

# INDEX OF SUBJECTS, 1948.

## A.

- Abietic acid**, oxidation of, tricarboxylic acid and its derivatives from, 1201.
- Acenaphthene**, synthesis of *as*-hydrocarbons from, 1395.
- Acenaphthenesulphonic acid**, 3-amino-, acetyl derivative, *S*-benzylisothiuronium salt, 1714.
- Acenaphthenone**, *p*-bromo-, 2-chloro-5-nitro- and *o*- and *p*-nitro-phenylhydrazones, 1248, 1249.
- 1-(5-Acenaphthenyliminomethyl)cyclohexan-2-one**, 1540.
- Acenaphthylene**, dimerisation of, 1990.
- Acenaphthylene(7':8'-2:3)indole**, and its derivatives, 1247.
- Acenaphthylene(7':8'-2:3)indole**, 5-bromo-, and 7-chloro-4-nitro-, 1249.
- 6(or 4)-nitro-, 1-acetyl-, -benzoyl, and -cinnamoyl derivatives, 1248.
- Acenaphthylene(7':8':2:3)indole-1-carboxylic acid**, and 6(or 4)-nitro-, ethyl and methyl esters, 1248.
- Acetals**, parachors and refractivities of, 616.
- Acetaldehyde**, polymerisation of, low-temperature, 234.
- Acetamidinium picrate**, trichloro-, 305.
- Acetanilide**, *p*-chloro-*o*-nitro-*ω*-chloro-, 1910.  
di-nitro-derivatives, preparation of, 2132.
- 2-β-Acetanilidovinylbenzoxazole methiodide**, 1897.
- 2-β-Acetanilidovinylbenzthiazole methiodide**, 1897.
- Acetic acid**, adsorption of, from aqueous solutions, by charcoal, 1483, 1487.  
allyl ester, addition of chlorine to, 1394.  
geranyl ester, spectrum of, infra-red absorption, 1414.  
*nitro-tert.-butyl ester*, 57.
- Acetic acid**, aminocyanato-, ethyl ester, thiocyanate, 1344.  
bromo-, and chloro-, ethyl esters, reaction of, with keto-cholanic acids, 1358.  
chloro- and iodo-, 3-chloroallyl esters, 2182.  
*dichloro-*, preparation and properties of, and its esters, 1845.  
*trichloro-*, esters, 1845.  
fluoro-, alkyl and aryl esters, 1773, 1776.  
thiol-, 2:4-diacetamidophenyl ester, 1004.  
thiolchloro-, 2-bromo- and 2-chloro-ethyl esters, 1894.
- Acetic anhydride**, fluoro-, 1778.
- Acetoacetic acid**, *α*-amino-, benzoyl derivative, ethyl ester, and its semicarbazone, 315.  
1:3-difluoro-, ethyl ester, 1777.
- Acetoin**. See Acetyl methylcarbinol.
- 3-Acetomercuri-4-methylpyridine**, 200.
- Acetone**, bromination of, 272.  
condensation of, with fluorene, 1137.  
*β*-diethylaminoethoxyxime, 185.  
halogenation of, in chlorobenzene, 370.
- Acetone**, amino-, benzoyl derivative, and its 2:4-dinitro-phenylhydrazone, 315.  
*α*-bromopropionyl derivatives, 1857, 1858.
- Acetonitrile**, amino-, reaction of, with carbon disulphide, 201.  
thiocyanate, 1344.
- Acetophenone**, and bromo-, oxime benzene- and *p*-toluenesulphonates, 1518.
- Acetophenone**, 5:*ω*-dibromo-2-amino- and -2-nitro-, and 5-chloro-*ω*-bromo-2-amino- and -2-nitro-, and their pyridinium derivatives, 1173.  
*ω*-halogeno-*o*-amino-, diazotised, halogen exchange with, 1170.  
2:5-dihydroxy-, 5-benzoyl derivative, 2141.  
2:6-dihydroxy-, 2:6-dianisyl derivative, 2143.  
2:3:6-trihydroxy-, 2:3-di- and 2:3:6-tri-benzyl derivatives, 2141.  
*o*-nitro-, preparation of, 384.
- 3-Aceto-*m*-toluidide**, 4-chloro-5-nitro-, 1009.
- Acetoxime benzenesulphonate**, 1518.
- Acetyl chloride**, fluoro-, 1777.  
fluoride, fluoro-, 1778.
- 5-Acetylbenzfuran**, 4:5-dihydroxy-, 895.
- N*-Acetylidi-(2-chloroethyl)amine**, and *N*-chloro-, 2174.
- p*-Acetyl-*αβ*-diethylstilbene**, 1080.
- 3-Acetyl diphenylarsinous acid**, 2209.
- 3-Acetyl diphenylchloroarsine**, and 3-chloro-, 2210.
- 3-Acetyl diphenylcyanoarsine**, 2211.
- Acetyl dithiocarbamic acid**, 3-chloroallyl ester, 2182.
- Acetylene**, conversion of carbon dioxide into, 1534.
- Acetylenedicarboxylic acid**, esters, 679.
- Acetylenic compounds**, parachors and refractivities of, 674.
- 1- or 3-Acetyl glyoxaline**, 4(5)-amino-2-mercaptop-, 4(5)-benzoyl derivative, 1265.
- 2'-Acetyl guanosine**, 1381.
- 5-Acetylhexoic acid**, and its derivatives, 233.
- Acetyl methylcarbinol** benzoate, and its semicarbazone, 275.
- 4-Acetyl-3-methylphenol**, 6-amino-, and nitro-, and its methyl ether, 2146.
- 2-Acetyl-4-methylphenoxyacetic acid**, 5-hydroxy-, 5-benzyl derivative, and its ethyl ester, 2259.
- 2-Acetyl-5-methylphenoxyacetic acid**, and its ethyl ester, 2260.
- 5-Acetyl nona-2:7-diene-5-carboxylic acid**, 1:9-dicyano-, ethyl ester, 234.
- 5-Acetyl nonane-5-carboxylic acid**, 1:9-dicyano-, ethyl ester, 234.
- 2-Acetyl phenoxyacetic acid**, 5-hydroxy-, 5-benzyl derivative, and its ethyl ester, 2258.
- N-Acetyl phenyl carbamyl-3-acetoxythiophen**, 85.
- 3-Acetyl-3-phenylpentanecarboxylic acid**, 1744.
- 3-Acetyl-4-phenylthiazoline**, 5-amino-2-imino-, 5-acetyl-2-benzoyl derivative, 1266.
- 3-Acetyl-3-phenylundecanecarboxylic acid**, 1744.
- 6-Acetyl quinoline**, 2010.
- O-Acetyl salicylic acid**, *O*-fluoro-, 1779.
- α-Acetyl suberic acid**, *α*-chloro-, ethyl ester, 1553.
- 2-(Acetyl sulphanyl amido)ethyl bromide**, 1925.
- 2-(Acetyl sulphanyl amido)ethyl thiol**, 1925.
- Acetyl sulphanyl ethylene imide**, 1925.
- 3-Acetylthiazoline**, 5-amino-2-imino-, 5-acetyl-2-benzoyl derivative, 1265.
- 3-Acetylthiazoline-4-carboxylic acid**, 5-amino-2-imino-, 5-acetyl-2-benzoyl derivative, ethyl ester, 1343.
- 2-Acetylthio-2-acetyl iminazole**, 4-amino-, 4-benzoyl derivative, 1265.
- 2-Acetylthio iminazole**, 5-amino-, 5-benzoyl derivative, 1266.
- Acids**, aliphatic, physical properties and constitution of, 1814.  
*monocarboxylic*, branched-chain, preparation of, 1741.  
fatty, ethenoic, and their esters, oxidation of, 343.  
higher, unsaturated, structure of, 243.  
relative strengths of, 1029.
- organic**, heats of ionisation of, 1016, 1019.
- Acidity functions**, 1971, 1976.
- Acorn starch**, structure of, 1779.
- Acridine**, derivatives, adaptation of bacteria to, 1235.
- Acridine**, 5-amino-, derivatives, reaction of, with hydrogen sulphide, 1181.
- 2,8-diamino-**. See Proflavine.
- Acridines**, synthesis and reactions of, 1225.
- Acridines**, amino-, synthesis of, from formic acid and diaryl amines, 1225.
- 5-amino-, fluorine-substituted, properties of, 32, 288.
- N-Acridyl(5)-*p*-aminobenzoic acid**, 241.
- N-Acyl compounds**, action of diazomethane on, 605.
- Acyl peroxides**, reactions of, 2213.
- 5-Acylamido-6-hydroxypyrimidines**, 2:4-diamino-, 1157.
- Address**, presidential, 531.
- Adenine**, dissociation constants of, 765.
- Adenosine**, synthesis of, 967.
- Adsorbents**, mineral, 127, 133.
- Adsorption** from aqueous solutions by charcoal, 1483, 1487.  
of gases on minerals, 135.
- Agathis australis**, kaurene from, 1888.
- Alanine**, derivatives of, bacteriostatic action of, 85.

- DL-Alanine**, preparation of, 1861.  
**Albumin**, plasma, adsorption of water vapour on, 1083.  
**Alcohols**, aliphatic, physical properties and constitution of, 1814.  
 molecular association of, 1345, 1349.  
 polyhydric, anhydrides of, 237, 299, 2201, 2204.  
 spectra of, infra-red absorption, in mixtures with aldehydes, 1454.  
 unsaturated, formation of, from olefins by action of organic per-acids, 1331.  
**Aldehydes**, condensation of, with nitromethane, 1907.  
 detection of, with cyclohexa-1:3-dione, 1371.  
 formation of, from  $\alpha$ -amino-acids, 176.  
 spectra of, infra-red absorption, in mixtures with alcohols, 1454.  
 $\alpha\beta$ -unsaturated cyclic, reactions of, 996.  
**Aldobionic acid** from almond-tree gum, 1677.  
**Aldohexoses**, methylated, periodate oxidation of, with formaldehyde liberation, 993.  
**Aldoses**, oxidation of, by iodine solutions, 810.  
**Algic acid acetate**, 197.  
**Alkali sulphides**, reactions of, with polynitro-aromatic compounds, 2017.  
**Alkaloids**, curare, 265, 1945.  
*Daphnandra*, 2170.  
*Senecio*, 1891.  
*Sophora*, 1889.  
**Alkyl isothiocyanates**, reaction of, with  $\alpha$ -aminonitriles, 2028.  
**n-Alkyl bromides**, kinetics of olefin formation from, 2055, 2058.  
**tert.-Alkyl bromides**, kinetics of olefin formation from, 2065.  
**n-Alkylbenzenes**, parachors and refractivities of, 607.  
**Alkyl ketones**, parachors and refractivities of, 610.  
**p-Alkylsulphonylbenzylammonium chlorides**, preparation of, 381.  
**Alloxan**, reaction of, with 4-amino-3-(4-diethylamino-1-methylbutylamino)anisole, 1719.  
**Alloxazine**, lipid-soluble derivatives of, 219.  
 synthesis of, from 2-aminoquinoxaline-3-carboxamide, 517.  
**n- and iso-Alloxazines**, 7-amino-, synthesis of, 1926.  
**Allyl alcohol**, addition of chlorine to, in hydrochloric acid, 1393.  
**Allyl compounds**, 3-chloro-, 2180.  
**Allylcarbamic acid**, methyl ester, 2320.  
**Allyldichloroarsine**, 3-chloro-, 2183.  
**Allylmalonic acid**, esters, 663.  
**Almond-tree gum**, structure of, 1677.  
**Alumina**. See **Aluminium oxide**.  
**Aluminium**, reaction of, with nitrosyl chloride, 1955.  
**Aluminium chloride**, reaction of, with nitrosyl chloride, 1955.  
 oxide, catalytic, for vapour-phase reactions, 267.  
 $\gamma$ -form, properties of, 267.  
 powder, calcined and hydrated, adsorption by, of *n*-heptoic acid, and specific surface measurement, 969.  
**Aluminosilicates**, adsorption of, and their colour reactions, 2164.  
 mineral, 127.  
**Amides**, 1081.  
**Amidines**, 303, 1514, 1618.  
 chemotherapeutic, 261.  
 preparation of, from substituted amides, sulphonyl chlorides, and pyridine, 1618.  
 substituted, preparation of, 1514.  
**p-Amidinobenzyl methyl sulphide**, acetate and hydrochloride, 1504.  
**p-Amidinobenzyl methyl sulphone**, benzoate and hydrochloride, 1504.  
**2-Amidinopyridine**, preparation of, 308.  
**Amidone**, tetrahydrofurans related to, 1993.  
**Amines**, aromatic, polycyclic, 1756.  
 containing 2-halogenoethyl groups, 2174.  
 formylation of, with ethyl formate, 1457.  
 molecular association of, from viscosity, 1345.  
 primary, secondary, and tertiary, physical properties and constitution of, 1825.  
 reaction of, with esters, 1989.  
**Amino-acids**, bacteriostasis by, 85.  
 $\alpha$ -Amino-acids, degradation of, to aldehydes and ketones, 176.  
 synthesis of, 1386.  
 **$\alpha$ -Amino- $\beta$ -mercapto-acids**, new synthesis of, 1337.  
 **$\alpha$ -Amino-nitriles**, reaction of, with isothiocyanates, 1262, 2028.  
**Aminophosphonic acid**, diethyl ester, 701.  
**Ammines**, 1912.  
**Ammonia**, equilibrium of, with sulphur dioxide and water, 76.  
**Ammonium sulphinates**, action of chlorine on, in aqueous solution, 147.  
**n-Amyl nitrite**, preparation and physical properties of, 1847.  
**sec.-isoAmyl iodide**, olefin formation from, 2090.  
**2-n-Amyl-4-benzylaminomethylene-4:5-dihydro-oxazole**, 5-amino-, 1971.  
**n-Amyldicyandiamide**, 1633.  
**sec.-isoAmylidimethylsulphonium ions**, olefin formation from, 2090.  
**tert.-Amylidimethylsulphonium salts**, olefin formation from, 2084.  
**n-Amylmalonic acid**, esters, 633.  
**a-n-Amyloanthic acid**,  $\alpha$ -amino-, 1388.  
**2-n-Amyloxazole**, 4-cyano-, synthesis of, 1969.  
**tert.-Amylsulphonium salts**, olefin formation from, 2038.  
**p-n-Amylsulphonylbenzylammonium chloride**, 382.  
**p-n-Amylsulphonylphenyl cyanide**, 383.  
**2-n-Amylthioethanol**, 1895.  
**Analgesics**, new, 559.  
 synthetic, 2011.  
**Analysis**, chromatographic, quantitative, of mixed sugars, 1679.  
**Androstan-17-on-3( $\beta$ )-yl benzoate**, 790.  
**Androst-5-ene-3( $\beta$ ):17( $\alpha$ )-and-3( $\beta$ ):17( $\beta$ )-diols**, dibenzoates, 791.  
**Androst-5-en-3( $\beta$ )-ol-17-one**, and its acetate and benzoate, 4-phenylsemicarbazones of, 790.  
**Anethole**, dimerides of, 1984.  
*isoAnethole*, and its isomers, 1984.  
**Anhydrides** of polyhydric alcohols, 2201, 2204.  
**Anhydrohexitol**, dichloro-, 2207.  
**1:4-Anhydrosorbitol**, derivatives from 1:4:3:6-dianhydrosorbitol, 237.  
 formation of, from glucamine, 299.  
**1:4-Anhydrosorbitol**, 6-chloro-, and its derivatives, 240.  
**Anhydro- $\beta$ -strychninenitromethane**, 954.  
**Anhydroeostrychninephosphorous acid**, 956.  
**Anhydro- $\beta$ -strychninephosphorous acid**, and its perchlorate, 955.  
**Aniline**, diazotisation of, 558.  
**Aniline**, 2-chloro-5-nitro-, thiolation of, 870.  
**5-Anilinoacridine**, 5-*m*- and *p*-nitro-, 1183.  
**6-Anilinomesobenzanthrone**, and 6-*p*-chloro-, and 6-*p*-nitro-, 1749.  
**6-Anilino-4-n-butylamino-1-*p*-chlorophenyl-1:2-dihydro-1:3:5-triazine-2-thione**, 6-*p*-chloro-, 1642.  
**2-Anilino-4-carboxythiazole**, 5-amino-, 2030.  
**4-Anilino-2-*p*-di-*n*-butylaminopropylaminoquinazoline**, 4-*p*-chloro-, dihydrochloride, 1771.  
**2-Anilino-4- $\beta$ -diethylamino-6:7-benzoquinazoline**, 2-*p*-chloro-, dihydrochloride, 1766.  
**2-Anilino-4- $\beta$ -diethylaminoethylamino-6:7-dimethoxyquinazoline**, 2-*p*-chloro-, dihydrochloride, 1766.  
**2-Anilino-4- $\beta$ -diethylaminoethylamino-5-, -6-, -7-, and -8-methoxyquinazolines**, 2-*p*-chloro-, dihydrochlorides, 1766.  
**2-Anilino-4- $\beta$ -diethylaminoethylamino-7-methylquinazoline**, dihydrochloride, 1766.  
**4-Anilino-1- $\beta$ -diethylaminoethylaminophthalazine**, and 4-*p*-chloro-, 780.  
**2-Anilino-4- $\beta$ -diethylaminoethylamino-6- and 7-amino-2-*p*-chloro-, hydrochlorides, 1766.  
 6-chloro-2-*p*-chloro-, 6- and 7-nitro-2-*p*-chloro-, and their hydrochlorides, 1765.  
**4-Anilino-2- $\beta$ -diethylaminoethylaminoquinazoline**, 4-*p*-chloro-, salts, 1770.  
**2-Anilino-3- $\beta$ -diethylaminoethylaminoquinoxaline**, 2-*p*-chloro-, 781.  
**4-Anilino-1- $\delta$ -diethylamino- $\alpha$ -methyl-*n*-butylaminophthalazine dipicrate**, 780.  
**4-Anilino-1- $\gamma$ -diethylaminopropylaminophthalazine**, and 4-*p*-chloro-, 780.  
**4-Anilino-2- $\gamma$ -diethylaminopropylaminoquinazoline**, 4-*p*-chloro-, 1770.  
**2-Anilino-3- $\gamma$ -diethylaminopropylaminoquinazoline**, 2-*p*-chloro-, 781.  
**2-Anilino-4- $\beta$ -diethylaminoquinazolines**, 2-*p*-chloro-, nuclear-substituted, 1759.**

- 4-Anilino-6-dimethyldihydro-1:3:5-triazine,** 2-amino-4-*p*-chloro-, 1655.  
**4-Anilinodiphenyl,** 3-nitro-, 222.  
**6-Anilino-4-methylamino-1:2-dihydro-1:3:5-triazine-2-thione,** 6-*p*-chloro-, 1642.  
**4-Anilino-3-methylcinnoline,** 358.  
**4-Anilino-7-methylcinnoline,** 8-nitro-, 1705.  
**4-Anilino-8-methylcinnoline,** and nitro-, 1706.  
**3-β-Anilinomethylenedihydro-β-quindene methiodide,** 1897.  
**Anilinomethylenemalonic acid,** *p*-amino-, acetyl derivative, diethyl ester, 893.  
**Anilinomethyl ethyl ketone,** and its semicarbazone, 275.  
**Anilinomethyl *n*-propyl ketone,** 277.  
**4-Anilino-1-methylquinazoline,** 6- and 7-amino-, salts, 365.  
**1-Anilinonaphthalene,** 1-(2'-amino)-, and 1-(2'-nitro)-, 222, 223. 2-amino- and 2-nitro-, 221, 222.  
**2-Anilinonaphthalene,** 2-(2'-amino)-, and 2-(2'-nitro)-, 223.  
**3-Anilino-2-naphthoic acid,** 3-*m*- and *p*-nitro-, 1294.  
**2-Anilino-4-phenylthiazole,** 5-amino-, 1266.  
**2-Anilino-5-phenylthioureidothiazole,** 1267.  
**4-Anilinophthalazine,** 1-chloro-, and 1-chloro-4-*p*-chloro-, and their hydrochlorides, 779, 780.  
**4-Anilino-2-γ-piperidinopropylaminoquinazoline,** 4-*p*-chloro-, and its dihydrochloride, 1771.  
**6-Anilino-4-isopropylamino-2-methoxy-1:3:5-triazine,** 6-*p*-chloro-, 564.  
**6-Anilino-4-isopropylamino-1:3:5-triazine,** 564.  
**6-Anilino-4-isopropylamino-1:3:5-triazine,** 2-amino- and 2-chloro-6-*p*-chloro-, and their derivatives, 563.  
2-chloro-, and 6-*p*-chloro-, 564.  
**2-Anilino-4-(2-pyridylamino)-6-methylpyrimidine,** 2-*p*-chloro-, and its dihydrochloride, 596.  
**4-Anilino-2-(2-pyridylamino)-6-methylpyrimidine,** 4-*p*-chloro-, and 4-*p*-nitro-, and their dihydrochlorides, 595, 596.  
**4-Anilinoquinazoline,** 2-*p*-dichloro-, 1770. 6- and 7-nitro-, 364, 365.  
**4-Anilinoquinoline,** 6-nitro-, 1708.  
**2-Anilinoquinoxaline,** 6-chloro-3-amino-2-*p*-chloro-, 782.  
**3-Anilinoquinoxaline,** 2-amino-3-*p*-chloro-, 781. 2-chloro-3-*p*-chloro-, 780.  
**6-Anilino-1:3:5-triazine,** 2:4-dichloro-, 564. 2:4-dichloro-6-*p*-chloro-, 563.  
**2-Anilohexamethyleneimine,** 1619. and its hydrochloride, 1520.  
**2-Anilopentamethyleneimine,** and its hydrochloride, 1520.  
**Anionotropic rearrangement,** kinetics of, 794, 1982.  
**Anionotropic systems.** See under Systems.  
**Anionotropy,** mechanism of, 794.  
**5-*p*-Anisidinoacridine,** 1183.  
**Anisole-2-sulphonamide,** 4:5-dichloro-, 214.  
**Anisole-2-sulphonethylanilide,** 3:4- and 5:5-dichloro-, 214, 215.  
**p-Anisylacetic acid,** ethyl and methyl esters, preparation of, 153.  
**2-*p*-Anisylpyrrolidine,** and its picrate, 187.  
**2-*p*-Anisyl-Δ<sup>2</sup>-pyrrolidine,** and its picrate, 187.  
**Annual General Meeting,** 539, 904.  
*Anomospermum grandifolium*, curare from, 1945.  
**Anthranoic acid,** 4-chloro- and 4-nitro-, preparation of, 1762.  
**Anthraquinone,** derivatives, spectra of, infra-red, and structure, 1441.  
**Anthraquinone,** 1:4:5:8-tetraamino-, methyl derivatives of, 736.  
**Anthraquinone-1-carboxylic acid,** 4-bromo-, 1625. 5-chloro-, 1749.  
**Anthraquinone series,** 1627.  
**Antibacterials,** absorption of, by *Bacterium lactis aerogenes*, 2290.  
**Antimalarials,** new, 123. synthetic, 574, 581, 586, 594, 777, 1630, 1636, 1645, 1759, 1766. chemistry of, 97, 561, 1719.  
**Antimalarial activity,** constitution and, 1909.  
**Antimony tri- and pent-oxides,** amphoteric properties and solubility of, 759.  
**Antimony electrodes.** See under Electrodes.  
**4-L-Arabofuranosidamino-5-(2':5'-dichlorobenzeneazo)-2-methylthiopyrimidine,** 6-amino-, 964.  
**9-L-Arabofuranosido-2-methylthioadenine,** synthesis of, 957.  
**4-L-Arabopyranosidamino-5-(2':5'-dichlorobenzeneazo)-2-methylthiopyrimidine,** 6-amino-, 964.
- Areolatin,** and its derivatives, and its dyeing properties, 569, 570. synthesis of, and its isomer, 990.  
**Aromatic compounds,** cationoid activity of, 1175, 1622, 1746. kinetics of halogen substitution in, 100.  
kinetics of sulphonation of, 1065.  
new, attempts to prepare, 974.  
transition state in substitution in, 727.  
**Arsacridine,** derivatives of, 292, 295.  
**Arsacridinic acid,** 3-chloro-, 298.  
**Arsanthren cyanide,** 2212.  
**Aryl cyanides,** condensation of chloral with, 2322. nuclei, union of, 2213.  
**N<sup>1</sup>-Aryl-N<sup>2</sup>-alkyl-N<sup>5</sup>-alkyl- and -dialkyl-diguanides,** preparation of, 1636.  
**N<sup>1</sup>-Aryl-N<sup>5</sup>-alkyldiguanides,** preparation of, 1630.  
**Aryl alkyl ketones,** parachors and refractivities of, 610.  
**Arylamines,** reaction of, with ethyl ethoxymethylenemalonate, 893.  
**Arylbenziminoquinolyl ethers,** attempted rearrangement of, 1603.  
**Aryldiazoates,** decomposition reactions of, 556.  
**2-Arylguanidino-4-aminoalkylaminopyrimidines,** 574.  
**Arylguanidino-4-dialkylaminoalkylamino-6-methylpyrimidines,** 2-substituted, 580.  
**4-Arylguanidino-2- and -6-dialkylaminoalkylaminopyrimidines,** 586.  
**p-Arylsulphonylbenzaldehydes,** synthesis of, 601.  
**Aryl 2-thienyl sulphones,** synthesis of, 525.  
**Atoms, non-bonded,** reactions between, 340.  
**Auramine,** nitration of, 2169.  
**4-Azabenzimidazole,** and 6-bromo-2-hydroxy-, and 2-hydroxy-, 1392.  
**4-Azabenzimidazoles,** 1389.  
**4-Azabenzimidazole-2-thiol,** and 6-bromo-, 1392.  
4- and 5-Azaindoles, synthesis of, and their derivatives, 198.  
**5-Azaquinoxaline,** and 7-bromo-, and its *N*-oxide, 1391.  
**5-Azaquinoxalines,** 1389.  
**Azeotropic systems,** binary, composition, pressure, and temperature relationships in, 1987.  
**Azlaactones** from 2-nitro-derivatives of vanillin, isovanillin, and veratraldehyde, 376.  
**cis-Azobenzene,** dipole moment of, and of benzocinnoline and its oxide, 1949. properties of, 1097.  
**Azole series,** 201, 1056, 1060, 1262, 1337, 1340, 2028, 2031.  
**Azoisopropane,** thermal data for, 1190.  
**cis-Azoxybenzene,** dipole moment of, and of benzocinnoline and its oxide, 1949.  
**Azoxy-5-chloro-2-β-piperidinobutyramidobenzene,** 1911.  
**Azulenes,** 164.
- B.**
- Bacteria,** adaptation of, to acridine derivatives, 1235. chemistry of, 1605. coliform, growth of, in nitrate and nitrite media, 824, 833, 841, 845.  
**Bacteriostasis by amino-acids,** 85.  
*Bacterium lactis aerogenes*, cells, absorption of antibacterials by, 2290.  
**Balance sheets,** 905.  
**Barbituric acid,** condensation of, with isatin and 1-methyl-isatin, 552.  
**Barium bromotetrafluoride,** 2137.  
**Bases, cyclic, reduced,** stereochemistry and synthesis of, 1373. heterocyclic, strength of, 2240.  
**Beetroots, sugar pectin, araban component of,** 2311.  
**Benzacridine,** derivatives, 123.  
**1:2-Benzacridine,** 5-amino-, 1290. 7-amino-, 1294. 8-amino-, 1228.  
4':5-di amino-, and 4':5-nitro-5-amino-, 1291.  
5:8-dichloro-, 125.  
**2:3-Benzacridine,** preparation of, 1294.  
**2:3-Benzacridine,** 5-amino-, and its derivatives, 1290. 7-amino-, 1294.  
**3:4-Benzacridine,** 5-amino-, 1291. 7-amino-, 1294.  
8-amino-, 1228.  
5:8-dichloro-, 126.

- Benzacridine series, syntheses in, 1284.  
**2:3-Benzacridone**, 7-nitro-, 1294.  
**Benzaldehyde**, 4:5-dihydroxy-6-nitro-, bisbenzenesulphonyl derivative, 1246.  
   2-nitro-4:5-dihydroxy-, preparation of, 2224.  
**6:7-Benzalloxazine**, 222.  
**Benzamidine**, condensation of, with  $\alpha$ -diketones, 731.  
**Benzamidine**, 3:5-dinitro-, salts, 308.  
**8-Benzanilidoquinoline**, and 5:7-dichloro-, 1604, 1605.  
**1:2-Benzanthracene**, photo-polymerisation of, 2129.  
**1:2-Benzanthracene**, 2'-amino-, 2' and 3'-chloro-, and 3'-cyano-, 1758, 1759.  
**1:2-Benzanthraquinone**, 2'-amino-, and 2' and 3'-chloro-, 1758.  
**mesoBenzanthrone**, 1175.  
   3-acyl and 3-aryl derivatives, synthesis of, 2037.  
**mesoBenzanthrone**, 3-amino-, and 2-nitro-3-amino-, and their 3-acetyl derivatives, and 2-hydroxy-, 1088, 1089.  
   6-amino-, and its 6-acetyl derivative, 6-hydroxy-, and 4-iodo-, 1179, 1180.  
   6-amino-, 6-bromo-, 6-chloro-, and 6-iodo-, and their derivatives, 1624.  
   6 and 8-chloro-, properties of, 1746.  
   4-fluoro-, 1626.  
**Benzene**, and its deuterated derivatives, spectra of, absorption and fluorescence, 406, 491.  
   catalytic reaction of, with ethylene, 73.  
*hexachloride*. See *cycloHexane*, *hexachloro*.  
   excited states of, 406, 417, 427, 433, 440, 445, 456, 461, 475, 483, 491, 508.  
   methylation of, by dimethyl ether, 2154.  
   molecules, elastic constants of, 509.  
   reactions of, with acyl peroxides, 2217.  
   spectrum of, absorption, ultra-violet, 417.  
   fluorescence, ultra-violet, 427.  
   substitution in, ortho-para ratio in, 728.  
**Benzene**, 1:2:3-triamino-, dipicrate, 2132.  
   chloro-, halogenation of acetone in, 370.  
   1-chloro-2:6-dinitro-, preparation of, 1008.  
   nitro-, sulphonation of, by sulphuric acid, 1065.  
   o- and p-dinitro-, preparation of, 1512.  
**Benzeneazoacetoacetyl chloride**, 1925.  
**Benzeneazoacetoacetyleneimide**, 1925.  
**2- and 6-Benzeneazo-3:4-diethylphenols**, 2- and 6-p-chloro-, 2146.  
**2- and 6-Benzeneazo-3:4-dimethylphenols**, 2- and 6-p-chloro-, 2146.  
**2- and 6-Benzeneazo-3-methyl-4-ethylphenols**, and 2- and 6-p-chloro-, 2146.  
**2- and 6-Benzeneazo-3-methyl-4-n-propylphenols**, 2- and 6-p-chloro-, 2146.  
**5-(Benzenesulphonamido)-2:6-dimethyl-3-pyridazone**, 5-p-amino-, 5-p-acetyl derivative, 2197.  
**2-Benzenesulphonamido-4-hydroxy-6-methylpyrimidine**, 2-p-amino-, 2-p-acetyl derivative, 147.  
**3-(Benzenesulphonamido)pyridazine**, 3-p-amino-, 3-p-acetyl derivative, 2198.  
**Benzenesulphonic acid**, p-hydroxy-, ammonium salt, 307.  
**Benzenesulphonyl**. See also *Phenylsulphonyl*.  
**Benzenesulphonylacetylguanidine**, p-amino-, and its p-acetyl derivative, and p-nitro-, 145, 146.  
**Benzenesulphonylacetyl methylisothiourea**, p-amino-, p-acetyl derivative, 146.  
**Benzenesulphonylbenzoylguanidine**, p-amino-, and p-nitro-, 147.  
**Benzenesulphonyldibenzoylguanidine**, p-amino-, and p-nitro-, 147.  
**N-Benzenesulphonyl-N,N'-dimethylacetamidine**, and its picrate, 1523.  
**Benzenesulphonylguanidine**, p-amino-, acyl derivatives, 143.  
**N-Benzenesulphonyl-N'-methylacetamidine**, 1522.  
**N-Benzenesulphonyl-N'-phenylbenzamidine**, 1523.  
**Benzenesulphonylpropionylguanidine**, p-amino-, p-acyl derivatives, 146, 147.  
**3:4-Benzofluorenones**, 1231.  
**3:4-Benzofluorenone**, 7-nitro-, 1235.  
**Benzhydryl dibenzyl phosphate**, 1111.  
**Benzil**, 2:4:6:2':4'-penianitro-, 1613.  
**Benzimidazole**, dissociation constants of, 765.  
**Benzimidazoles**, antimalarial activity and structure of, 1909.  
**Benzocinnoline**, and its oxide, dipole moments of, 1949.  
**mesoBenzodianthrone-6:6'-dicarboxylic acid**, 1625.  
**Benzotri fluoride**, and its fluoro-derivatives, spectra of, infrared absorption, 1435.  
**Benzoic acid**, allyl ester, addition of chlorine to, 1394.  
**Benzoic acid**, p-amino-, derivatives of, 241.  
**Benzoin**, condensation of, with quinol or resorcinol, 1992.  
**Benzophenone**, action of potassium *tert*-butoxide on, 1411.  
   oxime benzene- and p-toluene-sulphonates, 1517.  
**Benzophenone**, 4:4'-diamino-, dibenzoyl derivative, 1459.  
**6:7-Benzooquinazoline**, 2:4-dichloro-, and 2:4-dihydroxy-, 1765.  
**p-Benzooquinone**, condensation of, with 2:3-dimethyl-1:3-butadiene, 1499.  
**m- and p-Benzotetraphenyldifurans**, 1992.  
**Benzo-1:3-triazepine**, 2:4-diamino-, and its salts, 1371.  
**Benzoxazolone-7-sulphonic acid**, 5:6-dichloro-, and its sodium salt, and 5-chloro-6-amino-, 214.  
**Benzoyl peroxide**, o-nitro-, 2216.  
**N-Benzoyl-N'-acetyl-N-methyl-p-phenylenediamine**, 1604.  
**3-Benzoylisooamyl cyanide**, 1743.  
**3-Benzoylmesobenzanthrone**, 3-o-chloro-, 2038.  
 **$\alpha$ -Benzoylbenzhydryl radical**, anionic nature of, compared with cationoid reactivity of the triphenylmethyl radical, 1549.  
**Benzoylcyanamide**, preparation of, 589.  
**1-Benzoyldiazethane**, 1-p-nitro-, 1675.  
**N-Benzoyldiphenylamine-3:3'-bisazo- $\beta$ -naphthol**, 1006.  
**Benzoylethyleneimine**, addition of hydrogen sulphide to, 1919.  
   preparation and reactions of, 1923.  
**3-Benzoyl-3-ethylhexanecarboxylic acid**, 1744.  
**9-Benzoylhexahydrocarbazole**, 11-nitro-10-hydroxy-, preparation and hydrolysis of, 2319.  
**Benzoylmalonic acid**, ethyl ester, preparation of, 555.  
**3-Benzoyl-3-methylbutanecarboxylic acid**, and its semicarbazone, 1743.  
**N-Benzoyl-4-methyldiphenylamine**, 2-bromo-, 1604.  
**3-Benzoyl-3-methylheptanecarboxylic acid**, 1743.  
**3-Benzoyl-3-methylundecanecarboxylic acid**, 1743.  
**N-Benzoyl-N'-phenylbenzamidine**, 1523.  
**N-Benzoyl- $\beta$ -phenyl-S-benzylcysteine**, methyl ester, 1063.  
 **$\beta$ -Benzoylpropionic acid**,  $\alpha$ -cyano-, catalytic reduction of, 188.  
**5-Benzoyl-2:3-isopropylidene methyl-D-ribofuranoside**, 962.  
**N-Benzoylthioureidoacetamide**, 1265.  
**5-Benzoylthioureido-4-phenylthiazole**, 2-amino-, 2-benzoyl derivative, 1266.  
**5-Benzoylthioureidothiazole**, 2-amino-, 2-benzoyl derivative, 1265.  
**DL-O-Benzoylthreonine**, ethyl ester, salts, 317.  
**DL-N-Benzoylallothreonine**, ethyl ester, 317.  
**DL-N-Benzoyl-O-p-tosylallothreonine**, ethyl ester, 317.  
**5-Benzoyl-2:3:4-triacetyl L-arabinose**, 963.  
   diethylthioacetal, 963.  
**5-Benzoyl-1:2:3-triacetyl D-ribose**, 962.  
**1:2-Benzperylene**, crystal structure of, 1398.  
**Benzquinoline series**, syntheses in, 1284.  
**6:7-Benzquinoline**, 3- and 4-amino-, 4-hydroxy-, and 3-nitro-, 1293.  
   3:4-diamino-, and its hydrochloride, and 4-chloro-3-nitro-, and 3-nitro-4-amino-, 1289.  
**7:8-Benzquinoline**, 2:4-dichloro-, 1292.  
   4-hydroxy-, 894.  
**7:8-Benzquinoline-3-carboxylic acid**, 4-hydroxy-, ethyl ester, 894.  
**Benz-1-thia-2:3-diazole**, derivatives of, 870.  
   nitration of, 1006.  
**Benz-1-thia-2:3-diazole**, 5-bromo-, and 5-iodo-, 874.  
   5-hydroxy-, preparation of, 873.  
   5-nitro-, preparation of, 872.  
   7-nitro-, 1009.  
**Benz-1-thia-2:3-diazoles**, 5-substituted, preparation of, 1002.  
**Benz-1-thia-2:3-diazole-5-azo- $\beta$ -naphthol**, 873.  
**Benzthiazole**, 2-mercaptop-, hydroxymethyl derivative of, 1717.  
**Benzthiazoles**, 2-amino-, spectra of, absorption, ultra-violet, 1497.  
**8-Benz- $\alpha$ -toluididoquinoline**, 1605.  
**Benzyl 2-aminoethyl sulphide**, preparation of, 1925.  
   cyanide,  $\alpha$ -amino-, thiocyanate, 1344.  
   methyl sulphide, p-cyano-, 1503.  
**2-Benzylaminonaphthalene**, 1-amino-, 223.  
**Benzylaminophosphonic acid**, dibenzhydryl ester, 1110.

