INDEX OF SUBJECTS, 1933.

Acetaldehyde, effect of, on conductivity of electrolytes in ethyl alcohol, 658.

O-Acetamido-sulphoxides, rearrangement of, 1490. Acetanilide, N-chloro-, photo-change of, in solvents,

Acetic acid, dissociation constant of, 313, 734, 1637. dl-phenylmethylcarbinyl ester, 177.

Acetic acid, bromo-, and its salts, elimination of bromine from, 1133.

Acetic anhydride, ketonic activity of, 1197.

2-Acetoacetyl-4-methylphenol, 1389.

Aceto- $\beta\beta\gamma$ -tribromo-a-hydroxybutylamide, 995.

Aceto-p-chlorobenzhydrylamide, 1504.

Aceto- β -chloro- $\beta\gamma$ -dibromo-a-hydroxybutylamide, 995. Aceto- $\beta \gamma$ -dichloro- β -bromo- α -hydroxybutylamide, 995. Aceto-a-naphthalides, 2- and 4-nitro-, 1205.

Acetone semicarbazone, hydrolysis of, 204.
Acetoneanil. See 2:2:4-Trimethyl-1:2-dihydroquin-

oline.

Acetophenone, dielectric constant of, 773.

Acetophenone, ω·chloro·, and its derivatives, velocities of prototropic change with, 893.

2:4:5-trihydroxy-, 1074.

ω:2:4.trihydroxy-, and its derivatives, 372.

ω:2:4:6-tetrahydroxy., acetyl and benzoyl derivatives, 368.

Acetophenones, nuclear-substituted, prototropy of, 217.

Acetophenoneoxime, and p-chloro-, picryl ethers, 810. Aceto-N-picrylanilide, 810.

7-Acetoxychromeno-(3':4':2:3)chromone, 493.

4-Acetoxy-3: 4-diphenyl - 5: 5-dimethyl- Δ^2 -cyclopentenons, 727.

ω-Acetoxy-4-methoxyacetophenone, 3-amino- and 3nitro-, 26.

2-Acetyl-3:5-dimethoxy-6-methylphenoxyacetic acid. ethyl ester, 444.

4-Acetyl-2:3-dimethyl a-methylglucoside, 738.

4-Acetyldiphenyl, 2-mono- and 2:4'-di-nitro-, 970.

Acetylene, diiodo-, dipole moment of, 652.

O-Acetylisoeverninaldehyde, 495.

Acetylmalic anhydride, rotatory dispersion of, 791. 2-Acetyl-4-O-methylresorcylaldehyde, azlactone of,

Acid, C₁₉H₂₂O₄, and its methyl ester, from reduction of ethyl ββ'-dihydroxy-ββ'-dianisyladipate, 828.
 C₂₀H₂₂O₄, and its methyl ester, from reduction of

ethyl $\beta\beta'$ -dihydroxy- $\beta\beta'$ -dianisyladipate, 828. Acids, influence of iodine on decomposition of, 1147.

aliphatic, halogen-substituted, salts, hydrolysis of, in aqueous solutions, 49.

monobasic, dissociation constants of, 731. organic acid salts of, 1016.

complex, physical chemistry of, 419, 512. fatty, and their esters, dipole moments of, 1569.

olefinic, 557, 561, 568, 577, 580. Δ^{a} - and Δ^{β} -olefinic, preparation and determination

of nitriles of, 612.

organic, dissociation constants of, 1637. unsaturated, behaviour of surface films of, 338. addition of hydrogen bromide to, 568.

Acids, $\Delta \gamma$ -unsaturated, formation of lactones from. 580.

weak, complex formation with, 5, 1543.

Acridone, 1:4-dibromo., 1:4-dichloro., and 4-chloro.1. nitro-, 1372.

Acridones, substituted, reactivity of groups in, 1372. 3-Acylchromones, preparation of, 1381.

o-Acyloxyacetophenones, molecular rearrangement of, 1381.

Address, presidential, 463.

Adipanilamide-p-arsonic acid, and its sodium salt, 92. Adipanilide-p-arsonic acid, and its sodium salt, 93. Adipanilide-pp'-diarsonic acid, and its disodium salt,

Adipanilodimethylamide-p-arsonic acid, and its sodium salt, 92.

Adipaniloethylamide-p-arsonic acid, and its sodium salt, 92.

Adipanilomethylamide-p-arsonic acid, and its sodium salt, 92.

Adipanilo-n-propylamide-p-arsonic acid, \mathbf{and} sodium salt, 92.

Adipic acid, esters of, 91.

Adsorption, irreversible, on charcoal, 842.

Alcohols, reactions of, with selenium dioxide, 391. aliphatic, free energy of, in aqueous solution, 674. electrostriction produced by salts in, 933.

n-aliphatic long-chain, 235.

identification of, in dilute aqueous solution, 216. Aldehydes, aromatic, reaction of, with 2-picoline, 77. chloro-substituted, reactions of, with chlorosubstituted arythydrazines, 1488.

2-Aldehydo-5-methoxyphenoxyacetic acid, ethyl ester, and its derivatives, 491.

2-Aldehydophenoxyacetic acid, cthyl ester, 492.

Aldoximes, configurations of, from electric dipole moments, 63.

 α - and β -Aldoximes, constitution of acetyl derivatives of, 1037.

Aliphatic compounds, higher, 346, 635, 1348.

B-cellobioside and Alizarin hepta-acetyl-β-primeveroside β -gentiobioside, 1168.

Alizarin, 3-bromo, and its methyl ethers, and 4bromo-l-hydroxy-, l-benzoyl derivative, methyl ether, 1517, 1520.

Alkaline-earth chlorides, equilibria of, with mercuric chloride and water, 151.

Alkaloids, cuprichlorides of, 996.

See also Cinchona and Lupin alkaloids.

Alkoxides, quaternary ammonium, decomposition of,

Alkyl halides, kinetics of reactions of, in hydroxylic solvents, 1576.

action of, with potassium hydroxide in ethyl alcohol, 258.

nitrates and nitrites, dipole moments of, 1252.

Alkylanilines, preparation of, 946.

hydrolysis of, 1070.

Allyl alcohol, reaction of, with iodine, 1323.

Allylacetic acid, preparation of, 582.

Altrose, derivatives of, 1076.

Amalgams. See Mercury alloys.

 β -Amino-ketones, 839.

a-Amino-nitriles, reduction of, 347.

Amines, tertiary, action of, with triphenylmethyl halides, 75.

Ammines, 517, 520.

Amminodipyridinoplatinous salts, chloro-, and ahydroxylamino., 1058.

Amminohydroxyplatinicdisulphamide, salts of, 418.

Amminopyridinoplatinous chloride, a-dihydroxylamino-, 1060.

 β -Amminotrimethylenediaminoplatinous salts, 1340. Ammonia, activity of, in ammonium chloride solutions, 1435.

action of, on solutions of mercuric salts, 1045.

Ammonium nitrate, equilibrium of, with lead and potassium nitrates, 799.

cobalt phosphate, 858.

magnesium phosphate, 854.

sulphate, equilibria of, with cobalt and nickel sulphates and water, 943.

Ammonium organic compounds, quaternary, thermal decomposition of, 526.

elimination of olefines from, 523.

containing benzhydryl, benzyl and methyl groups, decomposition of, 69.

containing the tert.-butylcarbinyl group, 67. d-Amyl alcohol, optical rotation of, and its deriv-

atives, 376. tert.-Amylaniline, and its hydrochloride, 949.

isoAmylbenzene, 2:6-dihydroxy-. See Tetrahydrotubanol.

 β -n-Amylglutaric acid, and its derivatives, 961, 962. β -Amyrene, 1346.

 β -Amyrin, and its derivatives, 1345.

Anagyramide, and its derivatives, 507.

Anagyramine, and nitroso-, 508.

Anagyrine, and its perchlorate, and dibromo-, 507.

Anagyris foetida, alkaloids of, 504.

Analysis, qualitative, of metals of the iron group in presence of phosphate, 253.

Anhydro-d-camphorsulphonylacetone, 308.

a-Anhydrotartaric acid, ethyl $\beta'\beta'\beta'$ -trichloro- α' hydroxyethyl ester, 796.

Aniline, conductivity of mixtures of, with phenol, 1032.

action of, with benzoyl chloride, in carbon tetra. chloride and hexane solutions, 1351.

Aniline, 2:4:6-trichloro-, and its derivatives, 142.

2-Anilino-2'-aminodiphenyl, 2.0-nitro-, and its diacetyl derivative, 1522.

 β -Anilinoisobutyl methyl ketons, nitroso \cdot , 366.

2-Anilino-6-ethoxylepidine, 1032.

ω-Anilino-α-ketopropaldehyde, nitrophenylhydrazones of, 479.

2-Anilinolepidine, derivatives of, 1031.

2-Anilino-6-methoxylepidine, 1032.

2-Anilinophenyl methyl sulphoxide, 2-p-chloro-onitro-, and 2-o-nitro-, acetyl derivative, 1493. 2-o-nitro-, 1492.

9-p-Anilinophenylcarbazole, o-amino-, and o-nitro-, and their acetyl derivatives, 1524.

ω-Anilinophenylglyoxal, bromophenylhydrazones of, 481.

2-Anilinophenylmethylsulphone, $2 \cdot p$ -chloro-o-nitro-, 1493.

2-o-nitro., 1492.

β-Anilinopropionic acid, toluene-p-sulphonyl derivative, action of phosphoryl chloride on, 618.

Anionotropy in cyclic systems, 720.

2-Anisidino-6-ethoxylepidines, 1032.

2-Anisidinolepidines, 1032.

2-Anisidino-6-methoxylepidines, 1032.

Anisil, Reformatsky reaction with, 827.

Anisole, tribromo-and tribromonitro-derivatives, 1054. 4-chloro-3:5-dinitro-, 827.

Anisoles, nitro-, dipole moments of, 1257.

p-Anisyl β -chloro- and β -hydroxy-ethyl sulphides,

Anisylmethyl p-toluenesulphonamide, 278.

Annual General Meeting, 451.

Antimalarials, 1467.

Anthocyanidins, synthesis of, 370.

Anthoxanthins, 268, 368, 610.

Anthracene, equilibrium of, with phenanthrene, 650. Anthranilic acid, condensation of, with 4-chloroquinaldine and with 2-chlorolepidine, 390.

Anthraguinone, 5- and 8-chloro-1-amino-, and their 1-acetyl derivatives, 448.

Anthraquinones, hydroxy., reduction products of, 1512.

Anthraquinone-1-carboxylic acids, chloro-, and their derivatives, 448, 449.

Anthraquinone-1:2-dicarboxylic acid, dimethyl ester, 1595.

tetramethyl **Anthraquinon**etetracarboxylic acids. esters, 1595.

Anthraguinonetricarboxylic acids, trimethyl esters, 1595.

Antimony, determination of, potentiometrically, 1. d-Arabotrimethoxyglutaric acid, amide and methyl ester, 641.

Aromatic compounds, rearrangements of, 984. influence of nuclear halogens on side-chain activity

in, 1112 volume effects of alkyl groups in, 977, 980.

containing two or more phenyl groups, substitution in, 968.

p-Arsanilic acid. See Phenylarsinic acid, p-amino-. Arsenic compounds, asymmetric, 1634.

Arsenicals, optically active, 1634. Arsenobenzene-NN'-dimethylenesulphurous acid. 3:3'-diamino-4:4'-dihydroxy-, sodium salt, 1011.

p-Arsinoadipanilic acid, p-dichloro-, 92. Arsinomethylmalonanilic acid, p-dichloro-, 1066.

Arsonic acids of the fluorenone and fluorenol series, 1454.

p-Arsonoadipanilic acid, and its esters, 92.

p-Arsonobenzylidenemalonic acid, 352.

p-Arsonomethylmalonanilic acid, and its derivatives, 1064.

p-Arsonosuccinanilic acid, 93.

β-Arylaminocrotonic acids, arylamides of, 1262.

Arylazobenzoylacetones, action of bromine on, 480. Arylhydrazines, chloro-substituted, reactions of, with

chloro substituted aldehydes, 1488. Ascorbic acid, constitution of, and its salts and

dcrivatives, 1270. rotatory dispersion of, 1444, 1564.

d- and l-Ascorbic acids, synthesis of, 1419. Aspidinol, and its diacetate, 819.

Atisine, and its perchlorate, 740.

Atomic weight of carbon, 846.

Atomic weights, report of Committee on, 354. tables of, 203, 361.

Atranorin, and its derivatives, 130.

Azides, organic, dipole moments and structure of, 406. 1:1'-Azonaphthalene, reduction of, 133.

1:1'-Azoxynaphthalene, reduction of, 133.

2:2'-Azoxytoluene, 3:3'-dinitro., 501.

B.

Balance sheets. See Annual General Meeting, 451. Barium azide, thermal decomposition of, 1397, 1400. nitrate, solubility of, in water, 501.

equilibrium of, with calcium and potassium nitrates, 236.

Base, C₅H₇N₂Cl, from methylglyoxal and formalin, 665.

mixtures of, 1439.

Benz-2:4:6-trinitro-m-tolylanilide, 811.

```
Batyl alcohol, constitution of, 165.
                                                            Benz-2:4:6-trinitro-m-tolyl-p-chloroanilide, p-chloro-,
Beckmann rearrangement, 806.
Benzaldazine, 3:5:3':5'-tetranitro-, 315.
                                                            Benzo-\beta\beta\gamma-tribromo-a-hydroxybutylamide, 995.
Benzaldehyde phenylhydrazone, dipole moment of,
                                                            Benzo-\beta-chloro-\beta\gamma-dibromo-a-hydroxybutylamide, 995.
                                                            Benzo-\beta \gamma-dichloro-\beta-bromo-a-hydroxybutylamide, 995.
                                                            4:5-Benzohydrindene, 1085.
Benzaldehyde, 3:5-dinitro-, and its derivatives, 315.
Benzaldehyde-p-arsenious oxide, 352.
                                                            Benzoic acid, dissociation constant of, 734.
Benzaldehyde-p-dichloroarsine, 352.
                                                            Benzoic acid, 3-amino-, 5-amidosulphonyl derivative,
Benzaldoxime, p-nitro., O-methyl ethers of, 65.
                                                                3-nitro., 5-amidosulphonyl derivative, and its
1:2-Benzanthracene from tar, 398.
                                                                amide and 5-chlorosulphonyl derivative, and its
  synthesis of, 1012.
                                                                chloride, 1373.
  derivatives, orientation of, 1592.
                                                              o-bromo-, o-bromophenyl ester, 1402.
  acctyl derivatives, 1408.
                                                              p-mono. and 3:5-di-nitro-, a-ethylcrotyl esters, 1498.
7-(1:2-Bens)anthranyldimethylcarbinol, 1410.
                                                                  menthyl csters, 172.
1:2-Benzanthraquinone, acetyl derivatives, 1409.
                                                            Benzonaphthaspiropyrans, colour of, 430.
Benzanthrone, chloro-derivatives, constitution of, 444.
                                                            Benzonitrile, dielectric constant of, 773.
                                                            Benzophenone, thio-, dipole moment of, 90.
Benzophenoneoxime, benzoyl, o-nitrobenzoyl, and 2:4:6-trinitro-m-tolyl esters, and p-chloro-, picryl
Benzdioxin, 8-bromo.6-nitro., 6-chloro., 8-chloro.6-
  nitro-, and 6-iodo-, 700.
Benzene nucleus, formation of rings attached to the
    m-position in, 1586.
                                                               ethers, 809.
  vapour pressure and refractivity of mixtures of,
                                                            Benzophenoneoximes, p-nitro-, O-methyl ethers of, 65.
    with benzyl alcohol, p-dichlorobenzene, nitro-
                                                            a-Benzopyrones, production of, 1263.
    benzene and phenol, 1413.
                                                            Benzoyl chloride, action of, with aniline in carbon
                                                               tetrachloride and hexane solutions, 1351.
  and chloro, and nitro, dielectric constants of, 773.
                                                            Benzoylacetone, condensation of, with salicylaldehyde,
  emulsions containing, 1214.
Benzene, nitro., f.p. of solutions of, in benzene and
                                                                1197.
                                                            beryllium compound, 1346.
3-Benzoyl-1-(2':4'-di- and 2':4':6'-tri-bromophenyl)-
      cyclohexane, 281.
    viscosity of, 118.
    nitration of, 113.
                                                              pyrazoles, 5-bromo-4-hydroxy- and 4-hydroxy-,
nitro- and n-dinitro-, equilibria between, 669. Benzeneazoacetic acid, 2-mono- and 2:6-di-bromo-4-
                                                               and their acetyl derivatives, 482.
                                                            e-Benzoylhexoic acid, 5-bromo. and 5-chloro-2-
  nitro-, and nitro-, ethyl esters, 476.
                                                               hydroxy-, and o-hydroxy-, 234.
Benzeneazoacetoacetic acid, mono- and di-chloro-
nitro-, and p-nitro-, ethyl esters, 1145.
                                                            2-Benzoyl-1-hydrindone, 612.
                                                            3-Benzoyl-1-nitrophenylpyrazoles, 5-bromo-4-hydroxy-,
                                                               5-chloro-4-hydroxy-, and 4-hydroxy-, 1626.
  nitro-, esters, action of bromine on, 475.
                                                            3-Benzoyl-1-nitrophenyl-4-pyrazolones, 5:5-dichloro-,
      action of chlorine on, 1143.
Benzeneazobenzoylacetone, and 2:4-di- and 2:4:6-tri-
  bromo., and their acetyl derivatives, 480.
                                                            7-Benzoyloxy-3-benzoylflavone, 1388.
Benzeneazobenzoylacetones, nitro-, action of halogens
                                                            7-Benzoyloxyflavone, 1385.
    on, 1624.
                                                            Benzoylphenacylcarbinol, and its acetate, 625.
  o- and p-nitro-, 1625.
                                                            δ-Benzoylvaleric acid, 5-chloro-2-hydroxy-, 1588.
Benzeneazo-p-bromoacetoacetic acid, 2-mono- and
                                                             Benz-N-picrylanilide, p-chloro-, 810.
    2:6-di-bromo-4-nitro-, and nitro-, ethyl esters,
                                                            Benz-N-picryl-p-chloroanilide, and p-chloro-, 810.
                                                            1:2-Benzpyrene, and nitro-, 403.
  mono- and di-chloronitro-, ethyl esters, 1146.
                                                             4:5-Benzpyrene, and its picrate, 405.
Benzeneazo-yy-dibromoacetoacetic acid, 2-mono- and
                                                            Benzpyrenes, and their picrates, 397.
  2:6-di-bromo-4-nitro-, and nitro-, ethyl esters, 478.
                                                             1:2-Benzpyrenequinone, 403.
                                                             isoBenzpyrylium ferrichloride, 555.
 Benzeneazo-y-chloroacetoacetic acid, mono- and di-
  chloronitro, and nitro, ethyl esters, 1146.
                                                             9-p-1":2":3"-Benztriazolylphenylcarbazole, 1524.
 Benzeneazo-\beta \gamma-dichloro-\Delta^a-butylene,
                                           2:5·dichloro-.
                                                             Benzyl alcohol, vapour pressure and refractivity of
                                                               mixtures of, with benzene, 1413.
 Benzeneazo-\beta\beta-dichloroethylene, 1490.
                                                             Benzyl hyponitrite, dielectric polarisation of benzene
                                                               solutions of, 309.
 Benzenesulphonic acid, m-nitro-, mono- and di-nitro-
   naphthyl esters, 287
                                                             β-Benzylaminoisobutyl methyl ketone, hydrochloride
 Benzenesulphon-nitrotoluidides, 1290.
                                                               of, and nitroso-, 366.
 8:9-Benz-△8:9-homogranatene, derivatives of, 553.
                                                             \textbf{Benzyl-} \textit{tert.-} \textbf{butylcarbinyldimethylammonium} \ \textbf{bromide,}
 \psi-8:9-Benz-\Delta<sup>8:9</sup>-homogranaten-3-ol, and its benzoyl
                                                               68.
  derivative, and its salts, 555.
                                                             2-Benzylchromone, 1461.
 8:9-Benz-\Delta^{g:9}-homogranaten-3-one, and its salts, 554.
                                                             Benzyldiallylamine, 66.
 4:5-Benzhydrindene, IIII.
                                                             Benzyldimethylethylarsonium picrate, 100.
 4:5-Benz-3-hydrindone, 1111.
                                                             Benzyl \Delta^1-cyclohexenyl ketone, and its semicarbazone,
 Benzhydrylamine, p-chloro-, and its salts, 1504.
                                                               1464
                                                             Benzylideneacetone, \beta-amino-ketones and pyrazolines
 Benzhydrylbenzyldimethylammonium salts, 74.
                                                               from, 839.
 Benzhydryldibenzylamine, and its salts, 75.
 Benzhydryldimethylamine, and its picrate, 73.
                                                             Benzylideneaniline, 3':5'-dinitro., 315.
 Benzhydryldimethylammonium bromide, 75.
                                                             \alpha-Benzylidene-\beta-3:4-dimethoxybenzoylpropionic acid,
 Benzhydryldimethylethylammonium salts, 73.
                                                               a-2-nitro-, and its lactone, 1088.
                                                             Benzylideneharman, 615.
 Benzhydrylidenebenzhydrylamine, 1502.
 Benzhydrylidene-a-phenylethylamine, p-chloro-, 1502.
                                                             4:6-Benzylidenemethylglucosides, 696.
 Benzidine, 3-bromo-2'-nitro-, 1590.
                                                             4:6-Benzylidene
                                                                                a-methylglucoside,
                                                                                                       2:3·di-p-nitro-
 Benzidine conversion, 984.
                                                               benzoyl derivative, 1079.
 α- and β-Benzilmonoximes, quantitative analysis of
                                                             Benzylidene-a-phenylethylamine, 1502.
```

