminobenzhydryl ether, 487.  
 Bis- $\gamma\gamma$ -diethoxypropyl sulphide, 407.  
 Bis- $\gamma$ -hydroxypropyl sulphide, and its diacetate, 406.  
 1:4-Bis-*o*-iodophenyl- $\Delta^{1:3}$ -butadiene, 489.  
 Bis- $\gamma$ -ketobutyl sulphide, and its derivatives, 406.  
 Boron oxides, 742.  
 $\beta$ -Boswellic acid, constitution of, 793.  
 $\beta$ -Boswellyene, 794.  
 Bunsen's salt, 25.  
*iso*Butanesulphonic acid,  $\alpha$ -amino-, 76.  
 1-Butyl-2-naphthol, 1- $\gamma$ -hydroxy-, 589.  
*p*-*tert*-Butylphenol, 3-bromo-, and 3-nitro-, substituted benzyl ethers of, 363.

## C.

Cannabinol, synthesis of, 137.  
*Cannabis indica*, 137, 169, 826.  
 4-Carboethoxy-3-methyl- $\Delta^2$ -cyclohexen-1-one-2:6-di-acetic acid, ethyl ester, 584.  
 3-Carboethoxy-1-methylcyclopentan-2-one-1-acetic acid, ethyl ester, 468.  
 $\beta$ -( $\beta'$ -Carboethoxypropionyl)butyrolactone, and its derivatives, 584.  
*N*-Carbobenzylxytaurine, amide and sodium derivative, 76.  
 Carbohydrates, sulphates of, 830.  
 3- $\beta$ -Carbomethoxyethyl-4-carbomethoxy-4-methyl- $\Delta^2$ -cyclohexen-1-one, 586.  
 Carbonyl compounds, molecular volumes and parachors of, 306.  
 $\beta$ -( $\beta'$ -Carboxyethyl)butyrolactone, 584.  
 3- $\beta$ -Carboxyethyl-4-methyl- $\Delta^2$ -cyclohexen-1-one, 586.  
 Carboxyl group, directive power of, and of quaternary ammonium group, 562.  
*p*-Carboxyphenyltrimethylammonium salts, and 3-nitro-, 563.  
*o*-Carvacrolaldehyde, preparation and derivatives of, 549.  
 Catalysts, poisonous conversion of, into non-poisonous derivatives, 132.  
 Cedrone, physical properties of, 820.  
 Chalkones, 111.  
 Chloronitroso-compounds, photolysis of, 602.  
 $\Delta^{4:6}$ -Cholestadienyl benzoate, 320.  
 $\Delta^4$ -Cholestene, 6-chloro-3-hydroxy-, 3-benzoyl derivative, conversion of, into  $\Delta^{4:6}$ -cholestadienyl benzoate, 320.  
*cis*- $\Delta^5$ -Cholestene, 3:4-*di*hydroxy-, derivatives of, 88.  
 $\beta$ -Cholesteryl benzoate oxide, pyrolysis of, 86.  
 Chrysene, derivatives of, 575.  
 Cinchona alkaloids, modified, 77.  
 Cinnamic acid, sodium hydrogen salts, 262.  
 Citronellal, aminosulphonic acid from, 76.  
 Complexes, formation of, 433.  
 Constitution and catalytic toxicity, 132.  
 and hashish activity, 169.  
 and molecular volume, 299.  
 Copper, determination of, in its alloys, 877.  
 phthalocyanine, 622.  
 Coumarandione, action on, of diazomethane, 348.  
 Cupric compounds, equilibrium of, with cuprous compounds in presence of copper, 802.  
 Curtius rearrangement, asymmetry during, 263.  
*iso*Cyanic acid, methyl ester, photolysis of, 30.

## D.

- dl*-Deguelin, m. p. of, 878.  
 Dehydrolanostenone, 181.  
 Diacetyl, electric polarisation and molecular vibration of, 727.  
 3:5-Dialdehyde-*o*-cresol, and its dioxime, 549.  
 2:4-Dialdehyde-*m*-cresol, 6-chloro-, and its dioxime, 549.  
*N*-Dialkylanilines, action of nitrous acid on, 470.  
 Di-*n*-amyltelluretine bromide, ethyl ester, 71.  
 $\beta\gamma$ -Dianisyladipolactone,  $\beta$ -hydroxy-, 578.  
 4:5-Dianisyl-2:7-dimethyloctane-2:7-diol-*b*, 579.  
 Diarylmaleonitriles, preparation of, 502.  
 Diazomethane, action of, on diphenyl triketone and on  $\alpha$ -keto-lactones, 348.  
 1:2:8:9-Dibenzanthrone, 683.  
 6:7:6':7'-Dibenzdithio- $\beta$ -isoindigo, 639.  
 Dibenzfluorenes, 679.  
   and their derivatives, 682.  
 Dibenzfluorenones, and their derivatives, 682.  
   synthesis of, 674.  
 1:2:5:6-Dibenzfluorenone, 538.  
 6:7:6':7'-Dibenz- $\beta$ -isoindigo, 639.  
 Dibenzyltrimethylammonium chloride, 40.  
 Dielectric constants, apparatus for measurement of, 730.  
 Diethyl sulphide, detoxication of, 134.  
 Diethylacetal, synthesis of, at low temperatures, 118.  
 $\alpha\gamma$ -Diethylalkyl alcohol, synthesis and resolution of, 316.  
*m*-Diethylaminobenzaldehyde, condensation products of, with 6-substituted quinaldine methiodides, 143.  
 $\alpha\beta$ -Diethylidibenzyl series, molecular symmetry in, 6.  
 $SS'$ -Diethylidithio- $\beta$ -isoindigo, 629.  
 Diethylxalatogold, sodium derivative, 107.  
 2:6-Di- $\alpha$ -furylcyclohexanol, 569.  
 Dihydrobenzofuran, synthesis of, 287.  
 5:10-Dihydrodiacidridyl 5:5'-ether, 2:8:2':8'-tetraamino-, and its tetrabuteryl derivative, 124.  
 Dihydroeremophilone, hydroxy-, 60.  
 Dihydroindole, synthesis of, 287.  
 Dihydronequidine, and its hydrochloride, 82.  
 Dihydronequine, and its salts, and nitroso-, 81.  
 Dihydrothionaphthen, synthesis of, 287.  
 Dihydrothionaphthenmethyldisulphonium chloroplatinate, 657.  
 $\Delta^3$ -Dihydrothiopyran-3-aldehyde, and its 2:4-dinitrophenylhydrazone, 407.  
*l*- $\alpha$ -Dihydrotoxicarol, m. p. of, 878.  
 4:7-Diketo-7-(5'-chloro-6'-methoxy-2'-naphthyl)-heptoic acid, 395.  
 8:2-Diketo- $\delta$ -cyclohexylvaleric acid, methyl ester and lactone of, 584.  
 4:7-Diketo-7-*p*-methoxyphenylheptoic acid, derivatives of, 399.  
 3:4-Dimethoxyacetophenone, 2-*mono*- and 2:5-*di*-hydroxy-, 666.  
 4:5-Dimethoxy-2-acetyltoluene, 3-hydroxy-, 671.  
 6:7-Dimethoxy-2-anisyl-1-acetonilidene-1:2:3:4-tetrahydronaphthalene, and its 2:4-dinitrophenylhydrazone, 581.  
 6:7-Dimethoxy-2-anisyl-1-acetonyl-1:2:3:4-tetrahydronaphthalene, 581.  
 6:7-Dimethoxy-2-anisyl-1-allyl-3:4-dihydronaphthalene, 580.  
 6:7-Dimethoxy-2-anisyl-3:4-dihydronaphthalene, 580.  
 6:7-Dimethoxy-2-anisyl-3:4-dihydro-1-naphthylacetic acid, 580.  
 6:7-Dimethoxy-2-anisyl-1:2:3:4-tetrahydro-1-naphthylacetic acid, 580.  
 $\gamma$ -(6:7-Dimethoxy-2-anisyl-1:2:3:4-tetrahydro-1-naphthyl)acetoacetic acid,  $\gamma$ -1-hydroxy-lactone, and its derivatives, 581.  
 6:7-Dimethoxy-2-anisyl- $\alpha$ -tetralol, 580.  
 2:6-Dimethoxybenzoquinone, preparation of, 665.  
 3:6-Dimethoxy-1:4-benzoquinone, 2-hydroxy-, and its acetyl derivative, 668.  
 2:3-Dimethoxybenzylidenepyruvic acid, methyl ester, 722.  
 4:6-Dimethoxy-3'-( $\alpha$ -carbethoxyethyl)-1:2-cyclopentanonaphthalene, 402.  
 4:6-Dimethoxy-3'-(carbethoxymethylene)-1:2-cyclopentanonaphthalene, 402.  
 4:6-Dimethoxy-3'-(carbethoxymethyl)tetrahydro-1:2-cyclopentanonaphthalene, 403.  
 4:6-Dimethoxy-3'-( $\alpha$ -carboxyethyl)-1:2-cyclopentanonaphthalene, 402.  
 Dimethoxy(carboxymethyl)tetrahydrocyclopentanonaphthalene, 403.  
 4:4'-Dimethoxydesylacetic acid, and its ethyl ester, 577.  
 2:6-Dimethoxydihydronaphthalene, 389.  
 5:14-Dimethoxy-2:11-dimethylchrysene, and its picrate, 578.  
 2:2'-Dimethoxy-1:1'-dinaphthylethylene, 504, 505.  
 2:2'-Dimethoxy-1:1'-dinaphthylmaleonitrile, 505.  
 $pp'$ -Dimethoxydiphenylmaleonitrile, 506.  
 6:7-Dimethoxy-3-methylnaphthalene-1:2-dicarboxylic acid, anhydride of, 719.  
 5:6-Dimethoxy-3-methyl-1:2:3:4-tetrahydronaphthalene-1:2-dicarboxylic acid, anhydride of, 720.  
 6:7-Dimethoxy-3-methyl-1:2:3:4-tetrahydronaphthalene-1:2-dicarboxylic acid, derivatives of, 719.  
 Di-2-methoxy-1-naphthylcyanomethyl ether, 505.  
 4:6-Dimethoxy-1:2-cyclopentanonaphthalene, and its picrate, 401.  
 4:7-Dimethoxy-1:2-cyclopentenophenanthrene, 574.  
 4:7-Dimethoxy-1:2-cyclopentenophenanthrene-3-acetic acid, ethyl ester, 384.  
 4:7-Dimethoxy-1:2-cyclopentenophenanthrylidene-3'-acetic acid, ethyl ester, 383.  
 1:3-Di-*p*-methoxyphenyl-2-methylpropane, 674.  
 1:3-Di-*p*-methoxyphenyl-2-methylpropan-1-one, 674.  
 4:6-Dimethoxy-3'-isopropylidene-1:2-cyclopentanonaphthalene, 402.  
 2:6-Dimethoxyquinol, preparation of, III, 665.  
 3:6-Dimethoxyquinol, 2-hydroxy-, and its acetyl derivative, 668.  
 5:14-Dimethoxy-2:2:11:11-tetramethylhexahydrochrysene- $\alpha$ , 578.  
 4:5-Dimethoxytoluene, 2:3-dihydroxy-, and its diacetyl derivative, 671.  
 Dimethyl-1-acetyl-4-piperidylcarbinol, 45.  
*m*-Dimethylaminobenzaldehyde, condensation products of, with 6-substituted quinaldine methiodides, 143.  
 4-Dimethylaminobenzoic acid, 2-nitro-, 564.  
 3-*p*-Dimethylaminobenzylidene-*N*-methyloxindole, 622.  
 6-Dimethylamino-2-*m*-diethylaminostyrylquinoline methiodide, 145.  
 2-*m*-Dimethylaminostyryl-6-methylquinoline methiodide, 144.  
 2-*m*-Dimethylaminostyrylquinoline, 6-bromo-, methiodide, 144.  
 2:2-Dimethyl-7-*n*-amyl-3:4-cyclopenteno- $\Delta^3$ -chromen, 5-hydroxy-, 172.  
 2:2-Dimethyl-4'-*n*-amyl-3':4':5':6'-tetrahydrodibenzopyran, 6'-hydroxy-. See Tetrahydronorcannabinol.  
 2:4-Dimethyl 3:6-anhydrogluconic acid, and its amide, 100.  
 2:5-Dimethyl 3:6-anhydrogluconic acid, amide, 95.  
 2:4-Dimethyl 3:6-anhydroglucose, 100.  
 2:5-Dimethyl 3:6-anhydroglucose, and its derivatives, 95.  
 2:5-Dimethyl 3:6-anhydro- $\alpha$ - and - $\beta$ -methylglucosides, 95, 96.  
 2:4-Dimethyl 3:6-anhydro- $\alpha$ -methylglucopyranoside, 99.