- 2-Benzylamino-1-p-tolueneazonaphthalene**, 223.  
**Benzyl-n-amylamine**, and its hydrochloride, 97.  
**9-Benzyl-5:6-benzoisoalloxazine**, 223.  
**1-Benzyl-4-benzylidene-2-thiohydantoin**, 1064.  
**2-Benzylcarbamylphenylthioacetic acid**, and its *N*-benzylimide, 84.  
**N-Benzyl-p-chloroaniline**, 297.  
**5-Benzylidialuric acid**, 556.  
**Benzylid-n-amylamine**, 97.  
**5-Benzylideneamino-2-carbethoxyamino-4-phenylthiazole**, 1343.  
**Benzylidene anhydrohexitol**, chloro-, 2207.  
**3:5-Benzylidene 1:4-anhydrosorbitol**, constitution of, and 6-iodo, 299, 302.  
**3:5-Benzylidene 1:4-anhydrosorbitol**, 6-bromo-, 2203.  
   6-chloro-, 239.  
**Benzylideneanil**, thermal data for, 1190.  
**3':5'-Benzylidene cytidine**, and its tetraphenyl-*N*:2'-diphosphate, 1530.  
**Benzylideneguanosine**, and its acetyl derivative, 1380.  
**5-Benzylidene-3-methyl-2-thiohydantoin**, 2029.  
**Benzylideneoxindole**, 2':5-dinitro-, 924.  
**Benzylidenerhodanines**, bromo-, and chloro-, 1253.  
**4-Benzylidenethiazol-5-one**, 2-mercapto-, 204.  
**Benzylmalonic acid**, amino-*p*-cyano-, acetyl derivative, ethyl ester, 87.  
**Benzylmalonic dideuteracid**, 1087.  
**3-Benzyl-3-methylheptanecarboxylic acid**, and its *S*-benzylthiouronium salt, 1743.  
**9-Benzyl-10-methylphenanthridinium halides**, 7 : 9-*p*-diamino- and 7-amino-9-*p*-nitro-, and their acetyl derivatives, 196.  
   salts, 9-*p*-amino-, and 9-*p*-nitro-, 196.  
**4-O-Benzyl-5-methylresorcytaldehyde**, 2258.  
**Benzyl methyl sulphone**, *p*-cyano-, 1504.  
**3-Benzyl-3-methylundecanecarboxylic acid**, and its *S*-benzylthiouronium salt, 1744.  
**p-Benzyloxyphenylpyruvic acid**, 260.  
**9-Benzylphenanthridine**, 7-amino-9-*p*-nitro-, and its acetyl derivative, and 9-*p*-nitro-, 195, 196.  
**Benzylphosphonic acid**, diethyl ester, 702.  
**S-Benzyl-N-isopropylthiobenzamide**, and its picrate, 1924.  
**p-Benzylsulphonylbenzylammonium chloride**, 382.  
**N-Benzylsydnone**, and nitroso-, 2309.  
**β-Benzylthioacrylic acid**, *α*-amino-, hexoyl derivative, and its ethyl ester, 1968.  
**β-Benzylthioacryloylbenzamide**, *α*-amino-, benzoyl and hexoyl derivatives, 1969.  
**2-Benzylthio-4-anilinomethylenethiazolone**, 1059.  
**2-Benzylthio-4-benzylideneethiazolone**, 1060.  
**N-Benzylthiocarbamidoglycine benzylamide**, 1058.  
**2-Benzylthio-4-carboxythiazole**, 1059.  
**β-Benzylthio-*c*-carboxyisovaleric acid**, 1685.  
**2-Benzylthio-4-ethoxymethylenethiazolone**, 1059.  
**2-Benzylthio-4-hydroxymethylenethiazolone**, 1059.  
**2-Benzylthiothiazole**, 5-amino-, and its hydrobromide, 205.  
**2-Benzylthiothiazole**, and its hydrobromide, 1058.  
**β-Benzylthioisovaleric acid**, *α*-nitro-, ethyl ester, 685.  
**2-2'-Benzylthiovinyllbenzthiazole** methiodide, 689.  
**DL-N-Benzylallothreonine**, 316.  
**α-Benzyl-n-valeramide**, 1676.  
**Betacoccus arabinosaceous**, dextran synthesis from sucrose by, 1555.  
**Betulinic acid**, and its derivatives, from plane tree bark, 948.  
**Betulinic acid**, bromo-, and its acetyl derivative, and its derivatives, 950.  
**4:6-Bisacetamidoquinoline**, and its salts, 1709.  
**Bisanhydroneostrychninephosphoric acid**, 956.  
**NN'-Bis-4-bromophenylacetamidine**, and its benzenesulphonate, 1520.  
**meso-pp'-Biscarbethoxyamino-3:4-diphenyl-n-hexane**, 687.  
**Bis-(6-chloro 3:5-benzylidene 1:4-anhydrosorbitol) 2:2'-sulphite**, 301.  
**Bis-(m-chlorocinnamic acid) *α*-disulphide**, 1254.  
**2:5-Bischloromethyltetrahydrofuran**, 157.  
**2:4-Bis-p-chlorophenylthioquinazoline**, 1772.  
**Bis-p-cyanophenyl disulphoxide**, 382.  
**3-(Bis-o-cyanophenylthioacetyl)amino-2-6'-ketothionaphtheno-(2':3':5':4')-1:3-oxazinyl-2'-thionaphthen**, 80.  
**α,α'-Bisdiazoacetyl-3:4-diethyl-1-isopropylcyclopentane**, 168.
- 2:4-Bis-β-diethylaminoethylaminoquinazoline**, and its salts, 1771.  
**2:5-Bis(diethylaminomethyl)tetrahydrofuran**, and its methiodide, 158.  
**Bisdihydroneostrychninephosphoric acid**, 956.  
**3:4-Bis-(3':4'-dimethoxyphenyl)-n-hexane**, 890.  
**6:6'-Bisdimethylamino-4:4'-dimethyl-2:2'-dipyrimidylamine**, 596.  
**Bisdimethylaminofluorophosphine oxide**, 1315.  
**4:6-Bis-(4-dimethylaminostyryl)pyrimidine**, 2-chloro-, 2150.  
   2-hydroxy-, 2150.  
**2:5-Bisethoxymethyltetrahydrofuran**, 158.  
**[Bis-2-(3-ethylbenzoxazole)][γ-2'-(3-ethylbenzoxazole)]pentamethincyanine diiodide**, 694.  
**[Bis-2-(3-ethylbenzthiazole)]-α-anilomethyltrimethincyanine iodide**, 1884.  
**[Bis-2-(3-ethylbenzthiazole)][αβ'-dimethin-2'-(3'-ethylbenz-selenazole)]trimethincyanine diiodide**, 1886.  
**[Bis-2-(3-ethylbenzthiazole)][γ-2'-(3-ethylbenzoxazole)]pentamethincyanine diiodide**, 695.  
**[Bis-2-(3-ethylbenzthiazole)][γ-2'-(3-ethylbenzthiazole)]pentamethincyanine diiodide**, 694.  
**Bis-[4'-ethyl-3-(dihydro-β-quinindene)]methincyanine iodide**, 1897.  
**[Bis-2-(3-ethyl-Δ<sup>2</sup>-thiazoline)][αβ'-dimethin-2'-(3'-ethylbenzthiazole)]trimethincyanine diperchlorate**, 1886.  
**2-Bis-(2-hydroxyethyl)amino-4-(4-dimethylaminostyryl)-6-methylpyrimidine**, 2151.  
**2:5-Bishydroxymethyltetrahydrofuran p-toluenesulphonate**, 156.  
**3:4-Bis-(3':4'-dihydroxyphenyl)-n-hexane**, and its acetyl and benzoyl derivatives, 890.  
**Bismethanesulphonyl dianhydrohexitol**, 2206.  
**2:5-Bismethanesulphonyl 1:4-3:6-dianhydromannitol**, 2208.  
**2:5-Bismethanesulphonyl 1:4-3:6-dianhydrosorbitol**, 302.  
**4:5-Bis(methoxymethoxy)benzaldehyde**, 2-nitro-, 1246.  
**1:5-Bismethylaminoanthraquinone**, 4 : 8-diamino-, 4 : 8-di-bromo-, 4:8-dinitro-, and tetranitro-, 738.  
**1:8-Bismethylaminoanthraquinone**, and 4:5-diamino-, and 4:5-dibromo-, 739.  
**Bis-[4-methyl-3-(dihydro-p-quinindene)]methincyanine iodide**, 1897.  
**p-Bismethylsulphonylbenzene**, 605.  
**4:4'-Bismethylsulphonyldiphenyl sulphide**, 605.  
**4:4'-Bismethylsulphonyldiphenyl sulphone**, 605.  
**1:10-Bis-2-p-methylsulphonylphenyl-4'-thiazolyl-n-decane**, 1508.  
**1:8-Bis-2-p-methylsulphonylphenyl-4-thiazolyl-n-octane**, 1507.  
**[Bis-2-(3-methyl-Δ<sup>2</sup>-thiazoline)]-α-anilomethyltrimethincyanine perchlorate**, 1885.  
**5-Bisnitroaminoethane**, crystal structure of, 1316.  
**4-Bis-(3':5'-dinitro-4'-methylnitroaminophenyl)methylene-N-methylequinone**, 2:6-dinitro-, 2170.  
**4:4'-Bisnitroxymethyloxazolidine**, 3-nitro-, 1907.  
**s-Bis-(1-phenylpropyl)hydrazine**, *pp*'-diamino-, *pp*'-diacetyl derivative, 685.  
**Bisphenylsulphonyl sulphide**, crystal structure of, 325.  
**trisulphide**, crystal structure of, 326.  
**Bisquindolinoyl**, quaternisation of, 921.  
**4:5-Bis-p-toluenesulphonamido-1:8-bisdimethylaminoanthraquinone**, 739.  
**Bis-p-tolylsulphonyl sulphide**, and *trisulphide*, crystal structure of, 326, 327.  
**N'-Bis[tri(carbethoxyaminomethyl)methyl]urea**, 1906.  
**Bistriethyl-lead fluorophosphonate**, 703.  
**Bonds**. See Linkings.  
**Brassylic acid**, *α*-amino-, and its *α*-acetyl derivative, 1388.  
**Bromine trifluoride**, reactions of, with carbon tetrahalides and with tetraiodoethylene, 2188.  
   with metallic halides, 2135.  
**Hydrobromic acid**, oxidation of, by chromic acid in presence of manganous sulphate, 1376.  
**Brucine**, 703, 951.  
   *N*-oxide, action of potassium chromate on, 704.  
**Buta-1:3-diene**, 1-cyano-, reactions of, 227, 232.  
**Butane**, 2:3-amino-, and its salts, 60.  
   2:2:3:3-tetrachloro-1:1:4:4-tetraamino-, 1:1:4:4-tetrabenzyoyl derivative, 2322.  
   1-nitro-, preparation and physical properties of, 1847.  
   1:2-dinitro-, 59.

- iso*Butane, 1:2-dinitro-, 56.  
*cyclo*Butanecarboxylic acid, preparation of, and its esters, 1806.  
*cyclo*Butane-1:1-dicarboxylic acid, preparation of, and its esters, 1806.  
*tert*-Butanol, nitro-, 56.  
 Butan-2-one, heptachloro-, 281.  
 2'-*n*-Butoxydiethyl sulphide, 2-chloro-, 2179.  
 6-*n*-Butoxynicotinamide, 1945.  
 6-*n*-Butoxynicotinamide, hydrochloride and benzoate, 1945.  
 2-*n*-Butoxypyridine, 5-cyano-, 1945.  
 5-(2-*n*-Butoxypyridyl)methylamine dihydrochloride, 1945.  
*n*-Butylamine, adsorption of, from aqueous solutions by charcoal, 1483.  
 2-*n*-Butylanthraquinone, 1-amino-, 1:5- and 1:8-diamino-, 1-bromo-, dibromo-, 4-bromo-1-amino-, 1-chloro-, 1-nitro-, 1:5- and 1:8-dinitro-, and their derivatives, 1629.  
 2-*tert*-Butylanthraquinone, 1-amino-, 1:5- and 1:8-diamino-, 4-bromo-1-amino-, tribromo-, 4:6:8-tribromo-1:5-diamino-, 1-nitro-, and 1:5- and 1:8-dinitro-, and their derivatives, 1628.  
 Butylanthraquinones, amino-, and nitro-, 1627.  
 4-Butylbenzyl cyanide, 4-chloro-, and 4-hydroxy-, and its *a*-naphthylurethane, 809.  
*n*-Butylisobutylideneamine, thermal data for, 1190.  
*tert*-Butylcarbamic acid, *s*-trichloro-, methyl ester, 2320.  
 2-*iso*Butylcinchoninic acid, 6-bromo-, 108.  
   6:8-dichloro-, 109.  
 2-*n*-Butyldi-1:1'-anthraquinonylimide, 1629.  
 Butylidicyandiamides, 1633.  
*n*- and *iso*-Butyldimethylsulphonium salts, olefin formation from, 2072.  
*sec*-Butyldimethylsulphonium salts, olefin formation from, 2077.  
*tert*-Butyldimethylsulphonium salts, olefin formation from, 2084.  
 Butylenes, addition to, of dinitrogen tetroxide, 52.  
 2-Butylene, 2-nitro-, 60.  
*iso*Butylenediamine, dihydrochloride, 57.  
 2-(*N*<sup>3</sup>-*n*-Butylguanidino)-5:6-dimethoxybenzimidazole, and its salts, 1370.  
*N*-Butylguanylylthiourea, 1654.  
 2-*iso*Butylquinoline, 6-bromo-, and its picrate, 6-bromo-4-hydroxy-, and 6:8-dichloro-4-hydroxy-, 109.  
   4-hydroxy-, 108.  
*β*-*n*-Butylsuccinic acid, *α*-amino-, 1388.  
*tert*-Butylsulphonium salts, olefin formation from, 2038.  
*p*-Butylsulphonylbenzylammonium chlorides, 382.  
 2'-*n*-Butylsulphonyldiethyl sulphone, 2-chloro-, 2179.  
*p*-*sec*-Butylsulphonylphenyl cyanide, 383.  
 2-*n*-Butylsulphonylpyridine, 5-amino-, and 5-nitro-, 1944.  
 2'-*n*-Butylthiodiethyl sulphide, 2-chloro-, 2179.  
 2-*n*-Butylthiopyridine, 5-amino-, and its hydrochlorides, and 5-nitro-, 1944.  
 But-3-yne-1-carboxylic acid, esters, 677.  
 Butyranilide, *p*-chloro-*o*-nitro-*β*-bromo-, 1911.  
 Butyric acid, *α*-amino-*β*-hydroxy-, preparation of, 316.  
*iso*Butyric acid, *α*-bromo-, and *α*-fluoro-, methyl esters, 1777.  
 Butyrophenone, *o*-amino-, and its acetyl derivative, 2318.  
 Butyrylpyruvic acid, *β*-hydroxy-, ethyl ester, 1297.  
*N*-Butyryl-*p*-toluenesulphonamide, 112.
- C.
- iso*Cadinene, spectrum of, absorption, 1306.  
 Carbamic acid, esters, molecular association in, 874.  
 4-Carbamido-1-methylglyoxaline, 5-amino-, and 5-amino-2-mercapto-, 2030.  
 Carbamylmethyldithiocarbanic acid, benzyl and carbamylmethylammonium esters, 204.  
 2-Carbamylphenylsulphinylacetic acid, 83.  
 2-Carbamylphenylsulphonylacetic acid, 83.  
 2-Carbamylphenylthioacetic acid, and its ethyl ester, and derivatives, 83, 84.  
 6-Carbamyl-3-pyridazone, 2197.  
*S*-(5-Carbamyl-2-pyridyl)thiuronium chloride, 1942.  
 2-(2-Carbamyl-3'-thionaphthalenyl)carbamylthionaphthen, 3-amino-, 3-acetyl derivative, 80.  
 Carbanilic acid, 3-chloroallyl ester, 2182.
- Carbazoles, 919, 922.  
 2-Carbethoxyamino-5-acetamidothiazole-4-carboxylic acid, ethyl ester, 1344.  
 4(or 5)-Carbethoxyamino-2-acetylthioglyoxaline, 1342.  
 7-Carbethoxyamino-9-*p*-aminobenzyl-10-methylphenanthridinium chloride, 196.  
 9-*p*-Carbethoxyaminobenzyl-10-methylphenanthridinium bromide, 7-amino-, 7-acetyl derivative, 196.  
 chloride, 7-amino-, and its acetyl derivative, 196.  
 7-Carbethoxyamino-9-*p*-carbethoxyaminobenzyl-10-methylphenanthridinium chloride, 196.  
 2-Carbethoxyamino-5-carbethoxythioureido-4-methylthiazole, 1342.  
 2-Carbethoxyamino-5-carbethoxythioureido-4-phenylthiazole, 1343.  
 2-Carbethoxyamino-5-carbethoxythioureido-4-carboxylic acid, ethyl ester, 1344.  
 2-Carbethoxyamino-9:10-dimethylphenanthridinium bromide, 192.  
 3'-Carbethoxyaminodiphenyl, 2-amino-, and its acetyl derivative, 194.  
 4-Carbethoxyaminodiphenyl, 2-amino-, 2-acetyl derivative, 2-nitro-4'-amino-, and its 4'-acetyl derivative, and 2-nitro-, 192.  
   2-p-nitroamino-, benzoyl derivative, 193.  
 4(or 5)-Carbethoxyamino-2-mercaptopglyoxaline, 1342.  
 5-Carbethoxyamino-2-mercaptop-4-methylglyoxaline, 1342.  
 5-Carbethoxyamino-2-mercaptop-4-phenylglyoxaline, 1343.  
 5-Carbethoxyamino-4-methylglyoxaline, 1343.  
 2-Carbethoxyamino-9-methylphenanthridine, and its hydrochloride, 192.  
 6- and 8-Carbethoxyamino-9-methylphenanthridines, and their sulphates, 194.  
 2-Carbethoxyamino-4-methylthiazole, 5-amino-, 1342.  
 3-Carbethoxyamino-2'-*p*-nitrobenzamidodiphenyl, 194.  
 7-Carbethoxyamino-9-*p*-nitrobenzyl-10-methylphenanthridinium salts, 196.  
 7-Carbethoxyamino-9-*p*-nitrobenzylphenanthridine, 195.  
 4-Carbethoxyamino-2-*p*-nitrophenylacetamidodiphenyl, 195.  
 2-Carbethoxyamino-9-*p*-nitrophenyl-10-methylphenanthridinium chloride, 193.  
 8-Carbethoxyamino-9-*p*-nitrophenyl-10-methylphenanthridinium chloride, 195.  
 2-Carbethoxyamino-9-*p*-nitrophenylphenanthridine, 193.  
 6- and 8-Carbethoxyamino-9-*p*-nitrophenylphenanthridines, 194.  
 5-Carbethoxyamino-4-phenylglyoxaline, 1343.  
 9-*p*-Carbethoxyaminophenyl-10-methylphenanthridinium bromide, 2-amino-, 193.  
   chloride, 2-amino-, 2-acetyl derivative, and 7-amino-, 193.  
 2-Carbethoxyamino-4-phenylthiazole, 5-amino-, 1343.  
 2-Carbethoxyaminoquinoxaline-3-carboxyamide, 518.  
 2-Carbethoxyaminothiazole, 5-amino-, and its 5-acetyl derivative, 1342.  
 2-Carbethoxyaminothiazole-4-carboxylic acid, 5-amino-, ethyl ester, salts, 1344.  
*p*-Carbethoxybenzylacetoinic acid, ethyl ester, 1554.  
 4-*ω*-Carbethoxy-*n*-butylthiazole, 5-amino-2-mercapto-, 2033.  
 2-Carbethoxycoumarone, 2-hydroxy-, and its acetate, 2257.  
 4-Carbethoxy-2:5-diphenylthiazole, 1064.  
 2-Carbethoxy-6-hexahydrobenzyloxycoumarone, 2257.  
 2-Carbethoxyimino-3-acetyl-4-phenylthiazoline, 5-amino-, 5-acetyl derivative, 1343.  
*α*-Carbethoxy-*β*-2-ketocyclohexyl-*β*-phenylpropionic acid, 2015.  
 4-Carbethoxy-1-methylglyoxaline, 5-amino-, and 5-amino-2-mercapto-, and their derivatives, 2030.  
*β*-Carbethoxy-*β*-(2-methylcyclohexyl-1-enyl)propionic acid, 164.  
 3-Carbethoxy-5-methylquinoxaline, 2-hydroxy-, 2133.  
*N*-Carbethoxy-*S*-methylisothioureidocarbethoxyacetone, 1344.  
*p*-Carbethoxyphenylcarbamic acid, ethyl and methyl esters, 878.  
 DL-*trans*-4-Carbethoxy-2-phenyl-5-methyl- $\Delta^2$ -oxazoline, and its hydrochloride, 317.  
 4-Carbethoxy-5-phenylthiazole, 2-amino-, and its picrate, 1063.  
 2-Carbethoxy-4-benzylidenethiazol-5-one, 1065.  
 2-Carbethoxythio-4-ethoxymethylenethiazolone, 1060.  
*α*-Carbethoxythioureidobenzyl cyanide, 1343.  
 Carbethoxythioureidocarbethoxyacetone, 1344.  
 Carbethoxythioureidocarbomethoxyacetone, 1344.  
*α*-Carbethoxythioureidopropionitrile, 1342.

- 3-Carbethoxy-*o*-tolyloxyacetic acid, ethyl ester, 1673.  
*ω*-Carbethoxy-*n*-valeraldehyde cyanohydrin, 2032.  
*α*-Carbethoxyisovaleric acid,  $\beta$ -mercapto-, ethyl ester, 1684.  
 Carbocyanines, unsymmetrical, preparation of, 687.  
 Carbohydrates, periodate oxidation applied to, 992.  
 Carbolines, 919, 922.  
 3-Carbomethoxy-6-benzyl oxybenzaldehyde, 2-hydroxy-, and its 2:4-dinitrophenylhydrazone, 116.  
 3-Carbomethoxy-2:6-dibenzyl oxybenzaldehyde, and its 2:4-dinitrophenylhydrazone, 116.  
*N*-Carbomethoxydi-(2-chloroethyl)amine, 2174.  
 2-Carbomethoxyphenylcarbamic acid, 4-bromo-, ethyl ester, 878.  
 Carbon atoms, saturated, substitution at, 1283.  
 compounds, thermochemical evaluation of bond strengths in, 1161.  
 deposition of, on vitreous silica, 1362.  
 rings, three- and four-membered, physical properties and constitution of, 1804.  
 five- and six-membered, physical properties and constitution of, 1809.  
 Carbon tetrhalides, reaction of, with bromine trifluoride, 2188.  
*dioxide*, conversion of, into acetylene, 1534.  
*disulphide*, reaction of, with aminoacetonitrile, 201.  
 with  $\alpha$ -methylamino-nitriles, 1619.  
 Carbon-iodine linkings, evaluation of strength of, 1161.  
 Carbon-magnesium linkings, evaluation of strength of, 1161.  
 Carbon-nitrogen linkings, heat of formation of, 1187.  
 Carbonyl chlorofluoride and fluoride, preparation and reactions of, 2183.  
 compounds, reaction of, with  $\alpha$ -amino-acids, 176.  
 groups, vibration frequency of, in infra-red absorption spectra, 1436.  
*o*-Carboxyacetophenone 2':4':6'-tribromophenylhydrazone, 600.  
 2-chloro-5-nitrophenylhydrazone, 209.  
 2'-chlorophenylhydrazone, 1029.  
*N*<sup>4</sup>-Carboxyacetyl sulphonamides, preparation of, 821.  
 3-Carboxyamidoquinoline-4-carboxylic acid, 2-hydroxy-, ethyl ester, 554.  
*o*-Carboxybenzaldehyde  $\alpha$ -acetylhydrazone and 2'-chlorophenylhydrazone, 1028.  
 2':4':6'-tribromophenylhydrazone, 599.  
 2-chloro-5-nitrophenylhydrazone, 209.  
 3'-Carboxy-1:2-benzenanthracene, 1759.  
 5-(*p*-Carboxybenzyl)-4-methyliminazol-2-one, 1554.  
 3-Carboxy-6-benzyl oxybenzaldehyde, 2-hydroxy-, 116.  
 2-Carboxycoumarone, 6-hydroxy-, acetate, 2257.  
 4'-Carboxydiphenylamine, 4-amino-, and 4-nitro-, 241.  
 Carboxydiphenylarsonous acids, 2209.  
 4-Carboxy-2:5-diphenylthiazole, 1064.  
 4-Carboxy-2:5-diphenylthiazolidine hydrochloride, 1065.  
 DL-5-(*p*-Carboxyhexahydrobenzyl)-4-methyliminazolid-2-one, 1554.  
*N*-4-Carboxymethoxy-3-methyl-1-naphthylglycine, ethyl ester, 184.  
 11-Carboxy-5-methylquindoline, chloride and 5-methosulphate, 921.  
 6-Carboxyphenylacetooacetic acid, 2:4-dinitro-, ethyl ester, and its derivatives, 1718.  
 1-(*p*-Carboxyphenyl)-*n*-butane-2:3-dione 2-phenylhydrazone, 1554.  
 4-Carboxy-5-phenyl-2:2-dimethylthiazolidine hydrochloride, 1065.  
*N*<sup>1</sup>-*m*-Carboxyphenyl-*N*<sup>5</sup>-isopropylguanide hydrochloride, 1635.  
*N*-*o*- and *-p*-Carboxyphenylsydnone, 2310.  
 4-Carboxy-5-phenylthiazole, 2-amino-, 1064.  
 4-Carboxy-5-phenyl-2-thiazolidone, 1064.  
 2-Carboxyphenylthioacetanilide, 83.  
 2-Carboxyphenylthioacetbenzylamide, 83.  
 4-Carboxy-5-phenyl-2-thiothiazolidone, 1064.  
 4-Carboxyquinoline-3-carboxyamide, 2-hydroxy-, 554.  
 2-Carboxythionaphthen, 3-amino-, and its *N*-acetyl derivative, 84.  
 2-(2-Carboxy-3'-thionaphthenyl)carbamylthionaphthen, 3-amino-, and its derivatives, 80.  
*α*-Carboxyisovaleric acid,  $\beta$ -mercapto-, and its calcium salt, 1684.  
 Carcinogenics, hydrocarbon, oxidation of, with osmium tetroxide, 170.  
 Carob bean. See *Ceratonia siliqua*.  
 Carob gum, galactomannan from, 1278.  
 mannose from, 1989.  
 $\beta$ -Carotene, oxidation products of, and their X-ray structure, 710.  
 Catalysis, acid-base, in non-aqueous solvents, 370.  
 Catalysts, alumina, for vapour-phase reactions, 267.  
 alumina-silica, for reaction of naphthalene with methanol, 804.  
 for reaction of benzene with ethylene, 74.  
 Friedel-Crafts, cross-linking of vinyl polymers by, 771.  
 poisons for, detoxication of, 1091, 1093, 1916.  
 pyridine as poison for, 1095.  
 thoria, preparation of, 612.  
 Catalytic reactions, gas-phase, of aromatic hydrocarbons, 73, 1700, 2154.  
 vapour-phase, alumina catalysts for, 267.  
 (-)-*epi*Catechin, and its gallate, 2252, 2253.  
 Catechins from green tea, 2249.  
 Cellulose, oxidation of, by dinitrogen tetroxide, 1135.  
*Ceratonia siliqua*, carob gum from, 1989.  
 Cerium salts, separation of, from neodymium salts, by ion exchange, 1272.  
 Chabazite, adsorption of gases on, 135.  
 mineral with sorptive properties like, 127.  
 Charcoal, adsorption by, from aqueous solutions, 1483.  
 columns, adsorption by, from aqueous solutions, 1487.  
 Chemotherapeutics, amidine, 261.  
 sulphone type, 1501, 1506, 1939.  
 Chloral, condensation of, with aryl cyanides, 2322.  
 Chlorine, action of, on ammonium sulphates, in aqueous solution, 147.  
 Hydrochloric acid, dissociation of, in oxygen-containing solvents, 1971.  
 Cholestan, 3( $\alpha$ )-chloro-, and 3( $\beta$ )-hydroxy-, preparation of, 1040.  
 Cholestan-6[7]-dicarboxylic acid, 3( $\alpha$ )- and 3( $\beta$ )-hydroxy-, and their derivatives, 1040, 1041, 1042.  
 Cholestan-7-on-3( $\beta$ )-yl benzoate, 792.  
 Cholest-2-(or 3)-ene-6[7]-dicarboxylic anhydride, 1041.  
 Cholest-6-ene-3( $\beta$ ):5( $\alpha$ )-diol, 1796.  
 Cholest-6-en-5( $\alpha$ )-ol, 3-hydroxy-, acetyl and benzoyl derivatives, 1796.  
 Cholesterol, stereochemistry of, 1032.  
 7-substituted derivatives of, 1788, 1792, 1798.  
 Cholesterol, " $\alpha$ "- and " $\beta$ "-7-hydroxy-, acetyl derivatives, 1797.  
 Cholesterols, 7-hydroxy-, epimeric, esters, 1792.  
 Cholestryl acetate, " $\beta$ "-7-chloro-, and -iodo-, 1792.  
 " $\alpha$ "-7-chloro-, 1792.  
 bromide, preparation of, 1787.  
 bromide and chloride, " $\beta$ "-7-bromo-, 1787.  
 esters, " $\beta$ "-7-bromo-, 1786, 1787.  
 bromo-, chloro-, and hydroxy-, and their acyl derivatives, 1795.  
 fluoroacetate, 1779.  
*Chondrodendron tomentosum*, curare from, 1945.  
 Chromatography, partition, of mixed sugars, 1679.  
 Chromic acid. See under Chromium.  
 Chromium :—  
 Chromic acid, oxidation by, mechanism of, 1666.  
 of hydrobromic acid in presence of manganous sulphate, 1376.  
 Dichromates, photochemical oxidation with, 2119.  
 Chrysene, synthesis of, and its derivatives, 999.  
 Cinnamaldehyde, *p*-nitro-, dinitrophenylhydrazone, 2011.  
 Cinnamic acid,  $\alpha$ -amino-,  $\alpha$ -acetyl derivative, methyl ester, 1063.  
 Cinnamyl halides, coupling reaction of, 1111.  
 Cinnoline, 4-amino-, 1713.  
 4-amino-, 6- and 7-chloro-4-amino-, 6-nitro-4-amino-, and their acetyl derivatives, 360.  
 3-bromo-4-hydroxy-, and 3-chloro-4-hydroxy-, and their acetyl derivatives, 1173.  
 3:6-dibromo-4-hydroxy-, 3-chloro-6-bromo-4-hydroxy-, 6-chloro-3-bromo-4-hydroxy-, and 3:6-dichloro-4-hydroxy-, and their 4-acetyl derivatives, 1174.  
 8-nitro-4-amino-, 1705.  
 Cinnolines, 354, 358, 1170, 1702, 2318.

- Cinnolines, 4-amino-, preparation of, 358.  
 3-halogeno-4-hydroxy-, preparation of, 1170.  
**3-3'-Cinnolyl-n-propane-1-carboxylic acid**, 3'-hydroxy-, 2319.  
 Citraconic acid, esters, 665.  
 Citral, spectrum of, infra-red absorption, 1414.  
 Citronellal, spectrum of, infra-red absorption, and structure, 1414.  
 Citronellol, spectrum of, infra-red absorption, and structure, 1413.  
 Clathrate compounds, 61, 571, 815.  
 Coal, bituminous, X-ray diffraction and solvent extraction studies of, 1693.  
 Compounds, molecular, structure of, 61, 571, 815.  
 Constitution, antimalarial activity and, 1909.  
 physical properties and, 607, 610, 616, 624, 644, 654, 658, 674, 1804, 1809, 1814, 1820, 1825, 1833.  
 Copper, oxide-film formation on, and its potential, 740.  
 Copper electrodes. See under Electrodes.  
*Coprosma*, chemistry of, 564, 568, 990.  
*Coprosma areolata*, colouring matters from, 568.  
*Coprosma australis*, colouring matters from, 564.  
*Cortex piscidiae erythrinae*, constituents of, 257.  
 Coumarin, 5-nitro-3-hydroxy-, 1609.  
 Coumarins, 4-hydroxy-, synthesis of, 174.  
 Coumarin-3-carboxylic acid, 2257.  
 Coumarone, 6-hydroxy-, 6-benzyl derivative, and *p*-nitrobenzoate, 2257.  
**β-Coumarone-5-acrylic acid**, β-6-hydroxy-, 6-acetyl derivative, and its 2:4-dinitrophenylhydrazone, 2258.  
**Coumarone-2-carboxylic acid**, 6-hydroxy-, 6-benzyl derivative, ethyl ester, 2257.  
 Coumarono-(2':3':3:4)-coumarins, 1672.  
 Coumarono-(2':3':3:4)-coumarin, 7-hydroxy-, and 7:8-dihydroxy-, and their derivatives, 1673.  
**2-(2'-Coumaronyl)-Δ<sup>2</sup>-pyrroline**, and its picrate, 188.  
*p*-Cresol-3-sulphonic acid, 2-chloro-5-amino-, 215.  
 Crotonanilide, *p*-chloro-*o*-nitro-, 1911.  
 Crotonic acid, esters, 666.  
 Crotonic acid, γ-bromo-, methyl ester, in synthesis of hydro-aromatic ketones, 162.  
 Crystal-violet, nitration of, 2169.  
 Culture media, containing nitrates and nitrites, growth of coliform bacteria in, 824, 833, 841, 845.  
 Curare alkaloids, 265, 1945.  
 (+)-*cis*- and (-)-*trans*-Cryptols, and their derivatives, 996.  
 (-)-Cryptone, cryptols from, 996.  
 Cyanides. See under Cyanogen.  
*neo*Cyanines, preparation and structure of, 690.  
 Cyanine dyes from 2:3-dihydro-β-quinindene, 1895.  
 triunuclear, 1872.  
 Cyanogen :—  
   Cyanides, parachors and refractivities of, 674.  
   preparation of amidines from, 303.  
 Cyanophosphonic acid, diethyl ester, 701.  
 α-Cyanoprene. See Buta-1:3-diene, 1-cyano-.  
 β-Cyclopropylpropionitriles, 186.  
 2-Cyclylpyrrolidines, formation of, from β-cyclopropionitriles, 186.  
 2-Cyclyl-Δ<sup>2</sup>-pyrrolines, formation of, from β-cyclopropionitriles, 186.  
 Cysteine hydrochloride, preparation of, 1339.  
 Cytidine-2' phosphate, synthesis of, 1527.
- D.**
- DDT, decomposition of, by basic substances, 1657.  
*Daphnandra*, alkaloids, 2170.  
 Decahydroquinolines, *cis*- and *trans*-, 1373.  
 aryl derivatives, 2011.  
**Decahydrotetrahydrostrychnidine**, 1666.  
*cis*-Decalin, structure of, 340.  
*n*-Decane-1-carboxylic acid. See Undecoinic acid.  
*n*-Decoinic acid, *n*-butyl and *n*-propyl esters, 631.  
 soluble films of, expansion of, at air-water interface, 936.  
**3-Decoyl-3-methylbutanecarboxylic acid**, 1745.  
**Dec-9-yne-1-carboxylic acid**, esters, 677.  
 Dehydroascorbic acid, and its salts and derivatives, 160.  
 Dehydro-*l*-ascorbic acid, isolation and properties of, 158.
- 7-Dehydrocholesterol, preparation of, and its derivatives, 1783.  
 7-Dehydrocholesteryl bromide and chloride, 1788.  
 Dehydrodihydrostrychnidine, 1665.  
 Densitometer-viscometer, 2239.  
 Desyl dibenzyl phosphate, 1111.  
 Desyl radical, anionic nature of, compared with cationoid reactivity of the triphenylmethyl radical, 1549.  
**DL-Dethiobiotin**, synthesis of, 1552.  
 Deuterobenzene, spectrum of, absorption, ultra-violet, 483.  
*α*-Deuterobutyric acid, 1088.  
*α*-Deuterohexoic acid, 1088.  
 Dextran, structure of, from sucrose, 1555.  
 Diacetimide, preparation of, 1081.  
**5:5-Diacetylmona-2:7-diene, 1:9-dicyano-**, 233.  
**5:5-Diacetylmonane, 1:9-dicyano-**, 234.  
**3:4-Dialkylphenols**, substitution in, 2143.  
 Diallyl sulphide, 3:3'-dichloro-, 2181.  
 Diallylamine, *di*-3-chloro-, 2181.  
**1:1-Di(allyloxy)ethane, 1:1-di-3-chloro-**, 2182.  
**Di(allyloxy)methane, di-2-chloro-**, 2182.  
**1:1-Di(allylthio)ethane, 1:1-di-3-chloro-**, 2182.  
**1:2-Di(allylthio)ethane, 1:2-di-3'-chloro-**, 2181.  
**6':6"-Diamidino-2:2'-dimethoxydi-a-naphthylmethane diisethionate**, 263.  
**6':6"-Diamidino-1:5-di-β-naphthoxypentane, salts**, 263.  
**6':6"-Diamidino-1:3-di-β-naphthoxyp propane diisethionate**, 263.  
**4':4"-Diamidino-1:1-diphenyl-2:2-dimethylethylene dihydrochloride**, 263.  
**4':4"-Diamidino-1:1-diphenylethylene, dihydrochloride**, 262.  
**4':4"-Diamidino-1:1-diphenyl-2-methylethylene, dibenzoate**, 262.  
**4:4'-Diamidinostilbene**, preparation of, 308.  
 Diaminofluorophosphine oxides, 1313.  
**5:5-Di-n-aminohydantoin**, 1388.  
**1:4-3:6-Dianhydromannitol**, action of phosphorus tribromide on, 2201.  
**1:4-3:6-Dianhydrosorbitol**, 2:5-diacetate, 240.  
 action of phosphorus tribromide on, 2201.  
 conversion of, into 1:4-anhydrosorbitol derivatives, 237.  
**1:4-3:6-Dianhydrosorbitol, 5-mono- and 2:5-di-chloro-**, 2202.  
 Dianilinofluorophosphine oxide, 1315.  
**1:4-Dianilinophthalazine**, 780.  
**2:3-Dianilinoquinoxaline**, 780.  
**2:3-Dianilinoquinoxaline, 2:3-di-*p*-chloro-**, 780.  
 6-chloro-2:3-di-*p*-chloro-, 781.  
**1:1-Di-p-anisyl-2-p-ethoxyphenylethylene**, 2-chloro-, 155.  
 Dianisylidenestrychninonic acid, hydrate, 956.  
**1:1'-Dianthraquinonyl-4:4'-dicarboxylic acid**, and its pyridinium salt, 1625.  
**1:5-Di-*α*-anthraquinonylimino-2-tert.-butylanthraquinone**, 1629.  
 Diaryleyanoarsines, 2208.  
*NN'*-Dialyformamidines, synthesis of, 1014.  
 Diaryl sulphones, *o*-hydroxy-, action of diazomethane on, 605.  
**1:3-Diaza-acridine, 5-amino-2:4-dihydroxy-**, and its hydrochloride, 555.  
**1:3-Diaza-acridine-5-carboxylic acid**, 2:4-dihydroxy-, and its methyl ester and sodium salt, 554.  
 Diazocompounds, aromatic, decomposition of, in aqueous solution, electronic mechanism of, 348.  
 free-radical reactions of, 882.  
 replacement of diazo- by nitro-group in, 556.  
 Diazocyanides, isomeric, Hantzsch's, structure of, 1097.  
 Diazomethane, and its derivatives, experiments with, 605.  
 Diazomethyl *β*-*p*-methylsulphonyl phenylethyl ketone, 1505.  
 Diazonium groups, replacement of, by nitro-groups, 1512.  
 Diazonium salts, coupling of, with 3:4-dialkylphenols, 2143.  
 decomposition of, in neutral solutions, 1512.  
 Diazosulphonates from β-naphthol-1-sulphonic acid, phthalazine reaction with, 597, 1026, 1249.  
 anti-Diazosulphonates of naphthalene series, isolation of, 1183.  
**3:3-Di-(5-barbituryl)-1-methyloxindole**, 555.  
**3:3-Di-(5-barbituryl)oxindole**, 553.  
 "Dibenzamidodioxetetrol", structure of, 1958.  
 Dimesobenzanthronyl, composition of, from mesobenzanthrone with alkaline condensing agents, 1622.  
**6:6'-Dimesobenzanthronyl**, 1625.  
 action of fused potassium hydroxide on, 1746.  
**4:6'- and 6:6'-Dimesobenzanthronylamines**, 1179, 1180.  
 Diphenhydraminophosphonate, 1110.  
 phosphate, 1110.

