

by no means critically. However, as numerous literature references are given it is possible to refer to the original methods and authorities. Eighteen chapters are given to the discussion of volumetric methods for as many metals: most of the processes described are the standard methods used in practice, but in the effort at completeness some things of very doubtful value are introduced.

In spite of these possible blemishes the book has merit, and will prove unquestionably of use in the class of laboratories for which it is written. The mechanical work on the book and its general appearance are commendable.

J. H. LONG.

Neuere theoretische Anschauungen auf dem Gebiete der Organischen Chemie. BY DR. VERDINAND HENRICH. 294 pp. Braunschweig: Friedr. Vieweg & Sohn. 1908. Price, 8 marks, bound.

The title of the book indicates its nature. It is intended not only as a guide for students in advanced courses but equally so as a useful reference book for chemists in general. Those who are interested in the development of the working hypotheses in the field of organic chemistry during the last fifteen–twenty years will find in Dr. Henrich's *Anschauungen* a clear, concise, and an unbiased, exposition of these hypotheses. The material is presented not from a critical, but rather from an historical point of view.

After a brief review of the older theories of Berzelius, Dumas, Laurent, Liebig, etc., the *Valence Theory* of Kekulé is taken up and discussed in all its phases. The author brings out clearly the historical as well as the logical connection which exists between Kekulé's theory on the one hand and the various hypotheses dealing with stereochemistry on the other hand. A relatively large amount of space is devoted to the discussion of Thiele's *Partial-Valence* theory. Chapters VIII–X cover the subjects: Tautomerism and Desmotropism; Pseudo-acids and Pseudo-bases; Tautomerism of Ions; The Relation between Chemical Constitution and Color. The chapter on tautomerism is especially well written. Molecular rearrangements—chemical changes which differ from such of tautomerism in not being readily reversible—are taken up next. Then follows a chapter on the *Basic Properties of Oxygen*, describing in the usual conventional way the well-known work of Collie and Tickle on the salts of dimethylpyrone, of Kehrman on the azoxonium salts, of Baeyer and Villiger on the salts of alcohols, ethers, aldehydes, etc., and of Werner on the carboxonium salts. All this is presented in the purely historical way and no attempt is made to show that the conclusions arrived at by the different investigators are rather contradictory to, than in harmony with, each other. Separate chapters are devoted to each, Nef's methylene chemistry, Michael's recent theoretical system and to Werner's theory

of "Haupt-und Neben-Valenzen." The final chapter deals with the most recent electrochemical conceptions. M. GOMBERG.

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