Benzylidenetartaric acid, esters, rotatory dispersion

of, 789.

Benzylidene-p-toluidine, 3':5'-dinitro-, 315.

Benzylmethylamine picrate, 349.

3-Benzyl-2-methylchromone, 7-hydroxy-, 1462.

10-Bensyl-2-methyl-5:10-dihydrophenarsasina, 1636.

10-Benzyl-2-methyl-10-n-propyl-5:10-dihydrophenarsazonium salts, 1636.

6-Benzyloxy-2:3-dimethoxyacetophenone, 1623.

6-Benzyloxy-7-methoxy-1-(3'-benzoyloxy-4'-methoxybensyl)-3:4-dihydroisoquinoline, and its derivatives,

6-Benzyloxy-7-methoxy-1-(3'-benzyloxy-4'-methoxybensyl)-2-methyl-1:2:3:4-tetrahydroisoquinoline, 281. Benzyltriethylarsonium salts, 100.

Benzyltrimethylammonium hydroxide, and its salts,

Benzyltrimethylarsonium picrate, 99.

Beryllium organic compounds:

Beryllium benzoylacetonate, 1546.

Betanin, and related anthocyanins, 25.

Bile acids, structure of, and sterols, 626.

action of selenium dioxide on, 387.

compounds related to, 811, 815, 1098.

Bindschedler's-green iodide hydriodide, 253.

Biscamphor-10-mercury, 825.

Bis-p-carbethoxyphenyl disulphide, 1507.

7:7'-Bis-(5-chloro-2-methoxyphenylthio)stilbene, 1529. Bis- $(\beta\beta\beta-trichloro-\alpha-N'-nitrophenylcarbamidoethyl)$ ethers, and their acetyl derivatives, 31.

Bis- $(\beta\beta\beta-trichloro-a-N'-tolylcarbamidoethyl)$ ethers, and their derivatives, 31.

Bisdecalone, 1480.

4:4'-Bisdiethylamino-2'-acetoxydiphenylphthalide,

4:4'-Bisdiethylamino-2'-acetoxy-2''-ethoxydiphenylphthalide, 1268.

4':4"-Bisdiethylamino-2'-acetoxy-2"-methoxydiphenylphthalide, 1268.

4:4'-Bisdiethylamino-2:2'-dimethoxytriphenylcarbinol, preparation of, 1269.

4:4'-Bisdiethylamino-2:2'-dimethoxytriphenylmethane,

10:10'-Bis-5:10-dihydrophenarsazinyl, action of pentamethylene dibromide on, 1637.

2:2'-Bisdimethylaminodiphenyl hydriodide and chloroplatinate, 139.

Bisethylenediaminoplatinous chloride, crystal structure of, 1092.

Bisethylsulphonylethylthiomethane, 308.

6:7:3':4'-Bismethylenedioxy-2-phenylnaphthalene, 1531.

Bis-2-o-nitrophenylaminophenyl disulphide, 1493. Bisnitroso-compounds, aromatic, 671.

aa'-Bisphenylsulphonylpropane, 309.

aa'-Bisphenylthiopropane, 309.

l-n- and n-iso-Borneols, depression of melting points of, by various substances, 93.

Boromalic acid, salts, rotatory dispersion of, 951.

Boron organic compounds, 556.

Borotartaric acid, salts, rotatory dispersion of, 951. Brucine, 486.

n-Butaldehyde, β -bromo, trimeride of, 818.

 $aa\beta$ -tribromo-, a-chloro- $a\beta$ -dibromo-, and $a\beta$ -dichloro-2-bromo-, 994.

aaββ-tetrachloro-, 2:5-dichloro-N-acetylphenylhydrazone, 1489.

Butane, ignition of mixtures of, with air, 1240.

cycloButane-1:2-dicarboxylic acid, 1:2-dibromo-, ethyl ester, 1632.

n-Butane-aaγγδ-pentacarboxylic acid, ethyl ester, 814. cycloButane-1:1:2:2-tetracarboxylic acid, 3-hydroxy.,

n-Butanetricarboxylic acid, methyl ester, 818.

Butan-2-one, 3-chloro, and its semicarbazone, 717.

 Δ^{1} -cycloButene-1:2-dicarboxylic acid, ethyl ester, 1632.

 Δ^{α} and Δ^{β} -n-Butenoic acids, lactones from, 577. m-n-Butoxyaniline, 661.

3-n-Butoxydimethylaniline, and 4-nitroso-, 661.

3-n-Butoxyphenols, nitro-, and nitroso-, 661.

n-Butyl alcohol, partial vapour pressure of, in aqueous solutions, 674

n-Butyl hyponitrite, parachor of, 309. d-n-Butyl a-phenylethyl ether, 178.

tert.-Butylaniline, preparation and derivatives of, 948.

tert.-Butylcarbinyldimethylamine, and its salts, 68.

tert.-Butylcarbinyltrimethylammonium iodide, 68. Butylene, ignition of mixtures of, with air, 1240.

 $\beta\beta\gamma \cdot tri$ bromo-a-hydroxy-, β -chloro- $\beta\gamma$ -Butylurea, dibromo-a-hydroxy-, and βy-dichloro-β-bromo-ahydroxy-, 995.

Butyric acid, a-chloro-a\beta-dibromo-, 994.

isoButyric acid, β -chloro- α -hydroxy-, synthesis of, 803.

C.

Cadalene, synthesis of, 22.

Cæsium organic compounds:-

Cæsium di-4-isonitroso-1-phcnyl-3-methyl-5. pyrazolone, 842.

Calcium carbonate, equilibrium of, with sodium carbonate and water, 1160.

nitrate, equilibrium of, with barium and potassium nitrates, 236.

oxide, equilibrium of, with magnesium chloride and water, 701. sulphate, hydrates of, 638.

Camphor, mercury derivatives of, 823.

Camphor, 10-bromo-, 10-iodo-, and their oximes, and 10-thiol-, 825.

d-Camphoroxime, depression of the melting point of, by various substances, 93.

l-Camphor-w-sulphonic acid, a.bromo-,l-menthylester,

Camphor-10-sulphonic acid, l-neomenthyl esters, 169. Camphor-10-sulphonic acids, d-isomenthyl esters, 173. Cancer, production of, by hydrocarbon from coal tar,

Cannabinol, structure of, 1400.

Cannabis indica, resin from, 1400.

7-Carbamido-9-fluorenol-2-arsonic acid, and its sodium salt, 1457.

7-Carbamylmethoxyfluorenone-2-arsonic acid, sodium salt, 1456.

9-O-Carbamylmethylfluorenol-7-glycineamide-2arsonic acid, and its disodium salt, 1457.

Carbanilide, and thio., dipole moments of, 90. 3-Carbethoxy-1-(2'-chloro-4'-nitrophenyl)pyrazole, hydroxy-, 1146.

3-Carbethoxy-1-(2':6'-dichloro-4'-nitrophenyl)pyrazole, 4-hydroxy., 1146.

3-Carbethoxy-1-(2'-chloro-4'-nitrophenyl)-4-pyrazolone, 5:5-dichloro-, 1391.

3-Carbethoxy-4:5-diketo-1-p-nitrophenylpyrazolone hydrate, 1393.

3-Carbethoxy-∆2-cyclohexeneoxalic acid, and its ethyl csters, 1631.

3-Carbethoxy-4-hydroxy-1-(2'-chloro-4'-nitrophenyl)-

pyrazole, 5-chloro-, 1391. 3-Carbethoxy-4-hydroxy-1-(2':6'-dichloro-4'-nitro-

phenyl)pyrazole, 5-chloro-, 1392. 3-Carbethoxy-4-hydroxy-1-nitrophenylpyrazoles,

chloro-, 1391. 3-Carbethoxy-4-ketoisooxazolone 4-p-nitrophenyl-

hydrazone, 1392. 3-Carbethoxy-1-(nitrophenyl)pyrazoles, 5-bromo-, 5and 4-hydroxy-, and their bromo-4-hydroxy-

derivatives, 479.

ureas, 30.

Chlorine, photochemical combination of, with hydro-

gen in presence of oxygen, 743.

```
3-Carbethoxy-1-p-nitrophenyl-5-pyrazolone,4.oximino-,
                                                          Chlorine, reaction of, with hydriodic acid, 1315.
                                                            Hydrochloric acid, dielectric polarisation of, in
                                                               solution, 1541.
 3-Carbethoxy-1-nitrophenyl-4-pyrazolones.
                                                5:5-di-
   chloro., 1391.
                                                              phosphorus pentoxide as drying agent for, 1533.
                                                            Hypochlorous acid, dissociation constant of, 1200.
 p-Carbethoxyphenylsulphonylacetone, and its sodium
   salt, 1508.
                                                          Chloroaquotetramminochromic chloride. See under
 a-p-Carbethoxyphenylsulphonyl-a-benzylacetone, 1508.
                                                            Chromium bases.
 a-p-Carbethoxyphenylsulphonylethyl methyl ketone,
                                                          Chloroaquotetramminocobaltic picrate, 519.
   1509.
                                                          Chlorosulphonic acid, action of, on p-cresol and phenol
 a-p-Carbethoxyphenylsulphonyl-a-p-tolylthioacetone,
                                                            at low temperatures, 337.
  1508.
                                                          Cholesterol, structure of, 632.
p-Carbethoxyphenylsulphonyl-p-tolylthiomethane,
                                                          Chromium bases :-
  1508.
                                                            Chloroaquotetramminochromic chloride, preparation
 p-Carbethoxyphenylthicacetone, 1507.
                                                             of, 521.
 Carbethoxysalicylaldehyde diphenylacctal, 498.
                                                            Dihydroxotetramminochromic hydroxide, and its
 Carbohydrates, optical rotatory dispersion of, 1564.
                                                             derivatives, 520.
 Carbomethoxyisoeverninic acid, and its derivatives,
  494.
δ-Carbomethoxyvaleryl chloride, 91.
                                                          Chromium salts:
 Carbon, atomic weight of, 846.
 Carbon monoxide, density of, and of oxygen, 846.
    flame phenomena of, 972.
    velocity of detonation of mixtures of, with
      oxygen, 59.
    action of, with nitric oxide, 56.
  dioxide, compressibility of, 621.
                                                           chloride, 996.
Carbonyl compounds, prototropy in, 217, 220, 890.
  sulphide, oxidation of, 145, 208.
1-o-Carboxybenzylpyrene, 403.
cis- and trans-dl-3-Carboxy-1:1-dimethylcyclopropane-
  2-propionic acids, resolution of, 1223.
2-Carboxycyclohexanone-2-\beta-propionic
                                                 ethyl
  ester, 1015.
Carboxyl groups, orienting influence of, in olefinic compounds, 800.
a-Carboxymethoxypropionyl chloride, 1066.
2-o-Carboxyphenylaminolepidine, and its hydrochloride,
                                                         Cobalt bases :-
4-o-Carboxyphenylaminoquinaldine, 391.
a-p-Carboxyphenyisulphonyl-a-methyisulphonylethane.
  and its salts, 1510.
a-p-Carboxyphenylsulphonyl-a-methylthioethane, 1510.
                                                             ate, 519.
a-p-Carboxyphenylsulphonyl-\beta-phenylethane, and its
  ethyl ester, 1508.
p-Carboxyphenylsulphonyl-p-tolylsulphonylbenzyl-
  methane, and its salts and ethyl ester, 1508.
a-p-Carboxyphenylsulphonyl-a-p-tolylsulphonylethane,
  and its ethyl ester, 1510.
p-Carboxyphenylsulphonyl-p-tolylsulphonylmethane,
  and its ethyl ester, 1508.
p-Carboxyphenylsulphonyl-p-tolylsulphonylphenylthio-
  methane, 1509.
a-p-Carboxyphenylsulphonyl-a-p-tolylthioethane,
                                                         Copper :-
  solution of, 1506.
dl-a-p-Carboxyphenylsulphonyl-a-p-tolylthioethane,
 and its salts and derivatives, 1509.
p-Carboxyphenylsulphonyl-p-tolylthiomethane,
                                                  and
 its sodium salt, 1508.
trans-dl-Caronic acid, resolution of, 1223.
Carvacrol, derivatives of, 979.
Catalysis, energetics of, 502.
 homogeneous, of stereoisomerism in oximes, 1439.
Catalytic hydrogenation of unsaturated compounds,
Catechol. See Pyrocatechol.
Chalkone, nitration of, 344.
Charcoal, chemisorption on, 842.
Chemical Society, present position and future of, 463.
Chimyl alcohol, constitution of, from surface films,
 164.
Chloral, condensation of, with nitrophenyl- and tolyl-
```

Hydroxoaquotetramminochromic salts, 521. Nitratoaquotetramminochromic nitrate, 522. Chromic chloride, co-ordination compounds of, 796. Chromones, synthesis of, 942, 1073, 1459. Chrysene, synthesis of, 1012. derivatives of, 607. Cinchene cuprichloride, 999. Cinchona alkaloids, precipitation of, by cupric Cinchonidine cuprichloride, 999. Cinchonine cuprichloride, 999. Cinnamic acid chlorohydrin, constitution of, 964. Cinnamic acid, 3:5-dinitro-2-hydroxy-a-amino. a. benzovl derivative, 487. cis-Cinnamic acid, three forms of, 1453. Cinnamonitrile-p-arsonic acid, 352. 6-Cinnamoyl-\(\psi\)-indoxylspirocyclopentane, 299. 7-Cinnamoyloxy-2-styrylchromone, 1388. Coal, composition of, 1405. Coal tar. See under Tar. Dihydroxotetramminocobaltic hydroxide, action of acids on, 517. Nitratoaquotetramminocobaltic nitrate hemihydr-Cobalt ammonium phosphate, 858. sulphate, equilibria of, with ammonium and sodium sulphates and water, 943. Colouring matters. See Garcinin and Robinetin. Combustion of hydrocarbons, 1599. Compounds, conjugated, properties of, 960, 1297, 1302. cyclic. See Cyclic compounds. spiro-Compounds, ring changes in, 352. Compressibility of gases at low pressures, 619. Co-ordination, covalency and chelation, 1290. Cupric chloride, equilibrium of, with mercuric chloride and water, 151. Copper determination :determination of, with salicylaldoxime, 314. and its separation from nickel, 895. Covalency, co-ordination and chelation, 1290. o-Cresol, 4:5. dinitro-, and its methyl ether, 1166. m-Cresol, conductivity of mixtures of, with phenol, p-Cresol, action of chlorosulphonic acid on, at low temperature, 337. p-Cresol, 2:6-dinitro-, and its methyl ether, 440. o-Cresol-4-sulphonic acid, barium salt, 1377. Crotonaldehyde, $\alpha\beta$ -dichloro-, chlorophenylhydrazones of, and their acetyl derivatives, 1489. y-p-Cumyl-n-butyric acid, 436. Cyanogen halides, reactions of, with hydriodic acid, 1318. Hydrocyanic acid, potassium salt, action of, on platinic chloride, 1429. Cyanides, complex alkylated, 101.

absorption

and 6-hydroxy-, benzyl derivative, and 6-iodo-, 1622. 6:7-Dimethoxy-3-benzoyl-2-phenylquinoline-4-prop-

ionic acid, 1089.