- 5:6:7:8-Dibenzoaloxazine**, 2-imino-, 223.  
**Dibenzoylmalonic acid**, ethyl ester, 556.  
**Dibenzyl chlorophosphonate**, preparation of, and its use in phosphorylation, 1106.  
 phosphite, preparation and purification of, 1109.  
**Di(benzylamino)fluorophosphine oxide**, 1315.  
**Dibenzylideneazazine**, thermal data for, 1190.  
**Dibenzylidene-ethylenediamine**, thermal data for, 1190.  
**Dibenzylidene-*neglyoxal***, structure of, 763.  
**2:4:3:5-Dibenzylidene sorbitol**, 1:6-*d*:bromo-, and 1-bromo-6-*i*:odo-, 2203.  
 1:6-*dichloro*-, 239.  
**Dibenzylidenestrychninonic acid hydrate**, 956.  
**Dibenzylidene styracitol**, 2207.  
**Di(3':5'-benzylidene uridine-2':2') phenyl phosphate**, 1533.  
**NN'-Dibenzyl-*p*-methylsulphonylbenzamidine**, 308.  
**2:4(5)-Dibenzylthioglyoxaline**, and its acetyl derivative, 203.  
**Di(*n*-butylamino)fluorophosphine oxide**, 1315.  
**2- $\gamma$ -Di-*n*-butylaminopropylamino-4-hydroxyquinazoline**, hemi-hydrate, 1770.  
**2- $\gamma$ -Di-*n*-butylaminopropylaminoquinazoline**, 4-chloro-, sesquicarbate, 1770.  
**Diisobutylene**, oxidation of, by chromic acid, 1334.  
*α*-Diisobutylene, reaction of, with organic per-acids, 1328.  
 with selenium dioxide, 1333.  
*β*-Diisobutylene, reaction of, with organic per-acids, 284.  
 with selenium dioxide, 1333.  
**Di-4-butylformal**, *di*-4-chloro-, 809.  
**NN'-Dicarbomethoxy-2:2'-diaminodiethyl sulphide**, and *NN'*-dinitroso-, 2320.  
**2:2'-Dicarbomethoxybenzoyl peroxide**, 2216.  
**3:3'-Di-(*ω*-carboxymethylamino)diphenylamine**, 1006.  
 **$\gamma\delta$ -Dicarboxy- $\delta$ -phenyl-*n*-valeric acid**, and its trimethyl ester, 978.  
**Dichromates**. See under Chromium.  
**Dicinnamyl**, spectrum of, absorption, 1123.  
*trans*-Dicinnamyl, 1116.  
*iso*-Dicinnamyl, 1117.  
**1:4-Dideuterobenzene**, spectrum of, absorption, ultra-violet, 461.  
**Di-2:4-dimethoxyphenyl disulphide**, 526.  
**4:4'-Diethoxybenzophenone**, preparation of, 152.  
**6:7-Diethoxy-1-benzyl-3-methylisoquinoline**, 889.  
**2:2'-Diethoxydiethyl sulphide**, 2:2'-*d*-2-chloro-, and its derivatives, 43.  
 2:2'-*d*-2-hydroxy-, 43.  
**6:7-Diethoxy-1-3':4'-dimethoxyphenyl-3-methylisoquinoline**, 889.  
**2:5-Diethoxy-3:6-dimethylpyrazine**, 1862.  
**6:7-Diethoxy-1:3-dimethylisoquinoline**, 889.  
**6:7-Diethoxy-3-methylisoquinolines**, synthesis of, 885.  
**6:7-Diethoxy-1-phenyl-3-methylisoquinoline**, and its hydrochloride, 889.  
**1:3':4'-Diethoxyphenylpropanol**, 2-amino-, and its *N*-acyl derivatives and hydrochloride, 888, 889.  
 $\psi$ -2-amino-, and its acyl derivatives, and 2-nitro-, acetate, 887, 888.  
**3:4-Diethoxypropenylbenzene**, and its  $\psi$ -nitrosite, 887.  
 **$\beta\beta$ -Diethoxypropionylhydrazide**,  $\alpha$ -amino-, hexoyl derivative, and its benzylidene derivatives, 1967.  
***N*-( $\beta\beta$ -Diethoxypropionyl)-*D*-penicillamine**, *N*- $\alpha$ -amino-, hexoyl derivative, 1967.  
**3:4-Diethoxypropiophenone**, and  $\alpha$ -amino-, and its benzoyl derivative, and *a*-isonitroso-, 888, 890.  
**3:4-Diethoxypropiophenone azine**, 890.  
**Diethyl amino-**, cyano-, and thiocyanato-phosphonates, 701.  
 2-chloroethyl and 2-fluoroethyl phosphates, 703.  
 ether. See Ethyl ether.  
 fluorodithiophosphonate, 1014.  
 fluorophosphonate, 1012.  
*di*-2-chloro-, and *di*-2-fluoro-, 1013, 1014.  
 sulphide, 2-hydroxy-, acetyl derivative, 1596.  
 disulphide, *di*-2-hydroxy-, 46.  
 2:2'-*dihydroxy*-, and its derivatives, 42.  
 trisulphide, and 2:2'-*dichloro*-, crystal structure of, 323, 324.  
 2:2'-*diiodo*, crystal structure of, 324, 1256.  
 sulphilimine, 2:2'-*dibromo*-, 37.  
**Diethylamine**, *di*-2-fluoro-, 2176.  
**Diethylaminoacetanilide**, *p*-chloro-*o*-amino- and *o*-nitro-, 1910.  
**2-Diethylamino-4-(4-dimethylaminostyryl)-6-methylpyrimidine**, 2151.  
 **$\beta$ -Diethylaminoethoxyamine**, and its hydrochloride, 185.  
**9- $\beta$ -Diethylaminoethylisoalloxazine**, 7-chloro-, and its salts, 1931.  
**4- $\beta$ -Diethylaminoethylamino-6:7-benzoquinazoline**, 2-chloro-, 1765.  
**2- $\beta$ -Diethylaminoethylamino-4-*p*-chlorophenylthioquinazoline**, 1771.  
**4- $\beta$ -Diethylaminoethylamino-2-*p*-chlorophenylthioquinazoline**, 1771.  
**4- $\beta$ -Diethylaminoethylamino-6:7-dimethoxyquinazoline**, 2-chloro-, 1765.  
**2- $\beta$ -Diethylaminoethylamino-4-(4-dimethylaminostyryl)-6-methylpyrimidine**, 2151.  
**2- $\beta$ -Diethylaminoethylamino-4-hydroxyquinazoline**, 1769.  
**4- $\beta$ -Diethylaminoethylamino-5-, -6-, and -8-methoxyquinazolines**, 2-chloro-, 1765.  
**2- $\beta$ -Diethylaminoethylamino-6-methylpyrimidine**, 4-amino-, 591.  
**4- $\beta$ -Diethylaminoethylamino-7-methylquinazoline**, 2-chloro-, 1765.  
**2- $\beta$ -Diethylaminoethylamino-4-phenoxy-6-methylpyrimidine**, dipicrate, 590.  
**2- $\beta$ -Diethylaminoethylaminoquinazoline**, 4-chloro-, and its sesquicarbate, 1770.  
**4- $\beta$ -Diethylaminoethylaminoquinazoline**, 2:6- and 2:7-*dichloro*-, 2-chloro-6- and -7-nitro-, 1765.  
**3- $\beta$ -Diethylaminoethylaminoquinoxaline**, 2-amino-, 781.  
 2-chloro-, and its picrate, 780.  
**6'- $\beta$ -Diethylaminoethylamino-4'·8-trimethyl-2:2'-dipyridylamine**, and its dihydriodide, 596.  
 **$\beta$ -Diethylaminoethylaniline**, 5-chloro-2-nitro-, nitro-, and their salts, 1930, 1931.  
**2-Diethylaminomethylbenzimidazoles**, 5(or 6)-chloro-, 1910.  
**3-(4-Diethylamino-1-methylbutylamino)anisole**, 4-amino-, reaction of, with alloxan, 1719.  
 4-nitro-, picrate, 1719.  
**5-( $\delta$ -Diethylamino- $\alpha$ -methylbutylamino)-3:4-benzacridine**, 8-chloro-, and its picrate, 126.  
**5-( $\delta$ -Diethylamino- $\alpha$ -methylbutyl)amino-7-methoxyacridine**, 2-chloro-. See Mepacrine.  
**2-( $\delta$ -Diethylamino- $\alpha$ -methylbutylamino)-4-methoxy-1:3:5-triazine**, 6-amino-, and its picrate, 563.  
**2- $\delta$ -Diethylamino- $\alpha$ -methylbutylamino-6-methylpyrimidine**, 4-amino-, and its dipicrate, 592.  
**6- $\delta$ -Diethylamino- $\alpha$ -methylbutylamino-2-methylpyrimidine**, 4-amino-, dipicrate, 593.  
**4-( $\delta$ -Diethylamino- $\alpha$ -methylbutylamino)-1:3:5-triazine**, 2-chloro-6-amino-, 563.  
**9-( $\gamma$ -Diethylaminopropyl)isoalloxazine**, 7-chloro-, and its salts, 1931.  
**5-( $\delta$ -Diethylaminopropylamino)-1:2-benzacridine**, 8-chloro-, 125.  
**2- and 4- $\gamma$ -Diethylaminopropylamino-4- and -2-*p*-chlorophenylthioquinazolines**, 1771.  
**2- $\gamma$ -Diethylaminopropylamino-4-hydroxyquinazoline**, and its hydrate, 1770.  
**4- $\gamma$ -Diethylaminopropylamino-6-methylpyrimidine**, 2-amino-, 585.  
**4- $\gamma$ -Diethylaminopropylamino-2-*p*-methylsulphonylphenyl-6-methylpyrimidine** dihydrochloride, 1507.  
**5-( $\gamma$ -Diethylaminopropylamino)-1:2:3':2'-pyridoacridine**, 8-chloro-, 126.  
**5-( $\gamma$ -Diethylaminopropylamino)-3:4:3':2'-pyridoacridine**, 8-chloro-, 126.  
**2- $\gamma$ -Diethylaminopropylaminoquinazoline**, 4-chloro-, 1770.  
**3- $\gamma$ -Diethylaminopropylaminoquinoxaline**, 2-amino-, 781.  
 2-chloro-, and its salts, 780.  
**4- $\gamma$ -Diethylaminopropylamino-2-*p*-tolylthioquinazoline**, 1771.  
**( $\gamma$ -Diethylaminopropyl)aniline**, 5-chloro-2-nitro-, and its salts, 1931.  
**Diethylcarbamic acid**, methyl ester, 878.  
**Diethylcarbamyl fluoride**, 2186.  
**1:1'-Diethyl-2:4'-carboxyanine iodide**, 689.  
**Diethylcyanamide**, *di*-2-chloro-, 2174.  
**Diethylidicyandiamide**, 1633.  
**Diethyl-2-fluoroethylamine**, *di*-2-chloro-, 2177.  
***N*-(*NN*-Diethylguanyl)-*S*-methyls thiourea hydriodide**, 1654.  
**NN-Diethylguanylthiourea**, 1654.  
**meso- $\alpha\beta$ -Diethylidenedibenzyl**, 1122.

- 1:3:2:4-Diethylidene D-sorbitol**, 5:6-diacetyl derivative, 1936.  
**Diethyl ketoxime**, benzenesulphonate, 1518.  
**Diethylnitrosoamine**, preparation and physical properties of, 1846.  
**3:3'-Diethyloxaselenacarbocyanine iodide**, 689.  
**3:3'-Diethyloxathiocarbocyanine iodide**, 690.  
**NN'-Diethylpiperazine**, *NN'-di-2-chloro-*, and its dihydrochloride, 2175.  
**3:6-Diethylpyrazine**, 2-amino-, and its derivatives, and 2-hydroxy-, 1858.  
  2:5-dicyano-, and 2-hydroxy-, 1863.  
**3:6-Diethylpyrazine-5-carboxylic acid**, 2-hydroxy-, 1863.  
**Diethyl sulphone**, 2-chloro-, 2179.  
**2:2'-Diethylsulphonyldiethyl sulphone**, 2:2'-*di-2-chloro-*, 41.  
**2:2'-Di(ethylthio)diethyl ether**, 2:2'-*di-2-bromo-*, 2:2'-*di-2-cyano-*, 2:2'-*di-2-hydroxy-*, 2:2'-*di-2-iodo-*, and 2:2'-*di-2-thiocyanato-*, and their derivatives, 36, 37.  
  2:2'-*di-2-chloro-*, and its derivatives, 35.  
**sulphide**, 2:2'-*di-2-bromo-*, 42.  
  2:2'-*di-2-chloro-*, and its derivatives, and 2:2'-*di-2-iodo-*, and 2:2'-*di-2-thiocyanato-*, 40, 41.  
**disulphide**, 2:2'-*di-2-hydroxy-*, 41.  
**sulphoxide**, 2:2'-*di-2-chloro-*, and 2:2'-*di-2-hydroxy-*, 41.  
**2:2'-Di(ethylthio)diethyl sulphone**, 2:2'-*di-2-chloro-*, and 2:2'-*di-2-hydroxy-*, 41.  
**2:3-Di(ethylthio)-1:4-dioxan**, 2:3-*di-2-chloro-*, and 2:3-*di-2-hydroxy-*, 41.  
**2:2'-Di(ethylthio)di-n-propyl sulphide**, 2:2'-*di-2-chloro-*, and 2:2'-*di-2-hydroxy-*, 41.  
**1:2-Di(ethylthio)ethane**, 1:2-*di-2-chloro-*, 44.  
 **$\alpha$ - $\beta\beta$ -Diethylthiopropionamido- $\beta$ -methoxyisovaleric acid**,  $\alpha$ -amino-, hexoyl derivative, 1968.  
 **$\beta\beta$ -Diethylthiopropionic acid**,  $\alpha$ -amino-, hexoyl derivative, ethyl ester and hydrazide, 1967.  
**N-( $\beta\beta$ -Diethylthiopropionyl)glycine**, *N*- $\alpha$ -amino-, hexoyl derivative, 1967.  
**Diguanides**, formation of, from guanylthioureas, 1645.  
**5:5-Di-n-heptylhydantoin**, 1388.  
**Dicyclohexyl fluorophosphonate**, 1013.  
**Di(cyclohexylamino)fluorophosphine oxide**, 1315.  
**Dicyclohexylcarbamic acid**, ethyl ester, 878.  
**2:3-Dihydroacenaphthylene(7':8':2:3)indole-1-carboxylic acid**, 3-nitro-2-hydroxy-, 2-acetyl derivative, esters, 1248.  
**5:10-Dihydroarsacridine**, 10-chloro-, and 10-cyano-, 295.  
  3:10-dichloro-, and 3-chloro-10-cyano-, 298.  
**3:4-Dihydro-1:2-benzanthracene**, 3:4-*di-hydroxy-*, and its diacetate, 172.  
**2:3-Dihydrobenzfuran**, 4-hydroxy-, 894.  
**1:2-Dihydro-3:4-benzpyrene**, 1:2-*di-hydroxy-*, and its diacetate, 173.  
**Dihydrobetulonic acid**, and its derivatives, 950.  
**1:2-Dihydrochrysene**, 1:2-*di-hydroxy-*, and its diacetate, 173.  
**Dihydro-1:2:5:6-dibenzanthracene**, dihydroxy-, and its diacetate, 172.  
**Dihydroevodione**, and its derivatives, 2007.  
**Dihydromyrcene**, spectrum of, infra-red absorption, and structure, 1415.  
**2:3-Dihydropsoralene**, synthesis of, 2254.  
**1:2-Dihydropsyrene**, 1:2-*di-hydroxy-*, and its diacetate, 173.  
**2:3-Dihydro- $\beta$ -quinindene**, cyanine dyes from, 1895.  
  ethiodide, 1897.  
  methiodide 3-p-dimethylaminoanil, 1897.  
**Dihydrostrychnine**, *x*-hydroxy-, 955.  
**Dihydro-*z*-strychnine**, experiments with, 951.  
  methyl ether, 954.  
**Dihydroneostrychninephosphorous acid**, 956.  
**Dihydrothionaphthen sulphone**, iodo-, 1617.  
**Dihydroisovisnagin**, 2264.  
**Dihydrovisnagone**, and its 2:4-dinitrophenylhydrazone, 2264.  
**Diketen**, structure of, from conductivity and potential measurements, 1323.  
**1:3-Diketo-2-acetonylindane**, 979.  
**2:4-Diketo-1-acetylpyrrolidine**, 3-amino-, 3-acetyl derivative, 1959.  
**2:5-Diketo-3-(4'-amino-2':5'-dimethoxyphenyl)isoindolino-pyrazolidocine**, and its acetyl derivatives, 284.  
**6:17-Diketoandrostanone**, derivatives of, 1043.  
**1:4-Diketo-3-(2':4':6'-tribromophenyl)tetrahydropthalazine**, 599.  
**7:12-Diketo-3-carbethoxymethylcholanic acid**, 3-hydroxy-, ethyl ester, 1361.  
**7:12-Diketo-3-carboxymethylenecholanic acid**, and its diethyl ester, 1361.  
**1:4-Diketo-3-(2'-chlorophenyl)tetrahydropthalazine**, 1029.  
**1:4-Diketo-3-(3'-chlorophenyl)tetrahydropthalazine**, 600.  
**6:7-Diketocholestane**, 3( $\beta$ )-hydroxy-, 1042.  
**7:12-Diketo-3-cyanocabethoxymethylenecholanic acid**, ethyl ester, 1360.  
**2:4-Diketo-1:3-dimethyl-1:2:3:4-tetrahydro-1:3-diaza-acridine-5-carboxylic acid**, methyl ester, 554.  
**2:3-Diketo-1:4-dimethyl-1:2:3:4-tetrahydroquinoxaline**, 521.  
**1:3-Diketoindane**, 2-hydroxy-, 2-acetyl and 2-benzoyl derivatives, 51.  
**Diketolanostane**, 990.  
**Diketolanostanol**, 990.  
**Diketolanostanyl acetate**, 989.  
**Diketolanostenone**, 990.  
**2:4-Diketo-10-methyl-2:3:4:10-tetrahydro-1:3-diaza-acridine-5-carboxylic acid**, and its methyl ester, 555.  
**2:5-Diketo-3-(4'-nitro-2':5'-dimethoxyphenyl)isoindolino-pyrazolidocine**, 284.  
**6:7-Dimethoxyalloxazine**, 1930.  
**2:6-Dimethoxy-3-allylacetophenone**, 4-hydroxy-, and its acetate, 2264.  
**2-(2':5'-Dimethoxyanilino)isoindolinone-3-acetic acid**, 2-4'-nitro-, and its methyl ester, 283.  
**5:4'-Dimethoxy-3-anisoylflavone**, 8-hydroxy-, 8-anisyl derivative, 2142.  
**2:5-Dimethoxybenzenesulphonic acid**, 4-chloro-, and its derivatives, 215.  
**3:7-Dimethoxy-3:4-benzfluorenone-1-carboxylic acid**, methyl ester, 1269.  
 **$\gamma$ (Dimethoxybenzoyl)butyric acid**,  $\gamma$ -hydroxy-, 1050.  
**4:5-Dimethoxybenzylideneacetone**, 2-nitro-, 1246.  
**Di-o- and -p-methoxybenzylidenesuccinic acids**, and their anhydrides, 1271.  
**1:4-Dimethoxy-3-(2'-chlorophenyl)-3:4-dihydropthalazine**, 1027.  
**4:10-Dimethoxychrysene**, 2:8-*di-hydroxy-*, 2:8-diacetyl derivative, 1001.  
**3:4-Dimethoxycinnamic acid**, 2-nitro- $\alpha$ -amino-,  $\alpha$ -acetyl derivative, azlactone, 378.  
**5:7-Dimethoxycoumarin**, 4-hydroxy-, and its acetate, 174.  
**2:2'-Dimethoxydi- $\alpha$ -naphthylmethane**, 6:6'-*dibromo-* and -*di-cyano-*, 263.  
**5:4'-Dimethoxyflavone**, 8-hydroxy-, and its 8-anisyl derivative, 2142.  
**trans-5:14-Dimethoxy-1:2:9:10:11:18-hexahydrochrysene**, 1001.  
**5:6-Dimethoxyindole**, 2225.  
**5:7-Dimethoxy-3-methylcoumarin**, 4-hydroxy-, and its acetate, 175.  
**1:5-Dimethoxynaphthalene**, 2:6-*dibromo-*, preparation of, 1284.  
**meso- $\beta\beta'$ -Di-p-methoxyphenyladipic acid**, *meso- $\beta\beta'$ -dihydroxy-*, 1001.  
**4:7-Dimethoxy-3-phenylcoumarin**, 175.  
**7:4'-Dimethoxy-3-phenylcoumarin**, 4-hydroxy-, and its derivatives, 175.  
**trans- $\beta\beta'$ -Di-p-methoxyphenyl- $\alpha\alpha'$ -dihydromuconic acid**, 1001.  
**4:7-Dimethoxy-1-phenyl-3:4-dihydronaphthalene**, 1269.  
**3-(2':5'-Dimethoxyphenyl)-3:4-dihydropthalazine-4-acetic acid**, 1-hydroxy-3-4'-amino-, 282.  
  1-hydroxy-3-4'-nitro-, and its derivatives, 282.  
**3-(2':5'-Dimethoxyphenyl)-3:4-dihydropthalazine-1-sulphonic-4-acetic acid**, sodium hydrogen salt, 282.  
**2':5'-Dimethoxy-3-phenyl-1-methylphthalaz-4-one**, 4'-nitro-, 283.  
**2':5'-Dimethoxy-3-phenyl-4-methylphthalaz-1-one**, 4'-amino-, and 4'-nitro-, and its picrate, 283.  
**2':5'-Dimethoxy-N-phenyl-3-methylphthalimidine**, 4-amino-, 283.  
**4:7-Dimethoxy-1-phenylnaphthalene**, 1269.  
**2':5- and 4:7-Dimethoxy-1-phenylnaphthalene-2:3-dicarboxylic acids**, synthesis of, and their derivatives, 1270.  
**2(3':4'-Dimethoxyphenyl)pyrrolidine**, and its picrate, 187.  
**2(3':4'-Dimethoxyphenyl)- $\Delta^2$ -pyrrolidine**, and its picrate, 187.  
**4:3':4'-Dimethoxyphenylsulphonylbenzoic acid**, 603.  
**2:4-Dimethoxyphenyl 2-thienyl sulphone**, 526.

- 3:4-Dimethoxyphenyl *p*-tolyl sulphone**, 602.  
**8-(Dimethoxyphenyl)valeric acid**, 8-hydroxy-, 1051.  
**4:5-Dimethoxy-1:2:2':3'-pyridoacridine**, 291.  
**6:7-Dimethoxyquinazoline**, 2:4-dichloro- and 2:4-dihydroxy-, 1764, 1765.  
**8:9-Dimethoxyquinindoline**, and its 6-acetyl derivative, 923.  
**5:6-Dimethoxy-1-quinolylbenztriazole**, 923.  
**2:3-Dimethoxyquinoxaline**, preparation of, 521.  
**Dimethyl ether**. See Methyl ether.  
 sulphide, evolution of, by marine algae, 1591.  
**2-Dimethylaminoacridine**, 1227.  
**2-Dimethylaminoacidine**, 7-amino-, 1227.  
**7-Dimethylaminoalloxazine**, and its sodium derivative, 1929,  
*p*-Dimethylaminobenzaldehyde, condensation of, with 4-methyl-pyrimidine derivatives, 1715.  
**p-Dimethylaminobenz-o-toluide**, and its picrate, 1604.  
**3-p-Dimethylaminobenzylidene-2:3-dihydro- $\beta$ -quinindene ethiodide**, 1898.  
**7-Dimethylaminobenzylidene-2:4-diphenyldihydropyridene methiodide**, 1898.  
**4-Dimethylaminobutylbenzyl cyanide**, 809.  
**p-Dimethylaminocinnamic acid**,  $\alpha$ -amino-,  $\alpha$ -benzoyl derivative, 88.  
**7-Dimethylamino-9- $\beta$ -diethylaminoethylisoalloxazine**, and its salts, 1929.  
**3-Dimethylamino- $\beta$ -diethylaminoethylaniline**, and its picrates, 1928.  
**5-Dimethylamino- $\beta$ -diethylaminoethylaniline**, 2-nitro-, and its picrate, 1929.  
**3-Dimethylaminodiphenylamine**, and its *N*-acetyl derivative, 1229.  
**3'-Dimethylaminodiphenylamine**, 4-amino-, and 4-nitro-, 1230.  
**3'-Dimethylaminodiphenylamine-2-sulphonic acid**, 4-nitro-, hemihydrate, 1229.  
**7-Dimethylamino-9-methylisoalloxazine**, 1929.  
 **$\beta$ -p-Dimethylaminophenylalanine**, 88.  
 **$\gamma$ -Dimethylamino- $\alpha$ -phenylbutyric acid**, ethyl ester, 809.  
**4-[2-(4-Dimethylaminophenyl)ethyl]-6-methylpyrimidine**, 2-chloro-, 2151.  
**2-p-Dimethylaminophenylguanidino-6-methylpyrimidine**, 4-hydroxy-, 579.  
 **$\epsilon$ -Dimethylamino- $\alpha$ -phenylhexoic acid**, ethyl ester, 809.  
**2-(4-Dimethylaminostyryl)benzoazazole**, 2153.  
**4-(4-Dimethylaminostyryl)-6-methylpyrimidine**, 2-amino-, 2-acetyl derivative, 2151.  
**2-(4-Dimethylaminostyryl)- $\beta$ -naphthathiazole**, 2153.  
**1-(4-Dimethylaminostyryl)phthalazine**, 2153.  
**4-(4-Dimethylaminostyryl)pyrimidine**, and its picrate, 2150.  
**4-(p-Dimethylaminostyryl)pyrimidine**, 6-chloro-, 2:6-dichloro-, and 6-hydroxy-, 1715.  
**2-(4-Dimethylaminostyryl)quinoline**, 6-amino-, and 6-nitro-, 2152.  
**2-(4-Dimethylaminostyryl)thiazole**, 2153.  
**4-(p-Dimethylaminostyryl)uracil**, 1715.  
**4-p-Dimethylaminostyryluracil**, 5-nitro-, 1135.  
**Dimethylaminosulphonyl chloride and fluoride**, 1316.  
**3-Dimethylamino-*p*-toluenesulphonanilide**, 1928.  
**6'-Dimethylamino-4:4':6'-trimethyl-2:2'-dipyrimidylamine**, and its hydrobromide, 596.  
**Dimethyl-*n*-amylsulphonium iodide**, 1596.  
**Dimethylaniline**, derivatives, nitration of, 2169.  
**Di-(*N*-methylanilino)fluorophosphine oxide**, 1315.  
**2:3-Dimethyl-5-azaquinonoxaline**, and 7-bromo-, 1391.  
**6:8-Dimethyl-3:4-benzofluorenone**, 1232.  
**2:3-Dimethyl-1:3-butadiene**, condensation of, with *p*-benzoquinone, 1499.  
**Dimethyl-2-carboxyethylsulphonium chloride**, 1596.  
 hydroxide, and its salts, 1591.  
**2:2-Dimethylchroman-4-one**, 7:8-dihydroxy-, 1612.  
**2:3-Dimethylcinchoninic acid**, 6-bromo-, and its picrate, and 6:8-dichloro-, 108.  
**3:5-Dimethylcoumaran**, 6-hydroxy-, and its 6-benzyl derivative and *p*-nitrobenzoate, 2259.  
**3:6-Dimethylcoumarone-2-acetic acid**, 2260.  
**3:6-Dimethylcoumarone-2-carboxylic acid**, 2260.  
**Dimethyl-di-(2-chloroethyl)ammonium chloride**, 2176.  
**Dimethylidicyandiamide**, 1633.  
 **$N^1:N^2$ -Dimethylidicyandiamide**, 1650.  
**Dimethyl-di-(2-fluoroethyl)ammonium iodide**, 2176.  
**9:10-Dimethyl-dihydro-1:2-benzanthracene**, dihydroxy-, and its diacetate, 172.  
**2:5-Dimethyl-2:5-dineopentyl-1:4-dioxan**, 1329.  
**4:3'-Dimethylidiphenyl sulphide**, 2:6'-dinitro-, 2020.  
**4:4'-Dimethyl-2:2'-dipyrimidylamine**, 6:6'-dichloro-, and 6:6'-dihydroxy-, 596.  
**2:4:3:5-Dimethylene mannitol**, 1:6-dibromo-, 2203.  
**3:6'-Dimethyl-1'-ethylthaquino-2:2'-carbocyanine iodide**, 690.  
**3:4-Dimethyl-4-ethylthiazolidine-2-thione**, 5-imino-, 1621.  
**3:4-Dimethyl-4-ethylthiazolid-5-one-2-thione**, 1621.  
**2:4-Dimethylfluoroanthene**, synthesis of, and its derivatives, 1137.  
**6-(2:3-Dimethyl-*d*-glucuronosido) 2:4-dimethyl-*d*-galactoside**, methyl ester, 123.  
**Dimethylglyoxime**, complex compounds of, with metals, 378.  
**Dimethylglyoxime palladium**, metallic salts of, 380.  
**1:3-Dimethylcyclohexa-3:6-diene-5-one**, 2:2:4:6-tetrachloro-, 2-chloro-2:4:6-tribromo-, and 2:2:4-trichloro-6-bromo-, 369, 370.  
**5:6-Dimethyl-3-spirocyclohexyldihydrophthalide**, 807.  
**4:4-Dimethyl-2-hydroxymethylpent-1-ene** 3:5-dinitrobenzoate, 1330.  
**Dimethyl D-mannonic acid**, phenylhydrazide, 1279.  
**NN-Dimethyl-*p*-methylsulphonylbenzamidine**, preparation of, 307.  
**Dimethyl-2-(2:4:6-trinitrophenyl)ethylsulphonium iodide**, 1615.  
**3:3-Dimethylnonanecarboxylic acid**, and its *S*-benzylthiouronium salt, 1745.  
**3:3'-Dimethyloxathiacarbocyanine iodide**, 690.  
**2:2-Dimethyloxazolidine**, 5-imino-, 205.  
**2:3-Dimethylpentane**, hexadecafluoro-, spectrum of, infra-red absorption, 1432.  
**3:3-Dimethylpentanecarboxylic acid**, and its *S*-benzylthiouronium salt, 1745.  
**2:2-Dimethylpentan-4-ol** 3:5-dinitrobenzoate, 1329.  
**1:3-Dimethylphenanthridine**, 9-amino-, 1540.  
**9:10-Dimethylphenanthridinium bromide**, 2-amino-, 192.  
 6-amino-, 194.  
 **$N^1:4:3':5'$ -Dimethylphenoxyphenyl- $N^5$ -isopropylguanidine hydrochloride**, 1635.  
**O-Dimethylpiscidic acid**, and its derivatives, 259.  
**Dimethyl purpurogallin**, 1049.  
**3:6-Dimethylpyrazine**, 2-amino-, and its 2-propionyl derivative, 1858.  
 2-amino-5-hydroxy-, 2-chloro-, 4-oxide, 2:5-dichloro-, 2-chloro-5-hydroxy-, and 2-hydroxy-, 4-oxide, 1861, 1862.  
 2:5-dicyano-, 1864.  
**2:6-Dimethyl-3-pyridazone**, chlorination of, 2191.  
**2:6-Dimethyl-3-pyridazone**, 5-mono-, and 4:5-di-chloro-, 2193.  
**2:6-Dimethyl-3-pyridazone-4-carboxylic acid**, 2194.  
**2:6-Dimethyl-3-pyridazone-5-carboxylic acid**, 2193.  
**5:11-Dimethylisoquinolinolide**, 924.  
**5:11-Dimethylquinolinolium iodide and methochloride**, 924.  
**2:3-Dimethylquinoline**, 6-bromo-, 108.  
**[2-(1:6-Dimethylquinoline)][3-(4-methyldihydro- $\beta$ -quinindene)]-dimethylenecyanide iodide**, 1897.  
**3:5-Dimethyl D-ribose phenylosazone**, 2036.  
**6:7-Dimethyltetrahydro- $\alpha$ -naphthaquinone**, and its dioxime, 1500.  
**1:3-Dimethyl-5:6:7:8-tetrahydrophenanthridine**, 9-amino-, 1540.  
**3:3'-Dimethylthiathiadiazolinocarbocyanine iodide**, 690.  
 **$N^S$ : $N^S$ -Dimethylisothiourea**, *N*-cyano-, 1633.  
**3:3-Dimethyltridecanecarboxylic acid**, and its *S*-benzylthiouronium salt, 1745.  
**Dimorpholinofluorophosphine oxide**, 1315.  
**1:5-Di- $\alpha$ -naphthoxypentane**, 4:4":dibromo-, 2':2":4":4"-tetrabromo-, and 4:4":dicyano-, 263.  
**1:5-Di- $\beta$ -naphthoxypentane**, 6:6":dibromo- and -dicyano-, 263.  
**1:3-Di- $\beta$ -naphthoxypyropane**, 6:6":dibromo- and -dicyano-, 263.  
**2:2'-Dinaphthyl**, 4:4":diamino-, and 4:4":dihydroxy-, preparation of, and their derivatives, 1714.  
**1:1'-Dinaphthyl sulphide**, 2:4:4"-trinitro-, 2022.  
 **$\alpha\beta$ -Di-(2-naphthyl)acrylic acid**, 1603.  
**Di-2-naphthylchloroarsine**, 2210.  
**Di-2-naphthylcyanoarsine**, 2212.  
**1:2-Di-(1- and 2-naphthyl)ethylenes**, 1602.  
**Dioxan**, equilibrium of, with hydrogen chloride and water, 1460.  
**6:12-Dioxa-3:9:15-trithiaheptadecane**, 1:17-dichloro-, 43.  
**Diphenacyl-*p*-ethylaniline**, 869.

- Diphenacyl-*p*-toluidine, 869.  
 Diphenyl, 2-nitro-3'-amino-, 194.  
   2-nitro-4-amino-, and 2-nitro-4:4'-diamino-, 4'-acetyl derivative, 192.  
   *s*-nitro-derivatives, preparation of, 264.  
 Diphenyl fluorophosphonate, 1014.  
   sulphide, 2'-chloro-4:4'-dinitro-2-amino-, and 2:2'-dichloro-4:4'-dinitro-, preparation and derivatives of, 1104.  
   4:4'-dinitro-2:2'-diamino-, preparation of, 873.  
   disulphide, crystal structure of, 323.  
   mono- and di-sulphides, 2:2':4:4'-tetranitro-, reductions of, 1002.  
   sulphoxide, 2:2'-dichloro-4:4'-dinitro-, 1105.  
   2:2':4:4'-tetranitro-, 1003.  
*NN*-Diphenylacetamidine, preparation of, 1522.  
*NN'*-Diphenylacetamidine, preparation of, 1618.  
 1:1-Diphenyl-2-*p*-acetamidophenylethylene, 1080.  
 1:1-Diphenyl-2-*p*-acetylphenylethylene, 1080.  
 DL- $\beta\beta'$ -Diphenyladipic acid, 1000.  
 meso- $\beta\beta'$ -Diphenyladipic acid, 1001.  
 6:9-Diphenylisoalloxazine, 222.  
 Diphenylamine, 3-amino-, and its acyl derivatives, 1228.  
   3':4'-diamino-, 1229.  
   3:3'-diamino- and 3:3'-dinitro-, preparation of, and their derivatives, 1004.  
 Diphenylamine-2-aldehyde, 1230.  
 Diphenylamine-2-carboxyamidine, 5-nitro-, 1230.  
 Diphenylamine-2-carboxyhydrazide, and 5-amino-, 1230.  
 Diphenylamine-6-carboxyhydrazide, 3-nitro-, 1230.  
 Diphenylamine-2-carboxy-( $\beta$ -*p*-toluenesulphon)hydrazide, and 5-nitro-, 1230.  
 Diphenylamine-2:5-dicarboxylic acid, 34.  
 Diphenylarsonic acid, 2-amino-, 2-acetyl derivative, 2209.  
   2-chloro-, 2209.  
 2:3-Diphenyl-5-azaquinoxaline, 6-amino-, and its acetyl derivative, and 7-bromo-, and its trimethiodide, 1391.  
 1:1'-Diphenylazopropane, 686.  
 s-1:1'-Diphenylazopropane, *s*-di-1:1'-*p*-amino-, 1:1'-*p*-diacetyl derivative, 685.  
*NN'*-Diphenylbenzamidine, preparation of, 1618.  
 1:3-Diphenylbenzisofuran, polymerisation of, 2129.  
 Diphenylbutadiene, thermal data for, 1190.  
 1:1-Diphenylbut-2-ene, 1-cyano-, 1994.  
 1:2-Diphenyl-1-*p*-chlorophenylethylene, and 1-bromo-, and nitro-, 1080, 1081.  
 Diphenylcarboxylic acids, 3-nitro-, 2219.  
 Diphenyl-2-carboxylic acid, 4-nitro-, methyl ester, 2218.  
 Diphenylchloroarsine, 2-amino-, 2-acetyl derivative, 2-chloro-, and *di*-*o*-chloro-, 2210.  
 Diphenylchloroarsinecarboxylic acids, and their methyl esters, 2210.  
 Di-5-phenyl-5-cyanoamylformal, 809.  
 Diphenylcyanoarsines, amino-, and diamino-, chloro-, and dichloro-, 2211, 2212.  
 Diphenylcyanoarsinecarboxylic acids, methyl esters, 2212.  
 1:10-Diphenyldeca-1:9-diene, spectrum of, absorption, 1124.  
*NN*-Diphenyldicyandiamide, 1634.  
*N*<sup>1</sup>:*N*<sup>6</sup>-Diphenylguanide, *N*<sup>1</sup>:*N*<sup>6</sup>-*di*-*p*-chloro-, 1644.  
 $\beta\beta'$ -Diphenyl- $\alpha\alpha'$ -dihydromuconic acid, 1000.  
 9:10-Diphenyldihydrophenanthrene, 9:10-dihydroxy-, complexes of, with pyridinium salts, 385.  
 1:1-Diphenyl-2:3-dimethylethylene, 4:4''-dibromo- and -*di*-cyano-, 262, 263.  
 Diphenyl disulphide, crystal structure of, 324.  
 2:2-Diphenylethane, 1:1:1-trichloro-2:2-*d*-*p*-amino-, 1458.  
   1:1:1-trichloro-2:2-*d*-4-chloro-, decomposition of, by basic substances, 1657.  
 1:2-Diphenyl-1-*p*-ethoxyphenylethylene, 2-bromo-, 155.  
*N*<sup>1</sup>:*N*<sup>6</sup>-Diphenyl-*N*<sup>2</sup>-ethylguanide, *N*<sup>1</sup>:*N*<sup>6</sup>-*di*-*p*-chloro-, and its hydrochloride, 1641.  
 1:1-Diphenylethylene, diamidino-derivatives from, 261.  
 1:1-Diphenylethylene, 4:4''-*d*-bromo- and -*di*cyno-, 262.  
 2:2-Diphenylethylene, 1:1-dichloro-2:2-*d*-*p*-amino-, and its dibenzoyl derivative, and 1:1-dichloride-2:2-*d*-*p*-nitro-, 1459.  
*NN'*-Diphenylformamidine, preparation of, 1618.  
*NN'*-Diphenylformamidine, *di*-*o*- and -*m*-chloro-, hydrochlorides, 1015.  
*N*<sup>1</sup>:*N*<sup>6</sup>-Diphenylguanylthiourea, *N*:*N*'-*di*-*p*-chloro-, 1643.
- 1:4-Diphenylhexa-1:5-diene, 1116.  
   spectrum of, absorption, 1124.  
 3:4-Diphenylhexa-1:5-diene, 1116.  
 3:4-Diphenyl-*n*-hexane, derivatives, synthesis of, 684.  
 3:4-Diphenyl-*n*-hexane, *pp'*-diamino-, and its derivatives, 685.  
   *pp'*-dibromo-, *pp'*-dihydroxy-, *pp'*-dinitro-, and *tr*-nitro-, 686.  
 Diphenylmethane, oxidation of, by chromic acid, 1670.  
 Diphenylmethane, 5-chloro-2-amino-, and its derivatives, 297.  
   5-nitro-2-amino-, and its 2-acetyl derivative, 298, 299.  
 Diphenylmethane-2-arsonic acid, 5-chloro-, 298.  
*N*<sup>1</sup>:*N*<sup>6</sup>-Diphenyl-*N*<sup>2</sup>-methylguanide, *N*<sup>1</sup>:*N*<sup>6</sup>-*di*-*p*-chloro-, and its hydrochloride, 1641.  
 1:1-Diphenyl-2-methylethylene, 4:4''-*d*-bromo- and -*di*cyno-, 262.  
 3:3-Diphenyl-5-methyl-2-ethylidenetetrahydrofuran, 1994.  
 3:3-Diphenyl-5-methyl-2-ethyltetrahydrofuran, 2-hydroxy-, and its 2-acetyl derivative, 1994.  
 3:3-Diphenyl-5-methyltetrahydrofuran, 2-imino-, and its 2-acetyl derivative, 1994.  
 1:1-Diphenyl-2-*p*-nitrophenylethylene, 1081.  
 2:2-Diphenyl-1-*p*-nitrophenylethylene, 1-bromo-, 1081.  
 2:2-Diphenylpent-4-en-1-carboxyamide, 1994.  
 1:1-Diphenyl-2-*p*-propionamidophenylethylene, 1080.  
 1:1-Diphenyl-2-*p*-propionylphenylethylene, 1080.  
 Di-3-phenylpropylformal, *di*-3-cyano-, 808.  
 3:6-Diphenylpyrazine, 2-amino-, and its derivatives, 1858, 1859.  
 Diphenyl disulphide-*pp'*-bis(dichloro)arsine, 375.  
 Diphenyl disulphide-*pp'*-diarsonic acid, 375.  
 Diphenyl sulphone, 2:2'-dichloro-4:4'-dinitro-, 1105.  
   *p*-cyano-, 382.  
 Diphenyl-4'-sulphonic acid, 3-amino- and 3-nitro-4-hydroxy-, and 4-hydroxy-, and its sodium salt, 216.  
 CN-Diphenylsydnone, 2309.  
 $\alpha\gamma$ -Diphenyltetronic acid, 49.  
 1:1-Diphenyl-2-*p*-*n*-valerylphenylethylene, 1080.  
 2-*p*-Diphenylguanidino-6-methylpyrimidine, 4-hydroxy-, 579.  
*N*<sup>1</sup>:*p*-Diphenyl-*N*<sup>5</sup>-isopropylguanide, 1635.  
 Dipiperidinoanthranthrene, 1181.  
 Dipiperidinofluorophosphine oxide, 1315.  
 2:6-Dipiperidino-4-methylpyrimidine, 2151.  
 2:6-Dipiperidino-4-*p*-nitrostyrylpyrimidine, 5-nitro-, 1134.  
 2:6-Dipiperidino-4-styrylpyrimidine, 5-nitro-, 1132.  
 Dipole moments of *C*- and *N*-substituted sydrones, 2269.  
 Di-*p*-*n*-propoxyphenyl-*p*-ethoxybenzylcarbinol, 155.  
 Dipropyl fluorophosphonates, 1012.  
 Di-*n*-propyl sulphide, 2:2'-dichloro-, and 2:2'-*d*-hydroxy-, 39.  
 Diisopropyl fluorophosphonate, 695.  
 6:6'-Diisopropylamino-4:4'-dimethyl-2:2'-dipyrimidylamine, 597.  
 Di-*n*-propylcyanogold, structure of, 64.  
*N*<sup>1</sup>:*N*<sup>6</sup>-Diisopropylidicyandiamide, 1650.  
 2:2-Di-*n*-propylidethyl sulphide, 2:2'-*d*-2-chloro-, and 2:2'-*d*-2-hydroxy-, 41.  
 Diisopropylideneglyoxal, structure of, 763.  
 2:2'-Di-(2-propylthio)diethyl ether, 2:2'-*d*-2-chloro-, and 2:2'-*d*-2-hydroxy-, 41.  
 2:2'-Di-(*n*-propylthio)*di*-*n*-propyl sulphide, 2:2'-*d*-2-chloro-, and 2:2'-*d*-2-hydroxy-, 41.  
 2:2'-Di-(*n*-propylthio)*di*-*n*-propyl ether, 42.  
 1:2-Di-(*n*-propylthio)ethane, 1:2-*d*-2-chloro-, and 1:2-*d*-2-hydroxy-, 46.  
 2:6'-Diquinolyl, 2010.  
 2:6'-Diquinolyl-4-carboxylic acid, 2010.  
 Disalicylides, stereochemistry of, 891.  
 Dissociation, electrolytic. See under Electrolytic.  
 Distillation apparatus, 2289.  
 4:6-Distyrylpyrimidine, 2-chloro-, 2151.  
 Diterpenes, 1888.  
 2:2'-Dithienyl disulphide, preparation of, 770.  
 Di-2-thienylcyanoarsine, 2212.  
 2:4-Dithio-5- $\omega$ -carbethoxy-*n*-butylhydantoin, 2033.  
*N*-Dithiocarbobenzoyloxyaminomalonic acid, ethyl ester, 1059.  
*N*-Dithiocarbobenzoyloxy- $\beta\beta'$ -diethoxyalanine, and its methyl ester, 1059.  
*N*-Dithiocarbobenzoyloxyglycine, and its benzylamide, 1058.  
*N*-Dithiocarbocarbethoxyglycine, 1060.  
 2:4-Dithio-5-1-ethyl-*n*-amylhydantoin, 2032.  
 2:4-Dithio-5-*n*-hexylhydantoin, and its monoacetyl derivative, 2032.

- 2:4-Dithiohydantoin**, and its 1:3-diacyl and 5-isopropylidene derivatives, 206.

**4:8-Di-p-toluidino-2-tert.-butylanthraquinone**, 6-bromo-1:5-diamino-, 1629.

**Di-p-tolyl disulphide**, crystal structure of, 323.

**Ditolytarsonous acids**, 2209.

**Ditolylecanoarsines**, 2211.

**Di-p-tolyl disulphone**, crystal structure of, 325.

**NN'-Ditolyformamidines**, hydrochlorides, 1015.

**Di-p-tolylidenesuccinic acid**, and its anhydride, 1271.

**Diuridine-2':2' phosphate**, synthesis of, 1532.

**meso- $\alpha\beta$ -Divinylbenzyl**, 1111.

**meso- $\alpha\beta$ -Divinylbenzyl series**, isomorphism and molecular configuration in, 1118.

**n-Dodecoic acid**, n-butyl and n-propyl esters, 631.

**Dyes**, acid, blue, from amino- and nitro-butylanthraquinones, 1627.

**E.**

**Egg-plum gum**, structure of, 120.

**Electrical conductivity of oxides and spinels at high temperatures**, 1729.

**Electrodes**, antimony, behaviour of, in air, 752.  
out of contact with air, 756.  
copper, potential of, 740.  
in copper sulphate solution, 749.  
metallic, 740, 749, 752, 756, 759.

