
NEW BOOKS

Second Year College Chemistry. Fourth edition, revised. By WILLIAM H. CHAPIN, Emeritus Professor of Chemistry, and LUKE E. STEINER, Associate Professor of Chemistry, Oberlin College. John Wiley and Sons, Inc., 440 Fourth Avenue, New York, N. Y., 1938. xv + 407 pp. 42 figs. 16 × 24 cm. Price, \$3.00.

Teachers familiar with the earlier editions of "Chapin" (THIS JOURNAL, 55, 5063 (1933)) will be glad to have this new fourth edition, the major changes in which, according to the Preface, have been made in the treatment of electrolytes, X-rays and radioactivity, atomic transmutations, valence and chemical combination, electrochemistry. Giving as it does a brief but well-planned and executed survey of elementary chemical theory and laws, atomic principles, properties, structure and relationships, solution phenomena and equilibria, ionization theory and practice, indicators and titrations, colloids, and electrochemistry, the book constitutes a satisfactory text for the theoretical side of a course in Qualitative Analysis, or a short course in Elementary Physical Chemistry.

ALLEN D. BLISS

Photography: its Principles and Practice. A Manual of the Theory and Practice of Photography. By C. B. NEBLETTE, F.R.P.S., Counselor and Administrative Head, Department of Photographic Technology, Rochester Athenaeum and Mechanics Institute. D. Van Nostrand Company, Inc., 250 Fourth Avenue, New York, N. Y., 1938. xi + 590 pp. 229 figs. 16 × 23.5 cm. Price, \$6.50.

As hitherto, this book is admirably suited to the needs of practical photographers and of moderately advanced students who are perhaps not ready for high-powered physico-chemical interpretations such as Stenger's Fortschritte der Photographie.

The author has certainly made good on his promises regarding complete revision. His skill is evident when one compares, for example, the earlier with the present version of "photographic optics" or of "projection printing." The treatment of stops and shutter speeds is now based squarely upon the modern exposure meter. A substantial array of new topics such as "photography of moving objects" adds conspicuously to the value of the text. The claims of color photography are met by new paragraphs in the historical section, and by three practically new chapters setting forth processes of present-day importance. By drastic elimination of obsolete material the total number of pages has been slightly reduced. The references appear as footnotes—no longer in a water-tight compartment at the end.

The second edition (1930-1935) scarcely made mention of miniature cameras. The third concedes them three pages in Chapter II, but thereafter seems to overlook the very real special problems of enthusiasts in this field. Of course the fraternity would profit greatly by digesting the chapters which are generally applicable—that on "photo-

graphic reproduction of tone" above all. This reviewer does not share the opinion (page 318) that modern research on fine grain development has been for the most part unfruitful.

It would indeed be ungracious to lay stress upon a few misprints, such as the structural formulas of benzene derivatives (page 273). The solid merit and usefulness of the volume are everywhere apparent.

GEORGE S. FORBES

Gmelin's Handbuch der anorganischen Chemie. (Gmelin's Handbook of Inorganic Chemistry.) Edited by ERICH PRIETSCH. Eighth edition. System-Number 64, Rhodium. Issued by the Deutsche Chemische Gesellschaft. Verlag Chemie, G. m. b. H., Corneliusstrasse 3, Berlin W 35, Germany, 1938. 153 pp. 17 × 25 cm. Price, RM. 20.25.

The history and occurrence of rhodium and the preparation of metallic rhodium have already been treated in connection with the other metals of the platinum group in the earlier volume of this Handbook, entitled Platinum, Part A.

The properties of the free element and the formation, preparation and properties of its compounds are covered in this present volume in the satisfactory fashion characteristic of this Handbook. The complex amines of rhodium, characterized by an even greater stability than the corresponding amines of cobalt, constitute a particularly important chapter. Indeed these substances are about as numerous and their description requires about as many pages as all the other compounds of rhodium together.

ARTHUR B. LAMB

Lehrbuch der organischen Chemie. (Textbook of Organic Chemistry.) By DR. WOLFGANG LANGENBECK, Professor in the University of Greifswald. Verlag von Theodor Steinkopff, Residenzstrasse 32, Dresden-Blasewitz, Germany, 1938. xv + 537 pp. 5 figs. 16 × 23.5 cm. Price, RM. 15.

This textbook is described by the author as a "Lernbuch" rather than a reference book and is designed for study by chemists and students in biology, pharmacy and medicine who are genuinely interested in chemistry. The author has stressed the biochemical side of organic chemistry.

The text is divided into two parts. The first part is devoted to the general treatment of aliphatic (150 pages), aromatic (65 pages) and heterocyclic (27 pages) compounds. The second part deals with the following special topics: carbohydrates (56 pages), proteins (31 pages), isoprene derivatives (50 pages), dyes (62 pages), alkaloids (35 pages) and inorganic catalysts and enzymes in organic chemistry (43 pages).

An American reviewer at once notices the failure to

make use of the newer concepts of valence. Thus, the sulfones are written as having hexavalent sulfur; no structure is given for a nitro compound although azoxy compounds are shown with pentavalent nitrogen; and amine salts are sometimes indicated as ionic compounds and sometimes as having pentavalent nitrogen.

This book is remarkably up to date on the treatment of the biological aspects of organic chemistry. Such topics as the chemistry of vitamins A, B₁, B₂, C, D₁ and D₂, the sex hormones, the auxins and the enzymes are treated. Even the very recent synthesis of vitamin E is included. By contrast it seems surprising to the reviewer that the chapter on proteins does not contain a treatment of the essential amino acids, methionine and threonine.