Cyclic compounds, structure of, by selenium dehydros-Di(dimethylphenyl)ureas, 1263. genation, 352. Dielectric constants of organic liquids, 768. polarisation. See under Polarisation. synthesis of, 1028. p-Cymenecarboxylic acids, 983. 5:7-Diethoxy-2:8-dimethyl-3-ethylchromone, 821. β -2-Cymylisobutyric acid, 129. 2:2'-Diethoxyhydrasobenzene, benzidine conversion of, (2-Cymylmethyl)methylmalonic acid, and its ethyl ester, 129. Diethoxy-3-methyl-n-butyrophenones, hydroxy-, 821. β -2-Cymylpropionic acid, 129. 4:6-Diethoxytoluene, 2-nitro-, 821. Cytisine, and its perchlorate, 507. 4:6-Diethoxy-o-toluidine, and its acetyl derivative, 821. Diethyl sulphide, dipole moment of, 652. 4'-Diethylamino-2'-acetoxyphenyl-4''-dimethylaminoa-naphthylphthalide, 1268. D. 1-Diethylamino-5-furyl-4-penten-3-one hydrochloride, Daidzein, synthesis of, 274. Decahydronaphthalens. See Decalin. 4'-Diethylamino-2'-hydroxy-o-benzoylbenzoic acid, and Decalin, dipole moment of, 652. its methyl ester, 1267. trans- β -Decalone, chloro-, 1479. a-Diethylamino- β -(2:4-dinitrophenyl)ethane 302. Dehydrocadalene, and its dimeride, 24. ${\bf 2:2'-Diethyl-3:4:3':4'-dibenzthiotricar bocyanine~iodide,}$ Dehydrodihydrorotenonic acid, structure of, and its acetyl derivative, 1163. Dehydroergosterol 3:5-dinitrobenzoate, 389. 2:2'-Diethyl-5:6:5':6'-dibenzthiotricarbocyanine iodide, Dehydro-2-naphthol 1-disulphide, bromo-derivatives, 191. 10:10-Diethyl-5:10-dihydrophenarsazonium Diacetanilide, 2:4:6-trichloro-, 143. and iodide, 1637. 2:4-Diacetoxy-6-methylbenzylidene diacetate, 495. Diethylene dioxide (dioxan), dipole moment of, 90. Diacetylresorcylaldehyde, azlactone of, 493. Diethylene dioxide, 2:3-dichloro-, 1598. 4:4'-Dialdehydoarsenobenzene, 352. Diethyl-n-propylsulphonium salts, 992. Diallyl hydrobromides, 817. 2:2'-Diethylselenocarbocyanine iodide, Diamminocupric trisdiphenol, 1230. spectrum of, 216. 2:2'-Diethylselenotricarbocyanine iodide, 192. Diamminopyridinoplatinous chloride, a-chloro-, 1058. Diamminotrimethylenediaminoplatinic salts, 1340. Diethylsulphone, dipole moment of, 652. β-Diamminotrimethylenediaminoplatinous salts, 1340. Diethylthallium diphenol, 1229. $\beta\beta'$ -Dianisyladipic acid, $\beta\beta'$ -dihydroxy, and its 3:3'-Diethylthiazolinotricarbocyanine iodide, 192. esters, 828. 2:2'-Diethylthiotricarbocyanine iodide, 191. $\beta\gamma$ -Dianisyladipic-a acid, and its esters, 609. s-Diethylthiourea, dipole moment of, 90. p-Di-p-anisylurea, 1263. 1:1'-Diethyl-2:2'-tricarbocyanine iodide, 193. O-Diethylusneol, and its picrate, 716. Diethylzinc. See under Zinc diethyl. 1:1'-Dianthraquinonyl, 3:3':4:4'-tetrahydroxy-, 1517. Diaquorhodium disulphamide, salts of, 418. ay-Diarylmethyleneasomethines, influence of poly-Dicyclohexylphenylethylsilicane, 1043. nuclear aryl groups on mobility and equilibria in, 37. Dicyclohexylphenylsilicane, 1042. ω -Diaso-p-acetylanisole, 375. 9:10-Dihydro-1:2:5:6-dibenzanthracene, 1596. Diazo-compounds, aliphatic, dipole moments and Dihydro- $\beta\beta$ -dimethylanhydroacetonebenxil, 727. structure of, 406. Dihydroergosterol, action of selenium dioxide on, 387. Diazomethane, preparation of, 363. 3:5-dinitrobenzoate, 389. absorption spectrum and photochemical decomoxide, and its salts, 389. position of, 119. Dihydromethylanagyrine, 508. ω-Diazo-3-nitro-4-methoxyacetophenone, 26. △-Dihydromuconic acid, ethyl ester, 890. Diasosulphonates from β -naphthol-1-sulphonic acid, 1:2-Dihydropapaverine, 275, 740. reaction of, 1067. 2:3-Dihydropentachromone, 2-Diazotoluene 3-sulphide, 297. 6-nitro-, 235. ω -Diazo-3:4:5-trimethoxyacetophenone, 375. 2:3-Dihydropentachromone, 6-chloro-, 1588. 1:2:5:6-Dibenz-3:4-anthraquinone, 1596. Dihydroquinene cuprichloride, 999. 1:2:5:6-Dibenz-3:4-anthraquinoneazine, 1596. 1:2-Dihydroisoquinoline, preparation of derivatives of, 1:2:5:6-Dibenzanthraquinone-4:8-dicarboxylic scid. Dihydroxotetramminochromic hydroxide. See under Di(benzdioxinyl)ketone, di-6-nitro, 700. Chromium bases. Di(benzdioxinyl)methane, di-6-nitro-, 700. Dihydroxotetramminocobaltic hydroxide. See under Dibenzenesulphonanilide, di-m-nitro-, 1290. Cobalt bases. Dibensenesulphon-nitrotoluidides, di-m-nitro-, 1290. Di-(4-ketobenzdioxinyl) ketone, di-6-nitro-, 700. 2:11-Diketo-5:14-dimethoxyhexahydrochrysene-a, 609. Dibenzenesulphontoluidides, di-m-nitro-, 1290. 3:4:5:6-Dibensphenanthra-1:2:7:8-diquinone, 1597. Diketohexahydrochrysenes, 608. 3:4:5:6-Dibensphenanthra-1:2:7:8-diquinonediazine, 4:5-Diketo-1-(4'-nitrophenyl)pyrasolone-3-carboxylie 1597. acid, ethyl ester, 4-(4"-nitrophenyl hydrazone), 3:4:5:6-Dibensphenanthrene, 1592. 2:2'-Di-1":2":3"-benstriasolyldiphenyl, 1522. Diketosuccinic acid, esters, nitrophenyl-hydrazones Dibenzyldiallylammonium bromide, 67. and -osazones of, 1392. hydroxide, formation and decomposition of, 66. 6:7-Dimethoxy-3-acetyl-2-methylquinoline-4-propionic acid, 1089. Dibenzylmethylammonium salts, 75. 1:1'-Dicarbasyl, synthesis of, 1520. 6':7'-Dimethoxy-8-isoamylchromenochromone, 3:9'-Dicarbazyl, synthesis of, and its 9-acetyl derivhydroxy. See Dehydrodihydrorotenonic acid. ative, 1523. 2:3-Dimethoxybenzoic acid, 6-bromo-, and its anilide,

2-nitro-, 1590. 5 Q

Dicarbazyls, 1520, 1523.

NN'-Dicarbethoxybenzidine, 3-bromo-2'-nitro-, and

- β -3:4-Dimethoxybenzoylpropionic acid. and lactone, 1088.
- β-3:4-Dimethoxybenzoylpropionic acid, 6-amino-, and 6-nitro-, and their derivatives, 1089.
- β-4:5-Dimethoxybenzoylpropionic acid, 2-amino-, and 2-nitro-, 1467.
- 3':5'-Dimethoxy-4'-benzyloxyflavone, 5:7-dihydroxy-,
- 3:4-Dimethoxycinnamic acid, ethyl ester, and its dibromide, 1465.
- 3:3'-Dimethoxy-1:1'-dianthraquinonyl,4:4'-dihydroxy-, and its dibenzoyl derivative, 1517.
- 6:7-Dimethoxy-1- β -3':4'-dimethoxyphenylethyl-3:4-dihydroisoquinoline, 1584.
- 4:6-Dimethoxy-2:3-dimethylcoumarone, and its
- picrate, 717. 5:7-Dimethoxy-2:8-dimethyl-3-ethylchromone, 823.
- $a\beta$ -Dimethoxyethane- $aa\beta\beta$ -tetracarboxylic acid, methyl ester, 643.
- 2:6-Dimethoxy-4-ethoxy-3-mathylbenzoic acid, methyl cster, 719.
- 3':4'-Dimethoxyflavone, 7-hydroxy., 1387.
- 3':5'-Dimethoxyflavone, 5:7:4'-trihydroxy-, 942.
- 7:4-Dimethoxyisoflavone-2-carboxylic acid, 275.
- Dimethoxyflavylium perchlorates, aminohydroxy-, 26. 7:4'-Dimethoxyflavylium chloride, 3-chloro-2'-hydroxv-, 290.
- 3:3'-Dimethoxyhelianthrone, 4:4'-dihydroxy-, and its diacetyl derivative, 1517
- 5:14-Dimethoxyhexahydrochrysene-a, 610.
- 2:2'-Dimethoxyhydrazobenzene, benzidine conversion
- 5:6-Dimethoxy-1-hydrindone-2-glyoxylic acid, and its cthyl ester, 611.
- Dimethoxymaleic acid, mcthyl ester, 1289.
- 3:4-Dimethoxymandelonitrile, and its imino ethyl ester hydrochloride, 1466.
- 4:6-Dimethoxy-3-methylacetophenone, 2-hvdroxv-.
- 4:6-Dimethoxy-3-mathylbenzaldehyde, 2-hydroxy-, and its acetate, 442.
- 2:4-Dimethoxy-6-methylbenzanilide, 494.
- 4:6-Dimethoxy-3-methylbenzoic acid, 2-hydroxy-, and its methyl ester, 442.
- 4:6-Dimethoxy-3-methyl-n-butyrophenone, 2-hydroxy-, and its acetate, 823.
- 4:6-Dimethoxy-3-methylchalkone, 2:4'-dihydroxy-, 444.
- 7:4'-Dimethoxy-2-methylisoflavone, 274.
- 6:7-Dimethoxy-2-methylnaphthalene, 86.
- 2:6-Dimethoxy-4-methylquinoline, 301.
- 5:6-Dimethoxynaphtha(1:2:4':3')coumarin, 4:7'-dihydroxy-, diacetyl derivative, 1471.
- 4:5-Dimethoxyphenoxyacetic acid, and its methyl ester, 2-acetonitriles, 1164.
- 4:5-Dimethoxyphenoxyacetic acid-(2':4'-dihydroxy-3'-isoamyl)acetophenone. See Tetrahydroderrisic isoamyl)acetophenone.
- 4:5-Dimethoxyphenoxyacetic acid-2-resacetophenone. See Tephrosic acid.
- 3:4-Dimethoxyphenylacetylens, 1466.
- β-3:4-Dimethoxyphenylethyl alcohol, and its derivatives, 1466.
- a-3:4-Dimethoxyphenyl- γ -2-hydroxy-4:6-dimethoxyphenyl-n-propyl alcohol, 290.
- α -2:4-Dimethoxyphenyl- γ - ϕ -hydroxyphenyl-n-propyl alcohol, 290.
- 7:8-Dimethoxy-3-phenyl-4-(4'-methoxystyryl)coumarin, 617.
- 7:8-Dimethoxy-3-phenyl-4-(3':4'-methylenedioxystyryl)coumarin, 617.
- 3:4-Dimethoxyphenylpropiolic acid, 1466.
- β-3:4-Dimethoxyphenylpropiono-β-3':4'-dimethoxyphenylethylamide, 1584.

- 2:4-Dimethoxy-β-phenylpropiophenone, 2'-hydroxy-,
- 6:7-Dimethoxy-2-phenylquinoline-4-propionic acid. 1089.
- β -6:7-Dimethoxyquinaldyl(4)-ethylamine dihydrochloride, 1467
- β -6:7-Dimethoxyquinaldyl(4)-ethylurethane, 1468.
- β-6:7-Dimethoxyquinaldyl(4)-propionic acid, and its derivatives, 1468.
- 6:7-Dimethoxyquinolin:-4-propionic acid, 1089.
- 7:4-Dimethoxy-2-styrylisoflavone, 275.
- 3:4"-Dimethoxy-pp-tribenzaldehyde, 141.
- 3:4"-Dimethoxy-pp-tribenzoic acid, and its chloride,
- 4:6-Dimethoxy-2:3:7-trimethylcoumarone, and picrate, 718.
- 2:4-Dimethoxytoluene, 6-nitro-, 441.
- 4:6-Dimethoxy-o-toluidine, 441.
- 2:6-Dimethoxyisovalerophenone, and its semicarbazonc, 1164.
- Di(methylamino)cupric diphenol, 1230.
- 4"-Dimethylamino-4'-diethylamino-2'-acetoxydiphenylphthalide, 1268.
- 2'-Dimethylaminodiphenyl, 3-bromo-, and its chloroplatinate, 1591.
- 1-Dimethylamino-5-furyl-4-penten-3-one, phenylhydrazone, hydrochlorides, 839. Dimethylaminohexose phenylosazone, 226
- 5-Dimethylamino-8-methoxy-2:3-diphenylquinoxaline, 826.
- β -Dimethylamino- β -methylpropane, α -amino-, salts, 349.
- o-(2-Dimethylaminophenyl)phenyltrimethylammonium iodide, resolution of, 135.
- p-Dimethylaminophenylpyridine, 1499.
- p-Dimethylaminostyrylbenzthiazole methiodide, absorption spectrum of, 216.
- Dimethyl anhydro-a-methylhexoside, 1081.
- Dimethyl-p-anisidines, dinitro-, 825.
- Dimethylascorbic acid, and its barium salt, 1287. Dimethylbutadienes, dipole moments and atomic polarisation of, 1297, 1302.
- $\beta \gamma$ -Dimethyl-n-butane- $\alpha \alpha \beta \gamma \delta \delta$ -hexacarboxylic methyl ester, 814.
- Dimethyl-tert.-butylsulphonium iodide and picrate,
- Dimethylbutylsulphonium iodides, 535.
- O-Dimethyldaidzein, 275.
- 2:2-Dimethyldibenzopyrans, synthesis of, 1400.
- 2:8-Dimethyl-5:6:11:12-dibenzperylene-4:10-quinone, 3:9-dihydroxy-, 1519.
- 2:2'-Dimethyldibenzthiotricarbocyanine chlorides, 192. 6:6'-Dimethyl-1:1'-diethyl-2:2'-tricarbocyanine iodide,
- 193. 3.nitro-2-hydroxy-,
- 2:3-Dimethyl-2:3-dihydroindole,
- 2:2-Dimethyldiphenyl disulphide, 3:3'-diamino-, and -dinitro-, 501
- 3:3'- and 5:5'-Dimethyldiphenyl disulphides, 2:2'-diamino-, and their derivatives, 297.
- 4:4'-Dimethyldiphenylketoxime picryl and trinitro-mtolyl ethers, 811.
- 3:3'-Ďimethylenedi-β-naphthas piropyran, 434.
- Dimethylethylarsine, and its salts, 95, 99.
- Dimethylethylarsonium picrate, hydroxy., 100.
- Dimethylethylsulphonium iodide, 535.
- aβ-Dimethylglutaconic acid, ethyl ester, methylation of, 556.
- l-trans-ay-Dimethylglutaconic acid, catalytic action of acids on racemisation of, 595.
- $\beta\beta$ -Dimethylglutaric acid, thermal decomposition of, 1028
- 3:3'-Dimethylhelianthrone, 4:4'-dihydroxy-, and its diacetyl derivative, 1519.

rivatives, 726.