**Electrolytic dissociation**, 1051.

**Electronegativity of bonded groups**, 399.

**Electrostatic energy**. See under Energy.

**Elements**, periodic system of, new, 318.  
radioactive. See under Radioactive.

**Elimination reactions**, mechanism of, 2038, 2043, 2049, 2055, 2058, 2065, 2072, 2077, 2084, 2090, 2093.

**Energy**, binding, in hydrocarbons, 1448.  
bond and dissociation, 398.  
electrostatic, differences, application of the method of, 1197.

**1:2-Epoxy-2:4:4-trimethylpentane**, 1329.

**2:3-Epoxy-2:4:4-trimethylpentane**, 286.

**Epoxy-2:4:4-trimethylpentanes**, reaction of, with sulphuric acid, 1332, 1333.

**1:2-Epoxy-2:4:4-trimethylpentan-3-ol**, 287.

**Ergosta-8(9):14-dien-3( $\beta$ )-yl benzoate**, 793.

**Ergostan-3( $\beta$ )-yl benzoate**, 1356.

**Ergost-7-en-3-one**, 793.

**Esters**, aliphatic, carboxylic, parachors and refractivities of, 624.  
preparation of, 628.  
containing phosphorus, 695, 699, 1010, 1313.  
reaction of, with amines, 1989.

**Ethane**, 1:1:1-trichloro-2:2-diamino-, 2:2-dibenzoyl and -di-p-toluoxy derivatives, 2322.  
dichlorotetrafluoro-, and iodopentafluoro-, 2190.  
1:1:1-trifluoro-, spectrum of, infra-red absorption, 1428.

**Ethers**, parachors and refractivities of, 616.  
preparation of, 617.

**" $\beta$ "-7-Ethoxycholesterol**, and its benzoate, 1802.

**Ethoxydihydrothionaphthen sulphone**, 1617.

**2-Ethoxy-4-(dimethylaminostyryl)-6-methylpyrimidine**, 2151.

**2-Ethoxy-3:6-dimethylpyrazine**, 4-oxide, and 2-chloro-, 1861.

**2-Ethoxydiphenyl ether**-5:4'-dialdehyde, 2173.

**1-Ethoxyhexylideneaminoacetonitrile**, 1970.

**$\alpha$ -(1-Ethoxyhexylideneamino)- $\beta$ -benzoyloxyacrylonitrile**, 1970.

**1-( $\alpha$ '-Ethoxyhexylideneamino)- $\beta$ -hydroxyacrylonitrile**, potassium salt, and 2:4-dinitrophenylhydrazone, 1970.

**2-Ethoxy-6-methyl-5:11-dihydroquinoline**, 11-amino-, 921.

**Ethoxymethylenemalonic acid**, diethyl ester, reaction of, with arylamines, 893.

**4-Ethoxymethylenethiazol-5-one**, 2-mercaptop-, 204.

**2-Ethoxy-6-methyl-3-ethoxymethylpyrazine**, 1861.

**2-Ethoxy-6-methyl-3-hydroxymethylpyrazine**, 1862.

**2-Ethoxy-3-methylquinoxaline**, and its picrate, 522.

**3-Ethoxy-2-methylquinoxaline 1-oxide**, 522.

**p-Ethoxyphenylacetic acid**, ethyl ester, preparation of, 152.

**2-p-Ethoxyphenyl-1:1-di-n-propoxyphenylethylen**, 155.

**N<sup>1</sup>-p-Ethoxyphenyl-N<sup>4</sup>-isopropyl-N<sup>5</sup>-n-butylguanide**, and its hydrochloride, 1652.

**N<sup>1</sup>-p-Ethoxyphenyl-N<sup>5</sup>-isopropyldiguanide hydrochloride**, 1635.

**$\beta$ -Ethoxypropionylpyruvic acid**, ethyl ester, preparation of, 1297.

**2-(3'-Ethoxypropyl)cyclohexanone**, and its derivatives, 1374.

**2-(3'-Ethoxypropyl)cyclohexanone-2-carboxylic acid**, ethyl ester, and its 2:4-dinitrophenylhydrazone, 1374.

**trans-2-(3'-Ethoxypropyl)cyclohexylamine**, and its derivatives, 1374.

**cis-2-(3'-Ethoxypropyl)cyclohexylbenzamide**, 1375.

**trans-Ethoxypropylcyclohexylformamide**, 1375.

**2-(3'-Ethoxypropyl)picelic acid**, 1374.

**2-Ethoxypyrazines**, oxidation of, with hydrogen peroxide, 1859.

**2-Ethoxypyridine 1-oxide**, and its derivatives, 1866.

**2-Ethoxyquinoline 1-oxide**, and its derivatives, 1865.

**3-Ethoxyquinoxaline 1-oxide**, 521.

**3-Ethoxyquinoxaline**, 2-chloro-, and 2-hydroxy-, 522.

**Ethyl allyl sulphilimine**, 2-chloro-, 2179.  
3-chloroallyl sulphide, 2-chloro-, and 2-hydroxy-, 2181.  
2-chloro-n-propyl sulphide, 2-chloro-, 41.  
2-chloroisopropyl sulphide, 2-chloro-, 47.  
dichloro- and difluoro-phosphonites, 703.

**Ethyl ether**, pure dry, preparation of, 1163.

**Ethyl ether**, 2-hydroxy-2'-mercapto-, 43.

**Ethyl heptyl sulphide**, 2-chloro-, 2178.  
2-hydroxypropyl sulphide, 2-hydroxy-, 41.  
2-hydroxyisopropyl sulphide, 2-hydroxy-, 40.  
hydroxypropyl sulphides, 2-hydroxy-, and their bis-p-nitrobenzoates, 47.

**n-nonyl sulphide**, 2-chloro-, 2178.

**n-undecyl sulphide**, 2-chloro-, and 2-hydroxy-, 2178.

**1-Ethylacenaphthylene(7':8':2:3)-indole**, 1248.

**5-1'-Ethyl-n-amylydantoin**, 2032.

**4-1'-Ethyl-n-amythiazole**, 5-amino-2-mercaptop-, and its 5-acetyl derivative, 2032.

[2-(3-Ethyl-6:7-benzbenzoxazole)][2-(3-ethyl-6:7-benzbenzthiazole)][ $\gamma\beta'$ -dimethin-2'-(3'-ethyl-6:7'-benzbenzthiazole)]-trimethincyanine diiodide, 1882.

[2-(3-Ethyl-6:7-benzbenzthiazole)][2-(3-ethylbenzselenaazole)][ $\gamma\beta'$ -dimethin-2'-(3'-ethyl-6:7'-benzbenzthiazole)]trimethincyanine diiodide, 1883.

[2-(3-Ethylbenzoxazole)][2-(3-ethylbenzselenaazole)][ $\gamma\beta'$ -dimethin-2'-(3'-ethylbenzoxazole)]trimethincyanine diiodide, 1883.

[2-(3-Ethylbenzoxazole)][2-(3-ethylbenzthiazole)][ $\gamma\beta'$ -dimethin-2'-(3'-ethylbenzoxazole)]trimethincyanine diiodide, 1882.

[2-(3-Ethylbenzoxazole)][2'-(3-ethylbenzthiazole)][ $\gamma\beta'$ -dimethin-2'-(3'-ethylbenzoxazole)]pentamethincyanine diiodide, 695.

[2-(3-Ethylbenzoxazole)][3-(4-ethylidihydro- $\beta$ -quinindene)]-dimethincyanine iodide, 1898.

[2-(3-Ethylbenzoxazole)][2'-(1-ethyl-6-methylquinoline)]-[ $\gamma\beta'$ -dimethin-2'-(3-methylbenzthiazole)]pentamethincyanine diiodide, 695.

[2-(3-Ethylbenzselenaazole)][2'-(1-ethylquinoline)][ $\gamma\beta'$ -dimethin-2'-(3-ethylbenzselenaazole)]pentamethincyanine diiodide, 695.

[2-(3-Ethylbenzthiazole)][2'-(1:6-dimethylquinoline)][ $\gamma\beta'$ -dimethin-2'-(3-ethylbenzthiazole)]pentamethincyanine diiodide, 695.

[2-(3-Ethylbenzthiazole)][2'-(3-ethylbenzoxazole)][ $\gamma\beta'$ -dimethin-2'-(3-ethylbenzthiazole)]pentamethincyanine diiodide, 695.

[2-(3-Ethylbenzthiazole)][2'-(3-ethylbenzoxazole)]- $\alpha$ -anilomethyltrimethincyanine iodide, 1884.

[2-(3-Ethylbenzthiazole)][2-(3-ethylbenzselenaazole)][ $\alpha\beta'$ -dimethin-2'-(3'-ethylbenzselenaazole)]trimethincyanine diiodide, 1882.

[2-(3-Ethylbenzthiazole)][2-(3-ethylbenzselenaazole)][ $\gamma\beta'$ -dimethin-2'-(3'-ethylbenzthiazole)]trimethincyanine diiodide, 1883.

[2-(3-Ethylbenzthiazole)][3-(4-ethylidihydro- $\beta$ -quinindene)]dimethincyanine iodide, 1898.

[2-(3-Ethylbenzthiazole)][2'-(3-methylbenzselenaazole)][ $\gamma\beta'$ -dimethin-2'-(3-ethylbenzthiazole)]pentamethincyanine diiodide, 695.

[2-(3-Ethylbenzthiazole)][2'-(3-ethylbenzthiazole)][ $\gamma\beta'$ -dimethin-2'-(3-ethylbenzthiazole)]pentamethincyanine diiodide, 694.

**Ethyl 1-bromoethyl ketone**, 1-chloro-, 280.

**Ethylcarbamyl acid**, 2-chloro-, 3-chloroallyl ester, 2182.  
*N*-nitro-2-chloro-, *N*-nitroso-2-bromo-, methyl esters, and *N*-nitroso-2-chloro-, ethyl ester, 2320, 2321.

**2-Ethylcarbamylphenylthioacetic acid**, 84.

**Ethy 2-chloroethyl ketone**, 1-chloro-, 280.

- 3-Ethylcinnoline**, 4-hydroxy-, 2319.  
**Ethylycyanamide**, 2-chloro-, 2321.  
**1-Ethyl-1':5'-daza-2,3-pentamethylenequinoxaline**, 781.  
**Ethyldicyandiamide**, 1633.  
**Ethyldi-(2-fluoroethyl)amine**, 2-chloro-, and its picrate, 2176.  
**Ethyldimethylsulphonium salts**, olefin formation from, 2072.  
**Ethyli-1:2-diphosphonic acid**, tetraethyl ester, 702.  
**Ethylene**, catalytic reaction of, with benzene, 73.  
 Prins reaction with, 89.  
**Ethylene, tetraiodo-**, reaction of, with bromine trifluoride, 2182.  
**Ethylenes**, photochemical reactions of, with phenanthraquinone and with 1:2:3-triketones, 2126.  
**Ethylene dinitroamine**. See *s*-Bisnitroaminooethane.  
**Ethylene glycol bisfluoroacetate**, 1779.  
**Ethylene sulphide**, reactions of, 1894.  
**NN-Ethylenebistrichloroacetamide**, and its salts, 305.  
**1,3-*endo*Ethylene-1:2:3:4-tetrahydronaphthalene**, and its sulphonamido-derivative, 979.  
**Ethylenic compounds**, parachors and refractivities of, 658.  
**Ethylguanidine sulphate**, 1642.  
**2-Ethyl-*n*-hexanal cyanohydrin**, and its hydrochloride, 2032.  
**2,4-Ethyldiene D-sorbitol**, and its acetyl derivatives, 1935.  
**2-Ethylindole**, picrate, 275.  
**Ethylmalonic dideuteracid**, 1088.  
**Ethylmercuric iodide**, *penta*fluoro-, 2190.  
**o-Ethylphenylcarbamic acid**, ethyl ester, 878.  
**Ethylphosphonic acid**, diethyl ester, 702.  
**Ethylphosphonic acid**, 2-fluoro-, diethyl ester, 702, 703.  
**3-Ethyl-2-*n*-propylcinchoninic acid**, 109.  
**N<sup>1</sup>-Ethyl-N<sup>2</sup>-isopropylidicyandiamide**, 1650.  
 $[2\text{-}(1\text{-Ethylquinoline})][2\text{-}(3\text{-ethylbenzselena}zole)][\gamma\beta'\text{-dimethin-2'}(1'\text{-ethylquinoline})]$ trimethincyanine diiodide, 1882.  
 $[2\text{-}(1\text{-Ethylquinoline})][2\text{-}(3\text{-ethylbenzthiazole})]\text{-}\gamma\text{-anilomethyl-trimethincyanine iodide}$ , 1884.  
 $[4\text{-}(1\text{-Ethylquinoline})][2\text{-}(3\text{-ethylbenzthiazole})]\text{-}\gamma\text{-anilomethyl-trimethincyanine iodide}$ , 1883.  
 $[2\text{-}(1\text{-Ethylquinoline})][2\text{-}(3\text{-ethylbenzthiazole})][\gamma\beta'\text{-dimethin-2'}(3'\text{-ethylbenzselena}zole)]$ trimethincyanine diiodide, 1886.  
 $[2\text{-}(1\text{-Ethylquinoline})][2\text{-}(3\text{-ethylbenzthiazole})][\alpha\beta'\text{-dimethin-2'}(3'\text{-ethylbenzthiazole})]$ trimethincyanine diiodide, 1882.  
 $[4\text{-}(1\text{-Ethylquinoline})][2\text{-}(3\text{-ethylbenzthiazole})][\alpha\beta'\text{-dimethin-2'}(3'\text{-ethylbenzthiazole})]$ trimethincyanine diiodide, 1881.  
 $[2\text{-} \text{and } 4\text{-}(1\text{-Ethylquinoline})][2\text{-}(3\text{-ethylbenzthiazole})][\gamma\beta'\text{-dimethin-2'}(3'\text{-ethylbenzthiazole})]$ trimethincyanine diiodides, 1885.  
 $[2\text{-}(1\text{-Ethylquinoline})][2\text{-}(3\text{-ethylbenzthiazole})][\gamma\beta'\text{-dimethin-2'}(1'\text{-ethylquinoline})]$ trimethincyanine diiodide, 1882.  
 $[2\text{-}(1\text{-Ethylquinoline})][2\text{-}(3\text{-ethylbenzthiazole})][\gamma\beta'\text{-dimethin-4'}(1'\text{-ethylquinoline})]$ trimethincyanine diiodide, 1886.  
 $[4\text{-}(1\text{-Ethylquinoline})][2\text{-}(3\text{-ethylbenzthiazole})][\gamma\beta'\text{-dimethin-4'}(1'\text{-ethylquinoline})]$ trimethincyanine diiodide, 1882.  
 $[4\text{-}(1\text{-Ethylquinoline})][2\text{-}(3\text{-ethylbenzthiazole})][\gamma\beta'\text{-dimethin-2'}(3'\text{-ethyl-}\Delta^2\text{-thiazoline})]$ trimethincyanine diperchlorate, 1886.  
 $[2\text{-} \text{and } 4\text{-}(1\text{-Ethylquinoline})][3\text{-}(4\text{-ethyldihydro-}\beta\text{-quinindene})]\text{-dimethincyanine iodides}$ , 1897.  
 $[2\text{-}(1\text{-Ethylquinoline})][4\text{-}(1\text{-ethylquinoline})][\gamma\beta'\text{-dimethin-2'}(1'\text{-ethylquinoline})]$ trimethincyanine diiodide, 1880.  
 $[4\text{-}(1\text{-Ethylquinoline})][2\text{-}(3\text{-ethyl-}\Delta^2\text{-thiazoline})]\text{-}\gamma\text{-anilomethyl-trimethincyanine iodide}$ , 1885.  
 $[4\text{-}(1\text{-Ethylquinoline})][2\text{-}(3\text{-ethyl-}\Delta^2\text{-thiazoline})][\gamma\beta'\text{-dimethin-2'}(3'\text{-ethylbenzthiazole})]$ trimethincyanine diiodide, 1886.  
 $[4\text{-}(1\text{-Ethylquinoline})][2\text{-}(3\text{-ethyl-}\Delta^2\text{-thiazoline})][\gamma\beta'\text{-dimethin-4'}(1'\text{-ethylquinoline})]$ trimethincyanine diiodide, 1883.  
 $[4\text{-}(1\text{-Ethylquinoline})][2\text{-}(3\text{-ethyl-}\Delta^2\text{-thiazoline})][\alpha\beta'\text{-dimethin-2'}(3'\text{-ethyl-}\Delta^2\text{-thiazoline})]$ trimethincyanine diperchlorate, 1882.  
 $[4\text{-}(1\text{-Ethylquinoline})][2\text{-}(3\text{-ethyl-}\Delta^2\text{-thiazoline})][\gamma\beta'\text{-dimethin-2'}(3'\text{-ethyl-}\Delta^2\text{-thiazoline})]$ trimethincyanine diperchlorate, 1886.  
 $[4\text{-}(1\text{-Ethylquinoline})][2\text{-}(3\text{-ethyl-}\Delta^2\text{-thiazoline})]$ trimethincyanine iodide, 1887.  
 $[2\text{-} \text{and } 4\text{-}(1\text{-Ethylquinoline})][2\text{-}(4\text{-methyl-3-ethylthiazole})]\text{-}\gamma\text{-anilomethyl-trimethincyanine iodides}$ , 1884.  
 $[2\text{-}(1\text{-Ethylquinoline})][2\text{-}(4\text{-methyl-3-ethylthiazole})]$ trimethincyanine iodide, 1887.  
 $[4\text{-}(1\text{-Ethylquinoline})][2\text{-}(4\text{-methyl-3-ethylthiazole})]$ trimethincyanine iodide, 1887.  
**O-Ethylrepandise dimethiodide**, 2173.
- α-Ethylstilbene**, photochemical reaction of, with phenanthraquinone, 2128.  
**1-Ethyl-1:2:3:4-tetrahydro-1:4:9:10-tetra-aza-anthracene**, and its dihydrochloride, 781.  
 $[2\text{-}(3\text{-Ethyl-}\Delta^2\text{-thiazoline})][2\text{-}(3\text{-ethylbenzthiazole})]\text{-}\alpha\text{-anilo-methyltrimethincyanine iodide}$ , 1885.  
 $[2\text{-}(3\text{-Ethyl-}\Delta^2\text{-thiazoline})][2\text{-}(3\text{-ethylbenzthiazole})]\text{-}\gamma\text{-anilo-methyltrimethincyanine iodide}$ , 1884.  
 $[2\text{-}(3\text{-Ethyl-}\Delta^2\text{-thiazoline})][2\text{-}(3\text{-ethylbenzthiazole})][\alpha\beta'\text{-di-methin-2'}(3'\text{-ethylbenzthiazole})]$ trimethincyanine diiodide, 1883.  
 $[2\text{-}(3\text{-Ethyl-}\Delta^2\text{-thiazoline})][2\text{-}(3\text{-ethylbenzthiazole})][\gamma\beta'\text{-di-methin-2'}(3'\text{-ethylbenzthiazole})]$ trimethincyanine diiodide, 1886.  
 $[2\text{-}(3\text{-Ethyl-}\Delta^2\text{-thiazoline})][2\text{-}(3\text{-ethylbenzthiazole})][\gamma\beta'\text{-di-methin-2'}(3'\text{-ethyl-}\Delta^2\text{-thiazoline})]$ trimethincyanine diperchlorate, 1885.  
 $[2\text{-}(3\text{-Ethyl-}\Delta^2\text{-thiazoline})][2\text{-}(3\text{-ethylbenzthiazole})]$ trimethincyanine iodide, 1887.  
 $[2\text{-}(3\text{-Ethyl-}\Delta^2\text{-thiazoline})][2\text{-}(4\text{-methyl-3-ethylthiazole})]\text{-}\gamma\text{-anilomethyltrimethincyanine iodide}$ , 1885.  
 $[2\text{-}(3\text{-Ethyl-}\Delta^2\text{-thiazoline})][2\text{-}(4\text{-methyl-3-ethylthiazole})][\gamma\beta'\text{-di-methin-2'}(3'\text{-ethyl-}\Delta^2\text{-thiazoline})]$ trimethincyanine diperchlorate, 1885.  
 $[2\text{-}(3\text{-Ethyl-}\Delta^2\text{-thiazoline})][2\text{-}(4\text{-methyl-3-ethylthiazole})]$ trimethincyanine iodide, 1887.  
**β-Ethylthioacrylic acid**, *a*-amino-, hexoyl derivative, and its ethyl ester, 1967.  
**β-Ethylthioacrylylbenzylamide**, *a*-amino-, hexoyl derivative, 1968.  
**N-(β-Ethylthioacrylyl)glycine**, *N*-*a*-amino-, hexoyl derivative, 1968.  
**N-(β-Ethylthioacrylyl)-D-penicillamine**, *N*-*a*-amino-, hexoyl derivative, 1968.  
**β-Ethylthioacrylyl-p-toluidide**, *a*-amino-, hexoyl derivative, 1968.  
**N-Ethylthiobenzamide**, N-2-hydroxy-, 1923.  
**2-Ethylthio-4-benzylidenethiazolone**, 1059.  
**1-(Ethylthio)-2-(3'-chloroallylthio)ethane**, 1-2'-chloro-, and 1-2'-hydroxy-, 2181.  
**2-(Ethylthio)diethyl ether**, 2-mercaptop-2'-2-hydroxy-, 44.  
**2-Ethylthio-4-ethoxymethylenethiazolone**, 1060.  
**2-(Ethylthio)ethylcarbamic acid**, 2-2-chloro-, and *N*-nitroso-2-2-chloro-, methyl esters, 2320.  
**2-Ethylthio-4-hydroxymethylenethiazolone**, 1060.  
**Ethylthiol**, 2-amino-, 2-benzoyl derivative, 1924.  
**3-Ethylthio-6-methylpyridazine**, 2200.  
**2-2'-Ethylthio-1-methylvinylbenzthiazole methiodide**, 689.  
**4-(Ethylthio)phenylarsonic acid**, 4-2-hydroxy-, 375.  
**p-(Ethylthio)phenyldichloroarsine**, p-2-chloro-, 374.  
**α-(2-Ethylthio)propaldehyde**, *a*-2-hydroxy-, and its diethylacetal, 40.  
**β-Ethylthiopropionic acid**, 1969.  
**2-Ethylthiopyridine**, 5-amino-, and its hydrochloride, and 5-nitro-, 1944.  
**2-2'-Ethylthiovinylbenzoxazole methiodide**, 689.  
**2,2'-Ethylthiovinylbenzthiazole**, metho-salts, 689.  
**2,2'-Ethylthiovinylquinoline**, metho-salts, 689.  
**Ethylnpropenylcarbinol**, kinetics of acid-catalysed rearrangement of, in solvent mixtures, 1982.  
*Evodia elleryana*, ketone from, 2005.  
*Evodione*, constitution of, 2005.

**F.**

- Fabiatriin hexaacetate and dihydrate**, 1672.  
 synthesis of, 1671.  
**Films**, soluble, at air-liquid and liquid-liquid interfaces, vertical-plate measurements with, 930.  
**Filters**, column, revivable, for spent catalysts, 1091.  
**Fluoranthene**, synthesis of, 1139.  
**Fluorene**, condensation of, with acetone, 1137.  
**Fluorene-1-carboxylacetocetic acid**, 9-bromo-, and 9-chloro-, ethyl esters, 1141.  
**3-(Fluorene-1-carbonyl)butan-2-one**, 3-9-chloro-, 1141.  
**Fluorene-1-carboxylic acid**, and its amide, 1140.  
**Fluorene-1-carboxylic acid**, 9-bromo-, 9-chloro-, and 9-iodo-, and their derivatives, 1140, 1141.

- 9-Fluorenol-1-carboxylic acid**, 1140.  
**Fluorenone-1-carboxylic acid**, ethyl ester, and its derivatives, 1141.  
**Fluorine compounds**, toxic, containing C-F link, 1773.  
**Fluorophosphonic acid**, diisopropyl ester, 695.  
 esters, 1010.  
**Formaldehyde**, yield of, from periodate oxidation of carbohydrates, 994.  
**Formamidines**, *s*-disubstituted, 1716.  
**Formic acid**, detection of, in mixtures with aliphatic monobasic acids, 1015.  
 ethyl ester, formylation of amines with, 1457.  
**Formic acid**, chloro-, 3-chloroallyl ester, 2182.  
 fluoro-, ethyl ester, 1778.  
 ethyl and phenyl esters, 2186.  
**2-Formyl-4-carbomethoxyphenoxyacetic acid**, 3-hydroxy-, and its ethyl ester, and its 2:4-dinitrophenylhydrazone, 116.  
**5-Formylcoumaran**, 6-hydroxy-, and its 2:4-dinitrophenylhydrazone, 2257.  
**N-Formyl-2-(chloroethyl)amine**, *N*-chloro-, 2174.  
**2-Formyl-3:6-dimethylcoumarone**, and its 2:4-dinitrophenylhydrazone, 2260.  
**6-Formyl-4:7-dimethyl-2-isopropylhydrindan-5-one**, and its disemicarbazone, 167.  
**3-Formyldiphenylarsonous acid**, and its 2:4-dinitrophenylhydrazone, 2209.  
**3-Formyldiphenylcyanoarsine**, 2211.  
**2-Formylethylenianiline**, 2:4'-dinitro-, 2026.  
**2-Formylethylenetoluuidines**, mono- and *di*-nitro-, 2026.  
**5-Formyl-3-methylcoumaran**, 6-hydroxy-, and its 2:4-dinitrophenylhydrazone, 2259.  
**2-Formyl-3-methylcoumarone**, 6-hydroxy-, and its derivatives, 2258.  
**2-Formyl-4-methylphenoxyacetic acid**, 5-hydroxy-, 5-benzyl derivative, and its ethyl ester, 2258.  
**2-Formylphenoxyacetic acid**, 5-hydroxy-, 5-benzyl derivative, and its ethyl ester, 2257.  
**Fractionating agents** for starch, 1687.  
**Friedel-Crafts reaction** in preparation of halogenated aliphatic ketones, 278.  
**Fumaric acid**, esters, 665.  
**Furan**, derivatives, formation of, from sucrose, 155.  
**Furano-compounds**, 115, 2254, 2260.  
**Furano(2':3':6:7')dihydrobenzfuran-3-one**, and its semicarbazone, 895.  
**N-2-Furyl-N'-methylacetamide**, 1521.  
**2-(2'-Furyl)- $\Delta^2$ -pyrroline**, and its picrate, 188.
- G.**
- $\epsilon$ -Galactan**, and its derivatives, 775.  
**4-D-Galactopyranosidamino-2-methylthiopyrimidine**, 6-amino-, 962.  
**Gallium**, reaction of, with nitrosyl chloride, 1955.  
**Gallium trichloride**, reaction of, with nitrosyl chloride, 1955.  
**(-)-Gallocatechin gallate**, 2253.  
**Gases**, adsorption of, on minerals, 135.  
 solubility of, measurement of, 2033.  
 solution and diffusion of, in polystyrene at high pressures, 1541.  
**Geranamide**, spectrum of, infra-red absorption, 1415.  
**Ginkgetin**, structure of, 2138.  
**Glucamine**, deamination of, to 1:4-anhydrosorbitol, 299.  
**9-D-Glucopyranosidoadenine**, synthesis of, 965.  
**9-D-Glucopyranosido-2-methylthioadenine**, 966.  
**4-D-Glucosidamino-5-(2':5'-dichlorobenzeneazo)pyrimidine**, 6-amino-, and its 4-tetra-acetyl derivative, 967.  
**4-D-Glucosidamino-2-methylthiopyrimidine**, 6-amino-, and its penta-acetyl derivative, 966.  
**4-D-Glucosidaminopyrimidine**, 6-amino-, 966.  
 5:6-diamino-, and its 4-tetra-acetyl derivative, 967.  
**2- $\beta$ -Glucosidoxyl-5-methoxybenzoic acid**, methyl ester, hemi-hydrate, 2222.  
**4- and 6-Glucuronosidogalactoses**, 1141.  
**Glycerides**, natural, mixed, configuration of, 722.  
 X-ray and thermal examination of, 985.  
**Glycerol**, photochemical oxidation of, by dichromate, 2119.  
**4-Glycofuranosidaminopyrimidines**, preparation of, 957.

- Glycogen**, experiments with, 995.  
 methylated, diffusion and ultracentrifugal characteristics of, 1567.  
**Glycosides**, synthesis of, 1671, 2220.  
**Glyoxal**, bond strengths in, 404.  
 sulphate, preparation of, 764.  
**Glyoxaline**, 4(5)-amino-, and 4(5)-amino-2-mercapto-, 4(5)-benzoyl derivatives, 1266.  
**Glyoxalines**, 1960.  
**Gomberg reaction**, 349.  
**Grignard reagents**, effect of impurities in magnesium on formation of, 1597.  
**Guanidine**, amino-, reaction of, with isatin, 2314.  
**2-Guanidinobenzimidazole**, and 5-chloro-, and their salts, 1368.  
**2-Guanidinobenzimidazole**, 5:6-dichloro-, and its salts, 1369.  
**2-Guanidino-5:6-dimethoxybenzimidazole**, and its salts, 1368.  
**2-Guanidino-5:6-dimethylbenzimidazole**, and its salts, 1369.  
**2-Guanidino-5-methoxybenzimidazole**, and its salts, 1368.  
**2-Guanidino-5-methylbenzimidazole**, and its salts, 1368.  
**2-Guanidino-6-methylpyrimidine**, 4-hydroxy-, 592, 596.  
**Guanine**, dissociation constants of, 765.  
**Guanosine**, synthesis of, 1685.  
**Guanylthioureas**, conversion of, into diguanides, 1645.  
**Guanylurea formate**, 1369.  
**Gum gatto**. See Carob gum.
- H.**
- Halogens**, kinetics of addition of, to unsaturated compounds, 980.  
 kinetics of substitution by, in aromatic compounds, 100.  
 parachors and refractivities of, 644.  
**Halogen compounds**, bond strengths in, 404.  
**Halogeno-ketones**, 272, 276, 278.  
**Heat of ionisation** of organic acids, 1016, 1019.  
**n-Heptane**, hexadecafluoro-, spectrum of, infra-red absorption, 1432.  
**3:4-cycloHeptenoisoxazole**, 169.  
**Hept-2-enyl cyanide**, 5-nitro-, 230.  
**n-Heptoic acid**, adsorption of, from solution, by calcined and hydrated alumina powders, 969.  
**Heptyl cyanide**, 5-nitro-, 230.  
***a-n*-Heptylpelargonic acid**,  $\alpha$ -amino-, 1388.  
**p-n-Hexadecylsulphonylbenzylammonium chloride**, 382.  
**p-n-Heptylsulphonylphenyl cyanide**, 383.  
**Heterocyclic compounds**, chemistry of, 360.  
 syntheses of, 1537.  
 by Hofmann reaction, 523.  
**p-n-Hexadecylsulphonylbenzylammonium chloride**, 382.  
**p-n-Hexadecylsulphonylphenyl cyanide**, 383.  
**Hexadeuterobenzene**, spectrum of, absorption, ultra-violet, 433.  
 fluorescence, ultra-violet, 440.  
**cycloHexa-1:3-dione**, as reagent for aldehydes, 1371.  
**3-Hexahydrobenzamido-2:4-diketopyrrolidine**, 1959.  
**cis- and trans-Hexahydrochrysenes**, 1001.  
**Hexahydrodichanostrychnidine**, 1665.  
**Hexahydrophenanthridone**, 1294.  
**Hexamethylisocyanidoferrous chloride trihydrate**, structure of, 63.  
**n-Hexane**, thermal decomposition of, 2226.  
**n-Hexane**, 1-nitro-, preparation and physical properties of, 1847.  
**cycloHexane**, hexachloro-, stereoisomers, spectra of, infra-red absorption, 1420.  
 1:2-dichloro-1-nitro- and -1-nitroso-, 2321.  
**dodecafluoro-**, spectrum of, infra-red absorption, 1432.  
**cycloHexanol**, as fractionating agent for starch, 1687.  
**cycloHexanone**, 2-chloro-, oxime, 2321.  
**5:6-cycloHexenopyrimidine**, 2-cyanoamino-4-hydroxy-, 579.  
**Hex-2-enyl cyanide**, 5-nitro-, 230.  
**Hex-3-en-5-yne**, 2-hydroxy-, 2-acetyl derivative, hydrolysis of, 798.  
**n- and iso-Hexestrols**, 686.  
**DL-N-Hexylcysteine**, 1969.  
**3-Hexoyl-3-methylbutanecarboxylic acid**, 1745.  
**cycloHexyl bromide**, chloride, and iodide, preparation and properties of, 1811.  
**N-cycloHexyl-1-amidino-n-heptane**, preparation of, 308.

- 2-cycloHexylamino-4-(4-dimethylaminostyryl)-6-methyl-pyrimidine**, 2151.  
**cycloHexylaminophosphonic acid**, dibenzhydryl ester, 1110.  
**4-cycloHexylbut-2-enyl cyanide**, 4-*l*-nitro-, 230.  
**4-cycloHexylbutyl cyanide**, 4-*l*-nitro-, 230.  
**cycloHexylcarbamic acid**, ethyl and methyl esters, 881.  
**2-n-Hexylcinchoninic acid**, and 6-bromo-, and 6:8-dichloro-, 109.  
**cycloHexylidicyandiamide**, 1633.  
*N*-**cycloHexyl-N'**-ethylacetamidine, and its hydrochloride, 1521.  
*N*-**cycloHexyl-N'**-ethylpropionamidine, and its hydrochloride, 1521.  
*N*-**cycloHexyl-N'**-methylacetamidine, 1521.  
hydrochloride, 1522.  
**a-cycloHexylmethyldiaminobutyric acid**, and its derivatives, 316.  
**a-cycloHexylmethyldiamino-β-hydroxybutyric acid**, 316.  
**2-cycloHexyl-6-methylheptane**, 48, 49.  
*N*-**cycloHexylphenylacetamidine**, preparation of, 308.  
**2-n-Hexylquinoline**, and 6-bromo-, 6:8-dichloro-, and 6:8-dichloro-4-hydroxy-, and their picrates, 109.  
**p-n-Hexylsulphonylbenzylammonium chloride**, 382.  
**p-n-Hexylsulphonylphenyl cyanide**, 383.  
*N*-**cycloHexylsydnone**, 2309.  
**4-n-Hexylthiazole**, 5-amino-2-mercapto-, and its derivatives, 2032.  
**n-Hexylthiol**, preparation and properties of, 1822.  
**Hofmann reaction** in synthesis of heterocyclic compounds, 523.  
**Hopkins Memorial Lecture**, 713.  
**Hydrazine**, anhydrous, preparation of, 1458.  
**Hydrobromic acid**. See under Bromine.  
**Hydrocarbons**, aromatic, catalysed gas-phase reactions of, 73, 1700, 2154.  
binding energies in, 1448.  
carcinogenic, oxidation of, with osmium tetroxide, 170.  
chemistry of, 531.  
fluorinated, spectra of, infra-red absorption, 1428, 1432.  
formation of organic peroxides from, 339.  
**Hydrochloric acid**. See under Chlorine.  
**Hydrogen atoms**, associating effect of, 874.  
bonding, in 4-triacetyl-D-xylosidaminopyrimidines, 2265.  
ions, nature of, in aqueous and non-aqueous solvents, 1976.  
isotopic differentiation of, in molecular asymmetry, 1085.  
solubility and diffusion of, in polystyrene, 1541.  
**Hydrogen bromide**. See Hydrobromic acid under Bromine.  
chloride. See Hydrochloric acid under Chlorine.  
peroxide, bond energies in, 331.  
oxidation with, of 2-hydroxyquinoxaline, and its derivatives, 519.  
reaction of, with symmetrical triketones, 50.  
selenide, photochemical oxidation of, 766.  
**Hydrogen-nitrogen-oxygen linking**, 874.  
**Hydroxamic acids**, 1864.  
**Hydroxy-carbonyl compounds**, 1674.  
**Hyperconjugation**, 17.

**I.**

- 2-Imino-3-phenyl-3'-2'-hydroxyethyltetrahydrofuran**, 808.  
**Indan-3-one-1-carboxylic acid**, and its derivatives, 980.  
**Indigo**, 5,6:5':6'-tetrahydroxy-, synthesis of, and its tetra-acetyl derivative, 1244.  
**Indium**, reaction of, with nitrosyl chloride, 1955.  
**Indium tribromide and monochloride**, 1958.  
**Indole**, derivatives, polycyclic, action of nitric acid on, 1247.  
**Indole**, 5,6-dihydroxy-, synthesis of, and its derivatives, 2223.  
**Indoles**, formation of, from phenacylarylamines, 847, 858.  
**Indoles**, hydroxy-, synthesis of, 1605.  
**Indole-2-carboxylic acid**, 6-hydroxy-, 1608.  
7-hydroxy-, and its 7-benzyl derivative, 1608.  
**Indole-(2':3':4)-coumarin**, 7-hydroxy-, and its diacetyl derivative, 1674.  
*iso***Indolinone** derivatives from aniline, 1249.  
**1:3:4-Indotriazine**, 2-amino-, and its salts and derivatives, 2314, 2317.  
**Insulin**, adsorption of water vapour on, 1083.  
**Inter-halogen compounds**, chemistry of, 2135.  
**Iodine**, molecular, solvolytic ionisation of, 1051.  
solutions, alkaline, oxidation by, of aldehydes, 810.  
**Periodates**, oxidation by, applied to carbohydrates, 992.  
**Ion-exchange apparatus**, 1273.  
**Ion-exchangers**, 1273.  
**Ionisation constants of heterocyclic bases**, 2240.  
**Isatin condensation of**, with barbituric acid, 552.  
*anti*- and *syn*-β-guananylhydrazone, and their salts and derivatives, 2315.  
reaction of, with aminoguanidine, 2314.  
**Isatin *syn*-β-guananylhydrazone-5-sulphonic acid**, 2316.  
**Isomerisation**, bimolecular, 1.  
**Isoprene**, action of hydrogen chloride on, 530.

**K.**

- Karanovic acid**, synthesis of, and its acetate, 115.  
**Karanjin**, synthesis of, 894.  
**Kaurene**, identity of, with podocarpene, 1888.  
**Keten**, spectrum of, infra-red absorption, 1416.  
**7-Keto-3(β)-acetoxy-5-allocholanic acid**, methyl ester, 1042.  
**α-Keto-β-acetylbutyrolactone**, 1297.  
**5-Keto-2-n-amyl-4-benzylthiomethylene-4:5-dihydro-oxazole**, 1968.  
**5-Keto-2-n-amyl-4-ethylthiomethylene-4:5-dihydro-oxazole**, 1968.  
**1-Keto-4:5-benz-Δ<sup>4:8</sup>-hexahydroazulene**, and its semicarbazone, 169.  
**2-Keto-4-benzyloxy-1-benzoyl-Δ<sup>3</sup>-pyrrolidine**, 3-amino-, 3-benzoyl derivative, 1959.  
**2-Keto-4-benzyloxy-Δ<sup>3</sup>-pyrrolidine**, 3-amino-, 3-benzoyl derivative, 1959.  
**1-Keto-3-(2':4':6'-tribromophenyl)-2-methyltetrahydrophthalazine-4-acetic acid**, and its anilide, 598.  
**α-Keto-β-(β'-carboethoxypropionyl)butyrolactone**, 1298.  
**3-Keto-2-carbomethoxy-4-methoxycycloheptatrienylacetic acid**, methyl ester, 1051.  
**3-Keto-2-carboxycycloheptatrienylacetic acid**, 4-hydroxy-, 1051.  
**1-Keto-3-(2'-chloro-5'-nitrophenyl)-2-methyltetrahydrophthalazine-4-acetic acid**, and its derivatives, 208.  
**1-Keto-3-(2'-chlorophenyl)-4-methyltetrahydrophthalazine**, 1028.  
**1-Keto-3-(3'-chlorophenyl)-4-methyltetrahydrophthalazine**, 600.  
**1-Keto-3-(2'-chlorophenyl)-2-methyltetrahydrophthalazine-4-acetic acid**, 1027.  
**1-Keto-3-(2'-chlorophenyl)tetrahydrophthalazine**, 1028.  
**α-Keto-β-(β'-chloropropionyl)butyrolactone**, 1298.  
**Ketocholanic acids**, reaction of, with ethyl bromo- and chloro-acetates, 1358.  
**7-Keto-5-allocholanic acid**, 3(β)-hydroxy-, 1042.  
**6-Ketocholestan**, derivatives of, 1032.  
**1-Ketodecahydroazulene**, and its semicarbazone, 169.  
**5-Keto-4:7-dimethyl-2-isopropyl-Δ<sup>4</sup>-tetrahydroindane**, and its derivatives, 167.  
**2-Keto-1-ethoxy-1:2-dihydroquinoline**, preparation of, 1866.  
**α-Keto-β-(β'-ethoxypropionyl)butyrolactone**, 1298.  
**4-Keto-1:3-endoethylene-1:2:3:4-tetrahydronaphthalene**, and its derivatives, 977, 979.  
**4-Keto-2-ethylthionaphtheno-(2':3':5:6)-1:3-oxazine**, 81.  
**4-Keto-1:2:3:4:10:11-hexahydrocyclopentindene**, and its derivatives, 979.  
**2-Ketohexamethyleneimine**, preparation of, 1518.  
**β-2-Ketocyclohexylbenzylmalonic acid**, and its derivatives, 2014.  
**β-2-Ketocyclohexylbenzylmalonic anhydride**, and its hydrogenation product, 2013, 2015.  
**β-2-Ketocyclohexyl-*p*-methoxybenzylmalonic acid**, 2016.  
**β-2-Ketocyclohexyl-*p*-methoxybenzylmalonic anhydride**, 2016.  
**β-2-Ketocyclohexyl-β-*p*-methoxyphenylpropionic acid**, and its ethyl ester and its oxime, 2016.  
**β-2-Ketocyclohexyl-β-phenylpropionic acid**, ethyl ester, oxime, 2015.  
**4-Keto-1-methoxy-3-(2'-chloro-5'-nitrophenyl)-3:4-dihydrophthalazine**, 208.  
**4-Keto-1-methoxy-3-(2'-chlorophenyl)-3:4-dihydrophthalazine**, 1029.  
**α-Keto-β-(β'-methoxypropionyl)butyrolactone**, and β-chloro-, 1298.  
**α-Keto-β-(β'-methoxypropionyl)-γ-phenylbutyrolactone**, 1298.  
**α-Keto-β-(β'-methoxypropionyl)-γ-valerolactone**, 1298.  
**2-Keto-1-methyl-3-chloromethyl-1:2-dihydroquinoxaline**, 522.