2:4-Dimethyl 3:6-anhydro- $\beta$ -methylglucopyranoside, 101.  
 Dimethylaniline, *p*-amino-, 613.  
 3-bromo-, 3-bromo-2-nitro-, 3-chloro-, 3-chloro-nitro-, 3-fluoro-, 3-fluoronitro-, 3-fluoronitroso-, 3-iodo-, 3-iodonitro-, and 4-nitro-3-hydroxy-, and their derivatives, 767.  
 3-halogeno-derivatives, reactions of nitrous acid with, 766.  
 2-2':4'-Dimethylbenzoyldiphenyl-2'-carboxylic acid, 4:4'-dinitro-, 284.  
 2:11-Dimethylchrysenes, 579.  
 4:4'-Dimethyl-7:8:8':7'-coumarinocoumarin, 390.  
 2:6-Dimethyl-1- $\beta$ -*p*-cuminylolethylcyclohexanol, 69.  
 SS'-Dimethyl-6:7:8':7'-dibenzdithio- $\beta$ -isoindigo, 639.  
 5:4'-Dimethyl-2:2-di-*n*-butyl-3':4':5':6'-tetrahydro-dibenzopyran, 6''-hydroxy-, 829.  
 5'4'-Dimethyl-2:2-di-*n*-propyl-3':4':5':6'-tetrahydro-dibenzopyran, 6''-hydroxy-, 829.  
 SS'-Dimethylidithio- $\beta$ -isoindigo, 628.  
 dibromide, 636.  
 9:10-Dimethyl-9:10-dihydroanthracene, 20.  
 9:10-Dimethyl-9:10-dihydro-1:2-benzanthracene 9:10-oxide, 20.  
 9:10-Dimethyl-9:10-dihydro-1:2:5:6-dibenzanthracene 9:10-oxide, and its picrate, 20.  
 3:4-Dimethyl  $\delta$ -mannonolactone, 842.  
 3:4-Dimethyl mannose 1:2-acetone, 842.  
 2:5-Dimethyl  $\beta$ -methylglucofururonoside, derivatives of, 342.  
 3:4-Dimethyl- $\Delta^3$ -penten-2-one, preparation of, 819.  
 3:5-Dimethylphenyl ethers, 2:4-dichloro-, 275.  
 Dimethyl-4-piperidylcarbinol, and its derivatives, 46.  
 1:12-Dimethyl-6-isopropyl-1:2:3:4:9:10:11:12-octahydrophenanthrene, 69.  
 Dimethyl-4-pyridylcarbinol, and its derivatives, 44.  
 2:3-Dimethyl-2:3:4:5-tetrahydro-*p*-carboline-4-carboxylic acid, 158.  
 $\alpha\beta$ -Dinaphthylacrylic acids, 536.  
 Dinaphthylcarboxylic acids, 683.  
 1:2'-Dinaphthylcarboxylic acids, 677.  
 2:2'-Dinaphthyl-3-carboxylic acid, 682.  
 1:1'-Dinaphthyl-2:2'-dicarboxylic acid, methyl ester, 683.  
 2:2'-Dinaphthyl-3:3'-dicarboxylic acid, and its methyl ester, 682.  
 1:1'-Dinaphthylethylene, 2:2'-dihydroxy-, 504.  
 $\alpha$ -1- $\beta$ -2-Dinaphthylethylene, 536.  
 Diphenamic acid, 4:4'-dinitro-, 284.  
 Diphenic acid, salts of, with optically active bases, 257.  
 Diphenic anhydride, reactions of, 282.  
 Diphenylthiourea, and 4:4'-dinitro-, 284.  
*p*-Diphenylacetamidoazobenzene, 187.  
 5-Diphenylbenzopinacols, 481.  
 $\alpha\delta$ -Diphenylbutane,  $\beta$ -chloro- $\beta$ -nitroso-, preparation of, 603.  
 2:5-Diphenyldihydroterephthalonitrile, 506.  
 4:5-Diphenyl-2:7-dimethyloctane-2:7-diol- $\alpha$ , 578.  
 4:5-Diphenyl-2-ethylglyoxaline, 281.  
 2:4-Diphenyl-5-ethylpyrimidine, 6-chloro-, and 6-hydroxy-, 329.  
 Diphenylformazylbenzene, cobalt, cupric, and nickel complexes, 825.  
 Diphenylketen, reactions of, with *cis*- and *trans*-azo-compounds, 184.  
 NN'-Diphenyl-*N*-methylacetamidine, 785.  
 1:3-Diphenyl-2-methylpropane, 1:3-*di-p*-hydroxy-, 674.  
 2:4-Diphenyl-5-methylpyrimidine, 6-chloro-, and 6-hydroxy-, 329.  
 2:4-Diphenyl-5-phenylglyoxaline, 2-*o*-hydroxy-4-*p*-nitro-, and 2-*m*-4-*p*-dinitro-, 282.  
 4:5-Diphenyl-2-isopropylglyoxaline, 281.  
 2:4-Diphenyl-5-*n*-propylpyrimidine, 6-chloro-, and 6-hydroxy-, 330.

2:4-Diphenylpyridine, 6-chloro-, 328.  
 Diphenylsulphone, 3-chloro-2-nitro-, 726.  
 Diphenylsulphones, chloronitro-, mobility of, 722.  
 NN'-Diphenyl-*N'*-*o*-tolylacetamidine, 785.  
 Diphenyl triketone, action on, of diazomethane, 348.  
 Dipole moments, measurement of, solvent effect in, 864.  
 2:2'-Dipyridyltetraethylsulphatodigold, 107.  
 Dissociation constants of stereoisomeric dibasic acids, 490.  
 Disulphides, dismutation of, 187.  
 2-Dithiobenzoyl, identity of, with *o*-trisulphidobenzoic acid thioanhydride, 793.  
 Dithio- $\beta$ -isoindigo, and its derivatives, and *diamino*-, 625, 630, 637.  
 Dithiophthalimide, 627.  
 2:3-Di-*p*-toluenesulphonylchlorobenzene, 726.  
 2:6-Di-*p*-toluenesulphonyl-4-methyldiphenyl sulphide, 726.  
 2:6-Di-*p*-toluenesulphonylpiperidinobenzene, 726.  
 Ditosylanhydrogalactose phenylmethylphenylosazone, 753.  
 Ditosylanhydroglucose phenylphenylmethylsazone, 754.  
 Dysprosium nitrate hydrates, 562.

