

INDEX, 1951

Authors of Articles :—

- Avison, A. W. D., and Hawkins, J. D., the role of phosphoric esters in biological reactions, 171
- Badger, G. M., the aromatic bond, 147
- Bradley, R. S., nucleation in phase changes, 315
- Brown, B. R., the mechanism of thermal decomposition, 131
- Burkin, A. R., the stabilities of complex compounds, 1
- Cook, J. W., and Loudon, J. D., the tropolones, 99
- Dalglish, C. E., biological degradation of tryptophan, 227
- Hughes, E. D., reactions of halides in solution, 245
- Irving, H. M., solvent extraction and its applications to inorganic analysis, 200
- Kipling, J. J., adsorption of non-electrolytes from solution, 60
- Lamberton, A. H., some aspects of the chemistry of nitramines, 75
- McCoubrey, J. C., and Ubbelohde, A. R., the configuration of flexible organic molecules, 364
- Maddock, A. G., radioactivity of the heavy elements, 270
- Owston, P. G., the structure of ice, 344
- Stern, E. S., synthetic approaches to the morphine structure, 405
- Szwarc, M., bond dissociation energies, 22
- Truter, E. V., the constitution of wool wax, 390
- Warhurst, E., the sodium "flame" reactions, 44
- Acetaldehyde, photolysis of, 31
- Acetic acids, trihalogeno-, decarboxylation of, 136
- Acetone, photolysis of mixtures of iodine and, 31
- Acids, aliphatic, adsorption of, by charcoal, 60
- of wool wax, 390
- Actinium series, origin of, 270
- Adenine nucleotides, 184
- Adenosine-5' phosphates, 184
- Adsorption, apparent and negative, 62
- isotherms, 61, 64
- multilayer, 69
- of non-electrolytes from solution, 60
- selective, 70
- theories of, 67
- true, measurement of, 65
- Agnosterol, 397
- Alcohols of wool wax, 394
- Amanita phalloides*, peptide from, 229
- Americium, 299
- Amines, adsorption of, by charcoal, 60
- Analysis, inorganic, solvent extraction in, 200
- Anion effect in complex compounds, 17
- Aromatic bond, 147
- Astatine, 281, 296
- Benzene, disubstituted derivatives, reaction of sodium with, 58
- Berkelium, 300
- Betatron, 301
- Bond dissociation energies, 22
- fixation, apparent, 147
- strength and stability, 5
- Bromides, solvent extraction of, 216
- Californium, 300
- Carbohydrates, oxidation of, 188
- Carbon halides, reactions of, in solution, 245
- Carbon-carbon bond lengths, 162
- Carnaubic acid, 391
- Cephalins, 173
- Cerotic acid, 391
- Ceryl alcohol, 394
- Charcoal, adsorption of non-electrolytes by, 60
- Chlorides, solvent extraction of, 212
- Cholesterol, 395
- isoCholesterol, 396
- Cinnamic acid, decarboxylation of, 143
- Coacetylase, 182
- Cocarboxylase, 179
- Codecarboxylase, 181
- Coenzymes, 182
- phosphoric esters as, 175
- Colchicine, 105
- Colchicine, 104
- Collision parameters of flexible molecules, 376
- Complex compounds, stability of, 1
- Counters, 283, 284
- Crystals containing flexible molecules, 368, 369
- Crystallisation, nucleation in, 328
- "Cupferrates", solvent extraction of, 225
- Curium, 298
- Cyclonite, 91
- Cyclophorase, 194
- Cyclotron, 287
- Decarboxylation, enzymic, 179
- ketonic, 145
- thermal, 131

- Deoxytetrahydrocodeine, 414
 Diazo-compounds, double bond reactions with, 155
 1 : 3-Diketones, inner complexes of, 223
 Diphosphoinositide, 173
 Diphosphopyridine nucleotide (DPN), 176
 "Dithizonates", solvent extraction of, 222
 Double bonds, reagents for, 155

 Electrometers, 285
 Electron impact, bond dissociation energies from, 33
 Electrostatic effect, 9
 Elements, heavy, radioactivity of, 270
 Equilibrium, bond dissociation energy and, 55
 constants, 6
 Extraction by solvents, 200
 for fractionation, 205
 for removal, 204

 Flames, diffusion, 45
 sodium, reactions in, 44
 Flavin mononucleotide (FMN), 177
 Flavinadenine dinucleotide (FAD), 177
 Fluorides, solvent extraction of, 216
 Fractionation, extraction for, 205
 Francium, 280

 Geiger-Mueller tube, 283
 Glucose, oxidation of, 190
 Glycolysis, 189

 Halides, organic, reaction of sodium with, 45
 reactions of, in solution, 245
 Heterocyclic compounds from phenanthrenes, 408
 syntheses of, 410
 Hexamine, nitrolysis of, 95
 Hinokitiol, 104
 "Homocyclonite", 94