**1-Keto-13-methyl- $\Delta^{11:12}$ -dodecahydrophenanthrene**, and its derivatives, 163.  
**4-Keto-2-methyl-3:4-dihydrothionaphtheno(2':3':5:6)pyrimidine**, 81.  
**2-Keto-5-methylhexamethyleneimine**, 1519.  
**5-Keto-2-methyl-4-(2'-nitro-5'-acetoxybenzylidene)-4:5-dihydro-oxazole**, 1607.  
**5-Keto-2-methyl-4-(2'-nitro-5'-hydroxybenzylidene)-4:5-dihydro-oxazole**, 1607.  
**6-Keto-2-methylthionaphtheno(3':2':4:5)-1:3-oxazine**, 81.  
**5-Keto-4-(2'-nitro-6'-acetoxybenzylidene)-2-methyl-4:5-dihydro-oxazole**, 1609.  
**1-Keto-3-(4'-nitro-2':5'-dimethoxyphenyl)-2-methyltetrahydropthalazine-4-acetic acid**, 282.  
**Ketones**, constitution and physical properties of, 610.  
 formation of, from  $\alpha$ -amino-acids, 176.  
 from semicarbazones with nitrous acid, 2319.  
 halogenated, 272, 276, 278.  
 hydroaromatic, fused-ring, synthesis of, 162.  
 non-enolisable, fission of, by potassium *tert.*-butoxide, 1408.  
 $\alpha\beta$ -unsaturated, cyclic, reactions of, 996.  
 halogen addition to, 980.  
**2:5-Keto-3-phenyl-2:3-indolinopyrazolidocoline**, 1251.  
**5-Keto-2-phenyl-4-methyl-4:5-dihydroimidazole**, and its derivatives, 735.  
**1-Keto-3-phenyl-4-methyltetrahydropthalazine**, 1251.  
**1-Keto-3-phenyl-2-methyltetrahydropthalazine-4-acetic acid**, 1250.  
 $\alpha$ -Keto- $\beta$ -propionylbutyrolactone, 1298.  
 $\alpha$ -(2-Keto-4-isopropylcyclopentyl)propionic acid, and its semicarbazone, 168.  
**6-Ketositostane**, derivatives of, 1043.  
**2-Keto-4-thio-3'-methyl-3-ethyl-5:2'-ethylenecarbonylidenetetrahydrothiazole**, 690.  
**2:6'-Ketothionaphtheno-(3':2':4:5')-1:3-oxazinyl-2'-thionaphthen**, 3-amino-, 3-diacyl derivative, and its derivatives, 80.  
**Ketoimine sulphonates**, Beckmann rearrangement of, in presence of ammonia or amines, 1514.

**L.**

**Lanosterol**, 988.  
**Larch wood**,  $\epsilon$ -galactan of, 774.  
*Larix decidua*, wood,  $\epsilon$ -galactan of, 774.  
**Lectures delivered before the Chemical Society**, 243, 386, 713, 1461.  
**Lepidine**, preparation of, 1457.  
**1- $\alpha$ -Lepidylbenztriazole**, 923.  
**Leptospermone**, synthesis and derivatives of, 383.  
*Leuconostoc mesenteroides*. See *Betacoccus arabinosaceus*.  
**Levan**, structure of, from sucrose, 1560.  
**Lewisite**, molar polarisation of, 1208.  
*iso***Lewisite**, molar polarisation of, 1208.  
**Linalol**, spectrum of, infra-red absorption, and structure, 1415.  
**Linkings**, double, addition of thiol-compounds to, 1683.  
 factors influencing strength of, 398.  
**Linoleic acid**, methyl ester, autoxidation of, 2275.  
**Liversidge Lecture**, 1461.

**M.**

**Magnesium**, effect of metallic impurities in, on formation of Grignard reagents, 1597.  
**Maize starch**. See under Starch.  
**Maleic acid**, esters, 664.  
**Mandelonitrile**, *p*-bromo-, and *o*-chloro-, benzoate, 1255.  
**Manganese** :—  
 Manganese sulphate as catalyst in chromic acid oxidation of hydrobromic acid, 1376.  
**Mannitol**, reaction of, with hydrochloric acid, 2204.  
**Mannitol**, 1:6-dibromo-, and its 2:3:4:5-tetra-acetyl derivative, 2202.  
**9-D-Mannopyranosidoxanthine**, synthesis of, 523.  
**Mannose**, preparation of, 1989.  
**1-D-Mannosidoglyoxaline-4:5-dicarboxyamide**, 524.  
**9-D-Mannosidoxanthine**, 524.  
**Melanin**, and its precursors, 1244.

**Melanins**, chemistry of, 2223.  
**Memorial Lecture**, Sir Frederick Gowland Hopkins, 713.  
**Mepacrine**, conversion of, into thiocarcidones, 1181.  
 resolution of, and its salts, 99.  
**Mercapto-acids**, tertiary, preparation of, 1683.  
**Mesaconic acid**, esters, 665.  
**Mesquite gum**, constitution of, 1141, 1146.  
**Mesquitic acid**, and its acetate, methylation of, 1152.  
 preparation of, 1144.  
**Metals**, and their chlorides, action of nitrosyl chloride on, 1952.  
 complex compounds of, with dimethylglyoxime, 378.  
**Metal electrodes**, 740, 749, 752, 756, 759.  
**Metallic halides**, reaction of, with bromine trifluoride, 2135.  
**Metanethole**, 1985.  
**Methane**, chlorofluoro-derivatives, spectra of, infra-red absorption, and thermodynamics, 1422.  
*iodotrifluoro*-, 2190.  
 nitro-, condensation of, with aldehydes, 1907.  
**Methanesulphonyl**. See also *Methylsulphonyl*.  
**5-Methanesulphonyl 2-chloro 1:4:3:6-dianhydromannitol**, 2207.  
**Methanol**. See *Methyl alcohol*.  
**4-Methoxy-7-acetoacetylchromone**, 6-hydroxy-, 2263.  
**4-Methoxy-7-acetoacetylcoumaran**, 6-hydroxy-, 2264.  
**4-Methoxy-5-acetoacetylcoumarone**, 6-hydroxy-, 2262.  
**2-Methoxyacetophenone**, 5-hydroxy-, and its 5-benzyl derivative, 2142.  
**6-Methoxyacetophenone**, 2:3-dihydroxy-, dibenzyl derivative, 2141.  
 preparation of, 2140.  
 2:6-dihydroxy-, 2:3-dianisyl derivative, 2142.  
**3-Methoxy-4-acetoxycinnamic acid**, 2-nitro- $\alpha$ -amino-,  $\alpha$ -acetyl and  $\alpha$ -benzoyl derivatives, azlactones of, 377.  
**2-Methoxy-6-acetoxypheoxyacetic acid**, 1611.  
**6-Methoxy-3-acetylacetophenone**, 2-hydroxy-, 2141.  
**4-Methoxy-3-acetylbenzoic acid**, 2:6-dihydroxy-, methyl ester, and its 2:4-dinitrophenylhydrazone, 2264.  
**8-Methoxy-4-acetylchroman-3-one**, 1611.  
**4-Methoxy-7-acetylcoumaran**, 6-hydroxy-. See *isoVisnagone*.  
**4-Methoxy-7-acetylcoumarone-2-carboxylic acid**, 6-hydroxy-, 2263.  
 ethyl ester, and its 2:4-dinitrophenylhydrazone, 2263.  
**5-Methoxyacetyl-2:3-dihydrobenz furan**, 4-hydroxy-, and its semicarbazone, 895.  
**7-Methoxyacetyl-2:3-dihydrobenz furan**, 4-hydroxy-, 895.  
**N-3-Methoxyacridyl(5)-p-aminobenzoic acid**, *N*-8-chloro-, 241.  
**6(or 7)-Methoxyaloxazine**, 1720.  
**4-p-Methoxyanilino-2- $\gamma$ -diethylaminopropylaminoquinazoline**, dihydrochloride, 1770.  
**4-Methoxyanthranilate**, preparation of, 1764.  
**6-Methoxybenzamide**, 2-amino-, preparation of, 1763.  
**2-Methoxymesobenzanthrone**, synthesis of, 1088.  
**5-Methoxybenzoxazolone**, 215.  
**5-Methoxybenzoxazolone-6-sulphonic acid**, 215.  
**3-m- and -p-Methoxybenzoylmesobenzanthrones**, 2038.  
**p-Methoxybenzoylmethylcarbinol p-nitrobenzoate**, 1675.  
**Methoxy-3:4-benzpyrenes**, 173.  
**1-Methoxy-3-(2':4':6'-tribromophenyl)-4-(5''-keto-1''-phenyl-3''-methylpyrazolinylidene-ethylidene)-3:4-dihydrophthalazine**, 599.  
**1-Methoxy-3-(2':4':6'-tribromophenyl)-4-methylene-3:4-dihydrophthalazine**, and its perchlorate, 599.  
**1-Methoxy-3-(2':4':6'-tribromophenyl)-4-(2''-dinitrobenzylidene)-3:4-dihydrophthalazine**, 599.  
**6-Methoxy-4-(*a*-bromopropionyl)quinoline hydrobromide**, 95.  
**5-Methoxy-2-carbethoxyphenoxyacetic acid**, ethyl ester, 1674.  
**6-Methoxy-4-(3:3:3-trichloro-2-hydroxypropyl)quinoline**, 96.  
**2-Methoxy-1-chloromethylnaphthalene**, 6-bromo-, 264.  
**1-Methoxy-3-(2'-chloro-5'-nitrophenyl)-4-methylene-3:4-dihydrophthalazine**, and its perchlorate, 208.  
**1-Methoxy-3-(2'-chloro-5'-nitrophenyl)-4-(2':4''-dinitrobenzylidene)-3:4-dihydrophthalazine**, 208.  
**1-Methoxy-3-(2'-chlorophenyl)-4-methylene-3:4-dihydrophthalazine**, and its perchlorate, 1028.  
**1-Methoxy-3-(2'-chlorophenyl)-4-(2':4''-dinitrobenzylidene)-3:4-dihydrophthalazine**, 1028.  
 $\beta$ -7-Methoxycholest-4-en-3-one, and its 2:4-dinitrophenyl hydrazone, 1803.  
 $\alpha$ -7-Methoxycholesterol, and its esters, 1802.  
 $\beta$ -7-Methoxycholesteryl acetate and benzoate, 1801, 1802.

- 7-Methoxychroman-3-one**, and its 2:4-dinitrophenylhydrazone, 1611.  
**8-Methoxychroman-3-one**, and its 2:4-dinitrophenylhydrazone, 1611.  
**3-Methoxycinnamic acid**, 2-nitro- $\alpha$ -amino-4-hydroxy-,  $\alpha$ -acetyl-4-benzoyl derivative, azlactone of, 377.  
**4-Methoxycinnamic acid**, 2-nitro- $\alpha$ -amino-3-hydroxy-, 2:3-diacetyl derivative, azlactone of, 377.  
 $\beta$ "-7-Methoxycoprostan-3-one, and its 2:4-dinitrophenylhydrazone, 1803.  
**4-Methoxycoumaran**, 6-hydroxy-, and its derivatives, 2263.  
**5-Methoxy- $\beta$ -coumaranone-2-carboxylic acid**, ethyl ester, 1674.  
**6'-Methoxycoumarono-(2':3':4')**-coumarin, 7-hydroxy-, and 7:8-dihydroxy-, and their derivatives, 1674.  
**4-Methoxy-5-diazoacetylbenzuran**, 895.  
**3-Methoxy-1:2:5:6-dibenzanthracene**, 173.  
**2-Methoxy-6-(2-dibutylamino-1-hydroxyethyl)naphthalene**, 1-bromo-, dipicrate, 97.  
**2'-Methoxydiethyl sulphilimine**, 2-chloro-, 2179.  
**Methoxydihydrothionaphthen sulphone**, 1617.  
**3-Methoxy-9:10-dimethyl-1:2-benzanthracene**, 173.  
**2-Methoxy-5:11-dimethylisoquinindoline**, 924.  
**2-Methoxy-5:11-dimethylquinindolinium chloride**, 924.  
**6-Methoxy-2:3-diphenylquinoxaline**, 1720.  
**1-Methoxy-4-ethoxy-3-(2'-chlorophenyl)-3:4-dihydrophthalazine**, 1028.  
**4'-Methoxyflavone**, 5:8-dihydroxy-, and its diacetyl derivative, 2143.  
    synthesis of, 2138.  
**6-Methoxy-3-formylacetophenone**, 2-hydroxy-, preparation of, 2140.  
**4-Methoxy-3-formylbenzoic acid**, 2:6-dihydroxy-, methyl ester, and its semicarbazone, 2264.  
 $\alpha$ -Methoxyhexylideneaminoacetic acid, ethyl ester, 1966.  
 $\alpha$ -(1-Methoxyhexylideneamino)- $\beta$ -hydroxyacrylic acid, ethyl ester, potassium salt, 1966.  
**6-Methoxy-4-(1-hydroxy-2-N-piperidylpropyl)quinoline**, 95.  
**5-Methoxyindole**, 6-hydroxy-, 2226.  
**6-Methoxyindole**, 5-hydroxy-, and its 5-acetyl derivative, 2226.  
**6-Methoxylepidine**, N-oxide, and its salts, 96.  
 $1-\alpha$ -(6-Methoxylepidyl)benztriazole, 923.  
**5-Methoxymethoxybenzaldehyde**, 2-nitro-4-hydroxy-, 1246.  
**2-Methoxy-1-methoxymethylnaphthalene**, 6-bromo-, 264.  
**3-Methoxy-1'-methyl-1:2-benzanthracene**, 173.  
**4-Methoxy-2-methyl-6:7-benzoquinoline**, 1293.  
**6-Methoxy-20-methylcholanthrene**, 173.  
**7-Methoxy-2-methylchroman-4-one**, and its derivatives, 1612.  
**7-Methoxy-3-methylcoumarin**, 4-hydroxy-, and its acetate, 175.  
**Methoxymethyldi-(2-chloroethyl)amine**, 2174.  
**11-Methoxy-5-methyl-5:11-dihydroquinoline**, 11-amino-, 921.  
**7-Methoxy-3-(3':4'-methylenedioxypyrenyl)coumarin**, 4-hydroxy-, and its derivatives, 175.  
**7-Methoxy-2-methylfuran(2':3':5:6)chromone**. See *isovinagin*.  
**2-Methoxy-11-methylquinindoline**, and its 6-acetyl derivative, 923.  
**1-Methoxy-8-a-naphthylsulphonylnaphthalene**, 606.  
**6-Methoxynicotinamide**, salts, 1943.  
**1-Methoxy-3-(4'-nitro-2':5'-dimethoxyphenyl)-4-(5''-keto-1''-phenyl-3''-methylpyrazolinylidene-ethylidene)-3:4-dihydrophthalazine**, 283.  
**1-Methoxy-3-(4'-nitro-2':5'-dimethoxyphenyl)-4-methylene-3:4-dihydrophthalazine**, 283.  
**1-Methoxy-3-(4'-nitro-2':5'-dimethoxyphenyl)-4-methylphthalazinium perchlorate**, 283.  
**1-Methoxy-3-(4'-nitro-2':5'-dimethoxyphenyl)-4-(2":4"-dinitrobenzylidene)-3:4-dihydrophthalazine**, 283.  
**4-Methoxyphenol-5-sulphonic acid**, 2-amino-, 215.  
**4-Methoxyphenylacetic acid**, 2-nitro-3-hydroxy-, 378.  
**7-Methoxy-3-phenylcoumarin**, 4-hydroxy-, and its acetate, 175.  
**4-Methoxyphenyl-3:4-dimethoxybenzyl ketone**, 2-hydroxy-, 175.  
 $\gamma$ -(*p*-Methoxyphenyl)- $\alpha$ -ethylbutyramide, 1676.  
*m*-Methoxyphenylethylcarbinol, and its phenylurethane, 2145.  
**4-p-Methoxyphenyl-1-ethyldecahydroquinoline**, and its salts, 2016.  

*p*-Methoxyphenylethynylcarbinol, 2037.  
*p*-Methoxyphenyl ethynyl ketone, 2038.  
**2-(2'-Methoxyphenyl)guanidino-6-methylpyrimidine**, 4-hydroxy-2:5'-chloro-, 579.  
**4-p-Methoxyphenyl-3:4:5:6:7-hexahydrocoumarin**, 2016.

$\gamma$ -(*p*-Methoxyphenyl)- $\alpha$ -methylbutyramide, 1676.  
*p*-Methoxyphenylpropionic acid, dimerisation of, 1267.  
 $\alpha$ -*p*-Methoxyphenylpropionamide, 1675.  
 $\beta$ -*p*-Methoxyphenylpropionylmethylecarbinol *p*-nitrobenzoate and 3:5-dinitrobenzoate, 1676.  
**4-Methoxyphenylpyruvic acid**, 2-nitro-3-hydroxy-, 377.  
**4-p-Methoxyphenylsulphonylbenzaldehyde**, 602.  
**1-Methoxy-8-phenylsulphonylnaphthalene**, 606.  
**p-Methoxyphenyl *p*-tolyl sulphone**, 602.  
**6-Methoxy-4-(*a*-N-piperidylpropionyl)quinoline** *dipicrolonate*, 95.  
**6-Methoxy-4-propenylquinoline**, and its picrate, 96.  
 **$\beta$ -Methoxypropionylpyruvic acid**, methyl ester, preparation of, 1297.  
**6-Methoxy-4-propylquinoline**, and its salts, 95.  
**1-Methoxypyrene**, 173.  
**2-Methoxypyridine**, 5-cyano-, 1945.  
**4-Methoxy-1:2:2':3'-pyridoacridine**, 5-amino-, and its derivatives, and 5-chloro-, 291.  
**5-Methoxy-1:2:2':3'-pyridoacridine**, and 4-fluoro-, 291.  
**5-(2-Methoxypyridyl)methlamine** hydrochloride, 1945.  
**4-Methoxyquinazoline**, 6- and 7-nitro-, 364.  
**5-Methoxyquinazoline**, 2:4-dihydroxy-, 1763.  
**6-Methoxyquinazoline**, 2:4-dichloro-, 1763.  
**7-Methoxyquinazoline**, 2:4-dichloro-, and 2:4-dihydroxy-, 1764.  
**8-Methoxyquinazoline**, 2:4-dichloro-, and 2:4-dihydroxy-, 1764.  
**4-Methoxyquinoline**, 6- and 8-nitro-, 1708.  
**6-Methoxy-8-quinolylacetic acid**, ethyl ester, and its salts, 98.  
 $\beta$ -*p*-Methoxy-4-quinolylacrylic acid, 96.  
 **$\beta$ -6-Methoxyquinolyl(4)alanine**, and its dihydrochloride, 89.  
**6-(6'-Methoxy-8'-quinolylamino)-4-diethylamino-1:3:5-triazine**, 2-amino-, and 2-chloro-, and their hydrochlorides, 563.  
**6-(6'-Methoxy-8'-quinolylamino)-1:3:5-triazine**, 2:4-diamino-, and its hydrochloride, and 2:4-dichloro-, 563.  
**6-Methoxy-8-quinolyl chloromethyl ketone**, and its hydrochloride, 98.  
**6-Methoxy-8-quinolyl di-*n*-butylaminomethyl ketone**, dipicrate, 99.  
**6-Methoxy-8-quinolyl diethylaminomethyl ketone**, dipicrate, 99.  
**6-Methoxy-4-quinolylethylcarbinol**, and its salts, 96.  
**6-Methoxy-4-quinolyl ethyl ketone**, picrate, and *isonitroso*-, 96.  
**6-Methoxy-8-quinolyl methyl ketone**, bromination of, 98.  
 $\beta$ -*p*-Methoxyquinolyl(4)propionic acid,  $\alpha$ -oximino-, and its ethyl ester, 89.  
**N<sup>1</sup>-(6-Methoxy-8-quinolyl)-N<sup>5</sup>-isopropylbiguanide** hydrochloride, 1636.  
**N<sup>1</sup>-(6-Methoxy-8-quinolyl)-N<sup>4</sup>-*n*-propyl-N<sup>5</sup>-isopropylisothiourea**, and its hydrochloride, 1652.  
**6-Methoxyquinolyl(4)pyruvic acid**, ethyl ester, 89.  
**5-Methoxysalicylic acid**, methyl ester,  $\beta$ -primeveroside and its O-hexa-acetyl derivative, *O*-triacetyl- $\beta$ -glucoside, and *O*-tri-acetyl-6'-O-trityl- $\beta$ -glucoside, 2222.  
**4-Methoxystyrene**,  $\beta$ :2-dinitro-5-hydroxy-, 5-acetyl derivative, 2226.  
**5-Methoxystyrene**,  $\beta$ :2-dinitro-4-hydroxy-, and its 4-acetyl derivative, 2226.  
**6-Methoxy-4-styrylquinoline N-oxide**, and its picrate, 96.  
**1-Methoxy-5:6:7:8-tetrahydrophenanthridine**, and its picrate, 1539.  
**3-Methoxy-5:6:9:10-tetramethyl-1:2-benzanthracene**, 173.  
**5-Methoxytoluene**, 2-hydroxy-, and its 2-benzyl derivative, 2307.  
**3-Methoxy-5:9:10-trimethyl-1:2-benzanthracene**, 173.  
**6-Methoxy-4-vinylquinoline**, picrate, 96.  
**2-Methoxy-*m*-xylene**, 2307.  
Methyl alcohol, action of, on naphthalene, catalysed by alumina-silica catalysts, 804.  
Clathrate compound of, with quinol, 571.  
Methyl 3-chlorosalyl sulphide, 2179.  
2-chloroethyl sulphilimine, 2179.  
ether, methylation of naphthalene by, 1700.  
    reactions of, with benzene, toluene, and xylenes, 2154.  
**2-Methylacenaphthene**, and its derivatives, 1397.  
**2-Methylacenaphthylene**, and its derivatives, 1397.  
**N**-Methylacetiminophenyl ether, and its picrate, 1522.  
**N**-Methylacetimino-*p*-tolyl ether, and its hydrochloride, 1522.  
**3-Methylacetophenone**, 2-amino-, and its acetyl derivative, and 2-nitro-, 1704.  
**4-Methylacetophenone phenylmethyl- and *p*-tolyl-hydrazones**, 854.

- 4-Methylacetophenone**, 2-amino-, 5-nitro-2-amino-, 3:5-dinitro-2-amino-, and their derivatives, 1704.  
**1-Methylacridine**, 4-amino-, 1228.  
**2-Methylacridine**, 5-amino-2-trifluoro-, and its derivatives, and 5-chloro-2-trifluoro-, 32.  
**4-Methylacridine**, 5-amino-4-trifluoro-, and its derivatives, 34.  
**2-Methylacridone**, 2-trifluoro-, 34.  
**4-Methylacridoné**, 4-trifluoro-, 34.  
**5- and 8-Methylalloxazines**, 2133.  
**6- and 7-Methylalloxazines**, preparation of, 1313.  
 $\alpha$ - and  $\gamma$ -Methylallyl halides, etholysis of, 4.  
**7-Methylaminoalloxazine**, and 7-nitroso-, 1930.  
**1-Methylaminoanthraquinone**, 5-chloro-, 738.  
**2-Methylaminobenzamide**, 4- and 5-nitro-, 366.  
**4-Methylaminomesobenzanthrone**, 1180.  
**6-Methylaminomesobenzanthrone**, 1749.  
**2-Methylaminobenzoic acid**, 4- and 5-nitro-, and their methyl esters, 366.  
**4-Methylaminobutylbenzyl cyanide**, 809.  
**2-Methylamino-4-carbethoxythiazole**, 5-amino-, and its hydrochloride, and benzylidene derivative, 2030.  
**m-Methylamino-N-dimethylaniline**, and its picrate, 1929.  
 $\alpha$ -Methylamino-nitriles, reaction of, with carbon disulphide, 1619.  
**Methylaminophosphonic acid**, diethyl ester, 702.  
**2(or 3)-Methyl-6-aminoquinoxaline**, 2134.  
**2-Methylaminothiazole**, 5-amino-, 2029.  
**N-Methyl-N'-n-amylobenzamidine**, preparation of, 1619.  
**5-Methyl-2-aminoglyoxaline-4-carboxylic acid**, ethyl ester, 1963.  
**Methyl n-amyli ketone**, bromo-, 278.  
**5-Methyl-2-aminoxazole-4-carboxylic acid**, 1963.  
**17( $\beta$ )-Methylandrost-5-ene-3( $\beta$ ):17( $\alpha$ )-diol 3( $\beta$ )-benzoate**, 790.  
**6-N-Methylaminomesobenzanthrone**, 1625.  
**Methyl 1-anilinoethyl ketone**, and its semicarbazone, 275.  
**3-Methyl-2- $\beta$ -anilinovinylbenzimidazoles methiodide**, 1897.  
**6-Methyl-2- $\beta$ -anilinovinylquinoline methiodide**, 1897.  
**2-Methylanthraquinone**, 3:5:6:7-tetrahydroxy-, and its derivatives, 991.  
**Methylation**, biological, 1591.  
**2-Methyl-4-azabenzimidazole**, 6-bromo-, 1392.  
**2-Methyl-4-azaindole**, 200.  
**2-Methyl-5-azaindole**, 200.  
**Methyl 1-benzamidoethyl ketone** 2:4-dinitrophenylhydrazone, 315.  
**1'-Methyl-1:2-benzanthracene**, 3-hydroxy-, 3-benzoyl derivative, 173.  
**6-Methyl-3:4-benzfluorenone**, 1233.  
**7-Methyl-3:4-benzfluorenone**, 1234.  
**2-Methylbenzopteridine**, 6-hydroxy-, and its acetyl derivative, 519.  
**2-Methylbenzoxazole hydrochloride**, 2153.  
**[2-(3-Methylbenzoxazole)][3-(4-methylidihydro- $\beta$ -quinindene)]-dimethincyanine iodide**, 1897.  
**2-Methyl-5:6-benzquinoline**, 4-amino-, and 4-chloro-, 1287.  
**2-Methyl-6:7-benzquinoline**, 4-amino-, and 4-hydroxy-, 1288.  
**8-chloro-4-amino- and -4-hydroxy-**, 1289.  
**2-Methyl-7:8-benzquinoline**, 4-amino-, 1288.  
**1'- and 6-amino-, and 1'-nitro-**, 1295.  
**4-Methyl-5:6-benzquinoline**, 2-amino-, 1292.  
**4-Methyl-7:8-benzquinoline**, 2-amino-, 1292.  
**2-Methyl-6:7-benzquinoline-3-carboxy-(2'-carboxy-3'-naphthyl)-amide**, 4-hydroxy-, 1288.  
**5-Methylbenz-1-thia-2:3-diazole**, and 7-nitro-, 1009.  
**[2-(3-Methylbenzthiazole)][3-(4-methylidihydro- $\beta$ -quinindene)]-dimethincyanine iodide**, 1898.  
**p-Methylbenzyl methyl sulphide**, p-amino-, hydrochloride, 1504.  
**Methylbenzylmalonic acid**, amino-p-amino-, acetyl derivative, ethyl ester, and its derivatives, 87.  
**p-Methylbenzyl methyl sulphone**, p-amino-, hydrochloride, 1504.  
**Methyl 2-bromoethyl ketones**, bromo-, and chloro-, 280.  
**Methyl 1-bromo-n-propyl ketone**, 277.  
**Methyl 2-bromovinyl ketone**, chloro-, 280.  
**2-Methylbut-3-ene**, 2-chloro-, 530.  
 $\omega$ -Methyl- $\omega$ -n-butylacetophenone, and its 2:4-dinitrophenylhydrazone, 1743.  
**6-Methyl-2-isobutylcinchoninic acid**, 108.  
**N<sup>1</sup>-Methyl-N<sup>2</sup>-n-butylidicyandiamide**, 1650.  
**Methyl butyl ketones**, bromo-, 278.  
**2-Methyl-2-isobutylquinoline**, and its picrate, 108.  
**S-Methyl-N'-butylisothioureas**, N-cyano-, 1633.  
**2-Methylcarbamylphenylthioacetic acid**, 84.  
**4-Methyl-5-( $\omega$ -carboxy-n-pentyl)iminazole-2-thione**, 1553.  
**4-Methyl-5-( $\omega$ -carboxy-n-pentyl)iminazol-2-one**, 1553.  
**Methyl 2-chloroethyl ketone**, bromo-, 280.  
**Methyl 2:2-dichloroethyl ketone**, chloro-, 280.  
**Methyl 1:2:2-trichloromethyl ketone**, chloro-, 280.  
**Methyl 3-chlororovinyl ketone**, bromo-, 278.  
**Methyl 2-chlorovinyl ketones**, bromo-, and chloro-, 280.  
**Methyl 1:2-dichlorovinyl ketone**, chloro-, oxime and semi-carbazone, 281.  
**2-Methylchroman-4-one**, 7-hydroxy-, and its derivatives, 1611.  
**2-Methylcinchoninic acid**, 6-bromo-, 108.  
**3-Methylcinnoline**, 6-bromo-4-hydroxy-, 6-chloro-4-hydroxy-, 4-hydroxy-, and its acetyl derivative, 6-nitro-4-hydroxy-, 357.  
**6-nitro-4-amino-, 8-nitro-4-amino-, and its acetyl derivative**, 360.  
**7-Methylcinnoline**, 4-chloro-8-nitro-, 4-hydroxy-, and its acetyl derivative, 8-nitro-4-amino- and 4-hydroxy-, and 6-nitro-4-hydroxy-, 1705.  
**8-Methylcinnoline**, 4-amino-, 4-hydroxy-, nitro-4-amino-, and nitro-4-hydroxy-, 1706.  
**Bz-Methylcinnolines**, 4-hydroxy-, and 8-nitro-4-hydroxy-, preparation and reactions of, 1702.  
**3-Methylcoumaran**, 6-hydroxy-, and its 6-benzyl derivative, 2258, 2259.  
**5-Methylcoumaran**, 6-hydroxy-, and its derivatives, 2258.  
 $\beta$ -3-Methylcoumaran-5-acrylic acid,  $\beta$ -6-hydroxy-, 6-acetyl derivative, 2259.  
**7-Methyl- $\beta$ -coumaranone-2-carboxylic acid**, ethyl ester, 1673.  
**3-Methylcoumarone-2-carboxylic acid**, 6-hydroxy-, 6-acetyl derivative, 2258.  
**5'-Methylcoumarono-(2':3';3:4)-coumarin**, 7-hydroxy-, and 5:7- and 7:8-dihydroxy-, and their acetates, 1673.  
**7'-Methylcoumarono-(2':3';3:4)-coumarin**, 7-hydroxy-, and its derivatives, 1673.  
**1-Methyl-4-(cyanophenylmethylene)piperidine hydrochloride**, 808.  
**Methyldi-(3-chloroallyl)amine**, preparation of, 2182.  
**Methyldi-(2-chloroethyl)amine**, compounds related to, 2174.  
**Methylidicyandiamide**, preparation of, 1633.  
**Methyldi-(2-fluoroethyl)amine**, 2176.  
**2-Methyl-5:10-dihydroarsacridine**, 10-chloro-, 295.  
**3-Methyl-5:10-dihydroarsacridine**, 10-chloro-, 298.  
**1'-Methylhydro-1:2-benzanthracene**, dihydroxy-, and its diacetate, 172.  
**3-Methyl-2:3-dihydrobenzthiazoles**, 2-imino-, spectra of, absorption, ultra-violet, 1497.  
**20-Methylidihydrocholanthrene**, dihydroxy-, and its diacetate, 173.  
**3'-Methyl-2':3'-dihydrofuran(4':5':6:7)coumarin**, 2259.  
**3'-Methyl-2':3'-dihydrofuran(4':5':6:7)coumarin-3-carboxylic acid**, 2259.  
**3-Methyl-5:6-dihydro- $\gamma$ -pyrone-2-carboxylactone**, 3-hydroxy-, and its bromo-derivative, 1298.  
**5-Methyl-5:11-dihydroquindoline**, 11-imino-, 921.  
**6-Methyl-5:6-dihydouracil**, 5,5-dichloro-6-hydroxy-, action of hydrochloric acid on, 1988.  
**Methyl-3-dimethylaminomethylindoles**, 708.  
**8-Methyl-2:6-dioxapyrrolizidine**, 8-hydroxy-, and its derivatives, 1906.  
**3'-Methyldiphenyl sulphide**, 2:6'-dinitro-, 2020.  
**4-Methyldiphenyl sulphide**, 2:2'-dinitro-, 2020.  
**2:6:2'-trinitro**, 2022.  
**5-Methyldiphenyl sulphide**, 2:3:4'-trinitro-, 2020.  
**4-Methyldiphenylamine**, tri- and tetra-nitro-derivatives, 1993.  
**3'-Methyldiphenylamine-2-carboxylic acid**, 3'-trifluoro-, and its p-nitrobenzyl ester, 33.  
**4'-Methyldiphenylmethane**, 2-amino-, 295.  
**5-Methyldiphenylmethane**, 2-amino-, and its derivatives, 297.  
**5-Methyldiphenylmethane-2-arsonic acid**, 298.  
**Methyldithiohydantoin**, acetyl derivatives, 206.  
**Methylene-blue**, absorption of, by cells of *Bacterium lactis aerogenes*, 2290.  
**Methylene compounds**, reactive, addition of, to  $\alpha$ -cyanoprene, 232.  
**4-Methylene-2-thiothiazolone**, 4-hydroxy-, 1339.  
**N<sup>1</sup>-Methyl-N<sup>2</sup>-ethylidicyandiamide**, 1650.  
**3-Methyl-2-ethylindole**, preparation of, 277.

- Methyl ethyl ketone, bromination of, 272.  
 Methyl ethyl ketone, amino-, *a*-bromopropionyl derivative, 1857.  
 oximino-, 1863.  
 Methyl ethyl ketoimine benzenesulphonate, 1518.  
 3'-Methyl-3-ethyloxathiacarbocyanine iodide, 690.  
 3-Methyl-4-ethylphenol, 6-amino-, 2146.  
 4-Methyl-5-ethylthiazole, 2-amino-, and its picrate, 277.  
 [2-(4-Methyl-3-ethylthiazole)][2-(3-ethylbenzselenaazole)][ $\alpha\beta'$ -dimethin-2'-(3'-ethylbenzselenaazole)]trimethincyanine diiodide, 1883.  
 [2-(4-Methyl-3-ethylthiazole)][2-(3-ethylbenzselenaazole)]trimethincyanine iodide, 1887.  
 [2-(4-Methyl-3-ethylthiazole)][2-(3-ethylbenzthiazole)][ $\alpha\beta'$ -dimethin-2'-(3'-ethylbenzthiazole)]trimethincyanine diiodide, 1883.  
 [2-(4-Methyl-3-ethylthiazole)][2-(3-ethylbenzthiazole)]trimethincyanine iodide, 1887.  
*S*-Methyl-*N*'-ethylisothiourea, *N*-cyano-, 1633.  
 Methyl fluoroform. See Ethane, 1:1:1-trifluoro-.  
 2-N-Methylformamidobenzoic acid, 4-nitro-, 366.  
 2-Methylfuran(2':3':5:6)chromone, 7-hydroxy-, 2264.  
 1-Methylglyoxaline, 5-amino-2-mercaptop-, and its hydrochloride, 2029.  
 Methylgramines, 708.  
 6-Methylheptane, 1:6-diamino-, derivatives of, 231.  
 6-Methylcycloheptatrienone, 2-hydroxy-, 1051.  
 Methylcyclohexane, tetradecafluoro-, spectrum of, infra-red absorption, 1432.  
 5-Methylhexane-1-carboxylic acid, 5-amino-, and 5-nitro-, and their derivatives, 231.  
 5-Methylhex-1-enyl cyanide, 5-nitro-, 231.  
 5-Methylhex-2-enyl cyanide, 5-nitro-, 230.  
 $\gamma$ -(2-Methylcyclohex-1-enyl)butyric acid, synthesis of, 163.  
 5-Methylhexyl cyanide, 5-amino-, and its derivatives, and 5-nitro-, 230.  
 6-Methyl-2-*n*-hexylcinchoninic acid, 109.  
 6-Methyl-2-*n*-hexylquinoline, 109.  
 Methyl-1-hydridanone, 164.  
 2-Methylimino-4-carbethoxy-3-acetylthiazoline, 5-amino-, 5-acetyl derivative, 2030.  
 2-Methylindole, 5-hydroxy-, and its 5-acetyl derivative, 1609.  
 5:6-dihydroxy-, and its 5:6-diacetyl derivative, 2225.  
 Methylindoles, and their derivatives, 707.  
 2-(7-Methyl-3-indolyl)ethane-1-carboxylic acid, 1-amino-1-cyano-, 1-acetyl derivative, ethyl ester, 709.  
 2-(Methyl-3-indolyl)ethane-1:1-dicarboxylic acids, 1-amino-, 1-acetyl derivatives, and their ethyl esters, 708.  
 9-Methyl-1:3:4-indotriazine, 2-amino-, and its salts, 2317.  
 1-Methylisatin, condensation of, with barbituric acid, 552.  
 anti- and syn- $\beta$ -guanylhydrazones, and their salts and derivatives, 2316.  
 Methyl ketones, bromo-, preparation of, 278.  
 Methylmalonic acid, esters, 632.  
 Methyl  $\beta$ -mercaptoisobutyl ketone, and its mercury mercaptide, 1684.  
 Methylmercuric iodide, trifluoro-, 2190.  
 Methyl  $\beta$ -*p*-methylsulphonylphenylethyl ketone, chloro-, 1505.  
 2-Methylnaphthalene, derivatives, water-soluble, 182.  
 preparation of, 804.  
 2-Methyl-1:4-naphthaquinone 4-oxime-*O*-sulphonic acid, potassium salt, 185.  
 2-Methyl-1:4-naphthaquinone 4-carboxymethyl oxime, 185.  
 2-Methyl-1:4-naphthaquinone 4- $\beta$ -diethylaminoethyl oxime hydrochloride, 185.  
 2-Methyl-1-naphthol, 4-chloroamino-, 4-acetyl derivative, 184.  
 2-Methyl-1-naphthoxyacetic acid, 4-amino-, and its 4-acetyl derivative, 184.  
 N-3-Methyl-1-naphthylglycine, *N*-4-amino-, and its 4-acetyl derivative, ethyl ester, 184.  
 2-Methylnicotinamide, preparation of, 200.  
 Methyl 2-(2:4:6-*tr*nitrophenyl)ethyl sulphide, 1615.  
 Methyl 2-(2:4:6-*tr*nitrophenyl)ethyl sulphone, 1615.  
 5-Methylnona-2:7-diene, 5-nitro-1:9-dicyano-, 230.  
 5-Methylnonane, 5-nitro-1:9-dicyano-, 230.  
 5-Methylnonane-1:9-dicarboxylic acid, 5-nitro-, and its bisbenzylthiuronium salt, 232.  
 6-Methyl-2-*n*-nonylcinchoninic acid, 109.  
 5-Methyl-5-*n*-nonylhydantoin, 1388.  
 6-Methyl-2-*n*-nonylquinoline, 4-hydroxy-, 109.  
*o*-Methyl-*o*-*n*-octylacetophenone, and its 2:4-dinitrophenyl hydrazone, 1743.  
 4:4-(3'-Methylcyclopentamethylene)-3-methylthiazolidine-2-thione, 5-imino-, 1621.  
 4:4-(3'-Methylcyclopentamethylene)-3-methylthiazolid-5-one-2-thione, 1621.  
*p*-Methylphenacyl-*N*-ethylaniline, 855.  
*p*-Methylphenacyl-*N*-methylaniline, 855.  
 1- and 3-Methylphenanthridines, 9-amino-, 1540.  
 9-Methylphenanthridine, 2-amino-, 192.  
 6-amino-, and its hydrochloride, 194.  
 8-amino-, and 8-hydroxy-, and their hydrochlorides, 194.  
 Methylphosphonic acid, fluoro-, di-sec.-butyl ester, 702.  
*O*-Methylpicidic acid, esters, 259.  
 2-Methylpropan-2-ol, 1:3-dinitro-, 56, 58.  
 Methylisopropylidicyandiamide, 1633.  
 2-Methyl-1-propylene, 3-nitro-, 58.  
*N*-(*N*-Methyl-*N*'-isopropylguanyl)-*S*-methylisothiourea, 1654.  
*N*-Methyl-*N*'-isopropylguanylthiourea, 1654.  
 Methyl *n*-propyl ketone, bromo-, 277.  
 Methyl *n*- and *iso*-propyl ketones, bromination of, 276.  
 Methyl propyl ketones, bromo-, 278.  
 3-Methyl-4-*n*-propylphenol, 6-amino-, and 6-nitro-, methyl ether, 2146.  
 3-Methyl-4-*n*-propylphenoxyacetic acid, 2145.  
*S*-Methyl-*N*'-propylisothioureas, *N*-cyano-, 1633.  
 6-Methylpyridazine, 3-amino-, synthesis of, 2199.  
 3-mercaptop-, 2200.  
 6-Methyl-3-pyridazone, sulphanilamides derived from, 2195.  
 2-Methyl-3-pyridazone, 4:5-dichloro-, 2194.  
 2-Methyl-3-pyridazone-6-carboxylic acid, and its methyl ester, and 5-chloro-, and 4:5-dichloro-, 2194.  
 6-Methyl-3-pyridazone-4-carboxylic acid, 2193.  
 4-Methylpyrimidine, derivatives, condensation of, with *p*-dimethylaminobenzaldehyde, 1715.  
*N*-(6-Methyl-2-pyrimidyl)-*O*-ethylisourea, *N*-4-hydroxy-, 585.  
 7-Methylquinazoline, 2:4-dihydroxy-, 1763.  
 1-Methyl-4-quinazolone, 6- and 7-nitro-, and their *p*-toluenesulphonates, 365, 366.  
 3-Methyl-4-quinazolone, 6- and 7-nitro-, preparation and decomposition of, 365.  
 5-Methylisoquindoline, 7-nitro-, 920.  
 5-Methylquindolinium chloride,  $\psi$ -base from, 920.  
 chloride, 7-amino-, 11-amino-, and 7-nitro-, 920, 921.  
 iodide, 11-amino-, 921.  
 5-Methylisoquinindoline, and 9-nitro-, 924.  
 11-Methylquinindoline, and its 6-acetyl derivative, 923.  
 5-Methylquinindolinium chloride, and 5-nitro-, 924.  
 5-(or 7)-Methylquinoline, 3-nitro-, 2027.  
 6-Methylquinoline, 3-amino-, 3-nitro-, and 3:5-dinitro-, 2027.  
 8-Methylquinoline, 3-nitro-, 2027.  
 6- and 8-Methylquinolines, 4-hydroxy-, 894.  
 6- and 8-Methylquinoline-3-carboxylic acids, 4-hydroxy-, and their ethyl esters, 894.  
 [2-(1-Methylquinoline)][3-(4-methyldihydro- $\beta$ -quinindene)]-cyanine iodide, 1897.  
 [2- and 4-(1-Methylquinoline)][3-(4-methyldihydro- $\beta$ -quinindene)]dimethincyanine iodides, 1897.  
 1-Methyl-4-quinolone, 6-nitro-, 1709.  
 3-Methylquinolone, 2-amino-, and 2-chloro-, 2133.  
 2-chloro-, and 2-hydroxy-3-chloro-, 522.  
 5-Methylquinoxaline, 2-amino-, 7-amino-, 2-chloro-, and 2-hydroxy-, 2133, 2134.  
 6-Methylquinoxaline, 2-amino-, 2-chloro-, and 2-hydroxy-, 1312, 1313.  
 7-amino-, 2134.  
 7-Methylquinoxaline, 2-amino-2-chloro-, and 2-hydroxy-, 1312, 1313.  
 5-amino-, and its monohydrate, 2134.  
 8-Methylquinoxaline, 2-amino-, 2133.  
 5-Methylquinoxaline-3-carboxylic acid, 2-hydroxy-, 2134.  
 6- and 7-Methylquinoxaline-3-carboxylic acids, 1313.  
*O*-Methylrepandise dimethiodide, 2172.  
*O*-Methylrepandise methine dimethiodide, 2172.  
 2-Methyl ribitol, 1382.  
 Methyl-D-ribofuranoside, 2035.  
*p*-Methylstilbene, photochemical reaction of, with phenanthraquinone, 2127.  
 4-Methylstilbene, 4-bromo-, 227.  
*a*-Methylstyrene, Prins reaction with, 89.