## E.

Earths, rare, nitrates of, hydrated, 561.  
 Echinocystic acid, lactones of, 559.  
 Eicosyl alcohol, phenylurethane of, 347.  
 Electrolytic dissociation, 293.  
 reduction of organic compounds, 874.  
 Elliptones, m. ps. of, 878.  
 Emulsions, in sodium oleate solution, coagulation of, by alkaline-earth chlorides, 352.  
 oil-in-water, viscosity of, 542.  
 Eremophilol, and its 3:5-dinitrobenzoate, 67.  
 Eremophilone, and hydroxy-, constitution of, 60.  
 Eremophilone, *tetrabromo*-, 65.  
 Esters, molecular volumes and parachors of, 307.  
 Ethane, nitro-, ionisation of, 854.  
 Ethers, molecular volumes and parachors of, 305.  
 3-Ethynylquinuclidine, 3-hydroxy-, 477.  
 5-Ethynylruban-5-ol, 476.  
 2-Ethoxymethylene-cyclopentanone, and its semi-carbazone, 467.  
 Ethylallylamine picrate, 41.  
 dl(-)Ethyl-*n*-butylacetyl bromide, 266.  
 3-Ethyl- $\Delta^2$ -dihydrothiopyran, 3- $\alpha$ -hydroxy-, 407.  
 Ethylene dihalides, electric polarisation and molecular vibration of, 727.  
 Ethylene, trichloro-, nicotine distribution between water and, 275.  
 perchloro-, oxidation of, to trichloroacetic acid, 145.  
 Ethylenediaminotetraethyldibromodigold, 107.  
 Ethylenediaminotetraethylsulphatodigold, 106.  
 2-Ethyl- $\Delta^1$ -hexen-3-one, preparation of, 820.  
*p*-Ethylphenol, 3-bromo-, substituted benzyl ethers of, 362.  
 3-Ethylquinuclidine, 3-hydroxy-, 477.  
 S-Ethylthio- $\beta$ -isoindigo, 629.

## F.

Flavylium chloride, 3:7:8:3':4'-pentahydroxy-, 661.  
 Formaldehyde, action of, on tryptophan, 153.  
 analysis of mixtures of formic acid and, 51.  
 Formanilide, *m*-amino-, preparation of, 124.  
 Formazyl compounds, metallic derivatives of, 823.  
 tautomerism of, 820.

**Formic acid**, determination of, in mixtures with formaldehyde, 51.  
**N-Formyldiphenylamine**, 3-*mono*- and 3:3'-*di*-amino-, and 3-*mono*- and 3:3'-*di*-nitro-, 486.  
**Fumigatin**, synthesis of, 670.  
 $\alpha$ - and  $\beta$ -**Furfuraldoximes**, intramolecular rearrangement in, 606.  
**Furfurylideneacetone**, ring system extension by means of, 465.  
**1-Furyl-9-methyldecalin**, 469.

## G.

**Galactogen** from *Helix pomatia*, 125.  
**Galactose** phenylmethylphenylosazone, and its tetraacetate, 753.  
**Glucosamine** derivatives, action of periodic acid on, 47.  
**Glucose** phenylphenylmethylosazone anhydride, and its acetates, 754.  
**Glucurone**, furanose and pyranose derivatives of, 339.  
**Glyoxalines**, 777.  
**Glyoxaline series**, 278.  
**Gold organic compounds**, 102, 109.  
**Growth substances**, inhibitory synthesis of, 535.  
**Guanidines**, 777.

## H.

**Hashish activity** and constitution, 169.  
**Hedraganic acid**, and its methyl ester, 560.  
*Helix pomatia*, galactogen from, 125.  
*dl*- $\gamma$ -**Heptylamine**, and its hydrochloride, 267.  
 $\Delta^{1:3}$ -**cycloHexadiene**—maleic anhydride adduct, dimethyl ester, 142.  
**1:2:3:9:10:11-Hexahydro-1:2-cyclopentenophenanthrene**, 3-hydroxy-, 379.  
**Hexamethoxybenzene**, 660.  
 preparation of, 670.  
**Hexamethylenetetramine**, reaction of, with phenols, 547.  
*cycloHexane-1:4-dione-2-carboxylic acid*, ethyl ester, and its derivatives, 582.  
*cycloHexyldenesuccinic acid*, 585.  
**2-Hydratropaldehyde** mandelohydrazone, 652.  
**Hydrindene**, derivatives of, 586.  
 $\gamma$ -5-**Hydrindylbutyric acid**, 588.  
**Hydrocarbons**, aromatic, polycyclic, 18, 679.  
 molecular volumes and parachors of, 303.  
**Hydrogen atoms**, associating effect of, 1, 777, 820.  
 $o$ -**Hydroxy-aldehydes**, preparation of, III, 547.  
**Hygic acid**, methyl ester, preparation of, 339.  
 $l$ -**Hyoscyamine ions**, specific rotation of, 336.

## I.

**Inactive substances**, intramolecular rearrangement in, 606.  
**Indazole**, and its picrate, 116.  
 derivatives of, I.  
**Indazole**, 3-bromo-5-nitro-, 117.  
**Indazoles**, nitro-, structure of, 113.  
 $\beta$ -*iso***Indigo**, and its derivatives, 629, 635.  
**Indoline**, derivatives of, 288.  
**Intramolecular rearrangement** in inactive substances, polarimetry of, 606.  
**Iodine acyls**, 368.  
**Iodides**, reaction of, with persulphates, 641.  
 Periodic acid, action of, on glucosamine derivatives, 47.  
 $\alpha$ -**Ionone**, spectrum of, 820.

## K.

**3'-Keto-4-acetoxy-7-methoxy-1:2-cyclopentenophenanthrene**, 8-chloro-, and its oxime, 395.  
**2- $\gamma$ -Ketobutylcyclohexanone-2-carboxylic acid**, ethyl ester, 589.  
**1- $\gamma$ -Ketobutyl-2-naphthol**, and its derivatives, 588.  
 reduction of, 586.  
 $\gamma$ -**Keto- $\alpha$ -cyano- $\alpha$ -anisyl- $\gamma$ -3:4-dimethoxyphenylpropane**, 579.  
**4-Keto-1-cyano-2-*p*-chlorophenyl-3:3-diphenyldimethylene-1:2-di-imine**, 187.  
**3-Ketodecahydro-1:2-cyclopentenonaphthalene**, 381.  
**1-Keto-6:7-dimethoxy-2-anisyl-1:2:3:4-tetrahydronaphthalene**, and its *p*-nitrophenylhydrazone, 580.  
**3'-Keto-4:7-dimethoxy-1:2-cyclopentenophenanthrene**, 8-chloro-, 396.  
**4-Keto-6:7-dimethoxy-1-veratryl-3:3-bishydroxymethyl-1:2:3:4-tetrahydronaphthalene-2-carboxylic acid**, lactone, and its derivatives, 290.  
**4-Keto-6:7-dimethoxy-1-veratryl-1:2:3:4-tetrahydronaphthalene-2-carboxylic acid**, action of formalin on, 289.  
**Keto-diol**, Jacobs', 38.  
**4-Keto-3:3-diphenyl-1:2-di- $\beta$ -naphthylidimethylene-1:2-di-imine**, 187.  
**4-Keto-3:3-diphenyl-1:2-di-tolyldimethylene-1:2-di-imines**, 186.  
**3'-Keto-4-ethoxy-7-methoxy-1:2-cyclopentenophenanthrene oxime**, and its acetate, 575.  
**2-Keto-4-furyl-10-methyldecalin**, and its semicarbazone, 469.  
**2-Keto-4-furyl-10-methyl- $\Delta^{1:9}$ -octalin**, 469.  
**3-Ketohexahydro-1:2-cyclopentenophenanthrene**, 379.  
 $\gamma$ -**Keto- $\gamma$ -5-hydrindylbutyric acid**, 587.  
**3-Keto-7-hydroxyoctahydrothiopyrano(3':4':1:2)phenanthrene**, 407.  
 $\alpha$ -**Keto-lactones**, action on, of diazomethane, 348.  
**3'-Keto-7-methoxy-4'-benzylidene-1:2-cyclopentenophenanthrene**, 574.  
**3-Keto-7-methoxydecahydrothiopyrano(3':4':1:2)phenanthrene**, and its semicarbazone, 408.  
**3'-Keto-7-methoxy-9:10-dihydro-1:2-cyclopentenophenanthrene**, 8-chloro-4-hydroxy-, and 4-hydroxy-, 397.  
**6-Keto-14-methoxy-4-furyl-3-methyldecahydrochrysene**, 470.  
**2-Keto-7-methoxy-12-methyl- $\Delta^{1:11}$ -dodecahydrophenanthrene**, 392.  
**1-Keto-7-methoxy-2-methyloctahydrophenanthrene**, 469.  
**3-Keto-7-methoxy-2-methyloctahydrothiopyrano(3':4':1:2)phenanthrene**, 408.  
**3-Keto-7-methoxyoctahydrothiopyrano(3':4':1:2)phenanthrene dioxide**, 408.  
**3-Keto-7-methoxyoctahydrothiopyrano(3':4':1:2)phenanthrene- $\alpha$** , 407.  
**3'-Keto-6-methoxy-1:2-cyclopentenonaphthalene**, 4-hydroxy-, and its derivatives, 399.  
**3'-Keto-7-methoxy-1:2-cyclopentenophenanthrene**, 8-chloro-4-hydroxy-, 396.  
**3'-Keto-7-methoxy-4'-piperonylidene-2-methyl-1:2:3:4-tetrahydro-1:2-cyclopentenophenanthrene**, 573.  
**3'-Keto-7-methoxy-4'-piperonylidene-1:2:3:4-tetrahydro-1:2-cyclopentenophenanthrene**, 573.  
**6-Keto-5-methyl-7:8-dihydrocyclopentenonaphthalene**, and its 2:4-dinitrophenylhydrazone, 588.  
**2-Keto-12-methyl- $\Delta^{1:11}$ -dodecahydrophenanthrene semicarbazone**, 388.  
**2-Keto-12-methyl- $\Delta^{1:11}$ -dodecahydrophenanthrene-7-carboxylic acid**, ethyl ester, 393.  
**3-Keto-4-methyl- $\Delta^{2:10}$ -octalin-9-carboxylic acid**, ethyl ester, and its semicarbazone, 589.