1:1-Dimethylcyclohexane-2:4:6-trione-3:5-dicarboxylic acid, ethyl ester, 1617. 2:6-Dimethylcyclohexanone-2-acetic acid, ethyl ester, 2:3-Dimethylindole, acetyl and benzoyl derivatives, and 2 bromo, 1 acetyl derivative, 2 and 3 hydroxy. and nitro-derivatives, 957. O-Dimethyl-lecanoric acid, methyl ester, 494. Dimethylmalonic acid, ethyl hydrogen ester, and its derivatives, 1617. 4:6-Dimethyl a-methylaltroside, 2:3-di-p-toluenesulphonyl derivative, 1080. 4:6-Dimethyl a-methylglucoside, 2:3-di-p-tolucnesulphonyl derivative, 1080. Dimethyl-(4-methyl-1-naphthyl)carbinol, 24. Dimethylnaphthalene, dichloro-, 485 1:3-Dimethylnaphthalene, and its picrate, 437. 1:5-Dimethylnaphthalene, 485. 4:8-Dimethylnaphthalene, 1-bromo-, 23. 4:8-Dimethyl-1-naphthoic acid. and its ethyl ester, 23. 1:1-Dimethylpentane-2:4-dione-1:3:5-tricarboxylic acid, ethyl cster, 1618. 1:3-Dimethylphthalaz-4-one, preparation of, 1333. 4:8-Dimethyl-1-isopropenylnaphthalene, and its derivatives, 24. 1:7-Dimethyl-4-isopropylnaphthalene, and its picrate, 4:8-Dimethyl-1-isopropylnaphthalene, 24. Dimethylpropylsulphonium iodides, 535. Dimethyl-y-pyrone, dipole moment of, 90. O-Dimethylpyrousnic acid, and its methyl ester, 1177. 2:2'-Dimethylselenotricarbocyanine iodide, 192. absorption spectrum of, 216. Dimethyl-1:2:3:4-tetrahydronaphthalenes, 436. 1:7-Dimethyl-1:2:3:4-tetrahydro-1-naphthol, 436. 3:3'-Dimethylthiazolinotricarbocyanine iodide, 192. Dimethylthio-y-pyrone, dipole moment of, 90. 2:2'-Dimethylthiotricarbocyanine chloride, 191. s-Dimethylurea, dipole moment of, 90. O-Dimethylusneol, and its picrate, 716. 3:9-Dimethylxanthine, and its salts, 668. Dimethylzinc. See Zinc dimethyl. Dinaphthaspiropyrans, colour of, 430. Dinaphthyl bases, 133. Dioxan. See Diethylene dioxide. s-Di-p-phenetylurea, 1263. 2:2'-Diphenol, co-ordination compounds of, 1227. Diphenyl derivatives, nitration of, 968. derivatives, dissymmetrical, optical activity of, 1588. 2:2'-disubstituted derivatives, stereochemistry of, 135. Diphenyl, 3-bromo-2'-amino-, and -2'-nitro-, 1591. 4:4'-dichloro-3:3'-dinitro-, preparation of, 1621. Diphenyl sulphide, 4-chloro-2-nitro-2'-amino-, 1492. disulphides, tetra- and hexa-chloro, 47. sulphoxide, 4-chloro-2-nitro-2'-amino-, and its acetyl derivative, and 2-nitro-2'-amino-, acetyl derivative, 1492. Diphenyl-4'-aldehyde, 2- and 4-nitro-, 971. Diphenylaidehydes, and their derivatives, 43, 44. Diphenylamine-6'-carboxylic acid, 2:5-dibromo-, 2:5dichloro-, and 5-chloro-2-nitro-, 1372. 2:2'-Diphenylaminodiphenyl, di-o-amino-, and di-onitro-, and its NN-diacetyl derivative, 1521. aa-Diphenyl-n-butane, 533. $\alpha\beta$ -Diphenyl- β -tert.-butylurea, 949. Diphenylcarboxyanilides, 42, 44. Diphenyl-4'-carboxylic acid, 4-nitro-, ethyl ester, 971. 2:3-Diphenylchromone, 1461. 2:3-Diphenylchromone, 7-hydroxy-, 1388. 3:3'-Diphenyl-4:4'-dimethyldicoumarin, 616. 3:4-Diphenyl-5:5-dimethyl-2-methylene-△3-cyclopentenone, 729.

3:4-Diphenyl-5:5-dimethylcyclopentane, 726.

3:4-Diphenyl-5:5-dimethyl- Δ^2 -cyclopentenone, 2- and 4-hydroxy-, and their derivatives, 724 3:4-Diphenyl-5:5-dimethyl-△3-cyclopentenone, and its derivatives, 726. 3:4-Diphenyl-5:5-dimethylcyclopentenones, chloro-, and their derivatives, 729. 3:4-Diphenyl-5:5-dimethyl- Δ^3 -cyclopentenonylidene-3:4-diphenyl-5:5-dimethyl- Δ^3 -cyclopentenone, 731. aa-Diphenylethyldimethylamine picrate, 73 $\beta\beta$ -Diphenylethyltriethylphosphonium chloride, 532. aa-Diphenylethyltrimethylammonium iodide, 73. 2:3-Diphenylindole, bromo., 1-acetyl, 1-benzoyl and 1-cinnamovl derivatives, 959. 2:3-Diphenylindole-1-carboxylic acid, ethyl ester, 959. Diphenylketoxime, di-p-chloro-, picryl and trinitro-m. tolyl ethers, 811. Diphenylmathana, 4-amina-, 3:5-dibromo-, bromo-4mono. and di-amino-, dibromo-4-amino-, tri-bromo-4-amino-, 3-bromo-5-iodo-4-amino-, bromo-4-amino-, 3:5-diiodo., 3:5-diiodobromodinitro-4-amino-, 4-amino-, and 3:4'-dinitro-4-amino-, and their derivatives, 1062. 5:5'-dinitro-2:2'-dihydroxy-, and its derivative, and 3:3':5:5'-tetranitro-, 699. Diphenylmethyldimethylamine, m-hydroxy-, and its derivatives, 1097. 1:3-Diphenyl-2-mathylindene, and 1-hydroxy-, 1499. 4:6-Diphenyl-2-mathylpyrylium perchlorate, 1198. Diphenyl- βa -naphthapyrones, 1462. 1:5-Diphenyl-3-(β -piperidinoethyl)pyrazoline, 839. Diphenyl-y-pyrone, dipole moment of, 90. Diphenyl-4'-sulphonic acid, 4-amino-, 43. Diphenyl-o-tolylacetaldehyde, 336. 3:4-Diphenyl-2:5:5-trimethyl-\(\alpha^2\)-cyclopentenon 3, hydroxy-, and its 2:4-dinitrophenylhydrazone, 728. s-Diphenylureas, dichloro, 1263. Diphenylyl-2-arsonic acid, 3'-bromo-, 1591. Diphenylyl-2-trimethylammonium iodide, 3-bromo-, 1591. Diphenylyl-2-trimethylarsonium iodide, 3'-bromo-, 1591. salts, 3'-bromo-, 1591. $\alpha \gamma$ -Dipiperidino- β -(2:4-dinitrophenyl)propans, 302. Dipole moments, 1252. of long-chain molecules, 1567. Di-n-propyl-n-butylsulphonium salts, 993. Dipyridinoplatinous chloride, a-dihydroxylamino-, 1059. Di-3:3'-salicylic acid ketone, di-3:3'-5-nitro-, 700. Dispersion, rotatory, of carbohydrates, 1564. of organic compounds, 788, 951, 1179, 1444. Dissociation constants of monobasic acids, 731. of olefinic acids, 561. of organic acids, 1637. 1:3-Distyrylbenzene, 2:4:6-trinitro-, 980. Disulphonamides, nitration of, 1290. Disulphonylmethanes, substituted, attempted resolution of, 1506. Dithallium diphenol, 1229. Dithian, physical constants of, 1530. Dithionates. See under Sulphur. Ditolyl. See Dimethyldiphenyl.

3:4-Diphenyl-5:5-dimethylcyclopentanone, and its de-

E.

Elaidyl alcohol, oxidation of, 246.
Electric moments of cyclic 1:1-dicarboxylic esters, 1304.
polarisation. See under Polarisation.
Electrodes, glass, potential determinations with,

1200.

Electrolytic conductivity of salts in non-aqueous solvents, 645.

in ethyl alcohol, effect of acetaldehyde on, 658. dissociation, specific effect of solvent in, 1360. oxidation, 829.

Elements with consecutive atomic numbers, directive powers of, 482.

Emulsions, 1214.

concentrated, homogenisation of, 1458.

Equilibria, solid-liquid, 199, 236.

Equilibrium constants from cryoscopic data, 193. in terms of activities, 1431.

Ergostadien ediolone benzoate and its 2:4-dinitrophenylhydrazone, 305.

Ergostadienedionol, and its oxime, 305.

Ergostanetriol diacetate. 305.

Ergostenetriol-B, and its diacetate, 305.

Ergosterol, structure of, 302, 633, 1410.

action of selenium dioxide on, 387. Ergosterol- B_3 , 390.

dl-Escrethole, synthesis of, 1475.

dl- and l-Eseretholes, salts of, 1474.

Eserine, synthesis of, 270, 1472, 1475.

l-Esermethole tartrate, 271.

Esters, catalysis of hydrolysis of, by bisulphate ions, 291.

influence of iodine on decomposition of, 1147. reactions of, with selenium dioxide, 391.

cyclic 1:1-dicarboxylic, electric moments of, 1304.

Ethane, ignition of mixtures of, with air, 1240.

4-Ethoxy-o-cresol, 6-nitro-, 821.

m-Ethoxydiethylaniline, 1268.

2-Ethoxy-3:4-diphenyl-5:5-dimethyl-Δ²-cyclopentenon3, and its 2:4-dinitrophenylhydrazone, 726.

2-Ethoxy-3:4-diphenŷl-5:5-dimethyl- Δ^3 -cyclopentenons 2:4-dinitrophenylhydrazone, 724.

4-Ethoxy-3:4-diphenyl-5:5-dimethyl-Δ²-cyclopentenone, 728.

4-Ethoxy-3-methylbenzoic acid, 2:6-dihydroxy-, methyl ester, 718.

6-Ethoxy-4-mathylquinoline, 2-chloro- and 2-hydroxy-, 1032.

4-Ethoxytoluene, 2:6-dinitro., 820.

4-Ethoxy-o-toluidine, 6-nitro-, and its acetyl derivative, 821.

4-Ethoxy-2:3:5-trimethylcoumarone, 6-hydroxy-, 720. 4-Ethoxy-2:3:5-trimethylcoumarone-7-carboxylic acid,

4-Ethoxy-2:3:5-trimethylcoumarone-7-carboxylic acid 6-hydroxy-, and its methyl ester, 719.

Ethyl alcohol, effect of acetaldehyde on conductivity in, 658.

Ethyl hyponitrite, parachor and dielectric polarisation of benzene solutions of, 309.

iodide, reaction of, with sodium thiosulphate, 1576. Ethylaniline, dipole moment of, 1255.

β-Ethylanilinopropane, α-amino-, salts, 349.

a-Ethylanilinopropionitrile, 349.

o-Ethylcarbonatobenzal chloride, preparation and hydrolysis of, 498.

2-Ethylchromone, 433.

Ethyldiisobutylsulphonium salts, 993.

Ethyldi-n-propylsulphonium salts, 993.

Ethylene, compressibility of, 621.

ignition of mixtures of, with air, 1241.

dichloride, dielectric constant of, 773.

Ethylene, trans-diiodo-, vapour pressure of, 429.

Ethylene glycol, thio., 46.

Ethylene oxide, Reformatsky reaction with compounds of type of, 362.

Ethylenediaminotrimethylenediaminoplatinic salts,

β-Ethylenediaminotrimethylenediaminoplatinous salts,

1-Ethyl- Δ^2 -cyclohexene-1:3-dicarboxylic acid, and its ethyl ester, 1631.

2-Ethyl-a-naphthachromone, 433.
12-Ethyloctahydrophenanthrene, 1465.
Ethylhenanthrenes, and their salts, 1015.
Ethyl isopropyl ketone nitrophenylhydrazones, 728.
Ethylsulphonylethylthioacetone, 308.
n- and iso-Eugenols, refractive dispersion of, 557.
isoEverninic acid, methyl ester, 494.
Explosions, low-pressure, formation of water-gas in,

F.

Faraday Lecture, 1366.

Ferric sulphate. See under Iron.

Ferrocyanides, hexaethylated, 101.

Ferrous sulphate. See under Iron.

Filaments, heated, detection of adsorbed gas films on, 798.

Filicinic acid, synthesis of, 1617.

Filix mas. constituents of, 819, 1617.

Films, surface, of unsaturated compounds, 338.

Fish, clasmobranch, unsaponifiable matter from oils of, 165.

Flames, movement of, 546.

Flavone, 5:7:3':4':5'-pentahydroxy-, acetyl derivative, 942.

Flavones, di- and tetra-hydroxy-, 1075.

isoFlavones, synthesis of, 274, 374.

Flavylium chloride, 4'-amino-7-hydroxy., ·3:7·di-hydroxy., and ·3:5:7·trihydroxy., and its benzoyl derivative, and 4'-nitro-3:5:7·trihydroxy., 28.

Fluorene-2-arsonic acid, 7-amino-9-hydroxy-, diacetyl derivative, 1456.

9-Fluorenol-2-arsonic acid, and 7-amino-, and their salts and derivatives, 1456.

9-Fluorenol-7-glycin: amide-2-arsonic acid. and its sodium salt, 1456.

Fluorenone-7-glycinemethylureide-2-arsonic acid, and its sodium salt, 1455.

Fluorenone-7-glycinephenylureide-2-arsonic acid, and its sodium salts, 1456.

Fluorenone-7-glycineureide-2-arsonic acid, and its sodium salt, 1455.

9-Fluorenylamine, 1499.

Fluorenylidene-9-fluorenylamine, 1500.

Formaldehyde, polymerisation of, 1193. condensation of, with p-nitrophenol, 699.

condensation of, with p-nitropnenol, 699.

Formic acid, chloro-, esters, rotation of chlorides from decomposition of, 179.

Formo- $\beta \beta \gamma$ -tribromo-a-hydroxybutylamide. 995.

Formo- β -chloro- $\beta\gamma$ -dibromo-a-hydroxybutylamide,

Formo- $\beta\gamma$ -dichloro- β -bromo-a-hydroxybutylamide, 995.

β-(o-Formylphenyl)propaldehyde, and its dioxime, 554. Fulminic acid, mercury salt, thermal decomposition of, 1396, 1400.

Furanoquinolines, 1087.

Furfurylideneacetone, β -amino-ketones and pyrazolines from, 839.

G.

Gallacetophenone, benzoyl derivatives of, 1387. Galangin, synthesis of, and its O-tribenzoyl deriv-

ative, 369. Garcinin, synthesis of, 610.

Gas, water-, equilibrium of formation of, in low-pressure explosions, 1557.

Gases, compressibilities of, at low pressures, 619. ignition of, 1240.

Gases, adsorbed, detection of films of, on heated filaments, 798.

mixed, explosive, coil ignition of, 227.

Gas reactions, homogeneous catalysis of, 1147.

Glass electrodes. See under Electrodes. Glucose series, Walden inversion in, 1076.

Glucosides. See Glycosides.

3- β -Glucosido-4-methylglyoxaline methochloroaurate,

Glutaconic acids, 595.

Glutaric acids, substituted, thermal decomposition of,

Glycollaldehyde octadecyl ether, and its 2:4-dinitrophenylhydrazone, 166.

Glycollic acid, and its ethyl ester, octadecyl ethers of, 166.

Glycosides, synthesis of, 1618. natural, 1167, 1170.

substituted, 223.

See also Primcverin.

Glutaconic acids, and their esters, structure of, 1628. Glyoxylic acid, and ω -amino- and ω -chloro-, ethyl esters, chlorophenylhydrazoncs of, 1490.

Glyoxylic acid, a-amino-, ethyl ester, chloronitro- and nitro-phenylhydrazones, 1146.

a-amino, and a-nitro, ethyl esters, phenylhydrazones of, 477.

a.chloro., ethyl ester, chloronitro. and nitrophenylhydrazones, 1145.

Guanosine, enzymatic preparation of, 667.

n- and iso-Hæmatommic acids, methyl esters, 133. Halides, influence of iodine on decomposition of, 1147.

Halogens, relation of electromeric effects and relative polarisabilities of, 1114.

nuclear, influence of, on aromatic side-chain activity,

side-chain, reactivities of, with reference to reaction mechanism, 1128.

Harman from yohimbine, 615.

Helianthrone, 3:3':4:4'.tetrahydroxy-, tetra-acetyl derivative, 1518.

Helminthosporin, synthesis of, 488.

Heptadecane, equilibria of, with its homologues, 1348. Heptadecyl alcohol, and its acetate, 637.

equilibria of, and its homologues, 1348. $\Delta \gamma \epsilon$ -Heptadiene- α -carboxylic- β -malonic acid, methyl ester, 961.

O-Heptamethylphloridzin, 1171.

Heptane- α -carboxylic- β -malonic acid, methyl ester,

Heptane-1:3:7-tricarboxylic anhydride, 1015. Δγ-isoHeptenoic acid, preparation of, 584.

δ-isoHeptolactone, 585.

Hexadecanesulphonic acid, preparation of, 739.

Hexadecyl alcohol, equilibrium of, with octadecyl alcohol, 637.

Hexahydroanagyryline, 508.

Hexahydrochrysenes, 609.

Hexahydrodeoxyanagyrine, and its salts, 509.

Hexahydrofluorene, 1109.

trans-Hexahydrohydrindene-2-acetic acid, and its amide, 1487.

trans-Hexahydrohydrindyl-2-acetone, and its derivatives, 1487.

trans-Hexahydrohydrindylidene-2-trans-hexahydrohydrindone, derivatives of, 1479.

as-Hexahydropyrene, and its picrate, 404.

 β -1:2:3:6:7:8-Hexahydro-4-pyrenoylpropionic acid. and its semicar bazone, 405.

γ-1:2:3:6:7:8-Hexahydro-4-pyrenylbutyric acid, and its lactone, 405.

Hexahydroxanthone, 10:11-dichloro-, 234.

4:5:6:3':4':5'-Hexamethoxy-3:3-diphenylcoumaran, 375. Hexamethylferrocyanogen mereuri-iodide, 104.