**$\beta$ -Methylstyrene**, 2: $\beta$ -dinitro-5-hydroxy-, 5-acetyl derivative, 1609.  
 **$\beta$ : $\beta$ -dinitro-4:5-dihydroxy-, 4:5-diacetyl derivative, 2225.**

**Methylsuccinic acid**, esters, 666.

**6-Methylsulphinylnicotinamide**, 1943.

**Methylsulphonyl-**. See also Methanesulphonyl-.  
 **$p$ -Methylsulphonylacetophenone**, 603.

**$p$ -Methylsulphonylbenzamidine**, hydrochloride, anti-bacterial activity of, effect of homologation on, 1501. preparation of, 306.

**$p$ -Methylsulphonylbenzenesulphonamide**, 604.

**$p$ -Methylsulphonylbenzoic acid**, methyl ester, 1506.

**$p$ -Methylsulphonylbenzophenone**, 603.

**$p$ -Methylsulphonylbenzoylacetic acid**, ethyl ester, 1506.

**$p$ -Methylsulphonylbenzothioamide**, 1507.

**$p$ -Methylsulphonylbenzylamine** hydrochloride, antibacterial activity of, effect of homologation on, 1501.

**6-Methylsulphonylnicotinamide**, 1943.

**6-Methylsulphonylnicotinamidine**, salts, 1943.

**$p$ -Methylsulphonylphenylacetamide**, 1504.

**$p$ -Methylsulphonylphenylacetamidine**, hydrochloride, 1505.

**$p$ -Methylsulphonylphenylacetic acid**, and its ethyl ester, 1504.

**$p$ -Methylsulphonylphenylacetonitrile**, 1504.

**$\beta$ - $p$ -Methylsulphonylphenylalanine**, 1506.

**$\delta$ - $p$ -Methylsulphonylphenyl-*n*-butylamine** hydrochloride, 1506.

**$\gamma$ - $p$ -Methylsulphonylphenyl-*n*-butyramide**, 1505.

**$\gamma$ - $p$ -Methylsulphonylphenyl-*n*-butyramidine** benzoate and hydrochloride, 1505.

**$\gamma$ - $p$ -Methylsulphonylphenyl-*n*-butyronitrile**, 1505.

**4- $\beta$ - $p$ -Methylsulphonylphenylethyl-2-aminothiazole**, hydrochloride, 1505.

**2- $p$ -Methylsulphonylphenyl-6-methylpyrimidine**, 4-chloro-, and 4-hydroxy-, 1507.

**2- $p$ -Methylsulphonylphenyl-4-methylthiazole-5-carboxylic acid**, ethyl ester, 1507.

**$\beta$ - $p$ -Methylsulphonylphenylpropionamide**, 1505.

**$\beta$ - $p$ -Methylsulphonylphenylpropionamidine** benzoate and hydrochloride, 1505.

**$\beta$ - $p$ -Methylsulphonylphenylpropionitrile**, 1505.

**$\gamma$ - $p$ -Methylsulphonylphenyl-*n*-propylamine** hydrochloride, 1505.

**$p$ -Methylsulphonylphenylthioacetmorpholide**, 1504.

**2-Methylsulphonylpyridine**, 5-amino-, and 5-nitro-, 1944. 5-cyano-, 1942.

**$p$ -Methylsulphonylthioanisole**, 605.

**1-Methyl-5:6:7:8-tetrahydrophenanthridine**, 9-amino-, 1540.

**2(or 4)-Methyl-5:6:7:8-tetrahydrophenanthridine**, and its picrate, 1539.

**3-Methyl-5:6:7:8-tetrahydrophenanthridine**, 9-amino-, 1540.

**3-Methylthienylsulphonic acid**, amide and chloride of, 771.

**$p$ -Methylthioacetophenone**, 603.

**$p$ -Methylthiobenzenesulphonic acid**, 604.

**$p$ -Methylthiobenzenesulphonamide**, 604.

**$p$ -Methylthiobenzenesulphonyl chloride**, 604.

**4-Methylthio-6-dimethylhydro-1:3:5-triazine**, 2-amino-, 1655.

**2-Methylthioethanethiol**, 1895.

**2-Methylthioglyoxaline**, 4-mercaptop-, methiodide, 206.

**2-Methylthio-4-*n*-hexylthiazole**, 5-amino-, 5-acetyl derivative, 2032.

**6-Methylthionicotinamide**, 1943.

**6-Methylthionicotinamidine**, salts, 1943.

**2-p-Methylthiophenylguanidino-6-methylpyrimidine**, 4-hydroxy-, 579.

**$N^1$ - $p$ -Methylthiophenyl-*N*<sup>6</sup>-isopropylguanide** hydrochloride, 1635.

**2-Methylthiopyridine**, 5-amino-, and 5-nitro-, 1944. 5-cyano-, 1942.

**2-Methylthiothiazole**, 5-amino-, 205.

**2-2'-Methylthiovinylbenzthiazole** methiodide, 689.

**$\alpha$ -Methyltridecyclic acid**,  $\alpha$ -amino-, 1388.

**2-Methyltrimethylene sulphate**, 2-nitro-2-chloro- and -2-hydroxy-, 1904.

**Methyltryptophans**, and their derivatives, 708.

**5-Methyl-5-*n*-undecylhydantoin**, 1388.

**$\alpha$ -Methylundecyclic acid**,  $\alpha$ -amino-, 1388.

**4-Methyluracil**, 5-nitro-, piperidine salt, 1131.

**6-Methyluracil**, 5:6-dichloro-, 1988.

**5-Methylureido-2-mercapto-1-methylglyoxaline**, and its picrate, 2029.

**Methyl vinyl ketone**, chloro-, 281.

**Methylxanthines**, dissociation constants of, 765.

**Mills-Nixon effect**, 730.

**Mineral**, new, zeolitic, 127, 133.

**Molecular association**, viscosity and, 1345, 1349. asymmetry based on isotopic differentiation of hydrogen, 1085.

**compounds**. See under Compounds.

**rotation**. See under Rotation.

**structure**, correlation of, with vibrational absorption spectra, 328.

**Mordenite**, synthesis and reactions of, 2158.

**Morindin**, hydrolysis and methylation of, 567.

**$\beta$ -Morindin**, 566.

**Morindone**, derivatives of, and its dyeing properties, 567, 568.

**4-Morpholinobutylbenzyl cyanide**, and its picrate, 809.

**2-Morpholino-4-(4-dimethylaminostyryl)-6-methylpyrimidine**, 2151.

**2-Morpholinoethylbenzyl cyanide**, 809.

**2-Morpholino-5-methylhexyl cyanide**, 5-nitro-, 231.

**$\gamma$ -Morpholino- $\alpha$ -phenylbutyric acid**, ethyl ester, hydrochloride, 809.

**$\epsilon$ -Morpholino- $\alpha$ -phenylhexoic acid**, ethyl ester, 809.

**Morpholinophosphonic acid**, diethyl ester, 702.

***Mycobacterium tuberculosis***, human, polysaccharides from, 1211, 1220.

**N.**

**Naphthalene**, diamidino-derivatives from, 261. methylation of, with dimethyl ether, 1700. reaction of, with methyl alcohol, catalysed by alumina-silica catalysts, 804. with styrene, 1397. substitution in, 729. synthesis of *as*-hydrocarbons from, 1395.

**Naphthalene**, 1-halogeno-derivatives, 100. 1:5-dihydroxy-, bromination of, and its methyl ethers, 1283. 1:4-dinitro-, preparation of, 1513.

**Naphthalene series**, *anti*-diazosulphonates of, 1183.

**Naphthalene-1:1'-azo-2'-naphthol**, 4-chloro-, 1186.

**Naphthalene-1-diazosulphonic acid**, 4-chloro- and 4-nitro-, sodium salts, 1186.

**Naphthalene-2-diazosulphonic acid**, sodium salt, 1186.

**$\alpha$ -Naphthaquinone**, photo-dimerisation of, 2128.

**1:4-Naphthaquinone**, 2,6-dibromo-5-hydroxy-, preparation of, 1284.

**1:8-Naphthasultam**, action of ethereal diazomethane on, 606.

**peri-Naphthindane-7:8:9-trione**, photochemical reaction of, with stilbene, 2128.

**peri-Naphthindenone**, dihydroxy-, preparation of, 182.

**2-Naphthoic acid**, 3-amino-, 3-acetyl derivative, ethyl ester, 1288. 1-bromo-, ethyl ester, 1233. 1-hydroxy-, esters, and naphthol-blue dyes therefrom, 309.

**Naphthol-blue dyes** from 1-hydroxy-2-naphthoates, 309.

**$\beta$ -Naphthol-1-sulphonic acid**, diazosulphonates from, phthalazine reaction with, 206, 281, 597, 1026, 1249.

**Naphthoylbenzoic acids**, chloro-, and their acetoxy lactones, 1758.

**$N$ - $\beta$ -Naphthoyl-*p*-toluenesulphonamide**, 111.

**$\alpha$ -Naphthyl group**, parachor and refractivity of, 654.

**9-(1'- and 2'-Naphthyl)isoalloxazines**, 223.

**1-Naphthylamine**, 4-chloro-, and 2- and 4-nitro-, preparation of, 1183.

**$\alpha$ - and  $\beta$ -Naphthylaminomesobenzanthrones**, 1749.

**2- $\alpha$ -Naphthylaminobenzoic acid**, 2-5'-nitro-, 1291.

**2- $\beta$ -Naphthylaminobenzoic acid**, 4-chloro-, 126.

**4-(1'-Naphthylamino)diphenyl**, 3-amino-, and 3-nitro-, 222.

**2- $\beta$ -Naphthylbutane**, and its derivatives, 1397.

**$\alpha$ - and  $\beta$ -Naphthylidicyandiamides**, 1634.

**$\alpha$ -Naphthyl ethynyl ketone**, 2038.

**$N$ - $\alpha$ -Naphthylmethyl-*p*-toluidine**, 298.

**1-(1-Naphthyl)-2-(2-naphthyl)ethylene**, 1602.

**$\alpha$ -1-Naphthylpropionamide**, 1676.

**$N^1$ -2-Naphthyl-*N*<sup>6</sup>-isopropylguanide**,  $N^1$ -6-bromo-, 1635.

**1-Naphthylpyridine picrate**, 2219.

**2-(2-Naphthyl)- $\Delta$ <sup>2</sup>-pyrroline**, and its picrate, 187.

**Neocyanines** with dissimilar nuclei, 1872.

**Neodymium salts**, separation of, from cerium salts, by ion exchange, 1272.  
**Nickel**, catalytic, Raney, use of, as reducing agent, 1716.  
**Nicotinamide**, 6-chloro-, 1942.  
  6-mercapto-, 1943.  
**Nicotinamidine**, 6-mercapto-, salts, 1943.  
**Nitrates**. See under Nitrogen.  
**Nitrites**. See under Nitrogen.  
**polyNitro-compounds**, aromatic, reactions of, with alkaline sulphides, 2017.  
  monoreduction of, 1275.  
**Nitrogen**, solubility and diffusion of, in polystyrene, 1541.  
**Nitrogen tetroxide**, addition of, to olefins, 52.  
  oxidation of cellulose by, 1135.  
**Nitrates**, reduction of, to nitrites by coliform bacteria, 824, 833, 841.  
  Nitrites, utilisation of, by coliform bacteria, 824, 833, 841.  
**Nitrogen-hydrogen-oxygen linking**, 874.  
**Nitrogen-nitrogen linkings**, heat of formation of, 1187.  
**Nitro-groups**, replacement of diazonium groups by, 1512.  
**Nitro-hydrocarbons**, *p*-reactivity of, 351.  
**Nitro-paraffins**, addition of, to  $\alpha$ -cyanoprene, 227.  
  co-ordinate link in, and refractivity, 1833.  
**Nitrosyl chloride**, action of, on metals and their chlorides, 1952.  
**Nonane-2:7-diene-5:5-dicarboxylic acid**, 1:9-dicyano-, ethyl ester, 233.  
**Nonane-5-carboxylic acid**, 1:5:9-tricyano-, ethyl ester, 234.  
**Nonane-5:5-dicarboxylic acid**, 1:9-dicyano-, ethyl ester, 233.  
**2-n-Nonylcinchoninic acid**, and 6-bromo-, 109.  
**2-n-Nonylquinoline**, and 6-bromo-, and their picrates, and 6-bromo-4-hydroxy-, 109.  
**Norpethidine**, and its carbonate, 561.

**O.****Obituary notices :—**

Francis William Aston, 1468.  
Edward Charles Cyril Baly, 1721.  
Marmaduke Barrowcliff, 1475.  
George Thomas Byrne, 253.  
Bernard Shirley Dyer, 896.  
Percy Faraday Frankland, 1996.  
John Masson Gulland, 1476.  
Ernald George Justinian Hartley, 899.  
Sir Philip Joseph Hartog, 901.  
David Hooper, 253.  
Victor Lefebure, 394.  
Dorothy Jordan Lloyd, 1727.  
George Newbery, 255.  
Edgar Philip Perman, 256.  
Frederick Maurice Rowe, 2323.  
Alfred Walter Stewart, 396.  
Frank Clifford Whitmore, 1090.  
Octane, 1:6-di<sup>a</sup>mino-, and its dipicrate, 231.  
Octan-7-one-1-carboxylic acid, 6-amino-, and its hydrochloride, and 6-chloro-, and its ethyl ester, 1553.  
Octenes, intensity of double-bond valence vibration in, 1456.  
*n*-Octyl cyanide, 1-amino-, hydrochloride, 2031.  
*β*-*n*-Octylsuccinic acid, *α*-amino-, 1389.  
*p*-*n*-Octylsulphonylbenzylammonium chloride, 382.  
*p*-*n*-Octylsulphonylphenyl cyanide, 383.  
**Oestrogens**, synthetic, of triphenylethylen series, 150.  
Olefins, addition to, of dinitrogen tetroxide, 52.  
  formation of, from *n*-alkyl bromides, kinetics of, 2055.  
  from *tert*-alkyl bromides, kinetics of, 2065.  
  from alkylidimethylsulphonium salts, kinetics of, 2072, 2077, 2084, 2094.  
  from *n*-amyl, *sec*-butyl, and *isopropyl* bromides, kinetics of, 2058.  
  from *tert*-amyl- and *tert*-butyl-sulphonium salts, 2038.  
  solvent effects in, 2043.  
  temperature effects in, 2049.  
*α*-methylenic activity in, 89.  
reaction of, with organic per-acids, 1331.  
**Oleic acid**, methyl ester, autoxidation of, 2275.  
  catalytic thermal oxidation of, 343.  
**Optical inversion**, Walden's, steroids and, 1032, 1043.  
**Organic compounds**, thermochemical evaluation of bond strengths in, 1161.

**Osmium tetroxide**, oxidation with, of carcinogenic hydrocarbons, 170.  
**8-Oxa-3-azabicyclo[3:2:1]octane**, and its derivatives, 157.  
**Oxalic acid**, lead salt, thermal decomposition of, 1898.  
**Oxazoles**, 1960.  
**Oxazoles**, 4-cyano-, synthesis of, 1969.  
**Oxidation** of ethenooid fatty acids and their esters, 343.  
  with chromic acid, 1666.  
**Oxides**, properties of, at high temperatures, 1729.  
**Oxy-acids**, esters, co-ordinate link in, and refractivity, 1833.  
**Oxycelluloses**, produced by oxidation of cellulose by dinitrogen tetroxide, 1135.  
**Ozone**, structure of, 1299.

**P.**

**Palm oil**, glycerides of, and their configuration, 722.  
**Paludrine**, benzimidazole analogues of, 1366.  
**Parachor** of acetals, 616.  
  of acetylenic compounds, 674.  
  of aliphatic acids and alcohols, 1814.  
  of aliphatic carboxylic esters, 624.  
  of aliphatic disulphides, sulphides, and thiols, 1820.  
  of *n*-alkylbenzenes, 607.  
  of amines, 1825.  
  of compounds with 3- and 4-membered carbon rings, 1804.  
  of compounds with 5- and 6-membered carbon rings, 1809.  
  of cyanides, 674.  
  of esters of oxy-acids and of nitro-paraffins, 1833.  
  of ethers, 616.  
  of ethylenic compounds, 658.  
  of halogens, 644.  
  of ketones, 610.  
  of *α*-naphthyl and phenyl groups, 654.  
**Patulin**, synthesis of, 1295.  
**Pectic substances**, 2311.  
**Pectin**, sugar-beet, araban component of, 2311.  
**Pedler Lecture**, 386.  
**Penicillenic acid**, analogues of, 1060.  
**Penicillic acid**, compounds related to, 1508.  
  synthesis of, 1508.  
**Penicillin**, synthesis of, experiments on, 1964.  
***n*-Pentadecane-8-carboxylic acid**. See *α-n*-Heptylpelargonic acid.  
**cycloPentamethylenedicyandiamide**, 1633.  
*NN*-**cycloPentamethyleneguanidine**, sulphate, 1643.  
**Penta methyleneimine**, 2-imino-, 1522.  
**4:4-cycloPentamethylene-3-methylthiazolidine-2-thione**, 5-imino-, 1621.  
**4:4-cycloPentamethylene-3-methylthiazolid-5-one-2-thione**, 1621.  
**1:2:2:6:8-Pentamethyl-4-ethynylpiperidine**, 4-hydroxy-, and its 4-acetyl derivative, perchlorate, 808.  
***n*-Pentane**, 1-nitro-, preparation and physical properties of, 1847.  
**Pentan-2-ol**, 1-amino-, and its 1-benzoyl derivative, 1909.  
**Pentan-2-one**, 1-amino-, 1-benzoyl derivative, 1909.  
  tetra-bromo-, 277.  
**cycloPantanone oxime** benzenesulphonate, 1518.  
**6:12:18:24:30-Pentaacxa-3:9:15:21:27:33-hexathiapentatriacontane**, 1:35-dichloro-, and its derivatives, 44.  
**3:6:9:12:15-Pentathiheptadecane**, 1:7-dichloro-, 46.  
**Pent-3-ene**, 1-nitro-2-hydroxy-, 2-acetyl derivatives, and 1-nitro-2:3:5-dinitrohydroxy-, 3:5-dibenzoyl derivative, 1908.  
**Pent-2-ene-5:5-dicarboxylic acid**, 1-cyano-, ethyl ester, 233.  
**Pent-3-en-2-ol**, 1-nitro-, derivatives, 1907.  
**5:6-cycloPentenopyrimidine**, 2-cyanoamino-4-hydroxy-, 578.  
**cycloPentindene**, 974.  
**cycloPentyl ethyl and methyl ethers**, 1811.  
**Peracetic acid**, preparation of, and its reaction with  $\beta$ -diisobutylene, 286.  
  with diisobutylene, 1330.  
**Per-acids**, organic, reaction of, with  $\alpha$ -diisobutylene, 1328.  
  with  $\beta$ -diisobutylene, 284.  
  with olefins, 1331.  
**Perbenzoic acid**, reaction of, with diisobutylene, 1329.  
**Formic acid**, reaction of, with diisobutylene, 1329.  
**Periodates**. See under Iodine.  
**Periodic system** of the elements, 318.

- Peroxides, bond energies in, 331.  
bond strengths in, 403.  
preparation of, 2216.
- Persulphates.** See under Sulphur.
- Pethidine.** homologues of, and their pharmacology, 559.
- Fitzinger reactions in synthesis of quinoline derivatives, 106.
- Phenacyl-N-alkylarylamines,** stability and reactions of, 847.
- Phenacylarylamines,** conversion of, into indoles, 847, 858.  
isomerisation and indolisation of, 858.
- Phenacylp-chloroaniline,** 869.
- Phenacyl-3:4-dimethylaniline,** 869.
- Phenacyl-p-ethylaniline,** 869.
- 1-Phenacyl-2(or 3)-phenyl-5-ethylindole,** 870.
- 1-Phenacyl-2(or 3)-phenyl-5-methylindole,** 869.
- Phenantraquinone,** photochemical reactions of, with ethylenes, 2126.
- Phenanthridine,** 2:7:9-triamino-, and 9-chloro-2:7-dinitro-, 1292.
- Phenanthridine series,** syntheses in, 1284.
- Phenantranidinium salts,** trypanocidal properties of, 188.
- Phenanthro(9':10':2:3)-5-azaquinoxaline,** 7-bromo-, 1391.
- p-Phenanthroline,** 1-amino-, 1290.
- Phenazine,** 1:3-dihydroxy-, and its 1:3-diacetyl derivative, 2318.
- Phenols,** oxidation of, by persulphates, 2303.  
oxidation products of, 116.
- Phenolsulphonic acids,** 2-amino-, nuclear-substituted, preparation of, 212.
- Phenol-2-sulphonic acid,** 3:4- and 5:4-dichloro-, and their potassium salts, 213, 214.
- Phenol-6-sulphonic acid,** 2:3:4-trichloro-, and its sodium salt, 3:4- and 4:5-dichloro-2-amino-, and 3:4-dichloro-2-nitro-, and its sodium salt, 214.
- N-Phenoxyacetyl-p-toluenesulphonamide,** 111.  
" " 7-Phenoxycholesterol, and its esters, 1803.
- 4-Phenoxyacinnoline,** 8-chloro-, and 8-nitro-, 1705.  
6-nitro-, 359.
- 4-Phenoxy-3-methylcinnoline,** 358.
- 4-Phenoxy-3-methylcinnoline,** 6- and 8-nitro-, 358.
- 4-Phenoxy-7-methylcinnoline,** and 8-nitro-, 1705.
- 4-Phenoxy-8-methylcinnoline,** and nitro-, 1706.
- 4-Phenoxyquinazoline,** 6- and 7-nitro-, 364.
- 2-Phenoxyquinoline,** 6-nitro-, 1708.
- 4-Phenoxyquinoline,** 6- and 8-nitro-, 1708.
- Phenyl alkyl sulphides,** preparation and properties of, 1822.  
*n*-amyl and hexyl sulphides, 1823.  
aryl sulphides and sulphonides, preparation of, with phenylmagnesium bromide, 528.
- 4-nitro-1-naphthyl sulphide,** 2:4-dinitro-, 2022.  
2:4-dinitro-1-naphthyl sulphides, 2- and 4-nitro-, 2022.  
4:5-dinitro-1-naphthyl sulphide, 2022.
- n*-propyl ether, *p*-bromo-, preparation of, 153.
- 2-thienyl sulphide and sulfoxide, 526.
- 2-thienyl sulphide, *p*-nitro-, 527.
- 7-Phenylacenaphthene,** and its trinitrobenzene derivative, 1397.
- 7-Phenylacenaphthylene,** and its derivatives, 1397.
- 2-Phenylacetamidodiphenyl,** 2-*p*-nitro-, 196.
- Phenylacetic acid,** halogen derivatives, preparation of, 1251.
- Phenylacetic acids** from 2-nitro-derivatives of vanillin, *iso*-vanillin, and veratraldehyde, 376.
- Phenylacetic acids,** bromo-, and chloro-, and their derivatives, 1254.
- Phenylacetophthalide,** and *o*- and *p*-bromo-, 1255.
- Phenylacetone,** 2-nitro-4-amino-, oxime, 1718.  
2:4-dinitro-, derivatives of, 1717.
- p*-Phenylacetophenone** phenylethyl-, phenylmethyl-, and *p*-tolyl-hydrazones, 854.
- Phenylacetylmethylecarbinol** *p*-nitrobenzoate, 1676.
- N-Phenylacetyl-p-toluenesulphonamide,** 111.
- β-Phenylacrylamide,** *α*-amino-, and its isomeride, 1063.  
6- or 7-Phenylalloxazine, 222.
- α-Phenylallyl esters,** bimolecular isomerisation in, 1.
- 4-Phenyl-1-allylpiperidine-4-carboxylic acid,** ethyl ester, and its hydrochloride, 561.
- Phenylammonium benzenesulphonate,** *p*-bromo-, 1525.  
methanesulphonate, 1522.
- 4-Phenyl-1-*n*-amylopliperidine-4-carboxylic acid,** ethyl ester, and its hydrochloride, 561.
- 1-Phenyl-1-*p*-anisyl-2-*p*-ethoxyphenylethylene,** 2-bromo-, 155.
- Phenylarsonic acid,** *p*-thiocyanato-, 375.
- Phenyl aryl sulphones,** preparation of, with phenylmagnesium bromide, 528.
- N-Phenylbenzimino-5:7-dichloro-8-quinolyl ether,** 1605.
- 1-Phenylbenziminoethyl ether,** 1523.
- N-Phenylbenzimino-β-naphthyl ether,** 1523.
- N-Phenylbenzimino-phenyl ether,** 1523.
- N-Phenylbenzimino-8-quinolyl ether,** 1604.  
*N*-*o*-chloro-, 1605.
- 9-Phenyl-7:8-benzoisoalloxazine,** 222.
- 2-Phenyl-5:6-benz-1:3-oxazine,** 5:2'-dinitro-6'-hydroxy-, and its acetyl derivative, 1609.
- N-Phenyl-*N*<sup>+</sup>-benzylbenzimidine,** and its picrate, 519.
- β-Phenyl-S-benzylcysteine,** 1063.
- 2-Phenyl-4-benzylideneoxazol-5-one,** 315.
- Phenyl α-bromo-*p*-methoxybenzyl ketone,** 866.
- γ-Phenylbutaldehyde,** *γ*-*o*-hydroxy-, and its 2:4-dinitrophenylhydrazone, 1577.
- 3-Phenylbutane-1:3-diol,** derivatives of, 93.
- 3-Phenylbutan-3-ol,** 1-chloro-, 93.
- Phenyl-*n*-butylcarbamic acid,** ethyl and methyl esters, 878.
- N<sup>1</sup>-Phenyl-N<sup>5</sup>-*n*-butyldiguanide,** N<sup>1</sup>-*p*-chloro-, 1643.
- 2-N<sup>1</sup>-Phenyl-N<sup>2</sup>-*n*-butylguanido-N<sup>3</sup>-4-β-diethylaminoethylamino-6-methylpyrimidine,** 2-N<sup>1</sup>-*p*-chloro-, and its dihydrochloride, 593.
- N-Phenyl-N<sup>2</sup>-*n*-butylguanylthiourea,** *N*-*p*-chloro-, 1642.
- 4-Phenyl-1-sec-butylpiperidine-4-carboxylic acid,** ethyl ester, and its hydrochloride, 561.
- 3-Phenyl-3-isobutyrylpropanecarboxylic acid,** 1744.
- 3-Phenyl-3-isobutyrylpropyl cyanide,** 1744.
- Phenylcarbamic acid,** *o*-bromo-, and 2:5-dichloro-, ethyl esters, 881.  
4-chloro-2-nitro-, ethyl ester, 878.
- 2-Phenylcarbamylphenylthioacetic acid,** and its *N*-phenylimide, 85.
- N-Phenyl-2:4-dichlorobenzamidine,** and its salts, 306.
- 1-Phenyl-1-*p*-chlorophenyl-2-*p*-acetylphenylethylene,** and its oxime, 1080.
- 2-Phenyl-2-*p*-chlorophenyl-1-*p*-nitrophenylethylene,** 1-bromo-, 1081.
- 3-Phenylcoumarin,** 4:7-dihydroxy-, and its derivatives, 175.
- β-Phenylcysteine hydrochloride,** 1065.  
synthesis of, 1060.
- β-Phenyl-*a*-deuteropropionic acid,** preparation of, and attempted asymmetric synthesis, 1086.
- Phenyldicyandiamide,** *p*-chloro-, and *p*-iodo-, 1634.  
*p*-fluoro-, 1634.
- 2-Phenyl-1:1-di-*p*-ethoxyphenylethylene,** 2-bromo-, 155.
- 2-Phenyl-5:3'-4'-diethoxyphenyl-4-methylloxazole,** 890.
- N-Phenyl-N-(4:2'-diethylaminoethylamino-6-methyl-5-ethyl-2-pyrimidyl)formamidine,** N<sup>1</sup>-*p*-chloro-, 1716.
- N-Phenyl-N-(4:2'-diethylaminoethylamino-6-methyl-2-pyrimidyl)formamidine,** N<sup>1</sup>-*p*-chloro-, 1716.
- N-Phenyl-N'N'-di-(2-fluoroethyl)urea,** 2176.
- 3-Phenyl-3:4-dihydrophthalazine,** 1:4-dihydroxy-3-(2'-chloro-5'-nitro-), 209.
- 3-Phenyl-3:4-dihydrophthalazine-4-acetic acid,** 1-hydroxy-, and its derivatives, 1250.  
1-hydroxy-3-(2':4':6'-tribromo-), and its derivatives, 598.  
1-hydroxy-3-2'-chloro-, and its derivatives, 1027.  
1-hydroxy-3-3'-chloro-, and its derivatives, 600.  
1-hydroxy-3-4'-chloro-, 601.  
1-hydroxy-3-(2'-chloro-5'-amino-), 308.  
1-hydroxy-3-(2'-chloro-5'-nitro-), and its derivatives, 207.
- 3-Phenyl-3:4-dihydrophthalazine-1-sulphonic-4-acetic acid,** 3-(2':4':6'-tribromo-), sodium hydrogen salt, 598.  
3-2'-chloro-, sodium hydrogen salt, 1027.  
3-3'-chloro-, sodium hydrogen salt, 600.  
3-4'-chloro-, sodium hydrogen salt, 601.  
3-(2'-chloro-5'-nitro-), sodium hydrogen salt, 207.
- Phenyl 3:4-dimethoxybenzyl ketone,** 2:4-dihydroxy-, 175.
- N-Phenyl-N-(4:6-dimethoxy-2-pyridyl)formamidine,** *N*'-*p*-chloro-, 1716.
- 2-Phenyl-4-*p*-dimethylaminobenzylidene-5-oxazolone,** 87.
- α-Phenyl-*a*-(2-dimethylaminoethyl)butyrolactone,** and its hydrochloride, 808.

- 4-Phenyl-3:3-dimethylbutanecarboxylic acid, and its *S*-benzylthiuronium salt,** 1743.  
**lactone,** 1745.
- N<sup>1</sup>-Phenyl-N<sup>2</sup>:N<sup>5</sup>-dimethyldiguanide,** *N*<sup>1</sup>-*p*-chloro-, and its hydrochloride, 1641.
- N<sup>1</sup>-Phenyl-N<sup>4</sup>:N<sup>5</sup>-dimethyldiguanide,** *N*<sup>1</sup>-*p*-chloro-, and its hydrochloride, 1651.
- N<sup>1</sup>-Phenyl-N<sup>5</sup>:N<sup>5</sup>-dimethyldiguanide,** and its hydrochloride, and *N*<sup>1</sup>-*p*-chloro-, 1644.
- N<sup>1</sup>-Phenyl-N<sup>5</sup>:N<sup>5</sup>-dimethyl-N<sup>2</sup>-ethyldiguanide,** *N*<sup>1</sup>-*p*-chloro-, acetate, 1645.
- N-Phenyl-N'-(*NN*-dimethylguanyl)-S-ethylisothiourea,** *N*-*p*-chloro-, 1642.
- N-Phenyl-N'-(*NN*-dimethylguanyl)thiourea,** and *N*-*p*-chloro-, 1642.
- 2-Phenyl-4:5-dimethyliminazole,** 734.
- 2-Phenyl-4:5(or 5:6)-dimethylindole,** 870.
- 1-Phenyl-2:4-dimethylnaphthalene,** 1-*amino*-, and its acetyl derivative, and 1-*nitro*-, 1139.
- N<sup>1</sup>-Phenyl-N<sup>2</sup>:N<sup>5</sup>-dimethyl-N<sup>5</sup>-isopropylidiguanide,** *N*<sup>1</sup>-*p*-chloro-, and its acetate, 1641.
- N<sup>1</sup>-Phenyl-N<sup>2</sup>:N<sup>5</sup>-disopropylidiguanide,** *N*<sup>1</sup>-*p*-chloro-, hydrochloride, 1644.
- N<sup>1</sup>-Phenyl-N<sup>4</sup>:N<sup>5</sup>-disopropylidiguanide,** *N*<sup>1</sup>-*p*-chloro-, and its hydrochloride, 1651.
- 2'-Phenyl-2:6'-diquinolyl,** 2'-*p*-*amino*-, and -*nitro*-, 2011.
- Phenyldithiobiuret,** *p*-chloro-, 1653.
- o-Phenylene dicyanide,** 3:6-dihydroxy-, 3:6-diacetyl derivative, 305.
- p-Phenylenebis dichloroarsine,** 2212.
- Phenyl *p*-ethoxybenzyl ketone,** preparation of, 152.
- 2-Phenyl-1-ethoxyphenyl-1-*p*-*n*-propoxypheylethylene,** 2-bromo, 155.
- 1-Phenylethyl alcohol,** 2:2:2-trichloro-1-*p*-*amino*-, and its 1-*p*-acetyl derivative, 1459.
- 2-(2':6'-dinitro-4'-*amino*)-,** and its diacetyl derivative, 1277.
- 2-Phenylethyl alkyl and amyl sulphides,** 2-(2:4:6-trinitro-), 1612.  
 chloride, 2-(2:4:6-trinitro-), 1614.
- N<sup>1</sup>-Phenyl-N<sup>2</sup>-ethyl-N<sup>5</sup>-*n*-butyldiguanide,** *N*<sup>1</sup>-*p*-chloro-, hydrochloride, 1645.
- N<sup>1</sup>-Phenyl-N<sup>5</sup>-ethyl-N<sup>2</sup>-*n*- and -*iso*-butyldiguanides,** *N*<sup>1</sup>-*p*-chloro-, hydrochlorides, 1644.
- 4-Phenyl-1-ethyldecahydroquinoline,** and its picrate, 2016.
- 4-Phenyl-1-ethyldecahydroquinoline,** 4-*p*-hydroxy-, hydrobromide, 2017.
- N<sup>1</sup>-Phenyl-N<sup>2</sup>-ethylidicyandiamide,** *N*<sup>1</sup>-*p*-chloro-, and *N*<sup>1</sup>-*p*-iodo-, 1639, 1640.
- N<sup>1</sup>-Phenyl-N<sup>5</sup>-ethylidiguanide,** *N*<sup>1</sup>-*p*-chloro-, 1643.
- 1-Phenylethyldimethylsulphonium salts,** olefin formation from, 2077.
- 2-Phenylethyldimethylsulphonium salts,** olefin formation from, 2072.
- 2-N<sup>1</sup>-Phenyl-N<sup>2</sup>-ethylguanidino-N<sup>3</sup>-4-β-diethylaminoethyl-amino-6-methylpyrimidine,** 2-*N*<sup>1</sup>-*p*-chloro-, 593.
- N-Phenyl-N'-ethylguanylthiourea,** *N*-*p*-chloro-, 1642.
- 3-Phenyl-3-ethylpentanecarboxylic acid,** and its *S*-benzylthiuronium salt, 1744.
- 4-Phenyl-1-ethylpiperidine-4-carboxylic acid,** ethyl ester, 561.
- N<sup>1</sup>-Phenyl-N<sup>2</sup>-ethyl-N<sup>5</sup>-isopropylidiguanide,** *N*<sup>1</sup>-*p*-bromo-, hydrochloride, 1645.  
*N*<sup>1</sup>-*p*-chloro-, and its hydrochloride, 1641, 1644.
- N<sup>1</sup>-Phenyl-N<sup>4</sup>-ethyl-N<sup>5</sup>-isopropylidiguanide,** *N*<sup>1</sup>-*p*-chloro-, and its hydrochloride, 1652.
- N<sup>1</sup>-Phenyl-N<sup>5</sup>-ethyl-N<sup>2</sup>-*n*- and -*iso*-propylidiguanides,** *N*<sup>1</sup>-*p*-chloro-, hydrochlorides, 1644.
- 2-Phenylethylpyridinium salts,** 2-(2:4:6-trinitro-), 1614.
- 2-Phenylethylquinolinium chloride,** 2-(2:4:6-trinitro-), 1615.
- 3-Phenyl-3-ethylundecanecarboxylic acid,** 1745.
- Phenylglycine,** *m*-bromo-, and its ethyl ester, and nitroso-, 2309.  
*N*-nitroso-, and its benzyl ester, dipole moments of, 2269.
- Phenyl group,** parachor and refractivity of, 654.
- Phenylguanidine,** *p*-chloro-, 590.
- 2-Phenylguanidine-4-amino-6-methylpyrimidines,** 4-substituted, 580.
- 4-Phenylguanidino-2-γ-di-*n*-butylaminopropylamino-6-methylpyrimidine,** 4-*p*-chloro-, 591.
- 2-Phenylguanidino-4-β-diethylaminoethylamino-5:6-dimethylpyrimidine,** 2-*p*-chloro-, and its dihydrochloride, 578.
- 2-Phenylguanidino-4-β-diethylaminoethylamino-5:6-cyclopentenopyrimidine,** 2-*p*-chloro-, 579.
- 2-Phenylguanidino-4-β-diethylaminoethylamino-6-methyl-5-*n*-butylpyrimidine,** 2-*p*-chloro-, 578.
- 2-Phenylguanidino-4-β-diethylaminoethylamino-6-methyl-5-ethylpyrimidine,** 2-*p*-chloro-, 578.
- 2-Phenylguanidino-4-β-diethylaminoethylamino-6-methyl-pyrimidine,** 2-*p*-amino-, 581.
- 4-Phenylguanidino-2-β-diethylaminoethylamino-6-methylpyrimidine,** 4-*p*-chloro-, 591.
- 4-Phenylguanidino-6-β-diethylaminoethylamino-2-methylpyrimidine,** 4-*p*-chloro-, 593.
- 2-Phenylguanidino-4-β-diethylaminoethylamino-5:6-cyclopentenopyrimidine,** 2-*p*-chloro-, 578.
- 2-Phenylguanidino-4-β-diethylaminoethylamino-6-phenylpyrimidine,** 2-*p*-chloro-, 578.
- 2-Phenylguanidino-4-β-diethylaminoethylaminopyrimidine,** 2-*p*-chloro-, 578.
- 2-Phenylguanidino-4-δ-diethylamino-α-methylbutylamino-6-methylpyrimidine,** 2-*p*-chloro-, and its dipicrate, 585.
- 2-Phenylguanidino-4-γ-diethylaminopropylamino-5:6-dimethylpyrimidine,** 2-*p*-chloro-, 578.
- 2-Phenylguanidino-4-γ-diethylaminopropylamino-6-methyl-5-n-butylpyrimidine,** 2-*p*-chloro-, 578.
- 2-Phenylguanidino-4-γ-diethylaminopropylamino-6-methyl-5-ethylpyrimidine,** 2-*p*-chloro-, 578.
- 2-Phenylguanidino-4-γ-diethylaminopropylamino-6-methyl-5-*n*-propylpyrimidine,** 2-*p*-chloro-, and its dihydrochloride, 578.
- 4-Phenylguanidino-2-γ-diethylaminopropylamino-6-methylpyrimidine,** 4-*p*-chloro-, 591.
- 4-Phenylguanidino-6-γ-diethylaminopropylamino-2-methylpyrimidine,** 4-*p*-chloro-, 593.
- 2-Phenylguanidino-4:6-dimethylpyrimidine,** 2-*p*-chloro-, 581.
- 2-Phenylguanidino-5:6-dimethylpyrimidine,** 4-chloro- and 4-hydroxy-2-*p*-chloro-, 577.
- 2-Phenylguanidino-5:6-cyclohexenopyrimidine,** 4-chloro-2-*p*-chloro-, and 4-hydroxy-2-*p*-chloro-, 579.
- 2-Phenylguanidino-4-hydroxy-6-phenylpyrimidine,** 2-*p*-chloro-, 578.
- 2-Phenylguanidino-6-methyl-5-*n*-propylpyrimidine,** 4-chloro-2-*p*-chloro-, 578.
- 2-Phenylguanidino-4-methylpyrimidine,** 4-hydroxy-2-3':5'-dichloro-, 579.
- 2-Phenylguanidino-6-methylpyrimidine,** 4-hydroxy-2-(2':5'-dichloro-), 579.
- 4-Phenylguanidino-6-methylpyrimidine,** 2-hydroxy-4-*p*-chloro-, hydrochloride, 590.
- 2-Phenylguanidino-5:6-cyclopentenopyrimidine,** 4-hydroxy-2-*p*-chloro-, 579.
- N-Phenylguanyl-S-benzylisothiourea,** *N*-*p*-chloro-, hydrochloride, 1653.
- N-Phenylguanyl-N'-*n*-butylthiourea,** *N*-*p*-chloro-, and its hydrochloride, 1651.
- N-Phenylguanyl-O-ethyl-N'-isopropylisourea,** *N*-*p*-chloro-, and its acetate and hydrochloride, 1652.
- N-Phenylguanyl-N'-ethylthiourea,** *N*-*p*-chloro-, and its hydrochloride, 1651.
- N-Phenylguanyl-S-ethylisothiourea,** *N*-*p*-chloro-, hydriodide, 1653.
- N-Phenylguanyl-S-methyl-N'-isopropylisothiourea,** *N*-*p*-chloro-, and its hydrochloride, 1652.
- N-Phenylguanyl-N'-methylthiourea,** *N*-*p*-chloro-, and its hydrochloride, 1651.
- N-Phenylguanyl-S-methylisothiourea,** *N*-*p*-chloro-, hydriodide, 1653.
- N-Phenylguanyl-N'-*n*-propylthiourea,** *N*-*p*-chloro-, and its hydrochloride, 1651.
- N-Phenylguanyl-N'-isopropylthiourea,** *N*-*p*-chloro-, and its hydrochloride, 1651.
- N-Phenylguanyl-S-isopropylisothiourea,** *N*-*p*-chloro-, hydrobromide, 1653.
- Phenylnuanylthiourea,** *p*-chloro-, and its hydrochloride, 1653.
- p-iodo,** hydrochloride, 1654.