**3'-Keto-2-methyl-4'-piperonylidene-1:2:3:4-tetrahydro-1:2-cyclopentenophenanthrene**, 573.  
**4-Keto-1-(1'-naphthyl)-3:4-dihydrophthalazine**, 351.  
**Ketones**, molecular volumes and parachors of, 307.  
 spectra of, absorption, and of their semicarbazones, 20.  
*αβ*-Ketones, unsaturated, spectra of, absorption, 815.  
**3-Keto-octahydro-1:2-cyclopentenonaphthalene**, and its dinitrophenylhydrazones, 380.  
**Ketocyclopentenophenanthrene**, *apochloro-*, *apochloro-dihydroxy-*, and *apodihydroxy-*, 396.  
**3'-Keto-4'-piperonylidene-1:2:3:4-tetrahydro-1:2-cyclopentenophenanthrene**, 573.  
**8-Keto-5:6:7:8-tetrahydro-2:3-cyclopentenonaphthalene**, and its semicarbazone, 588.  
**3'-Keto-1:2:3:4-tetrahydro-1:2-cyclopentenophenanthrene**, and its 2:4-dinitrophenylhydrazones, 573.  
**4-Keto-1:2:3:3-tetraphenyldimethylene-1:2-di-imine**, 186.  
**2-Keto-5:14:15-trimethoxyhexahydrochrysene**, 580.  
**1-Keto-6:3':4'-trimethoxy-2-phenyl-1:2:3:4-tetrahydronaphthalene**, 582.  
**Kyaphenine**, and *m-* and *p-*amino-, and its *p*-acetyl derivative, and *tri-p*-chloro-, and *mono-* and *di-*nitro-derivatives, and *dinitrotri-p*-chloro-, 280.

## L.

**Lævulic acid**, methyl ester, oxime hydrochloride, 604.  
**Lanostenetriol**, and its diacetate, 181.  
**Lanostenone**, preparation of, 175.  
**Lanostenone oxide**, 181.  
**Lanostenone-B**, 175.  
**γ-Lanostenone**, 180.  
**Lanosterol**, 172, 176.  
**Lanosterol-E**, 176.  
**γ-Lanosterol**, and its acetate, 180.  
**Lectures**, delivered before the Chemical Society, 414, 427, 433.  
**Lithium alkyls**, preparation of, 327.  
**Liversidge lecture**, 433.  
**Lophine**, amino-, *tri-p*-chloro-, and nitro-, 281.  
**Lupane**, derivatives of, surface films of, 761.  
**Lupanediol**, 759.  
**Lupanetriol**, acetate, 761.  
**Lupenediol**, and its acetates, 760.  
**ψ-Lupenol**, and its acetate, 760.  
**Lupeol**, constitution of, 757.  
**Lutecium nitrate hydrates**, 562.

## M.

**Macromolecules**, chemistry of, 414.  
*l*-Malaccol, m. p. of, 878.  
**Maleic acid**, anhydride and ethyl ester, addition of, to styrenes, 715.  
**Maleic anhydride**, esters from adducts of, 140.  
**Mandelohydrazides**, 649.  
**Mercury pumps**. See under Pumps.  
**Mesidine**, oxidation of, 496.  
**Metals**, of the copper and tellurium groups, qualitative analysis of, 786.  
 of the thallium group, semimicro-analysis of, 72.  
**6-Methoxy-2-acetonaphthone**, 5-chloro-, and its derivatives, 395.  
**3-Methoxyacetophenone**, 2:4-*di*hydroxy-, preparation of, 670.  
**4-Methoxy-4'-acetyl-αβ-diethylstilbene**, 746.  
**4-Methoxy-4'-acetyl-α-methyl-β-ethylstilbene**, 747.  
**4-Methoxybenzaldehyde**, 2:3:6-*tri*hydroxy-, 661.  
**2-Methoxy-p-benzoquinone**, 3:5-*di*bromo-6-hydroxy-, 660.

**β-m-Methoxybenzoyl-α-3:4-dimethoxyphenylpropionic acid**, amide and nitrile of, 581.  
**4-Methoxy-4'-carboxy-αβ-diethylstilbene**, 746.  
**Methoxy-3'-(carboxymethyl)tetrahydrocyclopentenonaphthalene**, 403.  
**2-Methoxy-1-chloromethylnaphthalene**, 504.  
**7-Methoxydecahydrothiopyrano(3':4':1:2)phenanthrene**, 3-hydroxy-, 408.  
**6-Methoxy-2-decalone**, 392.  
**4'-Methoxydeoxybenzoin**, 4-cyano-, and its 2:4-dinitrophenylhydrazones, 746.  
**6-Methoxy-2-m-diethylaminostyrylquinoline methiodide**, 145.  
**6-Methoxy-2-m-dimethylaminostyrylquinoline methiodide**, 145.  
**6-Methoxy-7-ethoxy-3-methyl-1:2:3:4-tetrahydronaphthalene-1:2-dicarboxylic acid**, and its derivatives, 720.  
**7-Methoxy-4-ethoxy-1:2-cyclopentenophenanthrene**, 3'-amino-, acetyl derivative, 575.  
**4'-Methoxy-α-ethyldeoxybenzoin**, 4-cyano-, 746.  
**4-Methoxy-3'-ethyl-Δ<sup>3'</sup>-1:2-cyclopentenophenanthrene**, 383.  
**4'-Methoxyflavylium chloride**, 7:8-*di*hydroxy-, 661.  
**7-Methoxyhexahydro-1:2-cyclopentenophenanthrene**, 3-hydroxy-, 380.  
**6-Methoxy-5-methyl-2-acetonaphthone**, and its derivatives, 389.  
**6-Methoxy-1-methyl-2-decalone**, 392.  
**2-Methoxy-4'-methyldiphenylsulphone**, 3-chloro-, 727.  
**6-Methoxy-4'-methyldiphenylsulphone**, 2-amino-, and 2-chloro-, 726.  
**14-Methoxy-3-methyldodecahydrochrysene**, 5-hydroxy-, 469.  
**6-Methoxy-5-methyl-2-naphthoic acid**, 390.  
**5-Methoxy-N-methyloxindole**, 624.  
**6-Methoxy-3-methyl-1:2:3:4-tetrahydronaphthalene-1:2-dicarboxylic acid**, 7-hydroxy-, benzoyl derivative, ethyl ester, 719.  
**6-Methoxy-2-naphthacyl bromide**, bromo-derivatives, 570.  
 5-chloro-, 572.  
**6-Methoxy-2-naphthacylacetoacetic acid**, 5-bromo-, ethyl ester, 570.  
**6-Methoxy-2-naphthacylacetonone**, 5-bromo-, and its derivatives, 570.  
**β-6-Methoxy-2-naphthacylpropionylacetic acid**, β-5-bromo-, and β-5-chloro-, ethyl esters, 571.  
**6'-Methoxy-2-naphthacylpyridinium bromide**, 5'-bromo-, 570.  
**2-Methoxy-1-naphthoic acid**, 6-bromo-, and its methyl ester, 687.  
**6-Methoxy-2-naphthoic acid**, 5-chloro-, 395.  
**β-6-Methoxy-2-naphthoylpropionic acid**, *p*-5-bromo-, 571.  
**2-Methoxy-1-naphthylacetone**, 504.  
**2-Methoxy-1-naphthylacetone**, bromo-, 505.  
**2-Methoxy-1-naphthylcarbonyl ethyl ether**, 504.  
**2-Methoxy-1-naphthylchloroacetone**, 505.  
**2-Methoxy-1-naphthylcyanomethylpyridinium chloride**, 505.  
 enimine-betaine, 505.  
**3-(6'-Methoxy-2'-naphthyl)-2-methylcyclopentan-1-one**, and 3-5'-chloro-, 571.  
**3-(6'-Methoxy-2'-naphthyl)-2-methyl-Δ<sup>2</sup>-cyclopentan-1-one**, 3-5'-bromo-, and its 2:4-dinitrophenylhydrazones, 571.  
**3-(6'-Methoxy-2'-naphthyl)cyclopentan-1-one-2-acetic acid**, methyl esters, 575.  
**γ-(6-Methoxy-2-naphthyl)-Δ<sup>β</sup>-pentenoic acid**, 382.  
**3-(6'-Methoxy-2'-naphthyl)-Δ<sup>2</sup>-cyclopentan-1-one-2-acetic acid**, 3-5'-chloro-, 395.  
**3-6'-Methoxy-2'-naphthyl-2:5-trimethylcyclopentan-1-one-2-acetic acid**, 575..