 Ice, electrical properties of, 350
 structure of, 344
 Ice-I, 346
 Insects, tryptophan metabolism in, 233
 Ionisation chambers, 285
 Isomerism, rotational, 365

β-Keto-acids, decarboxylation of, 139
 Kinetics, bond dissociation energy and, 37
 Kynurenic acid, 227
 Kynurenine, 227

 Lanoceric acid, 391
 Lano-octadecanol, 395
 Lanopalmic acid, 391
 Lanosterol, 397
 Lanyl alcohol, 395
 Lecithins, 173
 Ligand basicity, 13
 effect in complex compounds, 9, 19

 Ligands, polydentate, 10
 Liquids, rotational isomerism in, 371

 Metals, effect of, in complexes, 15
 Metallic complexes, solvent extraction of, 219
N-Methylmorphinan, 413
 Mills-Nixon effect, 152
 Molecules, flexible, configuration of, 364
 Morphan, 412
 Morphine, structure of, 406
 synthetic approaches to, 405
 Moulds, tropolones from, 99
 tryptophan metabolism in, 231

 Neptunium family, 303
 isotopes, 297
 Nicotinic acid, relation of tryptophan to, 230
 Nitramides, 88
 Nitramines, 75
 primary, 81, 85
 secondary, 81, 87
 Nitrates, solvent extraction of, 208
 Nitration, 83
 Nitroguanidine, 88
 Nitrolysis, 83
 Nitryl chloride, reactions of, 267
 Non-electrolytes, adsorption of, from solution, 60
 Nootkatin, 104
 Nucleation in phase changes, 315
 three-dimensional, 317
 two-dimensional, 339
 Nucleic acids, 174
 Nucleosides, 174
 Nucleotides, 174

 Octahydroisoquinolines, syntheses with, 413
 Ommochrome, 229
 Organic molecules, flexible, configuration of, 364
 Osmium tetroxide, double-bond reactions with, 160
 "Oximates", solvent extraction of, 222
 Oxindolylalanine, 229, 237
 Ozone, double-bond reactions with, 157

 Pantothenic acid, 182
 Partition isotherm, 201
*neo*Pentyl compounds, reactions of, 259
 Phalloidine, 229
 Phase changes, nucleation in, 315
 Phenanthrene derivatives, syntheses with, 406, 408
 Phenylcyclohexanones, syntheses with, 416
 Phosphatides, 173
 Phosphoarginine, 185
 Phosphocreatine, 185
 Phosphokinases, 185
 Phosphoproteins, 175
 Phosphoric acids, esters, role of, in biological reactions, 171

- Photochemistry and bond dissociation energies, 31
Plasmalogens, 173
Plutonium, 297
Puberulic acid, 101
Puberulonic acid, 101, 102
Pulse analysers, 310
Purpurogallin, 108
Purpurogallone, 110
Pyridoxal phosphate, 181
Pyridoxine deficiency, 239
Pyruvates, oxidation of, 193
- Radiation energy, 276
Radioactive heavy nuclei, synthetic, 286
 series, technique for study of, 309
Radioactivity, measurement of, 281
 of heavy elements, 270
Radium-*E*, decay of, 282
X-Rays, scattering of, by ice, 355
Reactions, 1 : 2-elimination, 261
 nucleophilic replacement, 246
" Rest " effect, 10
- Silicon halides, reactions of, in solution, 267
Sodium, flame reactions of, 44
Solids, nucleation in, 337
Solutions, supersaturated, nucleation in, 334
Solvent extraction, 200
Spallation, 301
Spectra, bond dissociation energies from, 26
Sphingomyelins, 173
- Stability, determination of, 17
 of complex compounds, 1
Statistical effect in complex compounds, 6
Stipitatic acid, 100, 101
Surface area, measurement of, 72
 films, flexible molecules in, 376
Synchroyclotron, 301
- Ternary mixtures, adsorption from, 71
Thermochemistry, bond dissociation energy and, 41
Thermodynamic parameters of flexible molecules, 380
Thermodynamics of adsorption, 69
Thiazole acids, decarboxylation of, 138
Thiocyanates, solvent extraction of, 217
Thujaplicins, 103
Transuranic elements, 297
Trifluoroiodomethane reactions of, 267
2 : 2 : 2-Triphenylethyl chloride, reactions of, 260
Triphosphopyridine nucleotide (TPN), 176
Tropolones, 99
 biogenesis of, 111
 properties of, 117
 synthesis of, 113
Tryptophan, biological degradation of, 227
 conversion of, into kynurenine, 236
- Wool wax, constituents of, 390
- Xanthurenic acid, 228