1:3:3:1':3'-Hexamethylindotricarbocyanine 193.

cycloHexane-1:1-diacetic acid, thermal decomposition of, 1028

Hexane-2:4-dione-1:3:5-tricarboxylic acid. ethyl ester. 439.

cycloHexanol-2:6-dicarboxylic acid, ethyl ester, 1630. cycloHexanespirocyclopentane, 353.

cycloHexanone-2:6-dicarboxylic acid, ethyl ester, 1630. cycloHexanone-2-propionic acid, and its methyl ester, 1015.

tert.-Hexylaniline, and its derivatives, 950.

y-cycloHexyl-sec.-butyl alcohol, 1484.

cycloHexyloxydicyclohexylphenylsilicane, 1042.

cycloHexylphenyl-5:5-dimethylcyclopentanone 2:4-dinitrophenylhydrazone, 727.

a-cycloHexylpropionic acid, and its derivatives, 1483. cucloHexylsulphonylacetone, 308.

Höchst Yellow R and U, degradation of, 1001.

Homocaronic acid, synthesis of, 1225.

cis-Homocaronic acid, action of hydrogen chloride on,

dl-Homolaudanosoline, synthesis and dehydrogenation of, 1583.

Homopiperonal, preparation of, and its 2:4-dinitrophenylhydrazone, 1530.

Homopiperonylmethylamine, 278.

Homopiperonylmethylaminodiethylacetal, its methiodide, 278.

Homopiperonylmethylaminodimethylacetal, 279.

Homoveratric acid, amide and ethyl ester, 1466.

Hormones, cestrus producing, compounds related to, 1098.

Hydrazobenzene, dipole moment of, 1255.

1:1'-Hydrazonaphthalene, 134.

Hydriodic acid. See under Iodine.

Hydrocarbon, cancer-producing, from coal tar, 395.

Hydrocarbons, combustion of, 1599.

paraffin, preparation of, 346.

polycyclic aromatic, 1408, 1592.

Hydrochloric acid. See under Chlorinc. Hydrocyanic acid. See under Cyanogen.

Hydroferrocyanic acid, and its metallic salts, 1543. Hydrogen, photochemical combination of, with

chlorine in presence of oxygen, 743. explosions of mixtures of, with air, 882.

Hydrogen sulphide, influence of solvent on reaction of, with iodine, 836.

Hydroxides, electrometric precipitation of, 9, 601, 1045, 1050, 1429.

Hydroxoaquotetramminochromic salts. See under Chromium bases.

Hypochlorous acid. See under Chlorine.

Hypophosphoric acid. See under Phosphorus.

I

Ignition of gases, 1240.

coil, of explosive mixtures of gases, 227.

Indican, natural and synthetic, 30.

Indigotin, benzovl derivatives of, 1000.

Indole compounds, additive reactions of, 955. polycyclic, action of halogens on, 298.

Indole-2-carboxylimide, 5:7-dinitro-, 487.

Interfacial tension, measurement of, 1449.

Iodine, influence of solvent on reaction of, with hydrogen sulphide, 836.

Iodine:-

Hydriodic acid, reaction of, with chlorine, 1315. with cyanogen halides, 1318.

Iron :-

Ferric sulphate, oxidation-reduction potential of mixtures of ferrous sulphate and, in sulphuric acid solution, 10.

Ferrous sulphate, oxidation-reduction potential of mixtures of ferric sulphate and, in sulphuric acid solution, 10.

K

Keten, absorption spectrum and photochemical decomposition of, 1533.

Keto-anils, aliphatic, constitution of, 1327.

- 1-Keto-3-(benzeneazophenyl)-2-mathyltetrahydrophthalazine-4-acetic acid, 1070.
- 4-Ketobenzdioxin, 8-bromo-6-nitro-, and 8-chloro-6-nitro-, 700.
- a-Ketobutaldehyde, β-chloro-, 2:4:5-trichlorophenylhydrazone, 1490.
- 3-Keto-4-o-carboxybenzoyl-10-ethoxy-7-methyl-3:4:5:6tetrahydro-4-\(\psi\)-carboline, 1473.
- 1'-Keto-1:2:3:6:7:8:1':2':3':4'-decahydro-4:5-benz-pyrene, 405.
- Keto-6:7-dimethoxy-2-methyl-1:2:3:4-tetrahydronaphthalenes, 86.
- 1-Ketodimethyl-1:2:3:4-tetrahydronaphthalenes, 436.
- 3-Keto-d-glucoheptonofuranolactone, 1422.
- 2-Ketocyclohexanespirocyclopentane, dehydrogenation of, 353.
- a-Keto-β-methoxybutaldehyde pentachlorodiphenylosazone, 1490.
- 7-Keto-6-methyl-7:10-dihydro-8:9-benzquinoquinoline, and its sulphate, 391.
- Ketones, influence of iodine on decomposition of, 1147. cyclic Δ²-unsaturated, synthesis of, 1481. dicyclic, condensation products of, 1477. heterocyclic, 839.
- 1-Keto-3-(4'-nitrobenzenzazophenyl)-2-methyltetrahydrophthalazine-4-acetic acid, 1070.
- 1-Keto-3-(4'-nitrophenyl)-2-methyltetrahydrophthalazine-4-acetic acid, and its methyl ester, 1069.
- β-Keto-n-pentane-γδ-dicarboxylic acid, methyl ester, and its semicarbazone, 814.
- a-Ketopropaldehyde, phenylhydrazones, and ω -amino-, ω -mono-, $\beta\omega$ -di- and $\beta\beta\omega$ -tri-bromo-, 477. 478.
- 1-Keto-7-isopropyl-1:2:3:4-tetrahydronaphthalene, 436.
- 1-Keto-1:2:3:4-tetrahydro-5:6-benzanthracene, 1014.
- 4'-Keto-1':2':3':4'-tetrahydro-1:2-benzpyrene, 403.
- 7-Keto-4:5:6:7-tetrahydrochysene, 1014.

L

Laudanosoline dimethyl ether, synthesis of, 280.

Lead azide, thermal decomposition of, 1395.

nitrate, equilibrium of, with ammonium and potassium nitrates, 199.

oxynitrates, formation of, in molten mixtures, 648. Lectures delivered before the Chemical Society, 316, 1366, 1599.

Lepidine, 2-chloro-, condensation of, with anthranilic acid, 390.

Lichen acids, 130, 493.

Liquids, binary mixed, mixture rule for, 114. organic, dielectric constants of, 768.

Lithium chloride, apparent molar volumes of, in aliphatic alcohols, 933.

Lithium organic compounds:—

Lithium di-4-isonitroso-1-phenyl-3-methyl-5-pyrazolone, 841. Lupanine, structure of, 644. Lupin alkaloids, 644.

M

Maclurin, cyano-, and its derivatives, synthesis of, 288.
Magnesium chloride, equilibrium of, with calcium oxide and water, 701.
ammonium phosphate, 854.

Malonatotetramminocobaltic nitrate, 518.

Mandelic acid, acid salts, 1016.

Manilla elemi, β-amyrin from, 1345.

Mannich reaction applied to derivatives of 4-methylquinoline and 2:4-dinitrotoluene, 300.

Margaric acid, ethyl ester, equilibria of, with cthyl palmitate and stearate, 636.

Memorial Lecture, 316.

dl-neoMenthol, optical resolution of, and its derivatives, 167.

dl- and d-isoMenthols, and their derivatives, 172.

Menthone series, 167, 170.

Menthoxyacetic acids, l-neomenthyl esters, 169.

p-Mercaptobenzoic acid, ethyl ester, 1507.

Mercury alloys, vapour pressure of, 537.

Mercuric salts, action of ammonia on solutions of,

1045.

Mercuric chloride, equilibria of, with water and alkaline-earth or cupric chlorides, 151.

action of ammonia on solutions of, 601. oxide, standardisation of acid solutions with, 9.

Mercurous oxide, equilibrium of, with nitrogen pentoxide and water, 1416.

Mesityl β -chlorocthyl sulphide, sulphone and sulphoxide, 46.

 β -hydroxyethyl sulphide, 46.

oxide 2:4-dinitrophenylhydrazone, 731.

Metals of the iron group, qualitative separation of, in presence of phosphate, 253.

Metallic salts, electrostriction produced by, in aliphatic alcohols, 933.

Methane, speed of flame in mixtures of air and, 546. explosions of, with air, 758.

Metathebainone, 1038.

4-Methoxy-7-acetoacetyl-2:3:5-trimethylcoumarone,

6-hydroxy-, 1178.

4-Methoxy-5-acetyl-2:3:7-trimethylcoumarone, 6-hydroxy-. See O-Methylisousnetol.

4-Methoxy-7-acetyl-2:3:5-trimethylcoumarone, 6-hydroxy-. Sce O-Methylusnetol.

2-Methoxyanthrone, 4-bromo-1-hydroxy-, and its diacetyl derivative, 1517.

 Methoxybenzal chloride, preparation and hydrolysis of, 498.

2-Methoxybenzaldehyde, 3:5.dinitro-, and its derivatives, 487.

3-Methoxybenzoic acid, 5-amidosulphonyl and 5chlorosulphonyl derivatives and their derivatives, 1374.

Methoxybenzoic acids, amido- and chloro-sulphonyl derivatives, and their derivatives, 1378. thiol., 1378.

-Methoxybenzoyl chloride, 3-nitro-, 26.

Methoxybenzoylmethoxytoluic acid, hydroxy, 489. m-Methoxybenzoylsuccinic acid, ethyl ester, 1472.

δ-o-Methoxybenzoylvaleric acid, and 5-amino-, and its derivatives, and 5-chloro-, and 5-nitro-, 1587.

2-Methoxy-3-benzyl-2-methylchromone, 7-hydroxy-, acetyl derivative, 289.

7-Methoxy-1-(3'-benzyloxy-4'-methoxybenzyl)-2methylisoquinolinium chloride, 6-hydroxy-, 281.

7-Methoxy-1-(3'-benzyloxy-4'-methoxybenzyl)-2-mathyl-1:2:3:4-tetrahydroisoquinoline, 6-hydroxy-, 281.

- 7'-Methoxychromeno-(3':4':2:3)-chromone, 7-hydroxy-, 492.
- 4-Methoxycinnamic acid, methyl ester, 609.
- 4-Methoxy-o-cresol, 6-nitro-, 441.
- m-Methoxydiethylaniline, 1269.
- 6-Methoxy-2:3-dimethylconmarone, 717.
- 3"-Methoxy-2:2-dimethyldibenzopyran, 1404.
- 5-Methoxy-1:3-dimethylindole, synthesis of, 271.
- 5-Methoxy-1:2-dimethyl-3- β -phenoxyethylindole, 272.
- 3-Methoxydiphenyl-2'-carboxylic acid, 2-hydroxy-, lactone, 1404.
- 2-Methoxy-3:4-diphenyl-5:5-dimethyl-\(\Delta^3\)-cyclopentenone 2:4-dinitrophenylhydrazone, 724.
- 2-Methoxy-3:4-diphenyl-5:5-dimethyl- Δ^2 -cyclopentenone 2:4-dinitrophenylhydrazone, 725.
- 4-Methoxy-3:4-diphenyl-5:5-dimethyl-\(\Delta^2\)-cyclopentenone, and its 2:4 dinitrophenylhydrazone, 728.
- m-Methoxydiphenylmethyldimethylamine, hydrochloride, 1097.
- Methoxyergostadienediol, and its benzoate, 305.
- 4-Methoxy-6-ethoxy-o-cresol, 719.
- 6-Methoxy-4-ethoxy-o-cresol, 822.
- 7-Methoxy-5-ethoxy-2:8-dimethyl-3-ethylchromone, 822.
- 6-Methoxy-4-ethoxy-3-methylbenzaldehyde, oxy-, and its derivatives, 719.
- 6-Methoxy-4-ethoxy-3-methylbenzoic acid, 2-hydroxy-, and its methyl ester, 718.
- Methoxyethoxy-3-methyl-n-butyrophenones, hydroxy-, 822.
- 6-Methoxy-2-ethoxy-4-methylquinoline, 301.
- 6-Methoxy-4-ethoxy-o-toluidine, and its acetyl derivative, 822
- 7-Methoxy-2-ethylchromone, 432.
- 4'-Methoxyflavone, 6-hydroxy-, 1075. 7-hydroxy-, 1386.
- 8-Methoxyflavone, 5-hydroxy-, and its acetyl derivative, 1623.
- 4'-Methoxyflavylium chloride, 3'-nitro-3:5:7-trihydroxy., and its 5-benzoyl derivative, 27.
- Methoxymalonic acid, derivatives of, 1627.
- 7-Methoxy-1-(4'-methoxy-3'-hydroxybenzyl)-2-methyl-1:2:3:4-tetrahydroisoquinoline, 6-hydroxy-, and its picrolonate, 281.
- 7'-Methoxy-4-(7''-methoxy-4''-phenylcoumarin-3''acetoxy)naphtha(1:2:4':3')coumarin, 1471.
- 4-Methoxy-3-methylacetophenone, 2:6-dihydroxy-, 1178.
- 2:4-dihydroxy. 6-Methoxy-3-methylacetophenone, 1178.
- 6-Methoxy-3-methylbenzaldehyde, 2:4-dihydroxy-,
- 2-Methoxy-5-methyldiphenyl, 1404.
- 7-Methoxy-3-methyl-2-ethylchromone, 433.
- 2-Methoxy-5-methyl-2'-a-hydroxyisopropyldiphenyl, 1404.
- 5-Methoxy-3-methyl-3- β -phenoxyethylindolenine, and its derivatives, 1476.
- 1-Methoxy-4-methylphthalazine, and its picrate, 1333.
- 1-Methoxy-3-methylphthalaz-4-one, 1334
- 2-Methoxy-4-methylquinoline, 8-chloro-, 301.

- 6-Methoxy-4-methylquinoline, 2-hydroxy-, 1032. 7'-Methoxynaphtha(1:2:4':3') commarin, 4-hydroxy-, and its acetyl derivative, 1470.
- 5-Methoxyphenoxyacetic acid-2-acetonitrile, 491.
- 5-Methoxyphenoxyacetic acid-2-resacetophenone, 491.
- 5-Methoxyphenoxyacetic-2-pyruvic acid, 491.
- a-3-Methoxyphenoxypropionic acid, ethyl ester, 716.
- a-m-Methoxyphenyl-n-amyldimethylamine, and its hydrochloride, 1097.
- m-Methoxyphenyl-n-butylcarbinol, 1097.
- a-m-Methoxyphenyl-n-butyldimethylamine, and its methiodide, 1097.
- 7-Methoxy-4-phenylcoumarin-3-acetic acid, 1470.

- 7-Methoxy-4-phenyl-2-ethylbenzopyrylium salts, 432. m-Methoxyphenylethylcarbinol, 1094.
- 7-Methoxy-4-phenyl-3-and-3'-methylbenzo- β -naphthaspiropyrans, 432.
- 7-Methoxy-4-phenyl-3-methyl-2-ethylbenzopyrylium perchlorate, 433.
- 2'-Methoxy-β-phenylpropiophenone, 2:4-dihydroxy-,
- a-m-Methoxyphenylpropyldimethylamines, and their derivatīves, 1094.
- 7-(2-Methoxyphenylthio)-7'-acetoxystilbene, chloro-, 1529.
- 7-(2-Methoxyphenylthio)deoxybenzoin, 7-5-chloro-, 1529.
- 1-Methoxyphthalazine, 4-hydroxy-, and its acetyl derivative, 1334.
- 6-Methoxy-2-piperazino-4-methylquinoline, 301.
- 6-Methoxy-2-piperidino-4-methylquinoline, 301.
- 6-Methoxyquinoline, 5-nitro-, cuprichloride, 999.
- 4-Methoxysalicylic acid, methyl ester, alkylglycosides of, 1619.
- d-β-Methoxysuccinic acid, α-hydroxy-, derivatives of, 643.
- 7-Methoxy-2:8:4':5'-tetramethyl-5:6-furano-(2':3')chromone, 1178.
- Methoxytoluenes, thiol-, and their derivatives. 1377.
- Methoxytoluenesulphonic acids, salts and derivatives of, 1377.
- 4-Methoxy-o-toluidine, 6-nitro-, 441.
- 2-Methoxy-p-toluidine, 5-nitro-, 1167.
- 4-Methoxy-2:3:5-trimethylcoumarone, 6-hydroxy-, 718.
- 4-Methoxy-2:3:5-trimethylcoumarone-7-carboxylic acid, 6-hydroxy-, and its methyl ester, 718.
- Methyl alcohol, partial vapour pressure of, in aqueous solutions, 674.
- Methyl ether, compressibility of, 621.
- fluoride, compressibility of, 621.
- hyponitrite, parachor of, 309.
- iodide, addition of, to pyridine, 1237.
- s-Methyl sulphite, dielectric polarisation of benzene solutions of, 309.
- 1-Methylacridone, 4-chloro., 1372.
- 1-O-Methylalizarin, O-hepta-acetyl dcrivative, 1168.
- a-Methyl-a'-n-amylglutaric acid, and its imide, 509.
- Methylaniline, nitrosation of, 510.
- Methyl-p-anisidine, 3:5-dinitro-, and 3:5-dinitro-Nnitroso-, 827. nitroso., 271.
- 2-Methylanthrone, 1-hydroxy-, 1519.
- Methyl-1:2-benzanthracenes, and their picrates, 1595.
- 5-Methyl-1:2-benzanthraquinone, 1596.
- p-Methylbenzhydrylidene-a-phenylethylamine, 1502.
- ϵ -5-Methylbenzoylhexoic acid, 2-hydroxy-, 234.
- 6-Methyl-8:9-benzquinoquinoline, and its chloroplatinate, 391.
- Methylbutadienes, dipole moments and atomic polarisation of, 1297, 1302.
- β -Methyl-n-butane-aa δ -tricarboxylic acid, methyl ester, 813.
- a-Methylbutyric acid, β-chloro- a-hydroxv-, 805.
- 7-Methylcarbamido-9-fluorenol-2-arsonic acid, and its sodium salt, 1457.
- 4-Methyl-1:2:5:6-dibenzanthracene, and its dipicrate, 1596.
- Methyldiethylsulphonium salts, 992.
- Methyl a-3:5-dimethoxy-2-methylphenoxyethyl ketone, and its semicarbazone, 718.
- Methyl a-3:5-dimethoxyphenoxyethyl ketone, and its semicarbazone, 717
- 5-Methyldiphenyl, 2-hydroxy-, and its benzoyl derivative, 1404.
- 2-Methyldiphenylamine-6'-carboxylic acid, 5-chloro., 1372.