- 7-Methoxyoctahydro-1:2-cyclopentenophenanthrene**, 3-amino-, and its hydrochloride, 379.  
**7-Methoxyoctahydro-1:2-cyclopentenophenanthrene-3'-acetic acid**, ethyl ester, 385.  
**Methoxy-5:6:7:8:9:10:11:12-octahydrotriphenylenes**, 17.  
**6-Methoxy- $\Delta^{1:9}$ -octalin**, 392.  
**6-Methoxy- $\Delta^{1:9}$ -2-octalone**, 392.  
**4-Methoxy-1:2-cyclopentenophenanthrene-3'-acetic acid**, 383.  
**4-Methoxy-1:2-cyclopentenophenanthrylidene-3'-acetic acid**, ethyl ester, 383.  
*p*-**Methoxyphenylchloroacetonitrile**, 506.  
 *$\gamma$ -m*-**Methoxyphenyl- $\alpha$ -3:4-dimethoxyphenylbutyric acid**, and its methyl ester, 581.  
**2-*p*-Methoxyphenyl-4:5-diphenylglyoxaline**, 281.  
*o*- and *p*-**Methoxy- $\beta$ -phenylethyl alcohols**, 657.  
**3-*p*-Methoxyphenyl- $\Delta^2$ -cyclopenten-1-one-2-acetic acid**, and its hydrate, 399.  
**5-Methoxy-2-piperonylidene- $\alpha$ -hydrindone**, 574.  
**6-Methoxy-2-piperonylidene- $\alpha$ -tetralone**, 573.  
**6-Methoxyquinaldine**, and its methiodide, 144.  
**4-Methoxy-2:5-toluquinone**, 3-hydroxy-. See Fumigatin.  
**Methoxytriphenylenes**, 15.  
*N*-**Methylacetanilide**, 3-fluoro-, 767.  
**5-Methyl-2-acetonaphthone**, 6-hydroxy-, 390.  
 *$\alpha$* -**Methylamine- $\beta$ -3-indolylpropionic acid**, 2-hydroxy-, 157.  
**4-Methyl-7-*n*-amylcoumarin**, 5-hydroxy-, 171.  
**5'-Methyl-7-*n*-amyl-3:4-cyclohexenocoumarin**, 6-hydroxy-, and its acetate, 171.  
**5'-Methyl-7-*iso*amyl-3:4-cyclohexenocoumarin**, 5-hydroxy-, 828.  
**5-Methyl 3:6-anhydrogluconamide**, 94.  
**4-Methyl 3:6-anhydrogluconic acid**, and its derivatives, 99.  
**5-Methyl 3:6-anhydro- $\gamma$ -gluconolactone**, 94.  
**5-Methyl 3:6-anhydromethylglucofuranoside**, 94.  
**4-Methyl 3:6-anhydro- $\alpha$ -methylglucopyranoside**, 99.  
**2-Methyl-5:6-benzochroman**, 589.  
**9-Methyl-1:2-benzfluorene**, 538.  
**9-Methyl-1:2-benzfluoren-9-ol**, 538.  
**2-Methyl-3:4-benzfluorenone**, 311.  
**3'-Methyl-5:6-benzhydrindene**, and its picrate, 588.  
**4-Methyl-7:8-benzocoumarin**, 6'-hydroxy-, and its *p*-nitrobenzoate, 390.  
**3-Methyldecahydro-1:2-cyclopentenonaphthalene**, 3-hydroxy-, 381.  
**1-Methyldecalin-6-carboxylic acid**, 390.  
**9-Methyldecalin-1-carboxylic acid**, 469.  
*trans*-**1-Methyl-1-decalol**, 569.  
**1-Methyl-2-decalol**, 388.  
**1-Methyl-2-decalone**, and its derivatives, 388.  
**1-Methyl-2-decalone-6-carboxylic acid**, ethyl ester, 393.  
*S*-**Methyl-6:7:6':7'-dibenzthio- $\beta$ -isoindigo**, 639.  
*N*-**Methyldihydroquinone**, 81.  
**4'-Methyldiphenyl sulphide**, 2-chloro-6-nitro-, 725.  
**4'-Methyldiphenylsulphones**, chloroamino-, and 2-chloro-6-nitro-, 725.  
*S*-**Methyldithio- $\beta$ -isoindigo**, 634.  
**Methylene ethers**, preparation of, 348.  
 group, active, addition of  $\beta\gamma$ -unsaturated alcohols to, 507.  
**1:1'-Methylenebis-2-hydroxy-6-methoxynaphthalene**, 389.  
**2:3-Methylenedioxybenzocoumarones**, 349.  
 *$\alpha\beta$* -**Methylenedioxy- $\beta$ -benzoyl- $\alpha$ -phenylethylene**, 349.  
**4:5-Methylenedioxychrysene**, 500.  
**2:3-Methylenedioxcoumarone**, 349.  
**6:7-Methylenedioxy-3-methyl-3:4-dihydronaphthalene-1:2-dicarboxylic acid**, anhydride of, 719.  
**6:7-Methylenedioxy-3-methylnaphthalene-1:2-dicarboxylic acid**, anhydride of, 719.  
**2:3-Methylenedioxy-10-methylquinindoline**, 623.  
**6:7-Methylenedioxy-3-methyl-1:2:3:4-tetrahydronaphthalene-1:2-dicarboxylic acid**, and its derivatives, 718.  
**4:5-Methylenedioxy- $\alpha$ -1'-naphthylcinnamic acid**, 2-amino-, and 2-nitro-, 501.  
 *$\alpha$ -3:4-Methylenedioxyphenyl- $\gamma$ -phenylbutyric acid*, 112.  
 *$\alpha$ -3:4-Methylenedioxyphenyl- $\gamma$ -*p*-tolylbutyric acid*, 112.  
**6:7-Methylenedioxy-3-propyl-1:2:3:4-tetrahydronaphthalene-1:2-dicarboxylic acid**, anhydride of, 720.  
**2:3-Methylenedioxythionaphthen**, 349.  
**Methyleneimines**, cyclic, 39.  
**Methylethylaniline**, *p*-nitroso-, 474.  
*S*-**Methyl-3'-ethylidithio- $\beta$ -isoindigo**, 634.  
**5'-Methyl-7-ethyl-3:4-cyclohexenocoumarin**, 5-hydroxy-, 828.  
 *$\beta$* -**Methylgalactoside barium sulphate**, 831.  
 *$\beta$* -**Methylglucofuranoside**, derivatives of, 342.  
**Methylglucopyranoside**, methyl ester, 343.  
**3-Methyl glucosamic acid**, 51.  
**3-Methyl glucosamine**, hydrochloride, 51.  
 preparation of, 50.  
**Methylglucoside barium sulphates**, 831.  
*l*(-)-**Methyl  $\gamma$ -heptyl ketone**, 266.  
**Methylhexoside barium sulphate**, 831.  
**5'-Methyl-7-*iso*hexyl-3:4-cyclohexenocoumarin**, 5-hydroxy-, 829.  
**1-Methylindazole**, 3-bromo-4-, -5-, and -6-nitro-, 117.  
**2-Methylindazole**, 3-bromo-5- and -6-nitro-, 117.  
*N*-**Methylindirubin**, 623.  
**4-Methylnaphthalene**, 1-iodo-, 311.  
**5-Methyl-2-naphthoic acid**, 6-hydroxy-, 390.  
**1-Methyl-2-naphthol**, 387.  
**2-Methyl-1-naphthylacetoneitrile**, 505.  
**2-Methyl-1-naphthylcarbinol**, 505.  
**2-Methyl-5:6:7:8:9:10:11:12-octahydrotriphenylene**, 17.  
**1-Methyloctalin**, 569.  
*N*-**Methyloxindole**, 6(or 5)-amino-, and -nitro-, 623.  
 5-hydroxy-, 623.  
*N*-**Methyloxindole-3-oxalic acid**, ethyl ester, and its phenylhydrazone, 622.  
**1-Methylcyclopentan-2-one-1-acetic acid**, ethyl ester, 468.  
**2-Methylcyclopentene-1-aldehyde**, and its 2:4-dinitrophenylhydrazone, 467.  
**2-Methyl- $\Delta^1$ -cyclopentene-1-carboxylic acid**, 467.  
**2-Methyl- $\Delta^1$ -cyclopentene-1-nitrile**, 467.  
**7-Methyl-3:4-cyclopentenocoumarin**, 5-hydroxy-, and its acetate, 172.  
**2-Methyl- $\Delta^1$ -penten-3-one**, 820.  
**3-Methyl- $\Delta^2$ -cyclopenten-1-one-2-acetic acid**, 569.  
**Methyl isopropenyl ketone**, preparation of, 819.  
**1-Methyl-6-*isopropylphenanthrene***, synthesis of, 68.  
**Methylpyridinium chloride**, cyano-, 506.  
**Methyl-4-pyridylcarbinol**, and its derivatives, 45.  
**Methylsulphonyl- $\beta$ -phenylethyl alcohols**, 657.  
**2-Methyl-2:3:4:5-tetrahydro- $\beta$ -carboline-4-carboxylic acid**, methyl ester, hydrochloride, 158.  
**2-Methyl-2:3:4:5-tetrahydro- $\beta$ -carboline-4-carboxylic acid**, 2-hydroxy-, 158.  
**3-Methyl-2:3:4:5-tetrahydro- $\beta$ -carboline-4-carboxylic acid**, 158.  
**3'-Methyl-1:2:3:4-tetrahydro-1:2-cyclopentenophenanthrene**, 3'-hydroxy-, 575.  
*S*-**Methylthio- $\beta$ -isoindigo**, 629.  
**Methylthio- $\beta$ -phenylethyl alcohols**, and their derivatives, 656.  
**2-Methylthioxanthen**, 6-nitro-, 749.  
**2-Methylthioxanthone**, 6-nitro-, 749.  
 dioxide, 750.  
**2-Methyltriphenylene**, 17.  
**4- $\alpha$ -Methylvinylpyridine**, and its salts, 44.  
**Micro-organisms**, growth of, inhibitors of, 75.

