

GROUP III.—CHEMICALS WHICH WILL PROBABLY BE PREPARED DURING THE SUMMER.

Acetylene tetrabromide	<i>m</i> -Nitrobenzaldehyde
Benzenesulfonamide	<i>p</i> -Nitrobenzaldehyde
Benzylamine	<i>p</i> -Nitrobenzoyl chloride
Butyl aldehyde (normal)	Nitron
Butyl bromide (normal)	<i>p</i> -Nitrophenyl hydrazine
Diethylamine	Oenanthol
Diphenylhydrazine	Oenanthylic acid
Ethylamine hydrochloride	<i>p</i> -Thiocresol
Formamide	Triethylamine
Iodobenzene	Trimethylamine hydrochloride
Methylphenyl hydrazine	Urethane
α -Naphthyl hydrazine	<i>m</i> -Xylene
Naphthyl isocyanate	<i>o</i> -Xylene
Ninhydrin	<i>p</i> -Xylene
<i>o</i> -Nitrobenzaldehyde	

Inquiries should be addressed as soon as possible to the Organic Chemical Division, University of Illinois.

ROGER ADAMS.

URBANA, ILLINOIS.

 NEW BOOK.

Notions Fondamentales de Chimie Organique. Par CHARLES MOUREAU. Member de l'Institut et de l'Académie de Médecine, Professeur au Collège de France. Cinquième édition revue et considérablement augmentée. Paris: Gauthier-Villars, 1917. 20 Fr. VIII—548 pp.

The fourth edition of this book was published in 1913 and reviewed in THIS JOURNAL, 36, 1064. The fifth edition has been revised and increased by 165 pages.

The book is divided into five sections: I, Introduction and General Theories, 159 pages; II, Hydrocarbons, 54 pages; III, Oxygen Compounds, 166 pages; IV, Nitrogen Compounds, 70 pages; V, Organic-metallic Compounds, 5 pages; VI, Heterocyclic Compounds, 18 pages; VII, Dyes, 39 pages.

The method of treatment is rather radically different from that adopted in American and English text-books for beginners. In the introduction the author considers in detail the molecular and atomic theories, isomerism, valence, stereochemistry, optical activity, physical properties and the mechanism of reactions. The aim of the book seems to be to present general principles first and concrete examples later and rather sparingly. It is, perhaps, worth our while to enquire whether such a method has not considerable advantage from the pedagogical point of view and whether in our attempt to give facts first and theory later it does not sometimes happen that our students fail to see the forest because of the trees.

The numerous, brief historical references with dates are very welcome. In some cases the emphasis ought, perhaps, to be a little different, but

in view of the author's evident intention to be impartial and of his request for corrections, criticisms here would be out of place.

The hypothesis of "active" and "inactive" molecules to explain the velocity of chemical reactions, after the analogy of the hypothesis of Arrhenius which preceded the ionic theory, is interesting, but every one must see that the hypothesis in its present form is very vague and indefinite. It is something, however, to recognize, as Professor Moureau does, that there is something about which we need further knowledge. Too many are satisfied with differential equations without enquiring what lies back of them.

The author follows Berthelot in considering the terms "spontaneous" and "forced," applied to reactions, as synonymous with "exothermic" and "endothermic;" if a constant temperature of 1000° is maintained, the reaction between carbon and steam goes on just as "spontaneously" and reaches an equilibrium just as truly as the reaction between hydrogen and oxygen. To call one reaction "forced" and the other "spontaneous" does not help us at all to understand why heat is absorbed in one case and given out in the other. Instead of that, it tends to conceal the fact that there is something here about which we are badly in need of further knowledge. The real distinction is, of course, between reactions having available "free energy" and those which do not.

The chapter on dyes is excellent and will be very useful at the present time. The logical arrangement of the material—hydrocarbons, oxygen compounds, nitrogen compounds, etc., is well suited to the author's treatment and well adapted to give students a clear view of the relations which must be mastered in securing a knowledge of organic chemistry.

W. A. NOYES.