- 4-Phenyl-3:4:5:6:7:8-hexahydrocoumarin**, 2015.  
**4-Phenyl-3:4:5:6:7:8-hexahydrocoumarin-3-carboxylic acid**, ethyl ester, 2014.  
**N<sup>1</sup>-Phenyl-N<sup>5</sup>-cyclohexyl-N<sup>1</sup>-isopropylguanide**, N<sup>1</sup>-p-chloro-, and its hydrochloride, 1652.  
**2-Phenyl-4-(1-hydroxyethylidene)oxazol-5-one**, 315.  
**2-Phenyl-4-(1-hydroxypyropylidene)oxazol-5-one**, 315.  
**2-Phenylimino-3-acetyl-4-phenylthiazoline**, 5-amino-, 5-acetyl derivative, 1266.  
**2-Phenylindole**, 5-chloro-, 870.  
**2-p-Phenylindole**, and 1-nitroso-, 854.  
**Phenylmagnesium bromide**, use of, for preparation of phenyl aryl sulphides, sulphones, and sulfoxides, 528.  
**N-Phenyl-N'-methylacetamidine**, 1521.  
**N-Phenyl-N'-methylbenzamidine**, preparation of, 1619.  
**N<sup>1</sup>-Phenyl-N<sup>2</sup>-methyl-N<sup>5</sup>-n-butylguanide**, N<sup>1</sup>-p-chloro-, hydrochloride, 1645.  
**N<sup>1</sup>-Phenyl-N<sup>4</sup>-methyl-N<sup>5</sup>-n-butylguanide**, N<sup>1</sup>-p-chloro-, and its hydrochloride, 1652.  
**4-Phenyl-1-(1'-methylbutyl)piperidine-4-carboxylic acid**, ethyl ester, and its hydrochloride, 561.  
**Phenylmethylecarbamyl fluoride**, 2186.  
**2-Phenyl-4-methyl-5-chloromethyliminazole** hydrochloride, 734.  
**N<sup>1</sup>-Phenyl-N<sup>2</sup>-methyldicyandiamide**, N<sup>1</sup>-p-bromo-, N<sup>1</sup>-p-chloro-, and N<sup>1</sup>-p-iodo-, 1639, 1640.  
**1-Phenyl-2-methyl-2-3'-diethylaminopropylethylene**, 1-cyano-, 808.  
**N<sup>1</sup>-Phenyl-N<sup>4</sup>-methyl-N<sup>5</sup>-diguanide**, N<sup>1</sup>-p-chloro-, and its hydrochloride, 1651.  
**3-Phenyl-4-methyl-3:4-dihydrophthalazine**, 1:4-dihydroxy-3-(2'-chloro-5'-nitro-), 209.  
**1-Phenyl-4-S-methylisodithiobiuret**, 1-p-chloro-, 1654.  
**2-Phenyl-5-methylglyoxaline-4-carboxylic acid**, and its ethyl ester, 1962.  
**2-N<sup>1</sup>-Phenyl-N<sup>2</sup>-methylguanidino-N<sup>3</sup>-4-β-diethylaminoethyl-amino-6-methylpyrimidine**, 2-N<sup>1</sup>-p-chloro-, and its trihydrochloride, 593.  
**2-N<sup>1</sup>-Phenyl-N<sup>2</sup>-methylguanidino-N<sup>3</sup>-4-γ-diethylaminopropyl-amino-6-methylpyrimidine**, 2-N<sup>1</sup>-p-chloro-, and its trihydrochloride, 593.  
**2-Phenyl-6-methylheptane**, 49.  
**2-Phenyl-6-methylhept-2-ene**, 49.  
**Phenylmethylisohexylcarbinol**, 49.  
**2-Phenyl-5-methyl-4-hydroxymethyliminazole**, and its picrate, 734.  
**2-Phenyl-5-methyliminazole-4-carboxyaldehyde**, and its 2:4-dinitrophenylhydrazone, 734.  
**2-Phenyl-1-methylindole**, 2-p-chloro-, and 2-p-chloro-3-nitroso-, 854.  
**2-Phenyl-4-methyloxazole**, and its picrate, 1963.  
**2-Phenyl-5-methyloxazole**, and its picrate, 1962.  
**1-Phenyl-p-methylphenacylaniline**, 866.  
**1-Phenyl-p-methylphenacyl-N-ethylaniline**, 867.  
**1-Phenyl-p-methylphenacyl-N-methylaniline**, 866.  
**9-Phenyl-10-methylphenanthridinium bromide**, 2:9-p-diamino-, 193.  
  8:9-p-diamino-, 195.  
  chloride, 2:9-p-diamino-, and its 2-acetyl derivative, and 2-amino-9-p-nitro-, 193.  
  6:9-p-diamino-, and 6- and 8-amino-9-p-nitro-, 195.  
**3-Phenyl-1-methylphthalaz-4-one**, 2':4':6'-tribromo-, 600.  
  2'-chloro-, 1029.  
  3'-chloro-, 600.  
  2'-chloro-5'-amino-, and its acetyl derivative, and 2'-chloro-5'-nitro-, 209.  
**3-Phenyl-4-methylphthalaz-1-one**, and its picrate, 1250.  
  picrate and sulphate, 600.  
**3-Phenyl-4-methylphthalaz-1-one**, 2':4':6'-tribromo-, and its picrate, 599.  
  2'-chloro-, and its picrate, 1028.  
  4'-chloro-, and its picrate, 601.  
  2'-chloro-5'-nitro-, and its picrate, 208.  
**3-Phenyl-4-methylphthalaz-1-one-x-sulphonic acid**, 1251.  
**N-Phenyl-3-methylphthalimidine**, 1251.  
**N-Phenyl-3-methylphthalimidine**, 4'-chloro-, 601.  
**4-Phenyl-1-methylpiperidine-4-carboxylic acid**, ethyl ester. See Pethidine.  
**N<sup>1</sup>-Phenyl-N<sup>2</sup>-methyl-N<sup>5</sup>-isopropylguanide**, N<sup>1</sup>-p-chloro-, and its picrate, 1641, 1644.  
**N<sup>1</sup>-Phenyl-N<sup>4</sup>-methyl-N<sup>5</sup>-n- and -iso-propylguanides**, N<sup>1</sup>-p-chloro-, and their hydrochlorides, 1652.  
**N<sup>1</sup>-Phenyl-N<sup>5</sup>-methyl-N<sup>5</sup>-isopropylguanide**, chloro-, p-cyano-, p-iodo-, and p-nitro-, hydrohalides, 1635.  
**5-Phenyl-2-methylpyrimidine-4-carboxylic acid**, ethyl ester, 556.  
**2-Phenyl-4-p-methylsulphonylbenzylidene-5-oxazolone**, 1506.  
**4-Phenyl-2-p-methylsulphonylphenylthiazole**, 1507.  
**C-Phenyl-N-methylsydnone**, 2310.  
**N-Phenyl-S-methylisothiourea**, N-p-chloro-, 590.  
**N-Phenyl-S-methylisothiourea**, N-cyano-N-p-bromo-, -N'-p-chloro-, and -N'-p-iodo-, 1639.  
**1-Phenylnaphthalenes**, 1268.  
**1-Phenylnaphthalene**, 1-2-amino-, and 1-2-nitro-, 1139.  
  4:7-diamino-, and its dibenzoyl derivative, and 4:7-dinitro-, 1268.  
**1-Phenylnaphthalene-2'-carboxylic acid**, 4'-nitro-, 1235.  
**1-Phenylnaphthalene-2- or -3-carboxylic acid**, 4':7-dinitro-, 1268.  
**1-Phenylnaphthalene-2':3-dicarboxylic acid**, 5:6'-dihydroxy-, 1234.  
  4':7-dinitro-, and its derivatives, 1268.  
**α-Phenyl-β-(2-naphthyl)acrylic acid**, 1602.  
**Phenyl-2-naphthylarsonous acid**, 2209.  
**Phenyl-2-naphthylecyanoarsine**, 2211.  
**1-Phenyl-1-α- and -β-naphthylethanes**, and their derivatives, 1396.  
**1-Phenyl-1-α-naphthylethylene**, and its trinitrobenzene derivative, 1396.  
**1-Phenyl-1-β-naphthylethylene**, and its derivatives, 1396.  
**1-Phenyl-2-(α- and -β-naphthyl)ethylenes**, 1602.  
**1-Phenyl-2-β-naphthylethylene**, photochemical reaction of, with phenanthraquinone, 2128.  
**2-Phenylloxazoline**, and its methiodide, 1922.  
**2-Phenyl-Δ<sup>2</sup>-oxazoline**, addition of hydrogen sulphide to, 1919.  
**N'-Phenyl-NN-pentamethylenebenzamidine**, and its salts, 1520.  
**N<sup>1</sup>-Phenyl-N<sup>5</sup>:N<sup>5</sup>-cyclopentamethylene-N<sup>2</sup>-ethyldiguanide**, N<sup>1</sup>-p-chloro-, 1645.  
**N-Phenyl-N'-(NN-cyclopentamethyleneguanyl)thiourea**, N-p-chloro-, 1643.  
**N<sup>1</sup>-Phenyl-N<sup>5</sup>:N<sup>5</sup>-cyclopentamethylene-N<sup>2</sup>-methyldiguanide**, N<sup>1</sup>-p-chloro-, 1645.  
**Phenylcyclopentanecarboxylic acids**, and their derivatives, 974.  
**3-Phenylcyclopentanone**, derivatives of, 979.  
**2-Phenylcyclopentanone-3:5-dicarboxylic acid**, dimethyl ester, enol form, 978.  
**3-Phenylcyclopentylidemethylcarbinol**, 978.  
**p-Phenylphenacyl-N-ethylaniline**, 855.  
**p-Phenylphenacyl-N-methylaniline**, 855.  
**9-Phenylphenanthridine**, amino- and hydroxy-9-p-nitro-derivatives, 195.  
  2-amino-9-p-nitro-, 193.  
**3-Phenylphthalaz-1-one**, and its derivatives, 1250.  
**3-Phenylphthalaz-1-one**, 2':4':6'-tribromo-, and its picrate, 598.  
  2'-chloro-, and its picrate, 1028.  
  3'-chloro-, and its picrate, 600.  
  4'-chloro-, 601.  
  2'-chloro-5'-amino-, and its acetyl derivative, and 2'-chloro-5'-nitro-, and its picrate, 208.  
**3-Phenylphthalaz-4-one**, 2':4':6'-tribromo-, 599.  
  2'-chloro-, 1028.  
  3'-chloro-, 600.  
  2'-chloro-5'-amino-, and its acetyl derivative, and 2'-chloro-5'-nitro-, 209.  
**3-Phenylphthalaz-1-one-x-sulphonic acid**, 1251.  
**N-Phenylphthalimidine**, 2':4':6'-tribromo-, 599.  
  2'-chloro-, 1028.  
  3'-chloro-, 600.  
  4'-chloro-, 601.  
  N-2:4- and -2:6-dinitro-, 1995.  
**4-Phenylpiperidine-4-carboxylic acid**, ethyl ester. See Nor-pethidine.  
**Phenylpropenylcarbinol**, kinetics of acid-catalysed rearrangement, in solvent mixtures, 1982.  
**Phenylpropionic acid**, esters, 679.  
**Phenylpropionic acid**, p-nitro-, dimerisation of, 1267.  
**Phenylpropionic acids**, 1267.  
**β-Phenylpropionic acid**, αβ-dicyano-, ethyl ester, 977.  
  α-oximino-β-bromo- and -β-chloro-, 1254.  
**Phenyl p-n-propoxy benzyl ketone**, 152.

- N<sup>1</sup>-Phenyl-N<sup>4</sup>-n-propyl-N<sup>5</sup>-n-butyldiguanide, N<sup>1</sup>-p-chloro-, and its hydrochloride,** 1652.  
**N<sup>1</sup>-Phenyl-N<sup>5</sup>-isopropyl-N<sup>2</sup>-n-butyldiguanide, N<sup>1</sup>-p-chloro-, hydrochloride,** 1644.  
**N<sup>1</sup>-Phenyl-N<sup>5</sup>-isopropylguanide, bromo-, chloro-, cyano-, fluoro-, iodo-, and nitro-derivatives,** 1634, 1635.  
**N<sup>1</sup>-p-bromo-, and N<sup>1</sup>-p-chloro-,** 1643.  
**N-Phenyl-N'-isopropylguanyl-S-ethylisothiourea, N-p-chloro-, hydrobromide,** 1642.  
**N-Phenyl-N'-isopropylguanylthiourea, N-p-bromo-, and N-p-nitro-,** 1643.  
*N-p-chloro-,* 1642.  
**4-Phenyl-1-isopropylpiperidine-4-carboxylic acid, ethyl ester,** 561.  
**N<sup>1</sup>-Phenyl-N<sup>4</sup>-n-propyl-N<sup>5</sup>-isopropylguanide, N<sup>1</sup>-p-chloro-, and its hydrochloride,** 1652.  
**N-Phenyl-N<sup>1</sup>-2-pyridylbenzamidine, and its derivatives,** 1520.  
**2-Phenylpyrrolidine, and its picrate,** 187.  
**2-Phenyl-Δ<sup>2</sup>-pyrroline, and 2-p-chloro-, and 2-m-hydroxy-, and their picrates,** 187.  
**Phenylpyruvic acid, p-hydroxy-, methyl ester, 2:4-dinitrophenylhydrazone,** 260.  
*2-nitro-5-hydroxy, and its derivatives,* 1607, 1608.  
**2-Phenylquinoline, 4'-amino-, 4-p-nitrocinnamylidene derivative,** 2010.  
**Phenylquinolines, and their picrates,** 2220.  
**2-Phenylquinoline-4-carboxylic acid, 2-p-amino-, acetyl and benzylidene derivatives, and 2-p-oximinoamino-, acetyl derivative,** 2010.  
**α-Phenyl-β-(6-quinolyl)acrylic acid,** 2152.  
**2-Phenyl-1-(6-quinolyl)ethanol,** 2152.  
**Phenylsulphonyl.** See also Benzenesulphonyl.  
**p-Phenylsulphonylacetophenone,** 603.  
**p-Phenylsulphonylbenzaldehyde, and 4-p-chloro-,** 602.  
**p-Phenylsulphonylbenzophenone,** 603.  
**p-Phenylsulphonylbenzylammonium chloride,** 382.  
**4-Phenylsulphonylbenzylidene diacetate, 4-p-chloro-,** 602.  
**N-Phenylsydnone, N-m- and -p-bromo-, and C-chloro-,** 2310.  
**3-Phenyl-5:6:7:8-tetrahydrophthalanthridine, and its picrate,** 1540.  
**1-Phenyl-3:1':3':3'-tetramethyl-2'-ethylideneindolylidene-5-pyrazolone,** 690.  
**4-Phenylthiazole, 5:2-diamino-, 2-benzoyl derivative,** 1266.  
**Phenyl-2-thienylchloroarsine,** 2211.  
**Phenyl-2-thienylcyanoarsine,** 2211.  
**Phenyl-2-thienyl sulphone,** 526.  
**Phenyl-2-thienyl sulphone, p-amino-, and p-nitro-,** 527.  
*2,5-dihydroxy-,* 527.  
**3-Phenylthioacetamido-2-(2'-carboxy-3'-thionaphthylcarbamyl)thionaphthen, 3-o-cyano-,** 81.  
**3-Phenylthioacetamido-2-6'-ketothionaphtheno(2":3":5:4)-1:3-oxazinyl-2'-thionaphthen, 3-o-cyano-,** 81.  
**Phenylthioacetic acid, derivatives, conversion of, into thiophenols,** 81.  
**Phenylthiol, 2:4-diamino-, dihydrochloride,** 1004.  
**β-Phenylthiopyruvic acids, bromo- and chloro-,** 1254.  
**4-Phenylthioquinazoline, dichloro-derivatives, and 4-hydroxy-2-p-chloro-,** 1772.  
**β-5-Phenyl-2-thiothiazolidone-4-carboxyamide,** 1339.  
**5-Phenyl-2-thiothiazolidone-4-carboxylic acid,** 1338.  
**5-Phenylthioureido-2-anilino-4-carbethoxythiazole,** 2031.  
**2-Phenylthioureido-4-dialkylaminoalkylamino-6-methylpyrimidines,** 581.  
**2-Phenylthioureido-4-β-diethylaminoethylamino-6-methyl-5-ethylpyrimidine, 2-p-chloro-,** 584.  
**2-Phenylthioureido-4-β-diethylaminoethylamino-6-methyl-pyrimidine, 2-p-bromo-, and 2-p-chloro-,** 584.  
**4-Phenylthioureido-2-β-diethylaminoethylamino-6-methyl-pyrimidine, 4-p-chloro,** 592.  
**4-Phenylthioureido-6-β-diethylaminoethylamino-2-methyl-pyrimidine, 4-p-chloro,** 592.  
**2-Phenylthioureido-4-8-diethylamino-α-methylbutylamino-6-methylpyrimidine, 2-p-chloro, and its dihydrochloride,** 585.  
**2-Phenylthioureido-4-γ-diethylaminopropylamino-6-methyl-pyrimidine, 2-p-chloro,** 585.  
**4-Phenylthioureido-6-γ-diethylaminopropylamino-2-methyl-pyrimidine, 4-p-chloro,** 593.  
**Phenyltolylarsonous acids,** 2209.  
**Phenyltolylarsonous acids, chloro-, and nitro-,** 2209.  
**Phenyltolylchloroarsines, nitro-,** 2210.  
**Phenyltolylecyanoarsines, and chloro-, and nitro-,** 2211.  
**2-Phenyl-3-p-tolyl-1-ethylindole,** 866.  
**3-Phenyl-2-p-tolyl-1-ethylindole,** 866.  
**2-Phenyl-2-p-tolylindole, and its picrate,** 866.  
**3-Phenyl-3-p-tolylindole, 866.**  
**Phenyl p-tolyl sulphone, p-chloro-,** 602.  
**N<sup>1</sup>-Phenyl-N<sup>2</sup>:N<sup>5</sup>-trimethylguanide, N<sup>1</sup>-p-chloro-, acetate,** 1645.  
**3-Phenylundecan-2-one, and its derivatives,** 1744.  
**α-Phenylureidobenzyl cyanide,** 1266.  
**2-Phenylureido-4-dialkylaminoalkylamino-6-methylpyrimidines,** 581.  
**2-Phenylureido-4-di-n-butylamino-6-methylpyrimidine, 2-p-chloro,** 584.  
**2-Phenylureido-4-γ-di-n-butylaminopropylamino-6-methyl-pyrimidine, 2-p-chloro,** 584.  
**2-Phenylureido-4-δ-diethylaminobutylamino-6-methylpyrimidine, 2-p-chloro,** 584.  
**2-Phenylureido-4-β-diethylaminoethylamino-6-methyl-5-ethyl-pyrimidine, 2-p-chloro,** 584.  
**2-Phenylureido-4-β-diethylaminoethylamino-6-methylpyrimidine, 2-p-chloro,** 584.  
**2-Phenylureido-4-γ-diethylaminopropylamino-6-methyl-pyrimidine, 2-p-chloro,** 584.  
**2-Phenylureido-6-methylpyrimidine, 4:2-p-dichloro-,** 583.  
**4-hydroxy-2-p-chloro-,** 583.  
**2-Phenylureido-4-morpholino-6-methylpyrimidine, 2-p-chloro,** 584.  
**2-Phenylureido-4-piperidino-6-methylpyrimidine, 2-p-chloro,** 584.  
**8-Phenylvaleric acid, preparation of,** 169.  
**Phenylvinylmethyl radical,** 1111.  
**Phenyl-m-4-xylolarsonous acid,** 2209.  
**2-p-Phenyl-1-ethylindole, and 3-nitroso-,** 854.  
**3-p-Phenyl-1-ethylindole,** 855.  
**2-p-Phenyl-1-methylindole,** and 3-nitroso-, 854.  
**2-p-Phenyl-5-methylindole, and 1-nitroso-,** 854, 855.  
**3-p-Phenyl-1-methylindole,** 855.  
**Phosphorus tribromide, preparation of,** 1846.  
*oxydichlorofluoride, preparation of,* 1011.  
**Phosphorus organic compounds, esters,** 695, 699, 1010, 1313.  
**Phosphorylation,** 1106.  
**Photochemical oxidation with dichromate, kinetics of,** 2119.  
*reactions,* 2126.  
**Phthalazine derivatives,** 777.  
*from aniline,* 1249.  
**ω-Phthalimido-α-aminoacetophenone, and α-nitro-, o-acetyl derivatives,** 1174.  
**p-Phthalimidobenzenesulphonamide, preparation of,** 822.  
**p-Phthalimidobenzenesulphonamidomethane,** 823.  
**2-(p-Phthalimidobenzenesulphonamido)pyridine,** 823.  
**2-(p-Phthalimidobenzenesulphonamido)thiazole,** 823.  
**ω-Phthalimido-α-hydroxyacetophenone,** 1174.  
**N<sup>4</sup>-Phthalyl-N<sup>1</sup>-methylsulphanilamide,** 823.  
**N<sup>4</sup>-Phthalyl-N<sup>1</sup>-phenylsulphanilamide,** 823.  
**N<sup>4</sup>-Phthalylsulphanilamide, derivatives, synthesis of,** 821.  
*preparation of,* 822.  
**N<sup>4</sup>-Phthalylsulphapyridine,** 823.  
**N<sup>4</sup>-Phthalylsulphathiazole,** 823.  
**Physical properties and constitution,** 607, 610, 616, 624, 644, 654, 658, 674, 1804, 1809, 1814, 1820, 1825, 1833.  
**2-Picoline, 3-amino-, diacetyl derivative, and its picrate,** 200.  
**3-Picoline, 4-amino-, and 4-hydroxy-, and their derivatives,** 199.  
**Piperidine, derivatives, synthesis of,** 2011.  
**Piperidine series,** 806.  
**ω-Piperidinoacetanilide, p-chloro-o-amino- and -o-nitro-,** 1910.  
**2-Piperidino-6-amino-4-styrylpurimidine, 5-nitro-,** 1132.  
**Piperidinoanthranthrone,** 1181.  
**2-Piperidino-4-6-bis-(4-dimethylaminostyryl)purimidine,** 2150.  
**β-Piperidinobutranilide, p-chloro-o-amino- and -o-nitro-,** 1911.  
**2-Piperidino-4-[2-(4-dimethylaminophenyl)ethyl]-6-methyl-pyrimidine,** 2151.  
**2-Piperidino-4-(4-dimethylaminostyryl)-6-methylpyrimidine,** 2150.  
**2-Piperidino-4-(p-dimethylaminostyryl)pyrimidine,** 1715.  
**2-Piperidino-4-6-dimethylpyrimidine,** 2151.

- 2-Piperidino-4:6-distyrylpyrimidine**, 2151.  
**2-Piperidinoethylbenzyl cyanide**, and its picrate, 809.  
**2-Piperidinomethylbenzimidazole**, 5(or 6)-chloro-, and its hydrochloride, 1911.  
**2-Piperidino-5-methylhexyl cyanide**, 5-nitro-, 231.  
 **$\gamma$ -Piperidino- $\alpha$ -phenylbutyric acid**, ethyl ester, 809.  
**2- $\gamma$ -Piperidinopropylamino-4-hydroxyquinazoline**, hemihydrate, 1770.  
**2- $\gamma$ -Piperidinopropylaminoquinazoline**, 4-chloro-, 1770.  
**2-Piperidino-4-styryl-6-methylpyrimidine**, 2151.  
*Piscidia erythrina*, constituents of root bark of, 257.  
**Piscicid acid**, structure of, and its derivatives, 257.  
**Plane trees**. See *Platanus acerifolia*.  
**Plasma albumin**. See under *Albumin*.  
**Platanol**, dehydrogenation of, 951.  
*Platanus acerifolia*, bark, betulinic acid from, 948.  
**Platinum bases** :-  
 Bromotriaminoplatinous salts, 1914.  
 Carbonotriaminoplatinum, 1914.  
 Chlorotriaminoplatinous salts, 1913.  
 Ethylenediaminodiamminoplatinous picrate, 1915.  
 Ethylenediaminotriaminoplatinous chloride, 1915.  
 Nitratotriaminoplatinous nitrate, 1914.  
 Nitrotetraaminoplatinous salts, 1914.  
 Oxalatotriaminoplatinum, 1915.  
 Picratotriaminoplatinous picrate, 1914.  
 Platinous triammines, 1912.  
 Sulphatotriaminoplatinum, and its hemihydrate, 1914.  
**Pleiadene-7:12-dione**, 1-amino-, 1758.  
*Pneumococcus*, types I, II, and III, physical properties of specific polysaccharides from, 1561.  
**Podocarpene**, identity of, with kaurene, 1888.  
*Podocarpus*, podocarpene from, 1888.  
**Poisons**, catalyst, detoxication of, 1091, 1093, 1916.  
**Polarity of bonds**, 401.  
**Polymethylbenzenes**, 2154.  
**Polyquinolys**, 2008.  
**Polysaccharides**, specific, from *Mycobacterium tuberculosis*, 1211, 1220.  
 specific, from types of *Pneumococcus*, 1561.  
*Polysiphonia fastigiata*, evolution by, of dimethyl sulphide and its precursor, 1591.  
**Polystyrene**, solution and diffusion of gases in, at high pressures, 1541.  
**Poly sulphides**. See *polySulphides*.  
**Potassium bromotetrafluoride**, 2136.  
**Potassium organic compounds** :-  
 Potassium *tert*-butoxide, fission of non-enolisable ketones by, 1408.  
**Potato starch**. See under *Starch*.  
*alloPregn-20-on-3( $\beta$ )-yl benzoate*, 791.  
*Pregn-5-en-20-on-3( $\beta$ )-yl benzoate*, 791.  
*Primulaverin*, 2220.  
**Prins reaction**, 89.  
**Proflavine**, absorption of, by cells of *Bacterium lactis aerogenes*, 2290.  
 bacteriostatic action of, effect of pH on, 1235.  
**Progesterone**, synthetic analogues of, 1078.  
**Propane**, 1:2-dichloro-2-nitro-, and 1:2:3-trichloro-2-nitro-, 2321.  
**cycloPropanecarboxylic acid**, and its esters, preparation of, 1805.  
**cycloPropane-1:1-dicarboxylic acid**, preparation of, and its esters, 1806.  
**Propanethiol**, 2-hydroxy-, 39.  
**Propanol**, 2:3-dimercapto-, preparation of, from 2:3-dichloropropanol, 1393.  
**1-Propenylbenzene**, spectrum of, absorption, 1124.  
**2-Propenylbenzimidazole**, 5(or 6)-chloro-, 1911.  
**Propenylethynecarbinol**, and its acetate, rearrangement and hydrolysis of, 794.  
**Propionic acid**,  $\alpha$ -fluoro-, methyl ester, 1777.  
**2-Propionylcarbamylthionaphthen**, 2-hydroxy-, and its *O*-acetyl derivative, 83.  
**Propionylcarbinyl benzoate**, and its semicarbazone, 275.  
 **$\beta$ -Propionylcrotonolactone**,  $\alpha$ -hydroxy- $\beta'$ -chloro-,  $\alpha$ -acetyl derivative, 1298.  
**4-Propionyl-3-methylphenol**, 6-amino-, and 6-nitro-, 2146.  
**N-Propionyl-p-toluenesulphonamide**, 112.  
**Propiophenone**, nitration of, 356.  
**Propiophenone**, *o*- and *m*-amino-, *m*-bromo-, 5-bromo-2-amino-, 5-bromo-2-nitro-, 5-chloro-2-amino-, 5-chloro-2-nitro-, 3- and 5-nitro-2-amino-, and their derivatives, 356, 357.  
*p*-amino-, and its acetyl derivative, azines of, 685.  
**2'-n-Propoxydiethyl sulphilimine**, 2179.  
**2-n-Propoxydiethyl sulphone**, 2-chloro-, 2179.  
***p*-n-Propoxyphenylacetic acid**, ethyl ester, 153.  
***n*-Propyl nitrate**, preparation and physical properties of, 1847.  
**2-isoPropylamino-6-hydroxy-4-methyltriazine**, 1369.  
**N<sup>3</sup>-isoPropyl-N<sup>2</sup>-n-butylidicyandiamide**, 1650.  
***n*-Propylcarboxylic acid**, 2- and 3-chloro-, 2:3-dichloro-, *N*-nitroso-2- and -3-chloro-, and *N*-nitroso-2:3-dichloro-, methyl esters, 2320.  
**2-n-Propylcinchoninic acid**, and 6-bromo-, and 6-bromo-4-hydroxy-, 108.  
**isoPropylidicyandiamide**, 1369.  
**Propylidicyandiamides**, 1633.  
***n*-Propylidimethylsulphonium salts**, olefin formation from, 2072.  
**isoPropylidimethylsulphonium salts**, olefin formation from, 2077.  
**Propylene**, 3:3:3-trichloro-1-nitro-, 1989.  
**isoPropylguanidine**, sulphate, 1641.  
**N<sup>3</sup>-isoPropylguanidinobenzimidazole**, and 5-chloro-, and their salts, 1369.  
**2-(N<sup>3</sup>-isoPropylguanidino)benzimidazole**, 5:6-dichloro-, and its salts, 1370.  
**2-(N<sup>3</sup>-isoPropylguanidino)-5:6-dimethoxybenzimidazole**, and its salts, 1370.  
**2-(N<sup>3</sup>-isoPropylguanidino)-5:6-dimethylbenzimidazole**, and its salts, 1370.  
**2-(N<sup>3</sup>-isoPropylguanidino)-5-methoxybenzimidazole**, and its salts, 1370.  
**2-(N<sup>3</sup>-isoPropylguanidino)-5-methylbenzimidazole**, and its salts, 1370.  
**N<sup>3</sup>-isoPropylguanyl-S-methylisothiourea**, hydriodide, 1654.  
**isoPropylguanylthiourea**, 1654.  
**trans-2-Propylcyclohexylbenzamide**, 2:3'-bromo-, 1375.  
**N<sup>1</sup>-isoPropyl-N<sup>2</sup>-cyclohexylidicyandiamide**, 1650.  
**5-Propylhydantoin-5-acetic acid**, ethyl ester, 1389.  
**isoPropylidenemalonic acid**, calcium salt, 1684.  
**4-isoPropylidene-2-thiothiazolone**, 1339.  
**N-Propylmalonic acid**, esters, 633.  
**isoPropyl nonyl ketone**, 1745.  
**1-isoPropylcyclopentane-3:4-bis-( $\beta$ -butyric acid)**, 168.  
**1-isoPropylcyclopentane-3:4-bis-( $\alpha$ -propionic acid)**, and its di-*p*-phenylphenacyl ester, 167.  
**p-isoPropylphenol**, preparation of, 166.  
**N<sup>1</sup>-n-Propyl-N<sup>2</sup>-isoPropylidicyandiamide**, 1650.  
 **$\gamma$ -isoPropylsulphuric acid**, 168.  
**a-Propylsuccinic acid**,  $\alpha$ -amino-, 1389.  
**p-Propylsulphonylbenzylammonium chlorides**, 382.  
***p*-isoPropylsulphonylphenyl cyanide**, 383.  
**N-isoPropylthiobenzamide**, 1924.  
**2-n-Propylthiodiethyl sulphide**, 2-chloro-, 2179.  
**2-n-Propylthiopyridine**, 5-amino-, and its hydrochloride, and 5-nitro-, 1944.  
**N'S-Propylsulphoureas**, *N*-cyano-, 1633.  
**Proteins**, adsorption on, of water vapour, 1083.  
**Protocatechic aldehyde**. See *Benzaldehyde*, 4:5-dihydroxy-.  
**Prototropy**, three-carbon, 17.  
**Provitamin-D<sub>3</sub>**. See 7-Dehydrocholesterol.  
**Pseudomonas mors-prunorum**, levan produced from sucrose by, 1560.  
**Purine nucleosides**, synthesis of, 957, 965, 967, 1685.  
**Purpuragallin**, 1045.  
 structure of, 116.  
**Pyrazine derivatives**, 1855, 1859, 1862.  
**Pyrazine, amino-**, derivatives, synthesis of, 1855.  
 hydroxy-, derivatives, preparation of, 1862.  
**Pyrazines**, 2-chloro-, oxidation of, with hydrogen peroxide, 1859.  
**Pyridazine derivatives**, from sucrose, 2191, 2195, 2199.  
**3-Pyridazine-6-carboxylic acid**, 3-chloro-, 2198.  
**3-Pyridazone-6-carboxylic acid**, ethyl ester, hydrate, 2197.  
 methyl ester, 2194.  
**Pyridine**, catalytic hydrogenation of, self-poisoning in, 1093.  
 derivatives, 2:5-disubstituted, 1939.  
 reactions of, with acyl peroxides, 2218.  
**Pyridine**, 2:3-diamino-, 5-bromo-2:3-diamino-, and its derivatives, and 5-bromo-3-nitro-2-amino-, 1391.

**P**yridine, 2,3:6-triamino-, triacetyl derivative, 1392.  
2-chloro-5-cyano-, and 5-cyano-2-mercaptop-, 1942.  
2-hydroxy-, 1-oxide, and its copper salt, 1866.  
**P**yridinium benzenesulphonate, 2-amino-, 1522.  
salts, reaction of, with tetra-arylglycols, 385.  
**P**yridoacridine, derivatives, 123.  
**1:2:2':3'-Pyridoacridine**, 5-amino-, 5-chloro-, 5-chloro-4-fluoro-, and 4-fluoro-5-amino-, and their derivatives, 290.  
**1:2:3':2'-Pyridoacridine**, 5:8-dichloro-, 126.  
3:4:3':2'-**Pyridoacridine**, 5:8-dichloro-, 126.  
**4-N-Pyridylacetamido-2-methyl-1-naphthol** chloride, 185.  
**β-Pyridyl(4)alanine** dihydrochloride, 88.  
**N-Pyridyl(4)-p-aminobenzoic acid**, and its hydrochloride, 241.  
**2-(2'-Pyridylamino)-4-β-diethylaminoethylamino-6-methylpyrimidine**, and its dihydrochloride, 595.  
**4-(2'-Pyridylamino)-2-β-diethylaminoethylamino-6-methylpyrimidine**, 596.  
**2-(2'-Pyridylamino)-4-hydroxy-6-methylpyrimidine**, 595.  
**2-(2'-Pyridylamino)-6-methylpyrimidine**, 4-chloro-, 595.  
**P**yridylaminopyrimidines, 594.  
**o-Pyridylbenzoic acid**, methyl ester, picrates, 2219.  
**N-2-Pyridyl-N'-methylacetamidine**, 1521.  
**β-Pyridyl(4)propionic acid**, α-oximino-, and its ethyl ester, 88.  
**S-2-Pyridylthiuronium** chloride, S-5-cyano-, 1942.  
**P**yrimidines, 2,4:5-triamino-6-hydroxy-, 5-acetyl, 5-p-acetylbenzenesulphonyl, and 5-p-aminobenzenesulphonyl derivatives, 1159, 1161.  
5-benzoyl and 5-a-hydroxypropionyl derivatives, 1160.  
**P**yrimidines, substituted, spectra of, infra-red, 2265.  
**P**yrimidylaminopyrimidines, 594.  
**P**yrimidyl-5-oxamic acid, 2:4-diamino-6-hydroxy-, and its sodium salt, 1160.

**Q.**

**Q**uinoline, 6-bromo-4-hydroxy-, and its picrate, 108.  
**Quinazoline**, 2:4:6- and 2:4:7-trichloro-, 6- and 7-chloro-2:4-dihydroxy-, 2:4-dichloro-6- and 7-nitro-, and 7-nitro-2:4-dihydroxy-, 1762, 1763.  
6- and 7-nitro-4-amino-, and their acetyl derivatives, 364.  
6- and 7-nitro-4-hydroxy-, reactions of, and their derivatives, 360.  
**Quindoline**, quaternary salts,  $\psi$ -bases from, 919.  
**Quinindoline**, preparation of, 923.  
**Quinindoline**, 9-amino-, and 9-nitro-, and their acetyl derivatives, 924.  
**Quinol**, clathrate compound of, with methyl alcohol, 571.  
compounds of, and their structure, 65, 815.  
condensation of, with benzoin, 1992.  
**Quinols**, preparation of alkyl ethers of, 2303.  
**a-Quinol**, structure of, 69.  
**Quinoline**, derivatives, synthesis of, by Pfitzinger reactions, 106.  
**Quinoline**, 4-amino-, nitration of, 2023.  
4-chloro-3-nitro- and 3-nitro-4-amino-, 1288, 1289.  
6-fluoro-8-amino- and 8-nitro-, 289, 290.  
2-hydroxy-, 1-oxide, preparation of, 1866.  
4-hydroxy-, derivatives, from arylamines and ethyl ethoxy-methylenemalonate, 893.  
3-nitro-, *Bz*-substituted, 2024.  
6-nitro-2- and -4-amino-, 8-nitro-4-amino-, and their derivatives, 1708, 1709.  
6-nitro-4-amino-, 3(?)-6-dinitro-4-amino-, 3(?)-6-dinitro-4-hydroxy-, and 6-nitro-4-nitroamino-, 2024.  
*isoQuinoline*, derivatives, 777.  
**Quinolines**, 4-chloro-, and 6-nitro-, 1707.  
4-hydroxy-, synthesis of, 106.  
4-substituted, 93.  
**N-Quinoline-p-aminobenzoic acids**, 241.  
**Quinoline-3:4-dicarboxylic acid**, 2-hydroxy-, 554.  
**4-Quinolinol**, 6-amino-, 1289.  
**β-6-Quinolylacraldehyde**, 2010.  
**2'-[4'-(6''-Quinolyl-β-acrylidene)aminophenyl]-2:6'-dquinolyl**, 2011.  
**β-Quinolyl(4)alanine**, and its derivatives, 88.  
**5-Quinolylanthranilic acid**, 4-chloro-, 126.  
**7-Quinolylanthranilic acid**, 7-chloro-, and its ethyl ester, 126.  
**N-(8-Quinolyl)anthranilic acid**, and N-6'-fluoro-, 290.  
**1-α-Quinolylbenztriazole**, 923.