**Molecular symmetry** in  $\alpha\beta$ -diethyldibenzyl compounds, 6.  
**Molecular volume.** See under Volume.  
**Molybdenum**, complexes of, with toluene-3:4-dithiol, 792.  
**Myrcene-maleic anhydride adduct**, dimethyl ester, 142.

## N.

**1-Naphthaldehyde**, 2:6-*di*hydroxy-, preparation and reduction of, 389.  
**Naphthalene**, *dichloro-*, *tetrachlorides*, *tetrachloro-naphthalenes* from, 243.  
*trichloro-*derivatives, and their derivatives, 248.  
*tetrachloro-*derivatives, and their derivatives, 243.  
*pentachloro-*derivatives, 246.  
**1:2:3-Naphthalenedisulphonic acid**, and its derivatives, 250.  
**Naphthalenesulphonic acids**, *trichloro-*, and their derivatives, 243.  
*tetrachloro-*, and their derivatives, 246.  
**Naphthalene-2-sulphonic acid**, 1:5-*dichloro-*, sodium salt and chloride of, 253.  
**Naphthalene-3-sulphonic acid**, 2:6- and 2:7-*dichloro-*, derivatives of, 256.  
**Naphthalene-4-sulphonic acid**, 1:8-*dichloro-*, sodium salt and chloride, 255.  
 2:7-*dichloro-*, chloride of, 256.  
**Naphthalene-8-sulphonic acid**, 1:4-*dichloro-*, sodium salt and chloride, 255.  
**1:4-Naphthaquinone**, spectra of, absorption, and of its alkyl derivatives, 159.  
 $\beta$ -( $\beta$ -Naphthoyl)- $\alpha$ -*p*-anisylpropionic acid, 112.  
 $\beta$ -( $\beta$ -Naphthoyl)- $\alpha$ -*p*-anisylpropionitrile, 111.  
 $o$ -1-Naphthoylbenzoic acid, derivatives of, 351.  
 $\beta$ -( $\beta$ -Naphthoyl)- $\alpha$ -phenylpropionic acid, 111.  
 $\beta$ -( $\beta$ -Naphthoyl)- $\alpha$ -phenylpropionitrile, 111.  
 $\beta$ -Naphthyl  $\alpha\beta$ -*di*bromo- $\beta$ -*p*-anisylethyl ketone, 111.  
 $o$ -1-Naphthylmethylbenzhydrazide, 351.  
 3-2'-Naphthyl-2-methylcyclopentan-1-one, 3-6'-hydroxy-, 571.  
 3-2'-Naphthyl-2-methyl- $\Delta^2$ -cyclopenten-1-one, 3-6'-hydroxy-, 571.  
 3- $\beta$ -Naphthylcyclopentan-1-one-2-acetic acid, acetate and hydroxy-lactone of, 568.  
 $\gamma$ -2-Naphthyl- $\Delta\beta$ -pentaenoic acid, 382.  
 2-( $\beta$ -Naphthylthio)benzaldehyde, 4-nitro-, 749.  
 $\omega$ -1-Naphthyl- $o$ -tolylurethane, 352.  
 $\gamma$ -2-Naphthylvalerolactone,  $\gamma$ -hydroxy-, 382.  
**Nicotine**, distribution of, between trichloroethylene and water, 275.  
**Nicotinic acid**, 428.  
*iso*Nicotinic acid, preparation of, 43.  
**Niquine**, and its derivatives, 77.  
**Nitrogen peroxide**, determination of, in atmosphere, 519.  
 vapour pressure of, 518.  
 Nitrous acid as nitrating and oxidising agent, 470, 766.  
**Nitrogen-hydrogen-nitrogen bond**, 777.  
**Nitrogen organic compounds**, photolysis of, 30.  
**Nor- $\beta$ -boswellenone**, 794.  
*iso*Norechinocystenedione, 559.  
 $\alpha$ - and  $\beta$ -Norechinocystenols, 559.  
**Nor- $d$ - $\psi$ -ephedrine diphenate**, optical activation of, in chloroform or acetone-chloroform, 257.  
 $\alpha$ -Norequilenin acetate, 572.  
*trans*-Norhederabetulene, m. p. of, 559.  
**Norhederabetulene-III**, 559.  
**Norlupanol**, and its acetate, 760.  
**Norlupanone**, 759.  
**Nor- $\psi$ -tropine**, preparation of, and its salts, 337.

## O.

## Obituary notices:—

James Bell, 680.  
 Arthur George Bloxam, 241.  
 Sir Henry Cort Harold Carpenter, 53.  
 Alexander Charles Cumming, 54.  
 Sir Robert Abbott Hadfield, 55.  
 Edward Haworth, 241.  
 George Ward Hedley, 444.  
 Edward William Lucas, 57.  
 Sir Gilbert Morgan, 689.  
 Sir William Jackson Pope, 697.  
 Christopher Rawson, 58.  
 Sir Jocelyn Field Thorpe, 444.  
 John William Towers, 242.  
 Norman Thomas Mortimer Wilmore, 59.  
 Sir William Fitzthomas Wyley, 465.  
 Frank Watson Young, 243.  
**1:2:3:4:9:10:11:12-Octahydro-1:2-cyclopentenophenanthrene-3'-acetic acid**, 383.  
**1:2:3:4:5:6:7:8-Octahydrotriphenylene**, 17.  
**Oestrone azobenzene-4-carboxylate**, 795.  
**Oleananic acids**, and their esters, 559.  
**Oleanene-II**, 560.  
**Oleanolic acid**, constitution of, 552.  
**Organic compounds**, electrolytic reduction of, 874.  
 spectra of, absorption, 20, 815.  
**Osazones**, mixed, formation of, and their anhydrides, 750.  
**Ozone**, determination of, in atmosphere, 519.  
 separation of, from gases, 511.

## P.

**Palmitoyldiglycylglycine**, 564.  
**Palmitoylglycineamide**, 564.  
**Palmitoylglycylglycine**, and its derivatives, 564.  
**Pantothenic acid**, 429.  
**Parachor**, calculation of, 299.  
**Pedicellin**, synthesis of, 662.  
*cyclo*Pentadiene-maleic anhydride adduct, derivatives of, 142.  
 2:3:4:5:6-Pentamethoxyacetophenone, 669.  
 Pentamethoxybenzene, 666.  
 2:3:4:5:6-Pentamethoxydibenzoylmethane, 669.  
 2:3:4:5:6-Pentamethoxyphenyl styryl ketone. See Pedicellin.  
 2:6:2':4':6'-Pentamethyldiphenylamine, 4-hydroxy-, *ON*-diacetyl derivative, 499.  
**Pentamethyleneparaconic acid**, methyl ester, 585.  
*iso*Pentanesulphonic acid,  $\alpha$ -amino-, 76.  
*cyclo*Pentenenaphthalene derivatives, hydrogenation of, 398.  
**Periodic acid.** See under Iodine.  
**Peroxidase**, reactions with, 496.  
**Persulphates.** See under Sulphur.  
**Phenacyl bromide**, 2:4:5- and 2:4:6-*trichloro-*, 800.  
**Phenacylpyridinium bromide**, 2:4:5-*trichloro-*, 801.  
**Phenanthrenesulphonic acids**, electrical conductivity of aqueous solutions of, 843.  
 viscosity of aqueous solutions of, 850.  
**Phenol**, *m*-fluoro-, coupling of, with diazotised amines, 645.  
 3-fluoro-4-amino-, 646.  
**Phenols**, preparation of *o*-hydroxyaldehydes from, 547.  
**Phenol ethers**, halogenation of, 267, 358.  
**Phenol ethers**, 2:4-*dichloro-*, 275.  
**Phenylacetic acid**, molecular compounds of, with its salts, 259.  
 sodium salt, molecular compounds of, 262.  
**Phenylacetic acid**, *p*-cyano-, preparation of, 745.  
*o*-iodo-, and its ethyl ester, 489.