5-Methyldiphenyl-2'-carboxylic acid, 2-hydroxy-, 1 lactone, 1403.

Methyldi-n-propyl picrate, 992.

Methylene blue, derivatives of, 248.

a-3:4-Methylenedioxybenzylidene- β -3:4-dimethoxybenzoylpropionic acid, lactone, 1088.

6:7-Methylenedioxy-4-ethoxy-2-methyltetrahydroisoquinoline picrate, 279.

6:7-Methylenedioxy-2-methyltetrahydroisoquinoline, 4hydroxy-, picrate, 279.

6:7-Methylenedioxy-4-phenyl-2-methyl-1:2-dihydroisoquinoline, and its picrate, 278.

Methylethylisobutylsulphonium iodide, 535.

6-Methyl-2-ethylchromone, 1389.

3-Methyl-2-ethyl-a-naphthachromone, 434.

Methylethylpropylsulphonium picrates, 535.

2-Methylisoflavone, 1461. a-Methylglucoside, 2:3-di-p-nitrobenzoyl and -dibenzoyl and 2:3-di-p-toluenesulphonyl derivatives, 1079.

 β -Methylglutaric acid, $\alpha\beta$ -dicyano, ethyl ester, hydrolysis of, 815.

Methylglycosidodimethylammonium p-toluenesulphonate, 226.

 β -Methylheptadiene- $aa\eta$ -tricarboxylic acid, methyl ester, 961.

β-Methylheptane-aaη-tricarboxylic acid, methyl ester.

a-Methyl-trans-hexahydrohydrindene-2-acetic acid. and its derivatives, 1487.

a-Methyl-trans-hexahydrohydrindyl-2-acetone, and its oxime, 1487.

a-Methyl-trans-hexahydroindene-2-acetic acid, and its derivatives, 1485.

7-Methylhexahydroxanthone, 10:11-dichloro-, 235.

δ-Methylhexoic acids, δ- and γ -bromo., 576.

a-Methyl-a-cyclohexylacetone, 1483.

a-Methylcyclohexylideneacetone, and its semicarbazones, 1482.

2-Methylcyclohexylideneacetone, and its semicarbazone, 1484.

a-Methyl-a-3-hydroxy-5-methoxy-2-acetyl-4-methylphenoxyacetone, 1179.

5-Methyl-2'-a-hydroxyisopropyldiphenyl, 2-hydroxy-, and its acetyl derivative, 1404.

Methylmalonanilamide-p-arsonic acid, and its sodium salt, 1066.

Methylmalonanilethylamide-p-arsonic acid, and its sodium salt, 1066.

Methylmalonanilide-p-arsonic acid, 1066.

Methylmalonanilide-pp'-diarsonic acid, 1067.

Methylmalonanilomethylamide-p-arsonic acid, and its sodium salt, 1066.

Methylmalonanilo-n-propylamide-p-arsonic acid, and its sodium salt, 1066.

Methylmalonic acid, esters, 1065.

Methyl a-3-methoxyphenoxyethyl ketone, and its semicarbazone, 717.

1-Methylnaphthalene, and 1-chloro-, 485.

2-Methylnaphthalene, 6:7-dihydroxy-, 86.

a-Methyl-a'- $[\beta$ -(a-naphthyl)ethyl] adipic acid, 1086. 5-Methyl-2- β -(a-naphthyl)ethylcyclopentanol, 1086.

5-Methyl-2- β -(a-naphthyl)ethylcyclopentanone,

its semicarbazone, 1086.

Methyloctahydrophenanthrenes, 1084.

2-Methylcyclopentanone-2:3-dicarboxylic acid, methyl ester, and its semicarbazone, 818.

1:2-(5'-Methylcyclopentano)tetrahydrophenanthrene, 1086.

3-Methyl-3- β -phenoxyethylindolenine, and its picrate,

Methyl-2-β-phenylethylcyclohexanols, 1083.

2-Methyl-2-β-phenylethylcyclohexanone, and its semicarbazone, 1084.

1-Methyl-2- β -phenylethylcyclopentanol, 1085.

Methylphloracetophenone, and its triacetate, 443.

Methylphloroglucinol, derivatives of, 437. a-diethyl ether, 821

Methylphloroglucinoldicarboxylic acid, ethyl ester, 440.

4-Methylphthalazine, 1-hydroxy-, acetyl derivative, 1334.

3-Methylphthalaz-4-one, 1-hydroxy-, and its acetyl derivative, 1334.

 β -Methyl-n-propane- $aa\beta\gamma\gamma$ -pentacarboxylic acid, methyl ester, 814.

β-Methyl-n-propane-aγγ-tricarboxylic acid, γ-bromo-, ethyl ester, 815.

1-Methyl-4-isopropenylnaphthalene, and its picrate,

Methylisopropylisobutylsulphonium picrate, 536.

1-Methyl-4-isopropylnaphthalene, 24. and its picrate, 130.

1-Methyl-1-isopropyl-1:2:3:4-tetrahydro-1-naphthol. 436.

3-Methyl-5-(3-pyridyl)pyrazole, and its salts, 351.

4-Methylquinoline. 2:8-dichloro-, and 8-chloro-2hydroxy-, 301.

4'-Methyl-2-stilbazole, 78.

4'-Methyl-2-stilbazolealkine, 78.

Methylsulphonylmethoxybenzoic acids, 1377.

8-Methyl-6:7:15:16-tetrahydro-5:18:9:14-dibenapyridocolinium iodide, 2:3:11:12-tetrahydroxy., 1585.

Methylthiolmethoxybenzoic acids, 1378.

Methylthiolmethoxytoluenes, 1377.

Methyltri-sec.-butylphosphonium iodide, 1044. 3:3'-(β -Methyltrimethylene)di- β -naphthas piropyran,

43¥. Methyltriisopropylphosphonium iodide, 1044.

Methyltropacocaine, 1512.

1-Methyl-ψ-tropine, and its derivatives, 1511.

1-Methyltropinone, and its derivatives, 1511.

O-Methylusnetic acid, 1178. O-Methylusnetol, 1179.

O-Methylisousnetol, 1178.

Michael reaction applied to triene esters, 960.

Micro-organisms, formation of organo-metallic compounds by, 95.

Molecular dissymmetry and physiological activity,

Molecules, long-chain, dipole moments of, 1567.

Molybdenum, thermal decomposition of phosphine by, 586.

Morinidin chloride, and its o-benzoyl derivative, 370. 3:5:7-trimethyl ether, 290.

Morphine group, synthesis in, 280.

Muconic acid, ethyl ester, hydrogenation of, 885.

Myristic acid, films of, on aqueous solutions, 1525.

N

Naphtha(1:2:4':3')commarin, 4:7'-dihydroxy-, and its diacetyl derivative, 1470.

Naphthadianthrone, 3:3 acetyl derivative, 1517. 3:3':4:4'-tetrahydroxy-, tetra-

Naphthalene, 1-bromo- and 1-iodo-2:4-dinitro-, 1621. 1:5- and 1:8-dinitro-, preparation of, pure, 1346.

Naphthalenes, homologous, synthesis of, 434.

2':3'-Naphtha-1:2-pyrene, 403.

2':3'-Naphtha-1:2-pyrene-1':4'-endo- $a\beta$ -succinic anhydride, 404.

 β -Naphthoic acid, dl-menthyl esters, 169, 173.

a-Naphthol, 8-nitro-, 287.

 β -Naphthols, dinitro-, 288.

 α - and β -Naphthols, nitration of, 286.

1-Naphthol-2:3-dimethylnaphthalenes, 1596.

β-Naphthol-1-sulphonic acid, reaction of diazosulphonates from, 1067.

1-a-Naphthoyl-6-methyl-2-naphthaldehyde, 1596. B-Naphthyl β-chloroethyl sulphide, chloro., 48.

1-disulphide, bromo-derivatives, 787.

a- and $\hat{\beta}$ -Naphthyl β -chloroethyl sulphides and sulphones, 47.

 β -hydroethyl sulphides and sulphones, 47.

1- α -Naphthylacetyl-2-methyl- Δ^1 -cyclopentene, 1106. a-Naphthylamine, 2- and 4-nitro-, preparation of, 1205.

5-nitro-, preparation of, 1346.

a-Naphthylchloroacetic acid, ethyl esters, optically active, 713.

r-a-Naphthylchloroacetic acid, and its (-) menthyl ester, 36.

2-Naphthylene 1-thiolcarbonate, 6-bromo-, 787.

 β -1-Naphthylethyl alcohol, and its bromide, 1014.

 β -1-Naphthylethyl chloride and picrate, 1107. α -[β ·(α -Naphthyl)ethyl] adipic acid, 1086.

 $2-(\beta-1)$ -Naphthylethyl)cyclohexanone-2-carboxylic acid, ethyl ester, 1015.

 $1-\beta$ -(1'-Naphthyl)ethylcyclopentanol, 1107.

 $2-\beta$ -(a-Naphthyl)ethylcyclopentanol, 1086.

2- β -(a-Naphthyl)ethylcyclopentanone, and its semicarbazone, 1086.

 $1-\beta$ -(1'-Naphthyl)ethyl- Δ 1-cyclopentene, and its picrate, 1108.

a-Naphthylglycollic acid, ethyl esters, optically active, replacement of hydroxyl by chlorine in, 705. (—) menthyl esters of, 32.

a- and β -Naphthylidenebenzylamines, 41, 42.

a- and β-Naphthylmethylamines, and their derivatives, 41, 42.

 β -Naphthylisopropylamine, and its derivatives, 496. hydrochloride, action of heat on, 495.

Nickel sulphate, equilibria of, with ammonium and sodium sulphates and water, 943.

Nickel organic compounds :-

Nickel carbonyl, dipole moment of, 652.

4.isonitroso.l-phenyl-3-methyl.5-pyrazolone, 842. Nickel determination :-

determination of, and its separation from copper, 895.

Nicotine, oxidation of, 350, 686.

Niohium :-

Niobates, reactions of, with organic acids, 419.

Niobium separation :-

separation of, from tantalum, 423.

Nitration, 105.

Nitratoaquotetramminochromic nitrate. See under Chromium bases.

Nitratoaquotetramminocobaltic nitrate. See under Cobalt bases.

Nitroamine, dielectric polarisation of dioxan solutions of, 309.

Nitroamines, aromatic, diazotisation of, 1620.

Nitrogen monoxide, compressibility of, 621.

dioxide (nitric oxide), action of, with carbon monoxide, 56.

pentoxide, equilibrium of, with mercurous oxide and water, 1416.

Nitroso- β -alkylamino-ketones, catalytic decomposition of, 363.

Nitrosoamines, dipole moments of, 1255.

Nitroso-compounds, aromatic, liquid-solid equilibria between, 671.

alloNorcholanic acids, chloro-, and their methyl ester, 1411.

0.

Obituary notices :-Arthur Piper Adams, 1645. Walter Craven Ball, 1645.

Obituary notices:-

Frederick William Fletcher, 1646.

Henry Chapman Jones, 468.

Sidney Alexander Kay, 1647.

William Harrison Martindale, 1648. John Bryson Orr, 1649.

Thomas Cunningham Porter, 1650.

Alfred Rée, 471.

Henry Lloyd Snape, 473.

Charles Maddock Stuart, 469.

Claude Metford Thompson, 474.

John Watts, 1652.

Octadecane, polymorphism of, 1348.

Octadecyl alcohol, equilibria of, with hexadecyl and heptadecyl alcohols, 637.

Octadecyl alcohols, 9:10-dihydroxy-, isomeric, 246.

trans-Octahydronaphthyl-2-trans- β -decalone, and its derivatives, 1480.

Octahydrophenanthrene, 1465.

derivatives, synthesis of, 1463.

 β -Octanol, and its derivatives, optical rotation of, 376. n-Octoic acid, potassium salt, specific heat of aqueous solutions of, 551.

Olefines, elimination of, from quaternary ammonium compounds, 523.

Olefinic compounds, reactions of, 800, 962.

Oleic acid, conductivity of mixtures of, with its potassium salt and water, 928.

potassium hydrogen salt, anhydrous, 924.

sodium salt, emulsions of, with water and benzene or tetrahydronaphthalene, 1214.

Oleyl alcohol, oxidation of, 246.

Optical activity and tautomerism, 1493.

inversion, Walden's, 705. in glucose series, 1076.

superposition, 696.

Optically active compounds, influence of solvents on rotation of, 760.

Organic compounds, rotatory dispersion of, 788, 951, 1179, 1444. substitution in, 1133.

Organo-metallic compounds, formation of, by microorganisms, 95.

Ostwald Memorial Lecture, 316.

Oxalatotetramminochromic salts, 522.

Oxalatotetramminocobaltic nitrate, 518.

Oxidation, electrolytic. See under Electrolytic.

3:4-Oxido-3:4-diphenyl-5:5-dimethylcyclopentanone, 2. hydroxy-, 725.

Oximes, isomerism of, 1037.

homogeneous catalysis of stereoisomerism in, 1439. rearrangement of picryl ethers of, 806. co-ordination compounds of, 840.

Oxy- β -amyrin, and its acetate, 1346.

 $p extsf{-}\mathbf{O}$ xyarsinoadipanilic acid, 92.

p-Oxyarsinomethylmalonanilic acid, 1066.

p-Oryarsinomethylmalonanilide, 1067.

Oxygen, density of, and of carbon monoxide, 846. velocity of detonation of mixtures of, with carbon monoxide, 59.

P.

Palladium bases :-

Tetramminopalladous chloride, crystal structure of, 1092.

Palladium compounds, co-ordination, structure of, 1089.

Palladosulphines, 1294.

Palmitic acid, sodium hydrogen salts, anhydrous, 920.

Paraffins, preparation of, 346.

Pentadienophenanthrene, 1110.

cycloPentadienophenanthrene, 1087.

```
3:5:7:2':4'-Pentamethoxyflavan, 290.
```

3:3':3":4"'-Pentamethoxy-ppp-tetrabenzaldehyde,

3:3':3":4"'-Pentamethoxy-ppp-tetrabenzoic acid. 141.

γ-2:3:4:5:6-Pentamethylpiperazine, and 1-nitroso-, and their salts and derivatives, 144.

y-2:3:4:5:6-Pentamethylpiperazine-d-methylenecamphor, 144.

O-Pentamethylrobinetin, 269.

cycloPentan-1-ol-1-acetic acid, cthyl ester, and its hydrazide, 362.

Pentane, $a\epsilon$ -dibromo-, 1531.

cycloPentane aldehyde, 362.

cycloPentane-1:1-diacetic acid, thermal decomposition of, 1028.

1:2-cycloPentano-1-methyltetrahydronaphthalene. 1085.

cycloPentanone-2:3-dicarboxylic acid, methyl ester, and its semicarbazone, 818.

1:2-cycloPentanotetrahydronaphthalene, 1085.

1:2-cycloPentanotetrahydrophenanthrene, 1086.

trans-1:2-cycloPentanotetrahydrophenanthrene. and its picrate, 1108.

 Δ^1 -cycloPentene-1:2-dicarboxylic acid, ethyl esters, 1632.

 $\Delta \beta$ -n-Pentenoic acid, 559.

 Δ^{α} and Δ^{β} -Pentenoic acids, lactones from, 577.

cycloPentenones, hydroxy-, 720.

1:2-cycloPentenophenanthrene, and its derivatives, 1087, 1109.

 β -cycloPentylpropionic acid, β -hydroxy-, ethyl ester, and its hydrazide, 362.

Phase volume theory, 1458.

10-Phenacyl-10-benzyl-2-methyl-5:10-dihydrophenarsazonium hydroxide, and its salts, 1636.

Phenacylhomopiperonylmethylamine, and its picrate, 278.

10-Phenacyl-2-methyl-10-n-propyl-5:10-dihydrophenarsazonium bromide, 1636.

Phenanthrene, equilibrium of, with anthraccne, 650. Phenanthrene-9-aldehyde, and its oxime and semi-

carbazone, 40. Phenanthrens-9-carboxylic acid, and its methyl esters, 40.

9-Phenanthroyl chloride, 40.

 β -(Phenanthroyl)propionic acids, 1014.

2-Phenanthryl bromomethyl ketone, 1013.

y-(Phenanthryl)butyric acids, 1014.

9-Phenanthrylidenebenzylamine, 40.

9-Phenanthrylmethylamine, and its derivatives, 40.

2-Phenetidino-6-ethoxylepidines, 1032.

2-Phenetidinolepidines, 1032.

2-Phenetidino-6-methoxylepidines, 1032.

Phenol, vapour pressure and refractivity of mixtures of, with benzene, 1413.

conductivities of mixtures of, with aniline, m-cresol and p-toluidine, 1032.

action of chlorosulphonic acid on, at low temperature, 337.

Phenol, m-bromo, dibromination of, 1053.

tribromo-, dibromonitro-, and tribromonitro-derivatives, 1054.

p-nitro-, condensation of, with formaldchyde,

p-nitroso-, dipole moment of, 1255.

Phenols, nitrosation of, 660.

dihydric, depside esters of, 140.