5-(2'-Quinolylmethylenehydantoin, 1389.  
5-(2'-Quinolylmethyl)hydantoin, 1389.  
**β-Quinolylpropionic acid**, α-amino-, 1389.  
**β-Quinolyl(4)propionic acid**, α-oximino-, and its ethyl ester, 88.  
**N<sup>1</sup>-6-Quinolyl-N<sup>5</sup>-isopropylguanide**, and N<sup>1</sup>-8-chloro-, hydrochloride, 1635.  
**Quinones**,  $\alpha\beta$ -unsaturated, halogen addition to, 980.  
**Quinoxaline**, derivatives, 777.  
**Quinoxaline**, 5- and 6-amino-, preparation of, 2132.  
2:3:6-trichloro-, 3-chloro-2-amino-, and 2:6-dichloro-3-amino-, 781.  
2-hydroxy-, oxidation of, and of its derivatives with hydrogen peroxide, 519.  
2:3-dihydroxy-, preparation of, 521.  
**Quinoxaline-3-carboxamide**, 2-amino-, conversion of, into alloxazine, 517.  
**Quinoxaline-3-carboxylic acid**, 2-amino-, 2-acetyl derivative, amide and methyl ester, 518.

**R.**

**R**adioactive elements, fluorides of, 1991.  
**R**eactions between non-bonded atoms, 340.  
elimination, mechanism of, 2038, 2043, 2049, 2055, 2058, 2065, 2072, 2077, 2084, 2090, 2093.  
**R**eactivity, cationoid, of aromatic compounds, 1175.  
**R**eduction of polynitro-compounds, 1275.  
**R**efractivity of acetals, 616.  
of acetylenic compounds, 674.  
of aliphatic acids and alcohols, 1814.  
of aliphatic carboxylic esters, 624.  
of aliphatic disulphides, sulphides, and thiols, 1820.  
of *n*-alkylbenzenes, 607.  
of amines, 1825.  
of compounds with 3- and 4-membered carbon rings, 1804.  
of compounds with 5- and 6-membered carbon rings, 1809.  
of cyanides, 674.  
of esters of oxy-acids and of nitro-paraffins, 1833.  
of ethers, 616.  
of ethylenic compounds, 658.  
of halogens, 644.  
of ketones, 610.  
of *α*-naphthyl and phenyl groups, 654.  
**R**epandine, 2170.  
**R**eport of the Council, 541.  
**R**esin acids, diterpenoid, stereochemistry of, 1197.  
**R**esorcinol, condensation of, with benzoin, 1992.  
**R**espropiophenone,  $\omega$ -chloro-, and  $\omega$ -hydroxy, 1611.  
**R**hodanine, preparation of, 1253.  
**9-β-D-Ribofuranosidoadenine**, 2:8-dichloro-, 968.  
**9-β-D-Ribofuranosidoguanine**, 1687.  
**9-D-Ribopyranosidoxanthine**, synthesis of, 523.  
**R**ibose, chemistry of, and its derivatives, 2035.  
**1-D-Ribosidoglyoxaline-4:5-dicarboxyamide**, 524.  
**9-D-Ribosidoxanthine**, 524.  
**R**ice starch. See under Starch.  
**R**otation, molecular, and structure of steroids, 783, 1354, 1357.  
**R**otenone, analogues of, 1672.  
synthesis of, and its derivatives, 1610.  
**R**ottlerin, 113.  
**R**ottlerone change, 115.  
**R**ubiadin dimethyl ether, 567.  
**R**ubiadin-1 methyl ether, and its derivatives, 567.

**S.**

**S**alicylic acid, 5-hydroxy-, preparation of, 2221.  
**S**chiff's bases from nitromalondialdehyde, 2026.  
**S**chmidt rearrangement, 1713.  
**S**coletin  $\beta$ -gentiobioside, and its hepta-acetyl derivative, 1672.  
**S**coletin-3-carboxylic acid, 1672.  
**S**elenium, photochemistry of, 766.  
**S**emicarbazones, reaction of, with nitrous acid, ketones formed by, 2319.  
**S**enecio alkaloids, 1891.

- Senecio kirkii*, alkaloid from, 1891.  
*Senkirkine*, and its salts, 1892.  
*Silica*. See Silicon dioxide.  
*Silica gel*, preparation of, 2251.  
*Silicon dioxide*, vitreous, deposition of carbon on, 1362.  
*Silver bromotetrafluoride*, 2137.  
*Soaps*, zinc, solubility of, in organic solvents, 1750.  
*Sodium hydrogen sulphide*, solution, rapid preparation of, 242.  
**Sodium organic compounds** :—  
 Sodium aryldiazoates, decomposition reactions of, 556.  
 benzene diazoate, reactions of, 349.  
 decyl sulphate, soluble films of, expansion of, at air-water and toluene-water interfaces, 943.  
**Solubility** of gases, measurement of, 2033.  
**Solutions**, thermochemistry of, 1016, 1019.  
**Solvents**, aqueous and non-aqueous, nature of hydrogen ions in, 1976.  
 effect of, on rates and product-proportions of elimination reactions, 2043.  
 non-aqueous, acid-base catalysis in, 370.  
 oxygen-containing, proton affinities of, 1971.  
*Sophora* alkaloids, 1889.  
*Sorbates*, 133.  
*Sorbitol*, ethylenedene derivatives of, 1933.  
**Spectra**, absorption, infra-red, of anthraquinone derivatives, 1441.  
 of fluorinated hydrocarbons, 1428, 1432.  
 of mixtures of alcohols and aldehydes, 1454.  
 of terpenoids, 1412.  
 vibrational frequency of carbonyl group in, 1436.  
 of terpenoid compounds, 1306.  
 ultra-violet, of 2-amino- and 2-imino-3-methyl-2,3-dihydrobenzthiazoles, 1497.  
 vibrational, correlation of, with molecular structure, 328.  
*γ-Spinastenol*, and its esters, 1356.  
**Spinel**s, properties of, at high temperatures, 1729.  
*Starch*, acorn, structure of, 1779.  
 amyloylysis of, 924.  
 fractionating agents for, 1687.  
 maize, 31.  
 potato, 30.  
 rice, 31.  
 structure of, 27.  
 sweet potato, 31.  
*Sterols*, structure of, from molecular rotation, 783, 1354, 1357.  
 Walden inversion and, 1032, 1043.  
**Steroid series**, syntheses in, 162.  
*neoSterol*, constitution of, 1357.  
**Sterol group**, 1783, 1788, 1792, 1798.  
*Stigmasta-5:22-dien-3-(β)-yl benzoate*, 22:23-di-bromide, 793.  
*Stilbene*, analogues, heterocyclic, 2147.  
 photochemical reactions of, with 1:2:3-triketones, 2128.  
*Stilbene*, α:4'-dicyano-, and α:4:4'-tricyano-, 1025.  
 2:4:6:2':4'-pentanitro-, 1614.  
 2,6-dinitro-4-amino-, and its acetyl derivative, 1277.  
*Stilbenes*, polynitro-, nitration of, 1612.  
*Stilbenecarboxylic acids*, 1024.  
*Stilbene-4-carboxylic acid*, and its anilide, 226.  
*Stilbene-4-carboxylic acid*, α-cyano-, 1025.  
*Stilbenedicarboxylic acids*, and their derivatives, 1025.  
*Stilbene-4:4'-dicarboxylic acid*, α-cyano-, 1025.  
*Stilbene-α:4:4'-tricarboxylic acid*, 1025.  
*Strecker degradation*, 176.  
*Strychnine*, 703, 951.  
 reduction of, and of its derivatives, 1661.  
*neoStrychnine*, experiments with, 951.  
*neoStrychnine*, x-hydroxy-, 955.  
*γ-Strychnine*, experiments with, 951.  
 preparation of, 703.  
*sec.-γ-Strychnine*, derivatives of, 954.  
*Styrene*, polymerisation of, propagation of reaction chains in, 2232.  
 short-chain, in presence of hydrogen chloride and stannic chloride, 1867.  
 reaction of, with naphthalene, 1397.  
*Styrene*, 2-β-dinitro-5-hydroxy-, 5-acetyl derivative, 1609.  
 2,β-dinitro-6-hydroxy-, 6-acetyl derivative, 1608.  
 β,2-dinitro-4:5-dihydroxy-, 4:5-diacetyl derivative, 2224.  
 2-Styrylbenzoxazole, and its picrate, 2153.  
 4-Styrylbenzyl alcohol, 225.  
 2-Styryl-6:7-benzquinoline, 4-amino-, 4-acetyl derivative, 1293.  
 2-Styryl-7:8-benzquinoline, 6-nitro-, 1295.  
 4-Styrylbenzylamine, 224.  
 and its benzoyl derivative, 226.  
 4-Styrylbenzylcarbamic acid, ethyl ester, 226.  
 4-Styrylbenzyldimethylamine, 224.  
 and its picrate, 227.  
 4-Styrylbenzylmethyl ether, 225.  
 4-Styryl-4-deoxyleucopterin, 1133.  
 2-Styrylfuran, 2-4-amino-, and its acetyl derivative and 2-4-nitro-, 2154.  
 4-Styryl-6-methylpyrimidine, 2-chloro-, 2151.  
 6-Styryl-1-methyl-1:2:3:4-tetrahydroquinoline, 2153.  
 4-Styrylphenylacetamide, 226.  
 4-Styrylphenylacetic acid, and its anilide, 226.  
 4-Styrylphenylacet-thiomorpholide, 225.  
 4-Styrylphenylmethylcarbamic acid, methyl ester, 226.  
 6-Styrylpteridine, 2:8:9-trihydroxy-, 1132.  
 4-Styrylpurine, 2-amino-8-hydroxy- and 2-chloro-8-hydroxy-, 1132, 1133.  
 4-Styrylpyrimidine, derivatives, 1128.  
 4-Styrylpyrimidine, 2:5:6-triamino-, 2-chloro-5:6-diamino-, 2-chloro-5-nitro-6-amino-, 2:6-dichloro-5-nitro-, and 5-nitro-2:6-diamino-, 1132, 1133.  
 2:5:6-triamino-4-p-amino-, 2:6-dichloro-5-nitro-4-p-nitro- and 5-nitro-2:6-diamino-4-p-nitro-, 1134.  
 2-Styrylquinoline, 6-amino- and 6-nitro-2-4-nitro-, 2152.  
 6-Styrylquinoline, 2152.  
 6- and 8-Styrylquinolines, 6- and 8-4-amino-, and 4-nitro-, 2151, 2152.  
 4-Styryluracil, 5-nitro-, and its derivatives, 1131.  
 5-nitro-4-p-nitro-, 1134.  
 Substitution at a saturated carbon atom, 1283.  
 in aromatic compounds, transition state in, 727.  
 Succinic acid, heat of ionisation of, 1019.  
 Sucrose, conversion of, into furan compounds, 155.  
 into pyridazine derivatives, 2191, 2195, 2199.  
 dextran synthesised from, by *Betacoccus arabinosaceus*, 1555.  
 levan produced from, by *Pseudomonas mors-prunorum*, 1560.  
 Sugars, aldose, oxidation of, by iodine solutions, 810.  
 mixed, analysis of, by partition chromatography, 1679.  
 p-Sulphamylbenzaldehyde, 603.  
*N<sup>1</sup>-Sulphanilamides* from aminoquinoxalines, 2129.  
 5-Sulphanilamido-2:6-dimethyl-3-pyridazone, and its hydrochloride, 2197.  
 2-Sulphanilamidoethylthiol hydrochloride, 1925.  
 Sulphides, aliphatic, physical properties and constitution of, 1820.  
 containing the 2-chloroethyl group, 2177.  
*diSulphides*, aliphatic, physical properties and constitution of, 1820.  
*polySulphides*, structure of, 322, 1256.  
 2-Sulphobenzoic acid, 4-nitro-, dimethyl ester, 1616.  
 2-p-Sulphonamidophenylguanidino-6-methylpyrimidine, 4-hydroxy-, 579.  
 Sulphonation, aromatic, kinetics of, 1065.  
 2-p-Sulphonimidylaminophenylguanidino-6-methylpyrimidine, 4-hydroxy-, 579.  
 Sulphonyl sulphides, structure of, 322, 1256.  
 Sulphur dioxide, equilibrium of, with ammonia and water, 76.  
 Sulphuric acid, sulphonation by, in nitrobenzene solution, 1065.  
 Persulphates, oxidation of phenols by, 2303.  
 Sulphur vesicants, organic, 35, 38, 42, 44, 47.  
 Sulphuric acid. See under Sulphur.  
 Sulphuryl chlorofluoride and fluoride, preparation and reactions of, 2183.  
 Surfaces, freshly-formed, properties of, 930, 936, 943.  
 Surface tension, measurement of, vertical-plate method for, 931.  
*Sweet potato starch*. See under Starch.  
*Sydnones*, 2307.  
 C- and N-substituted, dipole moments of, 2269.  
 Synthesis, asymmetric, 1085.  
 Systems, anionotropic, rearrangement and substitution in, 1, 4, 8.  
 olefinic, α-methylenic reactivity in, 89.

## T.

- Tartaric acid, formation of, by oxidation and hydrolysis of oxycelluloses, 1135.  
 Tea, green, catechins of, 2249.  
 Temperature, effect of, on rates and product-proportions in elimination reactions, 2049.  
 Terpenoids, spectra of, infra-red absorption, 1412.  
 Terpenoid compounds, spectra of, absorption, 1306.  
**2:3:5:6-Tetra-acetyl 1:4-anhydrosorbitol**, 301.  
**4-Tetra-acetyl-D-galactofuranosidamino-5-(2':5'-dichlorobenzeneazo)-2-methylthiopyrimidine**, 6-amino-, 962.  
**4-Tetra-acetyl-D-galactopyranosidamino-5-(2':5'-dichlorobenzeneazo)-2-methylthiopyrimidine**, 6-amino-, 962.  
**4-Tetra-acetyl-D-glucopyranosidamino-5-(2':5'-dichlorobenzeneazo)-2-methylthiopyrimidine**, 6-amino-, 963.  
**2-O-Tetra-acetyl- $\beta$ -glucosidoxy-5-methoxybenzoic acid**, methyl ester, 2222.  
**1-Tetra-acetyl-D-mannosidoglyoxaline-4:5-dicarboxyamide**, 524.  
**3-n-Tetradecyl-2-n-pentadecylcinchoninic acid**, 110.  
**1:2:4:5-Tetradeuterobenzene**, spectrum of, absorption, ultraviolet, 475.  
**3:3':4:4'-Tetraethoxy-a-azopropylbenzene**, 890.  
**3':4':6:7-Tetraethoxy-1-benzyl-3-methylisoquinoline**, 889.  
**3':4':6:7-Tetraethoxy-1-phenyl-3-methylisoquinoline**, and its hydrochloride, 889.  
**NNN'N'-Tetraethylmethylenediamine**, *NNN'N'-tetra-2-chloro-2175.*  
**Tetrahydroanhydro- $\psi$ -strychninephosphorous acid**, 956.  
**1:2:3:4-Tetrahydro-11-aza-6:7-acechrysene**, and its picrate, 1540.  
**6:7:8:9-Tetrahydro-2:3-benzacridine**, 5-amino-, 5-chloro-, and 5-hydroxy-, 1290.  
**5:6:7:8-Tetrahydro-1:2-benzphenanthridine**, and 9-amino-, 1540.  
**Tetrahydrodianostrotrychnidine**, and its acetyl derivative, 1665.  
**Tetrahydrodianostrotrychnidine**, hydroxy-, 1664.  
**Tetrahydrofuran**, amino-, derivatives, 155.  
**Tetrahydrofurans related to amidone**, 1993.  
**Tetrahydrophenanthridines**, synthesis of, 1537.  
**5:6:7:8-Tetrahydrophenanthridine**, and 9-amino-, and 3-nitro-, and their derivatives, 1539.  
**Tetrahydropururogallin**, 1049.  
**Tetrahydroquinoline-4-carboxylic acid**, 2-hydroxy-, 554.  
**Tetrahydrorottlerin**, synthesis of, 113.  
**Tetrahydroallrottlerin**, synthesis of, 113.  
**2:2:5:5-Tetrakis(chloromethyl)piperazine**, and its derivatives, 1905.  
**2:3:5:6-Tetrakis(methanesulphonyl) 1:4-anhydrosorbitol**, 301.  
**2:3:4:6-Tetrakis(methanesulphonyl) styracitol**, 2207.  
**Tetralin**, autoxidation of, 1574, 1578, 1585.  
 hydroperoxide, decomposition of, 1578.  
**4:2':3':4'-Tetramethoxybenzocycloheptene**, 1049.  
**4:2':3':4'-Tetramethoxybenzocyclohepten-3-ol**, and its 3:5-dinitrobenzoate, 1050.  
**4:2':3':4'-Tetramethoxybenzocyclohepten-3-one**, and its 2:4-dinitrophenylhydrazone, 1049.  
**5:6:5':6'-Tetramethoxyindigo**, 1246.  
**5:6:5':6'-Tetra(methoxymethoxy)indigo**, 1246.  
**4:7:2':4'-Tetramethoxy-3-phenylcoumarin**, 175.  
**2:2:3:3-Tetramethylbutanal 2:4-dinitrophenylhydrazone**, 286.  
 semicarbazone, 1333.  
 $\alpha\beta\beta\alpha$ -Tetramethyl-*n*-butryic acid, 1336.  
**2:2:5:5-Tetramethyl-3:6-di-tert.-butyl-1:4-dioxan**, and its dinitrophenylhydrazone, 1333.  
**5:6:9:10-Tetramethylidihydro-1:2-benzanthracene**, dihydroxy-, and its diacetate, 172.  
**2:2:6:6-Tetramethyl-4-ethynylpiperidine**, 4-hydroxy-, 807.  
**Tetramethyl hexahydropururogallin**. See 4:2':3':4'-Tetramethoxybenzocyclohepten-3-ol.  
**Tetramethyl pururogallin**, 120, 1049.  
**Tetramethyl tetrahydropururogallin**. See 4:2':3':4'-Tetramethoxybenzocyclohepten-3-one.  
**6:12:18:24-Tetraoxa-3:9:15:21:27-pentathianonacosane**, 1:29-dichloro-, and its derivatives, 44.  
**Tetraphenylglycol**, complexes of with pyridinium salts, 385.  
 $\omega\omega\omega$ -Tetraphenyl-*p*-xylylene glycol, complexes of, with pyridinium salts, 385.  
**2:6'-Tetraquinolyl**, 2011.  
**Thallium**, reaction of, with nitrosyl chloride, 1957.  
**Thallous salts**, reaction of, with nitrosyl chloride, 1957.  
**Thallium determination** :—  
 determination of, 1957.  
**Thermochemistry of solutions**, 1016, 1019.  
**Thiadiazole ring**, 870.  
**Thiazole**, 2:5-diamino-, derivatives of, 1265.  
 2-benzoyl derivative, and its salts, 1264, 1265.  
 5-amino-2-mercapto-, and its acetyl derivative, 205.  
 2-mercapto-, Schiff's base from, 204.  
**Thiazole-4-carboxylic acid**, 2:5-diamino-, 2-benzoyl derivative, and its ethyl ester, 1343.  
 ethyl ester, derivatives of, 1343.  
**Thiazolidine-butyroazlactone rings**, synthesis of, 1919.  
**Thiazolones**, preparation of, 1056.  
**Thiazol-5-one**, 2-mercapto-, and its acetyl derivative, 204.  
**2-(2'-Thienyl)- $\Delta^2$ -pyrroline**, and its picrate, 187.  
**2- and 3-Thienylthioacetic acids**, and their derivatives, 769.  
**Thioanisole**, 4-nitro-2-amino-, preparation of, 873.  
**Thioanisyl-2-azo- $\beta$ -naphthol**, 4-nitro-, 873.  
**Thioaryloxides**, nitro-, reaction of, with polynitro-aromatic compounds, 2017.  
**N-Thiocarbobenzyloxyglycine**, and its derivatives, 1059.  
**4-Thiocarboxy-5-phenyl-2-thiothiazolidone**, and its derivatives, 1064.  
**2-Thio-3-chloromethylbenzthiazolone**, 1717.  
*iso***Thiocyanates**, reaction of, with  $\alpha$ -amino-nitriles, 1262.  
**Thiocyanatophosphonic acid**, diethyl ester, 701.  
**Thiocyanic acid**, alkyl esters, preparation and physical properties of, 1848.  
 3-chloroallyl ester, 2182.  
**Thiodiglycol**, preparation of, 1892.  
**2-Thio-4-(*p*-dimethylaminostyryl)uracil**, 1715.  
**Thio-esters**, hydrolysis of, 1549.  
**Thioethylene glycol**, preparation of, 1892.  
**5-Thioformamido-4-D-glucosidamino-2-methylthiopyrimidine**, 6-amino-, and its 4-tetra-acetyl derivative, 966.  
**2-Thio-3-hydroxymethylbenzthiazolone**, 1717.  
**Thiols**, aliphatic, physical properties and constitution of, 1820.  
**Thiol-compounds**, addition of, to double bonds, 1683.  
**Thionaphthen**, derivatives of, 1615.  
 detoxication of, as catalyst poison, 1916.  
 1:3-oxazine derivatives of, 78.  
**Thionaphthens**, formation of, from phenylthioacetic acid derivatives, 81.  
**3-Thionaphthen-2-carboxylic acid**, 3-hydroxy-, 3-acetyl derivative, ethyl ester, 84.  
**Thionaphthen sulphone**, acetoxymercuri-derivative, 1617.  
**Thionaphthen sulphone**, nitro-, *d*bromide, 1616.  
**Thiophen**, detoxication of, 1091.  
**Thiophen-2-sulphonamide**, 4-amino-, and 4- and 5-nitro-, 527.  
**Thiophen-2-sulphonic acid**, *m*-methoxyphenyl ester, 526.  
**Thiophen-2-sulphonyl chloride**, nitration of, 525.  
**Thiophen-2-sulphonyl chloride**, 4-nitro-, 527.  
**1-Thiophenyl acetate**, 4-nitro-2-amino-, 2-acetyl derivative, 873.  
**Thiophthens**, isomeric, detoxication of, as catalyst poisons, 1916.  
**2-Thio-3-piperidinomethylbenzthiazolone**, 1717.  
**2-Thiothiazolidone-4-carboxylic acid**, 1339.  
**Thioureas**, formation of, by reduction with Raney nickel, 1716.  
**Thorium oxide**, catalytic, preparation of, 612.  
**DL-Threonine**, synthesis of, 310.  
**Thymol** as fractionating agent for starch, 1687.  
**Thymus nucleic acid**, sedimentation of, in the ultracentrifuge, 1382.  
**Titanium nitride**, deposition and growth of, on hot filaments, 1709.  
**Toluene**, methylation of, by dimethyl ether, 2154.  
**Toluene**, 2:4:6-triamino-, triacetyl derivative, 114.  
 fluoro-derivatives, spectra of, infra-red absorption, 1434.  
**2:5-dihydroxy-**, 2-benzyl derivative, 2307.  
 2:4:6-trinitro-, derivatives of, 1612.  
 reduction of, 1275.  
 6-nitro-2-hydroxy-, 2-benzyl derivative, 1609.  
**5-p-Toluenazequinoline**, 6-amino-, 223.  
**p-Toluenesulphinic acid**,  $\omega$ -amino-,  $\omega$ -acetyl derivative, preparation of, 148.  
**p-Toluenesulphonamide**, *N*-substituted derivatives, preparation of, 110.  
**2-p-Toluenesulphonamido-benzoic acid**, 4-nitro-, methyl ester, 366.

- 1-Toluene-*p*-sulphonamidoplaeidene-7:12-dione**, 1757.  
***p*-Toluenesulphon-( $\beta$ -diethylaminoethyl)anilide**, 3-nitro-, and its salts, 1930.  
**Toluene-*p*-sulphon-2-fluoroethylamide**, 2176.  
**Toluene-*p*-sulphonic acid**, 2-fluoroethyl ester, 2176.  
**2-*p*-Toluenesulphonmethylamidoobenzoic acid**, 4-nitro-, methyl ester, 366.  
**3-*p*-Toluenesulphomethylamido-N-dimethylaniline hydriodide**, 1929.  
**2-Toluene-*p*-sulphontoluclidide**, 3,5-dinitro-, 2134.  
**N<sup>v</sup>-*p*-Toluenesulphonyl-N-phenylbenzamidine**, 112.  
**N<sup>v</sup>-*p*-Toluenesulphonyl-N-tolylbenzamidines**, 112.  
***p*-Toluidic acid**, 3-bromo-, 1233.  
***m*-Toluidine**, 4-chloro-5-nitro-, 1009.  
***p*-Toluidine** hydrochloride, condensation product of, with 2-*p*-toluidinopen-2-en-4-one, 2027.  
***p*-Toluidine**, 6-nitro-2:4-diamino-, mono-, and di-acetyl derivatives, 1276.  
**Toluidines**, 3-nitro-, benzenesulphonyl derivatives of, 1312.  
**6-*p*-Toluidinomesobenzanthrone**, 1749.  
**4-*p*-Toluidino-2-*tert*-butylanthraquinone**, 1-amino-, 1628.  
***o*- and *p*-Toluidinomethylenemalonic acids**, diethyl esters, 893.  
**2-*p*-Toluidinopen-2-en-4-one**, condensation product of, with *p*-toluidine hydrochloride, 2027.  
**N-Toluoyl-*p*-toluenesulphonamides**, 111.  
 **$\beta$ -*p*-Tolylalanine**,  $\beta$ - $\omega$ -amino-, salts, 87.  
**N-p-Tolylbenzimino-o-nitrophenyl ether**, *N*-*o*-bromo-, 1604.  
**N-*o*-Tolylbenzimino-8-quinolyl ether**, 1605.  
**N-p-Tolylbenzimino-8-quinolyl ether**, *N*-*o*-bromo-, 1605.  
***p*-Tolyl α-bromobenzyl ketone**, 866.  
***p*-Tolylcarbamic acid**, 3-nitro-, ethyl ester, 878.  
***p*-Tolyl-2-carboxyethyl sulphone**, 1595.  
***o*-Tolylidyndiamide**, 1634.  
**N<sup>1</sup>-*p*-Tolyl-N<sup>5</sup>-ethyldiguanide** hydrochloride, 1635.  
**2-*p*-Tolyl-1-ethylindole**, 854.  
**3-*p*-Tolyl-1-ethylindole**, 855.  
**N-*o*-Tolylglycine**, *N*-3-nitro-, 2133.  
***m*-Tolylglycine**, 4-nitro-, 1312.  
**2-*p*-Tolylindole**, and 1-nitroso-, 854.  
**2-*p*-Tolyl-1-methylindole**, 854.  
**2-*p*-Tolyl-5-methylindole**, and 1-nitroso-, 854.  
**3-*p*-Tolyl-1-methylindole**, 855.  
**1-*p*-Tolyl-7-methylnaphthalene-2:3-dicarboxylic acid**, synthesis of, and its anhydride, 1270, 1272.  
**1-*m*-Tolynaphthalene-2-carboxylic acid**, 1233.  
**1-*m*-Tolynaphthalene-4'-carboxylic acid**, 1233.  
**1-*p*-Tolynaphthalene-2-carboxylic acid**, 1234.  
**1-*p*-Tolynaphthalene-3'-carboxylic acid**, 1234.  
***p*-Tolynaphthylarsonous acids**, 2209.  
***p*-Tolynaphthylcyanoarsines**, 2212.  
***m*-Tolyl- $\alpha$ -naphthylmethane**, 4-amino-, and its acetyl derivative, 298.  
***p*-Tolyl 2-(2:4:6-trinitrophenyl)ethyl sulphide and sulphoxide**, 1615.  
***p*-Tolyl 2-(2:4:6-trinitrophenyl)ethyl sulphone**, 1615.  
**4-*p*-Tolylxyloxy-2-methyl-5:6-benzquinoline**, 1287.  
**1-*p*-Tolylphenacylaniline**, 867.  
hydrobromide, 868.  
**1-*p*-Tolylphenacyl-*N*-ethylaniline**, 867.  
**1-*p*-Tolylphenacyl-*N*-methylaniline**, 867.  
**N<sup>1</sup>-*p*-Tolyl-N<sup>5</sup>-isopropylidiguanides**, and their hydrochlorides, 1635.  
**2-*p*-Tolylpyrrolidine**, and its picrate, 187.  
**2-*p*-Tolyl- $\Delta^2$ -pyrroline**, and its picrate, 187.  
**Tolyl-*m*-4-xylylarylarsonous acids**, 2209.  
**Tolyl-*m*-4-xylylcyanocarbonylarsines**, 2211.  
**6-Tosyl 1:4-anhydrosorbitol**, 302.  
**6-Tosyl 3:5-benzylidene 1:4-anhydrosorbitol**, 301.  
**1-*p*-Tosyl-4-phenylpiperidine-4-carboxylic acid**, 560.  
**4-Triacetyl-L-arabofuranosidamino-5-(2':5'-dichlorobenzene-azo)-2-methylthiopyrimidine**, 6-amino-, 963.  
**4-Triacetyl-L-arabopyranosidamino-5-(2':5'-dichlorobenzene-azo)-2-methylthiopyrimidine**, 6-amino-, 964.  
**1-Triacetyl-D-ribosidoglyoxaline-4:5-dicarboxyamide**, 524.  
**4-Triacetyl-D-xylosidaminopyrimidines**, hydrogen bonding in, 2265.  
**Triallylamine**, *tri*-3-chloro-, 2181.  
**1:3:5-Triazine**, 2:4-dichloro-6-amino-, 563.  
**1:3:5-Tiazines**, substituted, 561.  
**3:4-Triazolo-6:7-benzquinoline**, 1289.
- n-Tridecane-2-carboxylic acid**, See  $\alpha$ -Methyltridecyclic acid.  
**1:3:5-Trideuterobenzene**, spectrum of, absorption, ultra-violet, 445.  
fluorescence, ultra-violet, 456.  
**Triethyl trithiophosphate**, 1014.  
**Triethylamine**, *tri*-2-bromo-, and its hydrobromide, 2176.  
*tri*-2-chloro-, compounds related to, 2174.  
*tri*-2-fluoro-, 2176.  
**4-Triethylaminoacetamido-2-methyl-1-naphthol chloride**, 185.  
**Triethyl-lead fluoroacetate**, 1779.  
**Tri(ethylthioethyl)amine**, *tri*-2-chloro-, hydrochloride, 2175.  
**Triglycerides**, polymorphism of, 985.  
**Triketoindane**, photochemical reaction of, with stilbene, 2128.  
**Triketones**, symmetrical, action of hydrogen peroxide on, 50.  
**1:2:3-Triketones**, photochemical reactions of, with ethylenes, 2126.  
**4:2':3'-Trimethoxybenzocycloheptene**, 4'-hydroxy-, 1049.  
**1':2':3'-Trimethoxybenzocyclohepten-3-one**, and its 2:4-dinitrophenylhydrazone, 1051.  
**2':3':4'-Trimethoxybenzocyclohepten-3-one**, and its 2:4-dinitrophenylhydrazone, 1050.  
**4:2':3'-Trimethoxybenzocyclohepten-3-one**, 4'-hydroxy-, and its derivatives, 120, 1049.  
 **$\gamma$ -(2:3:4-Trimethoxybenzoyl)butyric acid**, 1051.  
 **$\gamma$ -(3:4:5-Trimethoxybenzoyl)butyric acid**, and its esters, 1050.  
**N-3:4:5-Trimethoxybenzoyl-p-toluenesulphonamide**, 111.  
 **$\gamma$ -(2:3:4-Trimethoxy-6-carboxyphenyl)butyric acid**, 1051.  
 **$\gamma$ -(3:4:5-Trimethoxy-2-carboxyphenyl)butyric acid**, and its dimethyl ester, 1050.  
**2:3:2-Trimethoxy-5:4'-divinylidiphenyl ether-6:5'-dialdehyde**, 2173.  
**7:2':4'-Trimethoxy-3-phenylcoumarin**, 4-hydroxy-, and its O-acetyl derivative, 175.  
**7:3':4'-Trimethoxy-3-phenylcoumarin**, 4-hydroxy-, and its derivatives, 175.  
 **$\delta$ -(2:3:4-Trimethoxyphenyl)valeric acid**, 1051.  
**8-(3:4:5-Trimethoxyphenyl)valeric acid**, 1050.  
**Trimethoxyphthalide**, 120.  
**NNN'-Trimethylacetamidine**, and its benzenesulphonate, 1619.  
**4-Trimethylaminoacetamido-2-methyl-1-naphthol chloride**, 185.  
**5:9:10-Trimethylidihydro-1:2-benzanthracene**, dihydroxy-, and its diacetate, 172.  
**4:4':6-Trimethyl-2:2'-dipyrimidylamine**, 6'-chloro-, and 6'-hydroxy-, 596.  
**1:5:5-Trimethyl-2:4-dithiohydantoin**, 1622.  
**2:3:4-Trimethylfluoranthene**, and its derivatives, 1139.  
**Trimethyl hexahydrodeoxypurropogallin**. See 4:2':3'-Trimethoxybenzocycloheptene, 4'-hydroxy-.  
**Trimethylhexahydrodropurropogallin**, 119.  
**[2-(1:3:3-Trimethylindolenine)][2-(3-ethylbenzselenaazole)]-[ $\gamma\beta'$ -dimethin-2-(1':3':3'-trimethylindolenine)]trimethincyanine perchlorate**, 1883.  
**[2-(1:3:3-Trimethylindolenine)][2-(3-ethylbenzselenaazole)]tri-methincyanine perchlorate**, 1887.  
**[2-(1:3:3-Trimethylindolenine)][2-(3-ethylbenzthiazole)]- $\gamma$ -anilomethyltrimethincyanine perchlorate**, 1884.  
**[2-(1:3:3-Trimethylindolenine)][2-(3-ethylbenzthiazole)]trimethincyanine iodide**, 1887.  
**[2-(1:3:3-Trimethylindolenine)][3-(4-methyldihydro- $\beta$ -quinidene)]dimethincyanine**, 1897.  
**2:3:6-Trimethyl D-mannonic acid**, phenylhydrazide, 1279.  
**2:4:4-Trimethylpentanal 2:4-dinitrophenylhydrazone**, 1329.  
**2:4:4-Trimethylpentane-1:2-diol**, 1329.  
**2:4:4-Trimethylpentane-2:3-diol**, and its nitrobenzoate, 286.  
**2:4:4-Trimethylpentan-3-ol**, and its derivatives, 1333.  
**2:4:4-Trimethylpent-1-ene**. See  $\alpha$ -Diisobutylene.  
**2:4:4-Trimethylpent-2-ene**. See  $\beta$ -Diisobutylene.  
**2:4:4-Trimethylpent-1-en-3-ol**, and its derivatives, 287.  
**2:4:4-Trimethylpent-2-en-1-ol**, and its nitrobenzoates, 1333.  
**Trimethyl purpurogallin**, 1049.  
**Trimethyl D-ribofuranose**, characterisation of, 2035.  
**2:3:5-Trimethyl D-ribonolactone**, 2037.  
**2:3:5-Trimethyl D-ribonophenylhydrazide**, 2037.  
**2:3:5-Trimethyl D-ribose anilide**, 2036.  
**Trimethyl tetrahydrodropurropogallin**. See 4:2':3'-Trimethoxybenzocyclohepten-3-one, 4'-hydroxy-.  
**3:3':8-Trimethylthiacyanocarbocyanine iodide**, 689.  
**3:4:4-Trimethylthiazolidine-2-thione**, 5-imino-, and its derivatives, 1621.

**3:4:4-Trimethylthiazolid-5-one-2-thione**, 1621.  
 **$\alpha\gamma\gamma$ -Trimethyl- $\alpha$ -valeric acid, ethyl ester**, 1336.  
**6:12:18-Trioxa-3:9:15:21-tetrathiatricosane**, 1:23-dichloro-, and 1:23-dihydroxy-, and their derivatives, 43.  
**Triphenylethylene**, and its derivatives, substitution reactions of, 1078.  
**Triphenylethylene series**, oestrogens of, 150.  
**Triphenylmethane**, oxidation of, by chromic acid, 1670.  
**Triphenylmethyl radical**, cationoid reactivity of, compared with anionic reactivity of desyl and  $\alpha$ -benzoylbenzhydryl radicals, 1549.  
 **$\alpha$ -Triphenylmethylthioacetic acid**, ethyl ester, 1551.  
**2:6'-Triquinolyl**, 2010.  
**Trisaminomethylaminomethane**, and its salts, 1905.  
**Tris(carboxyaminomethyl)carboxyaminomethane**, 1906.  
**Trischloromethylaminomethane**, and its *N*-*m*-nitrobenzylidene derivative, 1904.  
**Trischloromethylnitromethane**, 1904.  
**Trischloromethyltoluene-*p*-sulphonamidomethane**, 1905.  
**Tris-4-cyanobutylmethane**, nitro-, 230.  
**Trishydroxymethylnitromethane**, derivatives, 1902.  
**Tris-4:4':4''-methylnitroaminotriphenylcarbinol**, 3:5:3':5':5":5"-hexanitro-, 2170.  
**Tris(toluene-*p*-sulphonamidomethyl)toluene-*p*-sulphonamido-methane**, 1905.  
**Tris(toluene-*p*-sulphonomethylamidomethyl)toluene-*p*-sulphon-amidomethane**, 1905.  
**Trithians**, stereochemistry of, 892.  
**Trypanocides**, *N*-heterocyclic, 188.  
**Tryptophan**, aldehyde reactions for, 705.  
*n*-nuclear-C-methylated derivatives, synthesis of, 705.  
***d*-Tubocurarine chloride**, 1947.  
 constitution of, 265.

**U.**

**Ullmann reaction**, preparation of *s*-dinitrodiphenyls by, 264.  
**Undecane**, 1:6:11-*tri*amino-, tripicrate, 231.  
***n*-Undecane-2-carboxylic acid**. See  $\alpha$ -Methylundecylic acid.  
***n*-Undecane-6-carboxylic acid**. See  $\alpha$ -*n*-Amyloanthic acid.  
***n*-Undecane-1:11-dicarboxylic acid**. See Brassylic acid.  
**Undecenoic acid**,  $\alpha$ -amino, 1388.  
**Undecylenic acid**, esters, 662.  
**Unsaturated compounds**, conjugated, addition to, 17.  
 kinetics of halogen addition to, 980.  
 reactions of, 284, 1328, 1331, 1334.  
**2-Ureido-4:5-dimethoxybenzoic acid**, 1764.  
**2-Ureido-4-methoxybenzamide**, 1764.  
**2-Ureido-6-methoxybenzamide**, 1763.  
**3-Ureido-*p*-tolunitrile**, 1763.  
**Urethanes**, preparation of, and conversion into *N*-nitroso-derivatives, 2320.  
**Uridine**, preparation of, from yeast ribonucleic acid, 1936.

**V.**

**Valency**, modern theory of, 1461.  
***iso*Valeric acid**,  $\beta$ -mercapto-, 1685.

**Vanillin**, 2-nitro-, derivatives of, 376.  
***iso*Vanillin**, 2-nitro-, derivatives of, 376.  
**Vapour pressure of associated liquids**, relation of, to viscosity, 1349.  
**Veratraldehyde**, derivative from, with cyclohexa-1:3-dione, 1372.  
**Veratraldehyde**, 2-nitro-, derivatives of, 376.  
***N*-Veratroyl-*p*-toluenesulphonamide**, 111.  
**Vesicants**, 2177, 2180.  
 sulphur organic, 35, 38, 42, 44, 47.  
**Vinyl compounds**, polymers, cross-linking of, by Friedel-Crafts catalysts, 771.  
 halides, thermodynamic functions of, 1931.  
**cis**- and *trans*-Vinyldarsine oxide, 2-chloro-, 1205.  
**cis**- and *trans*-Vinyldarsinic acids, 2-chloro-, 1204.  
**Vinylchloroarsines**, 2-chloro-, isomeric, 1203, 1206.  
**Vinylchloroarsine**, 2-chloro-, physicochemical properties of, 1209.  
**Viscosity**, molecular association and, 1345, 1349.  
**Visnagin**, partial synthesis of, 2260.  
***iso*Visnagin**, synthesis of, 2260.  
***iso*Visnagone**, and its 2:4-dinitrophenylhydrazone, 2263.  
**Vitamin-A**, chemistry of, 386.

**W.**

**Walden inversion and steroids**, 1032, 1043.  
**Water**, solvating properties of, 1976.  
 vapour, adsorption of, on proteins, 1083.  
**Wolff rearrangement**, 1674.  
**Wood**, "insoluble red," chemistry of, 174.

**X.**

**Xanthic acid**, alkyl esters, and their potassium salts, 1848.  
**Xylenes**, methylation of, by dimethyl ether, 2154.  
***m*-2- and -5-Xylenols**, halogenation of, 209.  
***m*-2-Xylenol**, 4:5:6-tribromo-, bromide and chloride, 370.  
 chlorobromo-derivatives, 211.  
 5-hydroxy-, 5-benzyl derivative, 2306.  
***m*-5-Xylenol**, 2:4:6-trichloro-, bromide, 370.  
 chlorobromo-derivatives, 210.  
***m*-Xyloquinone**, 4-chloro-6-bromo-, 211.  
***N*-*m*-4-Kylylbenzimino-8-quinolyl ether**, *N*-5-bromo-, 1605.  
**1-*m*-5'-Kylynaphthalene-2-carboxylic acid**, 1232.  
**1-*m*-5'-Kylynaphthalene-4-carboxylic acid**, 1233.

**Y.**

**Yeast ribonucleic acid**, constitution of, 1527, 1532.  
 uridine from, 1936.

**Z.**

**Zeolites**, gas-absorption by, 133.  
 mineral resembling, with chabazite-like sorptive properties, 127.  
**Zinc iodide**, activity coefficients of, 216.  
**Zinc soaps**, solubility of, in organic solvents, 1750.