- Phenylarsenoxide, 4-amino-2-hydroxy-, 4-acetyl derivative, preparation of, 192.  
 Phenylbenzhydrols, 480.  
 3-Phenylbenzophenone, 481.  
 2-Phenylbenzophenoneanil, 480.  
*o*-Phenylbenzoyldiphenyl-*o*-diphenylmethane, 482.  
 Phenyl-*p*-bromophenylformazybenzene, cobalt, cupric, and nickel complexes, 825.  
 Phenyl-*p*-bromophenylformazybenzenes, isomeric, 823.  
*N*-Phenyldiphenamic acid, 283.  
 2-Phenyl-4:5-diphenylglyoxaline, 2-*o*-hydroxy-, 281.  
 2-Phenyl-4:5-diphenylglyoxalines, 2-amino- and 2-nitro-derivatives, 282.  
 4-Phenyl-2:5-diphenylglyoxaline, 4-*p*-amino-, and 4-*p*-nitro-, 282.  
*m*-Phenylenediamine, picrate, 486.  
 proflavin synthesis from, 121.  
 $\beta$ -Phenylethyl alcohol, effect of substituents on reactivity of hydroxyl in, 652.  
 $\beta$ -Phenylethyl alcohol, *o*-amino-, preparation of, and its benzoyl derivative, 287.  
*p*-amino-, and its derivatives, and iodo-, 656.  
 $\beta$ -Phenylethyl chloride, *o*-amino-, acetyl and benzoyl derivatives, 659.  
 2-Phenylethylacetylnaphthalene, 537.  
 1-Phenyl-2-cyclohexenylcyclohexanol, 16.  
 Phenylhydrazinodiphenylacetic acid,  $\alpha$ - $\beta$ '-cyano- $\alpha$ '-*p*-chloro-, 187.  
 Phenylimino- $\beta$ -isoindigo alcoholate, 635.  
 Phenyliminophthalimidine, 621.  
 Phenylmethanesulphonic acid,  $\alpha$ -amino-, 76.  
 Phenyl-*p*-methoxyphenylformazybenzene, cobalt, cupric, and nickel complexes, 825.  
 1-Phenylmethylacetylnaphthalene, 537.  
*N*-Phenyl-*N*-methylidiphenamic acid, 283.  
 1-Phenyl-2- and -4-methylnaphthalene-2'-carboxylic acids, 310.  
 3-Phenyl-2-methylcyclopentan-1-one, and its 2:4-dinitrophenylhydrazone, 570.  
 3-Phenyl-2-methyl-4<sup>2</sup>-cyclopenten-1-one, and its 2:4-dinitrophenylhydrazone, 570.  
 1-Phenyl-3-methylpyrazole, 5-amino-, preparation of, and 5-amino-1:2'-chloro-, 5-amino-1:2':5'-dichloro-, and 5-chloro-1:2':5'-dichloro-, 286.  
 2-Phenyl-3-methyl-2:3:4:5-tetrahydro- $\beta$ -carboline-4-carboxylic acid, 159.  
 2-Phenyl-7-methyltetral-1-one, 112.  
 1-Phenyl-3-methyl-4:5-thionaphthenopyrazole, 8-chloro-, 189.  
 9-Phenyl-2-methylthioxanthen, 7-nitro-, 750.  
 9-Phenyl-2-methylthioxanthidrol, 7-nitro-, and its derivatives, 750.  
*N*-Phenyl-*N*'- $\beta$ -naphthylacetamidine, 785.  
 $\gamma$ -Phenyl- $\beta$ -1-naphthylbutan- $\beta$ -ol, 537.  
 $\alpha$ -Phenyl- $\beta$ -2-naphthyl- $\alpha\beta$ -diethylethylene, 537.  
 $\alpha$ -Phenyl- $\beta$ -1-naphthyl- $\alpha\beta$ -dimethylethylene, 537.  
 Phenyl-naphthylformazybenzenes, cobalt and nickel complexes, 825.  
 isomeric, 822.  
 $\alpha$ -Phenyl- $\beta$ -1-naphthylmethylethylethylenes, 537.  
 2-Phenyl-4:5:9'-10'-phenanthrimazole, and 2-*o*-nitro-, 282.  
 $\beta$ -Phenylpropionitrile,  $\alpha$ -chloro-, 506.  
 Phenylpyridines, spectra of, absorption, 364.  
 Phenylthioarsenious acid, 4-amino-2-hydroxy-, 4-acetyl derivative, bis-carboxymethyl ester, 192.  
 $\alpha$ -Phenyl- $\gamma$ -*p*-tolylbutyric acid, 112.  
 Phenyl-*p*-tolylformazybenzene, cobalt, cupric, and nickel complexes, 825.  
 2-Phenyltriphenylmethane, 483.  
 Photographic sensitizers, condensation products of *m*-dialkylaminobenzaldehydes with 6-substituted quinaldine methiodides as, 143.  
 Photolysis of nitrogen organic compounds, 30.  
 Phthalimidephenylimine, 634.  
 3-Phthalimidylisoindolenine, 1-bromo-, and its derivatives, 635.  
 Phthalodiamide, 4-amino-, 640.  
 Phthalodiamidine, 3:6-*di*hydroxy-, 630.  
 Phthalonitrile, 4-amino-, acetyl derivative, and 4-nitro-, 639.  
 Picene, degradation of, 685.  
 "Picylene ketone," constituent of, 685.  
 2-Piperidinobenzophenone, 5-nitro-, 749.  
 Piperidino-4'-methylidiphenylsulphones, nitro-, 726.  
 Piperonylbutylcarbonyl ether, 720.  
 16-Piperonylidene-equilenin methyl ether, 573.  
 3-Piperonylidene-*N*-methyloxindole, 3:6'-amino-, 622.  
 1-Piperonyl- $\Delta^1$ -pentene, 720.  
 Polarisation, electric, and molecular vibrations, 727.  
 Polycyclic compounds, growth-inhibitory, synthesis of, 533.  
 Polymerisation, 421.  
 Proflavine, synthesis of, 121, 484.  
 Proline, preparation of, 338.  
*p*-Propenylanisole. See Anethole.  
*iso*Propylideneniquine, 80.  
*p-n*-Propylphenol, 3-bromo-, substituted benzyl ethers of, 363.  
 4-*iso*Propylpiperidine, and 4- $\alpha$ -bromo-, hydrobromide, 46.  
 4-*iso*Propylpyridine, and its derivatives, 44.  
 Pulegone, condensation of, with alkylresorcinols, 137.  
 Pumps, diffusion mercury, bumping in, 620.  
 Pyrazole derivatives, 1.  
 Pyridine, 6-amino-2-hydroxy-, condensation of, with *p*-acetamidobenzenesulphonyl chloride, 291.  
 Pyridines, halogeno-, condensation of, with sulphanilamide, 9.  
 Pyridine-4-carboxylic acid, ethyl ester, and its picrate, 43.  
 Pyridinium chloride, amino-, acetyl derivative, 506.  
 Pyridoxin, 429.  
 2-Pyridyl *p*-aminobenzenesulphonate, 6-amino-, and its derivatives, 292.  
*p*-(2'-Pyridylamino)benzenesulphonamide, and *p*-5'-amino-, and *p*-5'-nitro-, 11, 13.  
*p*-(2'-Pyridylamino)benzenesulphonic acid, *p*-5'-nitro-, sodium salt, 13.  
*p*-(2'-Pyridylamino)benzenesulphon-2'-pyridylamide, 14.  
 Pyridyldiphenyls, spectra of, absorption, 364.  
 Pyrogallol trimethyl ether, preparation of, 665.

## Q.

- Quillaic acid, constitution of, 552.  
 Quinaldine methiodides, 6-substituted, condensation of, with *m*-dialkylaminobenzaldehydes, 143.  
 Quinine *d*phenate, rotation of, in alcohol-chloroform, 257.  
 Quinodiphenone, 283.  
 Quinolines, halogeno-, condensation of, with sulphanilamide, 9.  
*iso*Quinolines, halogeno-, condensation of, with sulphanilamide, 9.  
*p*-Quinolylaminobenzenesulphonamides, 12.  
 Quino-4:4'-*di*nitrodiphenone, 284.

## R.

- Radio-bromine, exchange of, between inorganic and organic bromides, 293.  
 Reactions, aromatic, side-chain, polar effects of substituents in, 796.  
 Report of the Council, 197.

Resins, elemi Manila, triterpenoid constituents of, 181.  
 natural phenolic, constituents of, 289.  
 Resinols, tripterene, 319.  
 Rhenium, complexes of, with toluene-3:4-dithiol, 792.  
 Riboflavin, 428.  
 Rotenones, m. ps. of, 878.  
 Rubber, plantation, acetone extracts of, 344.

## S.

Samarium selenate, octahydrate, solubility of, in water, 112.  
 Sandmeyer reaction, 770.  
 Sapogenins, 552.  
 Selenium dioxide, oxidation with, 35.  
 Silane, derivatives of, 353.  
 Silane, *mono-* and *di-*iodo-, 353.  
 Silyl iodide. See Silane, *mono*iodo-.  
 Silylene iodide. See Silane, *di*iodo-.  
 Sorbic acid, electrolytic reduction of, at gallium cathodes, 874.  
 Spectra, absorption, of organic compounds, 20, 815.  
   of quinones, 159.  
   of terpenoid compounds, 811.  
 Stachydrine, preparation of, 338.  
 Stearoyldiglycylglycine, 564.  
 Stearoylglycine, and its derivatives, 565.  
 Stearoylglycylglycine, and its derivatives, 564.  
 Sterols, synthesis of substances related to, 386, 391, 393, 398, 404, 566, 575, 582, 586.  
 Sterol group, 344.  
 Stilbæstrol group, ketones of, 744.  
 Styrenes, substituted, addition to, of ethyl maleate and maleic anhydride, 715.  
 Substitution in aromatic compounds, 608, 793.  
 Sulphanilamide, condensation of, with halogenopyridines and -quinolines, 9.  
 Sulphur :—  
   Persulphates, reaction of, with iodides, 641.  
 Sumatrol, m. p. of, 878.

## T.

*ψ*-Taraxastanediol, and its acetate of, 183.  
*ψ*-Taraxasteryl acetate oxide, 184.  
 Taurine amide hydrochloride, 77.  
 Terpenoid compounds, diene synthesis with, 140.  
   spectra of, absorption, 811.  
 Tetradenterethylene, preparation of, 596.  
 Tetradenterethylene dibromide, preparation of, from dideuteracetylene, 596.  
 Tetraethylmalonatodigold, 108.  
 Tetraethylmethylmalonatodigold, 108.  
 Tetraethyl-3-nitrophthalatodigold, 108.  
 Tetraethyl-4-nitrosophthalatodigold, 108.  
 Tetraethyloxalatodigold, 107.  
 Tetraethyl-*n-* and *iso*-phthalatodigold, 108.  
 Tetraethylsaccharatodigold, 108.  
 Tetraethylsulphatodigold, 102, 109.  
 Tetraethylterephthalatodigold, 108.  
 2:3:4:5-Tetrahydroacetophenone, preparation of, 819.  
 Tetrahydrocannabinol, analogues of, 826.  
 2:3:4:5-Tetrahydro- $\beta$ -carboline-4-carboxylic acid, preparation of, 157.  
 2:3:4:5-Tetrahydro- $\beta$ -carboline-2:4-dicarboxylic acid, 158.  
 Tetrahydro-2:6-di-*a*-furylcyclohexanol, 569.  
 Tetrahydrofurfuryl alcohol *p*-xenylurethane, 315.  
*dl*-Tetrahydrofurfuryl alcohol, esters of, and its separation into optically active forms, 312.  
 Tetrahydrohydrindenes, 468.