Phenoxide, o-chloro-, pyridine derivative, dissociation of, in benzene, 193.

dissociation of, in p-chlorobenzene, 1431.

Phenoxyacetic acid-2-acetonitrile, 492.

Phenoxyacetic acid-2-resacetophenone, 492. β -Phenoxyethylamine, and its salts, 272.

y-Phenoxy-a-methylbutaldehyde, and its 2:4-dinitrophenylhydrazone, 1476.

y-Phenoxy-a-methylbutyric acid, and its ethyl ester, and derivatives, 272

 ϵ -Phenoxy- γ -methylpentane- $\beta\beta$ -dicarboxylic acid, ethyl ester, 1475

p-Phenoxyphenyldisopropylphosphine, and its methiodide, 1044.

Phenyl n-butyl ether, m-nitro-, 661.

β-chloroethyl sulphides, p-bromo-, p-chloro-, dichloro-, 2:4:6-trichloro-, and p.iodo-, 46.

 β -chloroethyl sulphoxides, dichloro-, 47.

β-hydroxyethyl sulphides, p-bromo-, p-chloro-, dichloro, and 2:4:6-trichloro, 46.

2-hydroxy-1-naphthyl sulphoxide, 2-nitro-, and its acetyl derivative, 1493.

4-hydroxy-m-tolyl sulphoxide, 2-nitro-, 1493.

Phenylacetic acid, β -naphthyl ester, 1462.

phenyl ester, 1461. Phenylacetonitrile, 2 hydroxy-, 493.

2-Phenylacetylenylpyridine, nitro derivatives, 82.

1-Phenylacetyl-∆¹-cyclohexene, 1106.

1-Phenylacetyl-2-naphthol, 1462.

Phenylamino-. See Anilino ..

a-Phenyl-n-amyldimethylamine, a-m-hydroxy-, and its derivatives, 1097.

Phenyl-tert.-amylnitrosoamine, and its p-toluenesulphonyl derivative, 950.

Phenyl-p-arsinic acid (p-arsanilic acid), derivatives of, 91.

Phenylarsinic acid, p-amino-, derivatives of, 1064.

Phenylarsono-N-methylenesulphurous acid, p-amino-, and 3-amino-4-hydroxy-, sodium salts, 1009.

Phenylazo-. See Benzcheazo-.

2-Phenylbenzopyrylium salts, preparation of, 1532. Phenylbenzylamines, and their derivatives, 43, 44.

Phenylbenzylidenebenzylamines, 43, 44.

Phenyl benzyl ketone, 2:4.dihydroxy., 4.benzoyl derivative, 1388.

Phenyl benzyl ketones, hydroxy., and their 2:4dinitrophenylhydrazones, 1461.

a-Phenyl-n-butyldimethylamine, m-hydroxy, and its derivatives, 1097.

Phenyl-tert.-butylnitrosoamine, 948.

7-Phenylcarbamido-9-fluorenol-2-arsonic acid, and its sodium salt, 1457.

1-Phenylcarbamyl-2:2:4-trimethyl-1:2-dihydroquinoline, 1328.

9-Phenylcarbazoles, 9-o- and p-nitro-, 1524, 1525.

N-Phenyl-N'- $\beta\beta\beta$ -trichloro-a-ethoxyethylureas, nitro-,

Phenyl- β -chloroethyl sulphone, p-bromo- and pchloro-, 46. p-nitro., 48.

N-Phenyl-N'- $\beta\beta\beta$ -trichloro- α -hydroxyethylureas. nitro, and their diacetyl derivatives, 31.

N-Phenyl-N'- $\beta\beta\beta$ -trichloro-a-methoxyethylureas. nitro., 32.

Phenyl 5:8-dichloro-a-naphthyl ketone, 448.

3(or 4)-Phenyl-4(or 3)-p-chlorophenyl-5:5-dimethyl- Δ^3 -cyclopentenone, 731.

Phenyl-y-chloropropylsulphone, 48.

4-Phenylcoumarin-3-acetic acid, 7-hydroxy-, and its ethyl ester, 1469.

Phenyl-3:4-dihydrophthalazine-4-acetic acids, 1-hydroxyamino-, 1070.

Phenyl-2:4-dimethoxyphenylmethylenesuccinic esters, 1470.

a-Phenyl-ay-dimethylcrotyl alcohol, 1497.

4-Phenyl-3:3'-dimethyl- $\alpha\beta$ -dinaphthas propyran, 434.

4-Phenyl- $a\beta$ -dinaphthas piropyran, 433.

 α -(β -Phenylethyl)adipic acid, 1084.

3-Phenyl-4-ethylcoumarin, 7-hydroxy-, and its acetyl derivative, 1462.

```
2-\beta-Phenylethyl-1-ethylcyclohexanol, 1465.
                                                          a-Phenylpropyldimethylamines.
                                                                                             m \cdot hydroxy \cdot.
                                                                                                              and
2-\beta-Phenylethyl-1-ethyl-\Delta^1-cyclohexene, 1465.
                                                            their derivatives, 1095.
                                                          a-Phenyl-\Delta^{\alpha}-propylene, \beta-chloro-, 965.
1-\beta-Phenylethylcyclohexanol, 1107.
β-Phenylethylcyclohexanols, and their derivatives,
                                                          Phenylpyridinium chloride, bromo-, chloro-
                                                            iodo-dinitro-derivatives, 313.
2-β-Phenylethylcyclohexanone, and its derivatives,
                                                           3-Phenyl-4-styrylconmarin, and its dibromide, 617.
                                                          3-Phenyl-4-styryl-1:2-a-naphthapyrone, 617.
                                                          Phenylsulphonylethylsulphonylethylthiomethane, 308.
1-\beta-Phenylethylcyclohexens, and its derivatives, 1464.
1-\beta-Phenylethyl-\Delta^1-cyclohexene, 1107.
                                                          ω-Phenylthioacetophenone phenylmercaptol, 1529.
a-Phenylethylidene-9-fluorenylamine, 1500.
                                                          7-Phenylthiodeoxybenzoin, 1529.
                                                          7-Phenylthiostilbene, 7'-hydroxy-, 7-acetyl derivative,
\beta-Phenylethylmethylethylsulphonium iodide, 535.
2-\beta-Phenylethylcyclopentanol, 1085.
2-β-Phenylethylcyclopentanone, and its semicarbazone,
                                                            -Phenyl-m-tolylacetonitrile, 335.
                                                          \delta-Phenylvaleric acid, \alpha-chloro-\beta-hydroxy-, and \beta-
  1084.
                                                            hydroxy-, 966.
2-\beta-Phenylethylcyclopentan-1-one-2-carboxylic
  ethyl ester, and its semicarbazone, 1084.
                                                          δ-Phenylvalerolactones, chlorohydroxy-, 967, 968.
                                                          9-Phenylxanthenol, 9-p-chloro- and 9-p-nitro-, 484.
\alpha-(\beta-Phenylethyl)pimelic acid, 1083.
β-Phenylethylpyridins, amino- and nitro-derivatives,
                                                          9-Phenylxanthylium perchlorate, nitration of, and
                                                            9-p-chloro-, 482.
2-β-Phenylethylpyridin3, nitration of, 79.
                                                          Phloracetophenone, \omega-hydroxy-, 369.
\beta-Phenylethyltrimethylammonium hydroxide, and
                                                          Phloridzin, glucose from, 1171.
  \beta \cdot p-nitro-, salts, 524.
                                                          Phosphates. See under Phosphorus.
Phenylglyoxal, ω-bromo-, and ω-chloro-, bromo-
                                                          Phosphine. See Phosphorus trihydride.
        phenylhydrazones of, 481.
                                                           Phosphines, tertiary, 1043.
      chloronitro- and nitro-phenylhydrazones, 1625.
                                                          Phosphonium chlorides, thermal decomposition of, 989.
Phenyl-tert.-hexylnitrosoamine, 950.
                                                            ethoxides, thermal decomposition of, 531.
                                                          Phosphorus trihydride, thermal decomposition of, by
3-Phenyl-4-methoxymethylcoumarin, 7-hydroxy-, and
  its acetyl derivative, 1462.
                                                              tungsten and molybdenum, 586.
                                                            pentoxide as drying agent for hydrogen chloride,
3-Phenyl-4-(4'-methoxystyryl)coumarin, 617.
3-Phenyl-4-(4'-methoxystyryl)-1:2-a-naphthapyrone,
  617.
                                                            Phosphates, 854, 871, 877.
9-Phenyl-10-methylacridinium perchlorate, and its
                                                            Hypophosphoric acid, formula of, 48.
                                                          Photochemical processes, primary, 119, 1533.
  nitration, 484.
4-Phenyl-3'-methylbenzo-\beta-naphthas piropyran, 433.
                                                          Phthalazine, 1:4-dihydroxy-, diacetyl derivative,
4'-Phenyl-3'-methylbenzo-a-naphthaspiropyran, 434.
2-Phenyl-3-methylbenzo-β-naphthylisospiropyran,
                                                          Phthalazine series, tautomerism in, 1331.
  1264.
                                                          Phthalic acid, 3-chloro, 1533, 1643.
1-Phenyl-3-methylbenzthiazole, 2'-amino-, and its
                                                          y-Phthalimido-α-methylbutaldehyde, and its 2:4·di-
  derivatives, 297
                                                            nitrophenylhydrazone, 1477.
 -Phenyl-a-methylbutadiene, 1497.
                                                          γ-Phthalimido-a-methylbutyramide, 1477.
l-Phenylmethylcarbinol, p-toluenesulphonic and p-
                                                           γ-Phthalimido-a-methylbutyronitrile, 1477.
                                                          Phthalobenzhydrylimide, 1501.
  toluenesulphinic esters, Walden inversion with,
  173.
                                                          Phthalo-3-diphenylmethylimide, 44.
3-Phenyl-4-methylcoumarin, 617.
                                                          Phthalo-\alpha- and -\beta-naphthylmethylimides, 41, 42.
3-Phenyl-4-methylcoumarin, 5:7-dihydroxy-, and its
                                                          Phthalyl bromide, tautomerism of, 1309.
  diacetyl derivative, 1461.
                                                            fluoride, 15.
4-Phenyl-3- and -3'-methyl-a\beta-dinaphthas piropyrans,
                                                          Physiological activity and molecular dissymmetry,
                                                            1094.
3-Phenyl-4-(3':4'-methylenedioxystyryl)coumarin, 617.
                                                          Physostigmine. See Eserine.
3-Phenyl-4-(3':4'-methylenedioxystyryl)1:2-a-naphtha-
                                                          2-Picoline, reaction of, with aromatic aldehydes, 77.
  pyrone, 617.
                                                          Picratoaquotetramminochromic picrate, 522.
3-Phenyl-2-methylindanone, 1499.
                                                          Picratoaquotetramminocobaltic picrate, 519.
3-Phenyl-2-methylindenone, and its 2:4-dinitrophenyl-
                                                          apoPicropodophyllic acid, 85.
  hydrazone, 1499.
                                                          a- and β-apoPicropodophyllins, 85.
2-Phenyl-3-methylindoles, bromo., 959.
                                                          N-Picrylacetanilide, p-chloro-, 811.
3-Phenyl-2-methyl-1:4-\beta\alpha-naphthapyrone, 1462.
                                                          2-Piperazino-4-methylquinoline, 8-chloro-, 301.
\beta-Phenyl-a-methylpropionic acid, a-chloro-\beta-hydroxy.
                                                          4-Piperidinoacridone, 1-nitro-, 1372.
                                                          Piperidinocupric diphenol, 1230.
  \beta-hydroxy-, and its ethyl ester, 965.
                                                          2-Piperidino-p-cymene, 3:5-dinitro-, 980.
1-Phenyl-3-methyl-5-pyrazolone, 4-isonitroso-, com-
                                                          1-Piperidino-5-furyl-4-penten-3-one hydrochloride,
  pounds of, with metals, 840.
                                                            and its phenylhydrazone, 840.
Phenylmethylselenetine salts, 127.
                                                          2-Piperidino-4-methylquinoline, 8-chloro-, 301.
Phenyl \beta-naphthyl ketone, m-chloro-, and its deriv-
                                                          a-Piperidino-\beta-(2:4-dinitrophenyl)ethane picrate, 302.
  atives, 447.
                                                          Piperonylethyl-p-toluenesulphonamide, 2\overline{7}8.
2-Phenyl-4-(3':5'-dinitro-2'-hydroxybenzylidene)-
                                                          a-Piperonylidene-\beta-3:4-dimethoxybenzoylpropionic
  oxazolone, 487.
                                                            acid, lactone, 1088.
2-Phenyl-4-(3':5'-dinitro-2'-methoxybenzylidene)-
                                                          Piperonylmethylenedioxynaphthalene, tribromo-, and
  oxazolone, 487.
                                                            nitro-, 1531.
δ-Phenyl-Δα-pentenoic acid, and γ-hydroxy-, 966.
                                                          Platinum, energy of catalysis on, 502.
1-Phenyl-3-(β-piperidinoethyl)-5-furylpyrazoline
                                                          Platinum bases (platinammines), 1056.
  hydrochloride, 840.
                                                            chelated, 1335.
\beta-Phenylpropiolic acid, addition of iodine to, 424.
                                                            Diamminoplatinic tetrachlorides, 1093.
```

Tetramminoplatinous chloride, crystal structure of,

1093.

 β -Phenylpropionic acid, β -hydroxy-, and its ethyl

cster. 964.

Platinum compounds, co-ordination, structure of, Pyrones, and thio-, dielectric polarisation of benzene 1089. solutions of, 87. Platinic chloride, action of sodium hydroxide on, Pyrousnic acid, 1173. in solution, 1429. Pyrrole, dipole moment of, 1259. Platosulphines, 1294. Pyrylium salts, synthesis of, 370. Podophyllomerol, 86. halogeno-, preparation of, 1532. Podophyllomeronic acid, 85. Podophyllotoxin, 83. Polar reactions. See under Reactions. Polarisation, dielectric, 87, 309, 1252. electric, coefficients of, and their interpretation, Quebrachine. See Yohimbine. 1341. Quinaldine cuprichloride, 999. Polydepsides, 140. Quinaldine, 4-chloro-, condensation of, with anthr-Polyhalides, 181. anilic acid, 390. Potassium dibromoiodide, action of ozone on, 183. Quinene cuprichloride, 999. hydroxide, action of, with alkyl halides in cthyl Quinidine cuprichloride, 999. alcohol, 258. Quinine cuprichloride, 999. mercuri-iodide, action of ammonia on, 1045. Quinol bis-(3:4"-dimethoxy-pp-tribenzoyl) ether, 142. nitrate, equilibrium of, with ammonium and lead bis-(4'-methoxy-p-dibenzoyl), (3':4'-dimethoxy-pnitrates, 199. dibenzoyl), and -(3:3':4'-trimethoxy-p-dibenzoyl) with barium and calcium nitrates, 236. ethers, 141. sulphite, electrolytic reduction of, to dithionate, Quinoline derivatives, 1087. cuprichloride, 999. Potassium organic compounds :-Potassium di-4-isonitroso-1-phenyl-3-methyl-5-pyrazolone, 841. R. Potential, determination of, with glass electrodes, Radium, effect of emission from, on decomposition Pratol. See 4'-Methoxyflavone, 7-hydroxy-. of solids, 1398. Priestley, Joseph, bicentenary of, 896. Reactions, mechanism of, 1357. Primetin, attempted synthesis of, 1621. aromatic, in relation to electronic theory of organic Primeverin, 1618. reactions, 1120. Propane, ignition of mixtures of, with air, 1240. bimolecular, in solution, 1237. n-Propane- $aa\beta$ -tricarboxylic acid, methyl ester and elimination, influence of poles and polar linkings on, amides, and bromo-, and β -iodo-, methyl esters, 66, 67, 68, 69, 75, 523, 526, 531, 533, 989, 991, 1571. 813. Δα-Propene-aaβ-tricarboxylic acid, amide and methyl organic, electronic theory of, 1120. ester, 813. polar, electrostatic factors operating in, 1551. 7-isoPropenyl-1:2-benzanthracene, dimeride of, 1410. side-chain, influence of nuclear substituents on, Propionic acid, β -iodo-, ethyl ester, preparation of, 1248. Reactivity of adjacent atoms or groups, influence of 2-Propionoacetyl-4-methylphenol, 1388. sulphur atoms on, 261. 3-Propionyl-2:6-dimethylchromone, 1389. Reformatsky reaction, 362, 827. n-Propyl alcohol, partial vapour pressure of, in Reimer-Tiemann reaction, 496. aqueous solutions, 674. Report of the Council, 451. Propyl alcohol, diodo-, formation of, from allyl Resacetophenone, acyl derivatives of, 1384. alcohol, 1323. Resacctophenone, ω-hydroxy-, and its derivatives, Propyl selenite, 393. 372. Propylaminocupric diphenol, 1230. Resinols, 1345. γ-isoPropyl-γ-butyrolactone, preparation of, 584. Resorcinol bis-(4'-methoxy-p-dibenzoyl) and -(3':4'. n-Propyldi-n-butylsulphonium salts, 993. dimethoxy-p-dibenzoyl) ethers, 141. n-butyl ethers, nitroso., 661. 2'-isoPropyldiphenyl, 2. hydroxy-2'-a-hydroxy-, 1403. Propylene, ignition of mixtures of, with air, 1240. Reychler's acid, constitution of, 823. Protosinomenine, and its picrolonate, 280. Rhodamine-B, blue sodium salt of, 1264. Prototropy in cyclic systems, 720. Rings, chelate, replacement of dialkylthallium by Purine nucleosides, constitution of, 662. trimethylplatinum in, 21. isospiroPyrans, 1264. Robinetin, and its penta-acetyl derivative, 269. 1-Pyrenoyl-o-benzoic acid, 403. Robinia pseudacacia, colouring matter from, 268. β-1-Pyrenoylpropionic acid, and its ethyl ester and Rotation of optically active compounds, influence of semicarbazone, 402. solvents on, 760. γ-1-Pyrenylbutyric acid, and its lactone, 402. Rotatory dispersion. See under Dispersion. Pyridine, additive compounds of, 313. Rotenone, and its derivatives, 489, 1163. addition of methyl iodide to, 1237. Ruberythric acid, 1167. compounds of, with triphenylmethyl halides, 76. Robidium organic compounds :o-chlorophenoxide, dissociation of, in benzene, 193. Rubidium di 4-isonitroso 1-phenyl-3-methyl-5-pyrin p-dichlorobenzene, 1431. azolone, 842. Pyridinoplatinous chloride, a-hydroxylamino-, 1058.

