

review of the literature for each element, giving all important ideas which have been put forth with references. The author should weigh these facts critically and sum up his conclusions distinguishing between what is thoroughly established and what is merely probable and mention possibilities which have not been verified. Neuberger's book falls below this standard. He ignores considerable data, good and bad, and often gives only his conclusions without specifically indicating their source or their relative probability. To get a good idea of the status of work on a given element it is still necessary to consult the original literature.

The author fails completely to mention the fact that cobalt is hexagonal at high temperatures, which has been verified by a number of authors and never disputed. On phosphorus, he ignores the fact that a number of contradictory x-ray patterns have been reported. He mentions the work of Frost [*J. Russ. Phys.-Chem. Soc.*, **62**, 2235 (1930)] which shows that red and violet phosphorus have different structures without giving credit or listing the reference. The best work on the transformation point of iron [by Wells, Ackley and Mehl (1935)] is not mentioned; perhaps it is too recent for inclusion.

The references, instead of being conveniently listed under each element, are placed at the end of the volume. The first 920 of them are alphabetically arranged according to author, but 82 more follow (not the most recent ones) in irregular order. The reference numbers are hard to find since they are not conspicuously printed and separate lines are not given to each reference. A great deal of space could have been saved by omitting data such as lattice constants which are conveniently found elsewhere. A few good tables would advantageously take the place of much of the discussion.

On the whole, the book bears evidence of hasty preparation. However, it is the first book on this subject and provides a summary, usually well chosen, of data to be found only by a search of the literature. It should be a useful reference work.

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Organic Chemistry. By ROBIN CHARLES BURRELL, Ph.D., Associate Professor of Agricultural Chemistry, The Ohio State University. McGraw-Hill Book Company, Inc., 330 West 42d Street, New York, N. Y., 1936. xii + 336 pp. 34 figs. 14 × 20.5 cm. Price, \$2.75.

A more specific title for this textbook would be more appropriate in view of its rather extensive discussion of the biologically important substances and its more restricted treatment of some of the other subjects, such as methods of synthesis which are less pertinent to its purpose. The text is especially designed for a semester course in organic chemistry for students of home economics, agriculture and biological sciences. The choice of subject matter was largely based upon the consensus of the opinions of a number of authorities on nutrition.

The fundamental concepts and the most important types of compounds are adequately discussed. The aliphatic and the aromatic hydrocarbons are presented in the same

chapter. About one-half of the book is devoted to the treatment of substances of direct biochemical importance—lipides, carbohydrates, proteins and their components, and miscellaneous natural substances. A concise account of the digestion and assimilation of each of the three important classes of food substances is also included.

The book is quite accurate and up-to-date; however, the following errors ought to be noted: "ethyl nitrile" for C_2H_5CN (p. 115); the boiling point of lactic acid is given as 122°C. (p. 154); the consideration of alcoholic fermentation as "a type of biological oxidation" (p. 176); and the formulas for hydroxyproline (p. 216) and nicotine (p. 281). The classification of the types of isomers that is given (p. 45) and the likening of esters to salts (p. 111) are not in accord with modern concepts.

The book is well organized and written in a clear and concise manner. It is well suited for the purpose for which it was intended.

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BOOKS RECEIVED

July 15, 1936–August 15, 1936

ÉTIENNE AUDIBERT. "Les Carburants. I. L'Essence." Gauthier-Villars, Éditeur, 55 Quai des Grands-Augustins, Paris, France. 181 pp. Fr. 45.

F. R. BICHOWSKY AND F. D. ROSSINI. "The Thermochemistry of the Chemical Substances." Reinhold Publishing Corporation, 330 West 42nd St., New York, N. Y. 460 pp. \$7.00.

G. DUPONT. "Cours de Chimie Industrielle. Vol. III. Métallurgie." Gauthier-Villars et Cie., Éditeur, 55 Quai des Grands-Augustins, Paris, France. 357 pp. Fr. 65.

HEINRICH FINCKE. "Handbuch der Kakaoerzeugnisse." Verlag von Julius Springer, Linkstrasse 23-24, Berlin W 9, Germany. 568 pp. RM. 55.

O. A. HOUGEN AND K. M. WATSON. "Industrial Chemical Calculations. The Application of Physico-Chemical Principles and Data to Problems of Industry." Second edition. John Wiley and Sons, Inc., 440 Fourth Ave., New York, N. Y. 487 pp. \$4.50.

KATHLEEN LONSDALE. "Simplified Structure Factor and Electron Density Formulae for the 230 Space Groups of Mathematical Crystallography." Published for the Royal Institution by G. Bell and Sons, Ltd., York House, Portugal St., London W. C. 2, England. 181 pp. 10s./- net.

S. SABETAY. "Progrès Récents dans la Chimie des Parfums et des Huiles Essentielles." Gauthier-Villars, Éditeur, 55 Quai des Grands-Augustins, Paris, France. 77 pp.

KARL SCHULTZE. "Das Ausblühen der Salze." Verlag von Theodor Steinkopff, Residenzstrasse 32, Dresden-Blasewitz, Germany. 99 pp. RM. 4.

- JOHN C. WARE. "The Chemistry of the Colloidal State. A Textbook for an Introductory Course." Second edition. John Wiley and Sons, Inc., 440 Fourth Ave., New York, N. Y. 334 pp. \$3.75.
- HARRY BOYER WEISER. "Colloid Symposium Monograph. Papers Presented at the Twelfth Symposium on Colloid Chemistry, Ithaca, N. Y., June, 1935." The Williams and Wilkins Company, Mt. Royal and Guilford Aves., Baltimore, Md. 156 pp. \$3.00.
- "Gmelins Handbuch der anorganischen Chemie. System-Nummer 4, Stickstoff." Lieferung 4. Verlag Chemie, G. m. b. H., Corneliusstrasse 3, Berlin W 35, Germany. 184 pp. RM. 25.15.
- "Gmelins Handbuch der anorganischen Chemie. System-Nummer 23, Ammonium." Lieferung 1. Verlag chemie, G. m. b. H., Corneliusstrasse 3, Berlin W 35, Germany. 242 pp. RM. 28.
- "Bucher der Anstrichtechnik. Vorträge in Veranstaltungen des Fachausschusses." Erstes Buch. Herausgegeben vom Fachausschuss für Anstrichtechnik beim Verein deutscher Ingenieure und Verein deutscher Chemiker durch die Gruppe "Verbreitung anstrich-technischen Kenntnisse." VDI Verlag G. m. b. H., Dorotheenstrasse 40, Berlin N. W. 7, Germany. 99 pp. RM. 7.50.