

addresses of the manufacturers of apparatus and material. There is a good index.

CHARLES BASKERVILLE.

A Treatise on Qualitative Analysis and Practical Chemistry. Adapted for use in the Laboratories of Schools and Colleges. By FRANK CLOWES, D.Sc., F.I.C., Emeritus Professor of Chemistry in the University College, Nottingham, etc., etc. Eighth edition, 1908. London: J. and A. Churchill. Philadelphia: P. Blakiston's Son & Co. pp. xxiii+518. Price, \$3.00 *net*.

This work, which has long been favorably known, combines a partial laboratory course in general inorganic chemistry with inorganic qualitative analysis, and with considerable practice in the detection of typical organic substances. The second edition (the latest available to the reviewer for comparison) was a volume of 372 pages, and the increase through the various editions to the present total of 518 pages has made it possible to both increase the scope of the work, and to introduce improved procedures. The author states that the important changes in this edition concern the preparation and detection of gaseous compounds, and the reaction and detection of organic substances.

While this work is primarily intended to meet conditions which do not generally obtain in this country, it presents much that is of interest and value, and will be found to be a handy reference work for many practicing analysts.

H. P. TALBOT.

Traité Complet D'Analyse Chimique Appliquée aux Essais Industriels. Par J. POST, B. NEUMANN. Deuxième édition française entièrement refondue. Traduite d'après la troisième édition allemande et augmentée de nombreuses additions. Par L. Gautier. Tome Premier. Second Fascicule. Gaz d'Éclairage—Carbure de Calcium et Acétylène—Pétrole—Huiles de Graissage—Huiles de Goudron—Paraffine—Cire Minérale—Ozocérite—Asphalte—Graisses et Huiles grasses—Glycérine—Bougies—Savons. Avec 109 figures dans le texte. Paris: Librairie Scientifique A. Hermann, 6 Rue de la Sorbonne. 1908. pp. 219-562.

A brief review of Part I of Vol. 2 of this work has already appeared on p. 913 of this Journal. Detailed comment is, therefore, unnecessary. An appendix contains the methods followed in France by official laboratories for the analysis of fatty matters.

W. F. HILLEBRAND.

Stoichiometry. By SIDNEY YOUNG, Professor of Chemistry in the University of Dublin. Together with an Introduction to the Study of Physical Chemistry by Sir William Ramsay, K.C.B., F.R.S. London, New York, Bombay, and Calcutta: Longmans, Green and Co. 1908. lxi+381 pp. Price, 7s. 6d.

The title of this volume, which is intended to be the first in the series of text-books of physical chemistry edited by Sir William Ramsay, has a somewhat uncertain significance to the average reader, but one finds in the introduction, a statement of the scope of the book: "Stoichiometry or the various methods employed to determine atomic or molecular weights, and the classification of compounds."

Ramsay's "Introduction to the Study of Physical Chemistry," which has already been published in Findlay's "Phase Rule," is reprinted in this volume as the opening volume of the series. In the various chapters are considered the fundamental laws of chemical combination, the Gas Law with its deviations and its application in the determination of molecular weights, the approximate determination of atomic weights in connection with Avogadro's Hypothesis, the Law of Dulong and Petit and that of Mitscherlich, the exact determination of atomic weights with special reference to Stas's work and recent density determinations, the Periodic Law, the dissociation of gases and abnormal vapor densities, the physico-chemical properties of liquids, the kinetic theory of gases and the reduced equation of state, the properties of solids, the properties of mixtures of gases and liquids, solubility and miscibility, the properties of dilute solutions, dissolution and vaporization, and the determination of molecular weight from purely chemical and from physico-chemical considerations.

A book upon these subjects from the hand of Professor Young is sure to be received with great interest on account of the author's own numerous contributions to knowledge in these lines. In the perusal of the volume, the reader is not disappointed in an expectation of an exceptionally lucid presentation. Throughout the book, the average student of physical chemistry, should have no difficulty in following the course of reasoning. Some subjects are treated more fully than others, the chapters dealing with the gas law, the properties of liquids and the kinetic theory of gases being particularly detailed and clear. Numerous tables of data and diagrams serve to illuminate the text, and abundant references to original articles are given. Occasional headings in the text facilitate the use of the volume as a reference book.

G. P. BAXTER.

Spectrum Analysis. By JOHN LANDAUER, Member of the Imperial German Academy of Naturalists. Authorized English Edition by J. Bishop Tingle, Professor of Chemistry in the McMaster University, Toronto. Second edition, Rewritten. New York: John Wiley & Sons; London: Chapman & Hall, Limited, 1907. 236 pp. Price, \$3.00.

In the new edition of this brief survey of spectroscopy, as the translator and editor states in the preface, "the measurements of spectra have been revised and brought up to date, the values being taken from Watts's 'Tables of Spectra,'" "the description of some of the older instruments has been eliminated in favor of a number of newer and superior forms." The index of authors has been combined with that of subjects. Few changes outside the above have been made. It is remarkable that Kayser's "Handbuch der Spectroscopie" is omitted from the bibliography of works on spectrum analysis.

G. P. BAXTER.