5-(3-Pyridyl)pyrazole, and its salts, and its 3-carboxylic

5-(3-Pyridyl)pyrazole, 4-bromo·3-nitro·, 3-iodo-, and 3- and 4-nitro-, and their derivatives, 686.

Pyrocatechol bis-(3':4'-dimethoxy-p-dibenzoyl) ether,

4-nitro-, from oxidation of nicotine, 350.

141.

S.

Salicylaldehyde, condensation of, with benzoylacetone, 1197. diphenylacetal, 498. Salicylaldehyde, dinitro-, and its derivatives, 486.

Salicylaldoxime, use of, in separation of copper and nickel, 895. Salicylic acid, 3-bromo. and 3-chloro.5-nitro., 700. Salts, conductivity of, in non-aqueous solvents, 645. Sandmeyer reaction, prevention of diaryl formation Selachyl alcohol, constitution of, 165. Selenium, dehydrogenation with, as method of determining ring structure, 352. Selenium dioxide as oxidising agent, 391. action of, on bile acids and sterols, 387. Selenophen, preparation of, 1644. 1:4-Selenothian, 1529. Selenoxan, physical constants of, 1530. Silicon organic compounds, 1040. Silver nitrate and oxide, constitution of ammoniacal solutions of, 1050. thiosulphate, equilibrium of, with sodium thiosulphate and water, 1423. Soaps, acid, phase-rule equilibria of, 920, 924. Sodium carbonate, equilibrium of, with calcium carbonate and water, 1160. hydroxide, action of, on platinic chloride in solution, 1429. orthophosphates, complex, 877. rhodiochloride dihydrate, 417. sulphate, equilibria of, with cobalt and nickel sulphates and water, 943. thiostannates, 1580. thiosulphate, equilibrium of, with silver thiosulphate and water, 1423. reaction of, with ethyl iodide, 1576. Sodium organic compounds : Sodium di-4-isonitroso-1-phenyl-3-methyl-5-pyrazolone, 841. Solids, effect of emission from radium on decomposition of, 1398. thermal decomposition of, 1393. Solubility of aliphatic alcohols in water, 674. Solutions, binary, theory of, 674. Solvents, action of, 376, 1217. specificity of, in electrolytic dissociation, 1360. Sorbic acid, catalytic hydrogenation of, 696, 885. Sparteine, structure of, 644. I-Sparteine perchlorate, 510. Stereochemistry in relation to physics, 1366. Sterols, structure of, and bile acids, 626. action of selenium dioxide on, 387. compounds related to, 607, 1081, 1098. Sterol group, 302, 1410. Stigmasterol, structure of, 635. 2-Stilbazole, mono- and di-nitro-derivatives, 82. 2-nitro-, nitrate, 78. 2-Stilbazolealkine, 3'-nitro-, 78. Strychnine, 486.

Succinic acid, a-phenylcrotyl esters, 1498. Succinic acids, dichloro, decomposition of, 1260. Sugars, aldehydic, rotatory dispersion and circular dichroism of, 1179. Sulphamide, complex metallic salts of, 412. 5-Sulpho-3-aminobensoic acid, 1374. Sulpharsphenamine. See Sulphosalvarsan. 5-Sulpho-3-diagobenzoic acid, 1374. 5-Sulpho-3-hydroxybenzoic acid, and its salts, 1373. 5-Sulpho-3-methoxybenzoic acid, and its salts, 1374. Sulphomethoxybenzoic acids, and their salts, 1378. Sulphonium compounds, elimination of the tert.-butyl group from, 1571. 5-Sulpho-3-nitrobenzoic acid, and its salts, 1373. Sulphonium hydroxides, thermal decomposition of, 533, 991. Sulphosalvarsan (sulpharsphenamine), constitution of, 1003. Sulphur atoms, influence of, on reactivity of adjacent atoms or groups, 261. mobility of groups containing. 306. colloidal, sols, ionic interchange in, 1022. action of, on o-toluidine, 296. Sulphur chlorides, analysis of, 1547. dioxide, compressibility of, 621. Dithionates, formation of, from electrolytic reduction of sulphites, 829. determination of, volumetrically, 5. Surface tension, measurement of, 1449. Systems, cyclic, anionotropy and prototropy in, T. Tantalum :-Tantalic acid, 419. Tantalum separation :separation of, from niobium, 423. Tar, coal, cancer-producing hydrocarbon from, 395. Tartaric acid. synthesis of, 45. thorium salt, alkaline solutions of, 5. ethyl ester, rotation of, 1217. nitrobenzyl esters, and their derivatives, rotation dispersion of, 760. Tartronic acid, preparation of, 643. Tautomerisation and optical activity, 1493. in relation to electronic theory of organic reactions, 1120. prototropic, 37. effect of nuclear halogen substitution on, 1117. in carbonyl compounds, 217, 220, 890. Tellurophen, attempted preparation of, 1644. Tephrosic acid, structure of, 1163. Terephthalyl bromide, 1313. 3-Tetra-aceto-p-glucosido-4-methylglyoxaline, and its methiodide, 665. Tetra-aceto- β -glucosidotheophylline, and its reactions, Tetrahydroanagyrine, and its perchlorate, 509. 1:2:3:10-Tetrahydrocarbasole, 10-hydroxy-, 299. Tetrahydroderrisic acid, 1165 Tetrahydronaphthalene, emulsions containing, 1214. Tetrahydropentindole, 9:10-dihydroxy-, and its deriv-

4-Styrylcoumarin, 617. Styrylpyrylium salts, 430, 1263. Styrylquinoline, 3':5'-dinitro-, 315.

Strycholamide, dinitro-, synthesis of, 486.

Styrylquinoline, 3.5. dinitro., 315. Substance, C₄H₁₂N₂Cl₂Pt, from tetramethylenediamine

1397.

and potassium chloroplatinite, 1341.

Styphnic acid, lead salt, thermal decomposition of,

C₅H₁₄N₂Cl₂Pt from pentamethylenediamine and potassium chloroplatinite, 1341.

C₁₆H₉O₂N, and its derivatives, from degradation of Höchst Yellow R., 1000.

C₂₄H₂₅O₅N₃ from autocondensation of aminoveratroylpropionic acid, 1469.

Substitution in compounds with two or more phenyl groups, 968.

in organic compounds, 1133.

nuclear, influence of, on side-chain reactions, 1248. Succinanil-p-arsonic acid, 93.

esters, 1633.
Tetrahydrotubanol, 1164.
1:2:3:4-Tetrahydroxanthone, reactions of, 232.
Tetrahydroxanthone, 7-amino-, 7-bromo-, dibromo7-chloro- and 7-nitro-, 233.

1:2:3:4-Tetrahydrophenanthrene, 4-hydroxy., 404.

△2-Tetrahydroisophthalic acid, and its ethyl ester,

 Δ^{1} - and Δ^{2} -Tetrahydrophthalic acids, and their ethyl

atives, 300.

1630.

```
3:4:4':6'-Tetramethoxybenzylideneacetophenone,
  hydroxy., 290.
2:3:8:9-Tetramethoxy-5:6:11:12-dibenzperylene-4:10-
  quinone, 1519.
3:4:3':4'-Tetramethoxydiphenic acid, ethyl ester, 1624.
3:3':4':5'-Tetramethoxyflavone, 7-hydroxy-, and its
  acetyl derivative, 269.
3:3':4:4'-Tetramethoxyhelianthrone, 1518.
4:5:6:4'-Tetramethoxy-3-phenylcoumarone, 375.
                                                      2'-
3:4:4':6'-Tetramethoxy-\beta-phenylpropiophenone,
  hydroxy-, 290.
2:3:11:12-Tetramethoxy-6:7:15:16-tetrahydro-
  5:18:9:14-dibenzpyridocoline methiodide, 1585.
3:3':3'':4''-Tetramethoxy-pp-tribenzaldehyde, 141. 3:3':3'':4''-Tetramethoxy-pp-tribenzoic acid, and its
  chloride, 141.
 Tetramethylammonium salts, conductivity of, in
  ethyl and methyl alcohols, 1207.
 Tetramethylascorbic acid, 1287.
 a- and β-Tetramethyldiethylferrocyanogen mercuri-
  iodides, 103.
 3:3'-Tetramethylenedi-\beta-naphthas piropyran, 434
O-Tetramethylgyrophoric acid, methyl ester, synthesis
  of, 493.
 2:3:4:6-Tetramethyl a-methylaltrose, 1080.
2:3:5:6-Tetramethylpiperazines, stereoisomeric, and
  their derivatives, 143.
 Tetraphenylsilicane, preparation of, 1043.
 Thallium compounds, applications of, in organic
  chemistry, 21.
 Thallium organic compounds :-
  Thallium diphenol, 1229.
     4-isonitroso-1-phonyl-3-methyl-5-pyrazolone, 842.
 Theobromine methochloride, 668.
 Theophylline l-arabinoside, structure of, 640.
 Theophylline, nitro-, 642.
 Thio-ketones, dielectric polarisation of henzene
  solutions of, 87.
 Thiostannates. See under Tin.
 Thioureas, dielectric polarisation in dioxan solutions
  of, 87.
Thioxan, physical constants of, 1530.
  Thiostannates, 1580.
Toluene, 2:3-dinitro-, lability of the 2-nitro-group in,
p-Toluenesulphonic acid, 4-nitro-o-tolyl ester, and
  o-nitro-, 4:5-dinitro-o-tolyl ester, 1166.
Toluene-4-sulphonic acid, o-nitro, salts of, 1377.
2-p-Toluenesulphonyl \beta-benzylglucoside, and its tri-
  acetyl derivative, 225.
2-p-Toluenesulphonyl \beta-methylglucoside, 225.
2-p-Toluenesulphonyl 3:4:6-triacetyl glucosidopyridin-
  ium p-toluenesulphonate, 225.
o-Toluidine, action of, with sulphur, 296.
p-Toluidine, conductivity of mixtures of, with
  phenol, 1032
p-Toluo-2:4:6-trinitro-m-tolyl-p-toluidide, 811.
p-Toluo-N-picryl-p-toluidide, 811.
β-m-Tolylaminoisobutyl methyl ketone, nitroso-, 366.
N-Tolyl-N'-\beta\beta\beta-trichloro-a-ethoxyureas, 31. N-Tolyl-N'-\beta\beta\beta-trichloro-a-hydroxyethylureas,
  their diacetyl derivatives, 31.
N-Tolyl-N'-\beta\beta\beta-trichloro-a-methoxyethylureas, 31.
r-o- and \cdot m-Tolyldeoxybenzoins, 335.
                                                       ı.
o-Tolyl-3:4-dihydrophthalazine-4-acetic
  hydroxy-4'-amino-, 1070.
o- and m-Tolyl diphenylmethyl ketones, 335.
Tolylhydrobenzoins, dehydration of \alpha-forms of, 332.
Tomatoes, colouring matter of stems of, 1528.
3:4:6-Triacetyl \beta-benzylglucoside, 225.
Tri-sec.-butylphosphine, 1044.
Tricarbocyanines, 189.
Tricin, synthesis of, 1644.
```

```
Triethylsulphonium salts, 992.
1:2:3-Triketo-1-phenylbutane, 4-mono. and 4:4-di-
        bromo-, bromophenylhydrazones of, 481.
      nitrophenylhydrazones, 1626.
\alpha\beta\gamma-Triketo-\gamma-phenyl-n-butyric acid, and its esters,
  nitrophenylhydrazones, 1626.
2:4:6-Trimethoxybenzoic acid, methyl ester, 612.
2:4:4'-Trimethoxybenzylideneacetophenone,
5:5':6'-Trimethoxy-4-carbethoxy-2:3(3':2')-indeno-
  benzopyrylium chloride, 7-hydroxy-, colour base of,
  611.
7:3':4'-Trimethoxyflavanone, 3-chloro-, 290.
3':4':5'-Trimethoxyflavone, and 6-hydroxy-, 1075.
5:7:4'-Trimethoxyflavylium perchlorate, 3'-amino-3-
  hydroxy-, 27.
2:4:6-Trimethoxy-3-methylbenzoic acid, methyl ester,
4:6:4'-Trimethoxy-3-methylchalkone, 2.hydroxy., 443.
5:7:4'-Trimethoxy-8-methylflavanone, 444.
5:7:4'-Trimethoxy-8-methylflavylium ferrichloride, 442.
3:4:5-Trimethoxyphenacyl bromide, 375.
3:4:5-Trimethoxyphenyl p-methoxyphenacyl cther, and its cyanohydrin, 375.
  3:4:5-trimethoxyphenacyl ether, 375.
2:4:2'-Trimethoxy-\hat{\beta}-phenylpropiophenone, 289.
Trimethoxy l-threonamide, 1285.
Trimethylamine, compounds of, with triphenyl-
  methyl halides, 76.
Trimethylarsine, and its salts, 95, 99.
Trimethylarsonium salts, hydroxy-, 99.
2:3:7-Trimethylcoumarone-5-carboxylic acid, 4:6-di-,
  hydroxy-, methyl ester, and its picrate, 720.
2:2:5"-Trimethyldibenzopyran, 1404.
2:2:4-Trimethyl-1:2-dihydroquinoline, and its acetyl derivative, and chloro-derivatives, 1328.
Trimethylenediaminoplatinic chlorides, 1339.
β-Trimethylenediaminoplatinous chlorides, 1339.
2:3:4- and 2:3:6-Trimethyl glucose, preparation of,
  737.
2:4:6-Trimethylphenyldimethylarsine, and its deriv-
  atives, 1592
Trimethylphloridzin, and its O-tetra-acetyl derivative,
(Trimethylplatini)acetoacetic acid, ethyl ester, 22.
Trimethylplatinum chloride and iodide, 1294.
Trimethylplatinum benzoylacetone, 22.
Trimethylplatinum dipropionylmethane, 22.
1:5:8-Trimethyl-1:2:3:4-tetrahydro-1-naphthol, 436.
2:2:4-Trimethyl-1:2:3:4-tetrahydroquinoline,
  tetrabromo-, 1329.
Trimethyltheophylline arabinoside, 641.
Trimethyl l-threonic acid, amide and methyl ester,
  1284.
Triphenylenecarboxylic acid, and its methyl ester, 404.
aa\beta-Triphenylethyldimethylamine, and its salts, 74.
aa\beta-Triphenylethylene, \beta-bromo-, 74.
aa\beta-Triphenylethyltrimethylammonium salts, 74.
Triphenylmethane, phosphorus derivatives, 776.
Triphenylmethyl halides, action of tertiary amines
  on, 75.
Triphenylmethyldichlorophosphine, 783.
Triphenylmethylchloropyrophosphonic acid, ethyl cster,
6-Triphenylmethyl-2:3-dimethyl
                                    a-methylglucoside,
  and its derivatives, 638.
Triphenylmethylhydrogenphosphonic acid, csters, 783.
Triphenylmethylphosphonic acid, methyl esters, 781.
Triphenylmethylpyrophosphonic acid, and its silver
 salt and esters, 784.
Triisopropylphosphine, 1044.
Tri-n-propylsulphonium salts, 992.
```

Triethylarsonium picrate, hydroxy-, 100.

Triethylphosphine, oxidation of, 1231.

Tripyridinoplatinous chloroplatinite, a-hydroxylamino., 1059.

Trisethylsulphonylmethane, 308.

Tris-(3:3':3'':4''-tetramethoxy-pp-tribenzoyl)2:3:4-trihydroxybenzaldehyde, 142.

Tropane, aromatic derivatives of, 553.

Tungsten, thermal decomposition of phosphine by,

U.

Unsaturated compounds, surface films of, 338. catalytic hydrogenation of, 687. conjugated, addition to, 885. Ureas, dielectric polarisation in dioxan solutions of, Usneol, 714. Usnetic acid, 1173. Usnetinic acid, 1177. Usnetol, 1173. Usnic acid, 437, 714, 1173.

V. δ-n-Valerolactone, preparation of, 583. Vanadium :-Vanadates, precipitation of, 512. Vanadium determination :determination of, 512. Vanillylethylamines, 278. o-Vanillylmethylamine, and its p-toluenesulphonamide, 278. Velocity of reaction in solution, 258. Veratroylacetoacetic acid, ethyl ester, 1471.

aa-Veratroylacetylsuccinic acid, ethyl ester, 1471. 4-Veratroylcoumarin-3-acetic acid, 7-hydroxy-, ethyl ester, 1471. α -Veratrylidene- β -3:4-dimethoxybenzoylpropionic acid, a-6-nitro-, lactone, 1088. Vinylacetic acid, dissociation constant of, 734. 1-Vinylacetylene, 2-iodo-, synthesis and properties of, 741. β-Vinylacrylic acid, hydrogenation of, 885.

W.

Walden inversion, 705, 1076. Water vapour, specific heat of, at high temperatures, 882. Water-gas. See under Gas.

X.

Xanthosine, preparation of, from guanosine, 667. y-o-Xylyl-n-butyric acid, 436.

Y.

Yohimbine, 614.

z.

Zinc sulphate, equilibrium of, with ammonium sulphate and water, 943. Zinc organic compounds :-Zinc diethyl, oxidation of, 756. dimethyl, oxidation of, 746.