

The main portion of the book treats of the elementary laws, the preparation, properties, and reactions of the gases, non-metals and metals. No mention of the periodic law is made, and there is no attempt to show the striking analogies in the properties of the elements and their compounds. It is much to be regretted also that there is little mention of historical names. They are so intimately connected with the science that it seems a great pity to have dropped them almost entirely. The author has introduced the term *crith* as the weight of a liter of hydrogen. It does not aid in the understanding and must surely lead to confusion.

The last chapter of twenty-five pages treats briefly of qualitative analysis. In the reviewer's opinion this portion of the book should have been devoted to the study of the preparation of typical inorganic compounds. The prime object of many books of this class is to prepare the student to make *separations*. While this cannot be said of this volume, there will, nevertheless, be a strong tendency on the part of the student to anticipate qualitative analysis on account of its presence in the book.

With the exception of the criticisms made, the book is to be commended.

HENRY FAY.

THE THEORY OF ELECTROLYTIC DISSOCIATION AND SOME OF ITS APPLICATIONS. BY HARRY C. JONES, Associate in Physical Chemistry in Johns Hopkins University. New York: The Macmillan Company. 1900. Cloth. xii + 289 pp. Price, \$1.60.

This book contains a survey of the earlier physical chemistry, an account of the origin of the theory of electrolytic dissociation together with a presentation of the evidence supporting the same, and some of the important applications of the theory.

Every student of chemistry, physics, and biology, who is not already well acquainted with the theory of electrolytic dissociation will find this an interesting and valuable book to read. The development of modern physical chemistry is, in a large measure, intimately connected with this theory. The facts that the latter has been able to explain and to correlate are many; and above all, the importance of the stimulus it has given to research can hardly be overestimated.

In this book the theory of electrolytic dissociation is viewed in its most favorable light. It must be admitted, however, that during the last year or two, facts have begun to accumulate which

the theory cannot explain. Though these facts have developed mainly from a study of non-aqueous solutions, yet in many instances the theory finds much difficulty in explaining the facts in case of aqueous solutions, especially when quantitative data are involved. It seems at present that even before the theory of electrolytic dissociation will have found its way into regular chemical text-books, it will have undergone radical modifications from its present form, or will perhaps have been superseded by more adequate explanations. LOUIS KAHLENBERG.

VICTOR V. RICHTER'S ORGANIC CHEMISTRY OR CHEMISTRY OF THE CARBON COMPOUNDS. Edited by PROF. R. ANSCHÜTZ. Authorized translation by EDGAR F. SMITH, Professor of Chemistry, University of Pennsylvania. Third American from the eighth German edition. Vol. II. Carbocyclic and Heterocyclic Series. Philadelphia: P. Blakiston's Son & Co. 1900. 671 pp. Price, \$3.00.

The first volume of this work was reviewed last year.¹ About the only adverse criticism which could be made of the completed work is that the theoretical discussions are often so concise that it is almost impossible for beginners to comprehend them. It is, however, necessary, in a book of this character, to choose between a very concise style and the omission of a great deal of material which it is desirable to include. The book is, undoubtedly, much more valuable because the former alternative was chosen. The comprehensive character of the work, considering its size, is remarkable.

In discussing Ladenburg's prism formula for benzene on page 41 the author has, apparently, overlooked the fact that, since the reduction of ortho compounds gives derivatives of cyclohexane in which the substituents are combined with adjacent carbon atoms, the prism formula must be considered as positively disproved.

Professor Anschütz has availed himself of the aid of other workers who are specially conversant with particular fields and has so secured an accuracy of presentation which a single author could not hope to attain. W. A. NOYES.

AN INTRODUCTION TO PHYSICAL CHEMISTRY. BY JAMES WALKER, Professor of Chemistry in University College, Dundee. New York: The Macmillan Company. 1899. 8vo. Cloth. x+335 pp. Price, \$2.50.

A number of elementary treatises on physical chemistry have

¹ This Journal 21, 708.