Except for the rather minor points mentioned, this book is an excellent treatment of organic chemistry and can be recommended for study to the classes of students for which the author has written it. There are some typographical errors but they are of the kind which will not confuse students.

C. S. MARVEL

Die Fermente und ihre Wirkungen. (Enzymes and their Action.) Supplement, Lieferungen 9-10. (Bd. II. Spezieller Teil; Haupt-Teil XVII-XX.) By Prof. CARL OPPENHEIMER, Dr. Phil. et Med. W. Junk Verlag, Scheveningsche Weg 74, The Hague, Holland, 1938. Lieferung 9, 159 pp. 20.5 × 27.5 cm. Price, 10 Fl. Lieferung 10, 159 pp. 4 figs. 19.5 × 27 cm. Price, 10 Fl.

The first fifty pages of Part 9 are a continuation from Part 8 [previously reviewed in *THIS JOURNAL*, 60, 498 (1938)] of a review of the more recent literature up to the early part of 1938, on biological oxidation. The remainder as well as Part 10 deals directly and indirectly with the same subject. Fermentation, carbohydrate breakdown, various theories which have been put forth to correlate the large mass of experimental data which has accumulated in the past few years, are given and discussed. Considerable space, especially in Part 10, is devoted to discussions of numerous enzymes, zymases, mutases, coenzymes, phosphorylases, dehydrogenases, respiratory carriers, oxidases, etc.

As in the previous installments, the author has gathered together, to an exhaustive degree, the information from the numerous papers published in this wide field of chemical research. The only criticism the reviewer might offer is that much of the discussion is of such pro and con nature as to tend to confusion rather than clarity.

J. M. NELSON

BOOKS RECEIVED

December 15, 1938-January 15, 1939

CHRISTIAN BOMSKOV. "Methodik der Hormonforschung. Band II. Ovar (Follikelhormone, Gelbkörperhormon), Hoden, Hypophysenvorderlappen." Georg Thieme Verlag, Rossplatz 12, Leipzig C 1, Germany. 1016 pp. RM. 89; bound, RM. 91.

EMIL J. FISCHER. "Abfallstoffe der organisch-chemischen Industrie und ihre Verwertung." Verlag von Theodor Steinkopff, Residenzstrasse 32, Dresden-Blasewitz, Germany. 256 pp. RM. 10.50; bound, RM. 11.25.

A. JUCKENACK, E. BAMES, B. BLEYER AND J. GROSSFELD. "Handbuch der Lebensmittelchemie. V. Getreidemehle, Honig, Zucker, Früchte, Gemüse." Verlag von Julius Springer, Linkstrasse 22-24, Berlin W 9, Germany. 1048 pp. RM. 135; bound, RM. 138.60.

PAUL KARRER. "Organic Chemistry." Translated from the German by A. J. Mee. Nordemann Publishing Company, Inc., 215 Fourth Ave., New York, N. Y. 902 pp. \$11.00.

M. KENTTÄMAA. "Das elektrolytische Reinigungsverfahren bei der Konservierung von in Boden gefundenen Metallgegenständen." K. F. Puromiehen Kirjapaino O.-Y., Helsinki, Finland. 30 pp.

A. MERZ. "Bewertung chemisch gefällter Kreiden nach neuzeitlichen Gesichtspunkten." Verlag von Theodor Steinkopff, Residenzstrasse 32, Dresden-Blasewitz, Germany. 60 pp. RM. 3.75; bound, RM. 4.50.

FRITZ MICHEEL. "Chemie der Zucker und Polysaccharide." Akademische Verlagsgesellschaft m. b. H., Sternwartenstrasse 8, Leipzig C 1, Germany. 399 pp. RM. 26.80; bound, RM. 28.40.

J. H. REEDY. "Theoretical Qualitative Analysis." McGraw-Hill Book Co., Inc., 330 West 42d St., New York, N. Y. 451 pp. \$3.00.

LYNDON F. SMALL, NATHAN B. EDDY, ERICH MOSETTIG AND C. K. HIMMELSBACH. "Studies on Drug Addiction." Supplement No. 138 to the Public Health Reports. Superintendent of Documents, Government Printing Office, Washington, D. C. 143 pp. \$0.60.

ERNEST H. SWIFT. "A System of Chemical Analysis (Qualitative and Semi-Quantitative) for the Common Elements." Prentice-Hall, Inc., 70 Fifth Ave., New York, N. Y. 589 pp. \$4.25.

JAN W. WARK. "Principles of Flotation." Australasian Institute of Mining and Metallurgy, Inc. Tait Book Co. Pty., Inc., 349 Collins St., Melbourne C 1, Australia. 346 pp. 21s./-.

"Gmelins Handbuch der anorganischen Chemie. System-Nummer 59, Eisen. Teil F II, Lieferung 1. Nachweis und Bestimmung von Fremdelementen in Eisen und Stahl." Erich Pietsch, Editor-in-Chief. Verlag Chemie G. m. b. H., Corneliusstrasse 3, Berlin W 35, Germany. 164 pp. RM. 19.50.

"Gmelins Handbuch der anorganischen Chemie. System-Nummer 64, Rhodium." Erich Pietsch, Editor-in-Chief. Verlag Chemie G. m. b. H., Corneliusstrasse 3, Berlin W 35, Germany. 153 pp. RM. 20.25.

"Gmelins Handbuch der anorganischen Chemie. Proband." Verlag Chemie G. m. b. H., Corneliusstrasse 3, Berlin W 35, Germany.

"Studies of the Institutum Divi Thomae." Vol. II, No. 1. Published by Institutum Divi Thomae of the Athenaeum of Ohio, Mt. Washington, Cincinnati, Ohio. 153 pp.