Tetrahydrocannabinol, 171.  
 5:6:7:8-Tetrahydro-1:2-cyclopentenonaphthalene, 400.  
*β*-Tetraaryl-*a*-methylpropionic acid, 684.  
 3:4:5:6-Tetramethoxyacetophenone, 2-hydroxy-, 669.  
 Tetramethoxybenzene, 1:2-*di*hydroxy-, preparation of, 670.  
 1:2:3:5-Tetramethoxybenzene, 665.  
 Tetramethoxy-*p*-benzoquinone, 662.  
 1:2:4:5-Tetramethoxy-3:6-diacetoxybenzene, 662.  
 2:2:4:7-Tetramethyl-3-*n*-butyl- $\Delta^3$ -chromen, 5-hydroxy-, 829.  
 2:2:4:7-Tetramethyl- $\Delta^3$ -chromen, 5-hydroxy-, 171.  
 2:2:5:4'-Tetramethyldibenzopyran, 6''-hydroxy-, and its *p*-nitrobenzoate, 140.  
 1:2:9:10-Tetramethyl-9:10-dihydroanthracene, 19.  
 2:3:4:6-Tetramethyl *dl*-galactose anilide, 130.  
 2:2:11:11-Tetramethylhexahydrochrysene-*a*, 578.  
 2:2:5:4'-Tetramethyl-1':2':3':4':5':6'-hexahydrodibenzopyran, 6''-hydroxy-, 139.  
 3:4:4:5-Tetraphenylpyrazole, 330.  
 Tetraphenylpyrazolines, 330.  
 Tetra-*n*-propyladipatodigold, 108.  
 Tetra-*n*-propylglutaratodigold, 108.  
 Tetra-*n*-propylpimelatodigold, 108.  
 Tetra-*n*-propylsuberatodigold, 108.  
 Tetra-*n*-propylsuccinatodigold, 108.  
 Tetra-*n*-propylsulphatodigold, 108.  
 Thallium, determination of, in mixtures of metals of the group, 72.  
 Thiobenzamide, *o*-cyano-, 621, 634.  
 Thio- $\beta$ -isoindigo, and its derivatives, 635, 639.  
 Thiophthalimidine, 634.  
 1-Thionaphthen, 5-chloro-3-hydroxy-, and its 3-acetyl derivative, and their 1:1-dioxides, 189.  
 Thionaphthindole, 10-chloro-, 190.  
 Thiophen, detoxication of, 136.  
 Thiophthalimide, 620, 627.  
 Thiophthalimidephenylimine, 634.  
 Thiopyranophenanthrene derivatives, 404.  
 Thioxanthen, derivatives of, 747.  
 Thorpe, (*Sir*) *Jocelyn Field*, scientific work of, 448.  
 "isoThujone," constitution and spectrum of, 811.  
 Thymol, 6-bromo-, and 6-chloro-, substituted benzyl ethers of, 364.  
 Tilden lectures, 414, 427.  
*p*-Tolueneazobenzaloxime, cobaltic complex, 825.  
 Toluene-3:4-dithiol, complexes of, with molybdenum, rhenium, and tungsten, 792.  
*p*-Toluenesulphonic acid, electrical conductivity of aqueous solutions of, 844, 850.  
 (*p*-Toluenesulphonyl)benzoic acids, nitro-, 749.  
*o*-Toluic acid, 4- and 6-nitro-, *p*-nitrobenzyl esters, 117.  
*β*-*p*-Toluoyl-*a*-*p*-anisylpropionic acid, 111.  
*o*-Tolyl ethers, 5-bromo-, 274.  
*p*-Tolyl ethers, 3-bromo-, 273.  
   3-nitro-, 274.  
 2-(*p*-Tolythio)benzaldehyde, 2- and 4-nitro-, and their oximes, 748.  
   5-nitro-, 749.  
 2-(*p*-Tolythio)benzoic acid, 5-nitro-, 749.  
 2-(*p*-Tolythio)benzophenone, 5-nitro-, 749.  
 2-*p*-Tolythio-4'-methyl-diphenylsulphone, 3-chloro-, 726.  
*N*-*o*- and *m*-Tolyl-*N'*-*p*-tolylacetamidines, 785.  
 Toxicarols, m. ps. of, 878.  
 Toxicity, catalytic, and chemical constitution, 132.  
 Triazine series, 278.  
 Triethyltrimethylenetriamine, action on, of allyl iodide, benzyl chloride, and ethyl bromide, 40.  
 Triglycerides, hydrogenation of, acyl group migration during, 527.  
 Trimethoxyacetophenones, 2-hydroxy-, 666.  
 3:4:6-Trimethoxyacetophenone, 2:5-*di*hydroxy-, 669.

- 3:4:5- and 3:4:6-Trimethoxybenzenes, 1:2-dihydroxy-, and their diacetyl derivatives, 666.  
 3:4:3'-Trimethoxychalkone, 581.  
 2:2:4-Trimethyl-7-*n*-amyl- $\Delta^3$ -chromen, 5-hydroxy-, 171.  
 2:2:5'-Trimethyl-4''-*n*-amyl-3':4':5':6'-tetrahydrodibenzopyran, 5''-hydroxy-, and its acetate, 171.  
 2:2:5'-Trimethyl-4''-isomyl-3':4':5':6'-tetrahydrodibenzopyran, 6''-hydroxy-, 829.  
 2:4:5-Trimethyl 3:6-anhydroaldehydoglucose, 101.  
 2:4:5-Trimethyl 3:6-anhydroglucose dimethylacetal, 101.  
 2-2':4':6''-Trimethylbenzoyldiphenyl-2'-carboxylic acid, 4:4'-dinitro-, 284.  
 2:2:5'-Trimethyl-4''-ethyl-3':4':5':6'-tetrahydrodibenzopyran, 6''-hydroxy-, 828.  
 Trimethylglycylcholine, salts, 191.  
   synthesis of, 190.  
 2:2:5'-Trimethyl-4''-isohexyl-3':4':5':6'-tetrahydrodibenzopyran, 6''-hydroxy-, 829.  
 Trimethylkyaphenines, 280.  
 Tri-*p*-methylkyaphenine, *m*-amino-, *m*-nitro-, *tri-m*-nitro-, and *di-m*-nitro-*tri-m*-amino-, 281.  
 2:4:6-Trimethyl *d*-mannonamide, 841.  
 2:4:6-Trimethyl  $\delta$ -mannonolactone, 841.  
 2:4:6-Trimethyl mannose hydrate, 839.  
 3:4:6-Trimethyl mannose anilide, 841.  
 2:3:4-Trimethyl methylglucopyruronoside, methyl ester, 343.  
 2:3:5-Trimethyl  $\beta$ -methylglucuronoside, 343.  
 2:2:7-Trimethyl-3:4-cyclopenteno- $\Delta^3$ -chromen, 5-hydroxy-, 172.  
 2:4:5-Trimethylphenacyl bromide, 799.  
 2:3:5-Trimethyl saccharolactone methyl ester, 342.  
 2:2:5'-Trimethyl-3':4':5':6'-tetrahydrodibenzopyran, 4':6''-dihydroxy-, 829.  
*NN'N''*-Trimethyltrimethylenetriamine dichloride, 41.  
 2:4:6-Triphenyl-2-*n*-butyl-1:2-dihydro-1:3:5-triazine, and its derivatives, 329.  
 2:4:6-Triphenyl-1:2-dimethyl-1:2-dihydro-1:3:5-triazine, 328.  
 Triphenylene, 2-hydroxy-, and its acetyl derivative, 18.  
 2:4:6-Triphenyl-2-ethyl-1:2-dihydro-1:3:5-triazine, 328.  
 2:4:6-Triphenyl-5-ethylpyrimidine, 329.  
 2:4:6-Triphenyl-2-methyl-1:2-dihydro-1:3:5-triazine, and its derivatives, 327.  
 2:4:6-Triphenyl-5-methylpyrimidine, 329.  
 2:4:6-Triphenyl-2-*n*-propyl-1:2-dihydro-1:3:5-triazine, and its sulphate, 329.  
 2:4:6-Triphenyl-2-isopropyl-1:2-dihydro-1:3:5-triazine, 329.  
 2:4:6-Triphenyl-5-*n*-propylpyrimidine, 330.  
*o*-Trisulphidobenzoic acid thioanhydride, identity of, with 2-dithiobenzoyl, 793.  
 Triterpene group, 181.  
 Triterpene resinols, 35, 319.  
 Tryptophan, tests for, 153.  
 Tungsten, complexes of, with toluene-3:4-dithiol, 792.

## V.

- Valeric acid,  $\gamma$ -chloro- $\gamma$ -nitroso-, preparation of, 603.  
 3-Vanillylidene-*N*-methyloxindole, 622.  
 Velocity of reaction at low temperatures, 118, 854.  
 $\beta$ -Veratroyl- $\alpha$ -anisylpropionic acid, and its amide, 579.  
 5-*o*-Veratryl-3:6-methylene- $\Delta^1$ -cyclohexene-4-oxalic acid, methyl ester, 722.  
 Vinyl compounds, polymerisation of, 416.  
 Viscosity of oil-in-water emulsions, 542.  
 Vitamin-*B*, constituents of, 427.  
 Volume, molecular, and structure, 299.

## Y.

- Yeast, mannan of, 833.  
 Yohimbine, constitution of, 153.  
 Ytterbium nitrate hydrates, 562.  
 Yttrium nitrate hydrates, 562.