

point and solubility are not paralleled by detectable discrepancies in composition, absorption spectra or physiological potency. Crystallographic and polarographic examinations have revealed a number of interesting features which, however, do

not permit us to draw any final conclusions. The matter is still under investigation.

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## NEW BOOKS

**The Chemistry of the Colloidal State.** A Textbook for an Introductory Course. Second edition. By JOHN C. WARE, Sc.M., Ph.D., Consulting Chemist. John Wiley and Sons, Inc., 440 Fourth Avenue, New York, N. Y., 1936. xvi + 334 pp. 96 figs. 15.5 × 23.5 cm. Price, \$3.75.

This second edition, like the first, is clearly written in a style suitable for students who are not interested in a too mathematical discussion of colloid chemistry, and it should therefore find a place in colleges where such courses are taught.

The following additions have been made: A new chapter of six pages on Intermediate Cases—Soaps; one-half page on Edible Jellies; three paragraphs on emulsions; four pages on the precipitation of substances in the colloidal state; two paragraphs on the electrical character of interfacial phenomena; nine lines on the plating of rubber; nine lines on the Donnan equilibrium, and two pages on surface tension lowering. There is an over-all increase of twenty-one pages.

One is at a loss, however, to see how the author's statement that the text has been largely rewritten is justified. Many of the chapters are practically unchanged and there is no change in the figures. Also, the statement in the Preface that the space given to adsorption has been doubled actually finds little support, as twenty-eight pages are devoted to this topic in the first edition and twenty-nine in the second edition.

A. L. ELDER

**Principles of Biochemistry.** By ALBERT P. MATHEWS, Andrew Carnegie Professor of Biochemistry, University of Cincinnati. William Wood and Company, Mt. Royal and Guilford Avenues, Baltimore, Maryland, 1936. x + 512 pp. 15.5 × 24 cm. Price, \$4.50.

A teacher for forty years who has "a profound respect and affection" for the "earnest, hard working and lively young people" who are his pupils should know their needs. And when he has in addition carried on continuous productive research in the field in which he teaches, he should be in a position to write a textbook which gives his students the information they need in a form at once interesting, critically accurate and up-to-date. This, we believe, Professor Mathews has accomplished in his new book.

The material is treated under the usual headings of Glucides, Lipides and Protides (the newer names for the

familiar Carbohydrates, Fats and Proteins; then the Special Chemistry of Important Tissues, Vitamins and Hormones; and Energy Metabolism. In each case, the material selected is such as to give a clear and accurate picture to the student of both the chemistry and physiology of the material under discussion with relatively little of that rounding off of debatable topics which is necessary in the interest of clearness.

In the opinion of the reviewer, it is to be regretted that the author has, after due consideration, omitted almost all references to the literature because the student has not time to consult the original literature. This is conceded; also that only a small percentage of the students would do so if they had the time, since it is easier to accept authority than to try to get at the truth of the matter from published work. Nevertheless, the medical school is the last place where the student will get formal assistance in arriving at a critical view of what is going on in his field of interest, and, if he wishes to keep up with the advance of medicine during his lifetime, he should acquire the technique of critical reading before he leaves school. However, this is a minor point and detracts little, if at all, from the general excellence of the book.

W. R. BLOOR

**Analytische Chemie der Edelmetalle.** (Analytical Chemistry of the Noble Metals.) By Dr. ALFRED WOGRNZ, Lecturer at the Technical Institute of Vienna. Ferdinand Enke Verlag, Hasenbergsteige 3, Stuttgart W, Germany, 1936. xi + 141 pp. 14 figs. 16.5 × 25.5 cm. Price, RM. 13; bound, RM. 14.80.

The above book is essentially a compilation of the scattered information on the analytical chemistry of the noble metals. Fifty pages are devoted to silver, thirty to gold, and forty-five to the platinum metals. Under each of these headings the subject matter is presented similarly, being divided into a brief introduction of history and occurrence, followed by a discussion of analytical reactions, methods of detection and of determination, and procedures of separation, including those applicable to certain technical products. In addition, six pages are given over to tables of a number of physical properties. The book also contains an author and a subject index, and a list of works consulted. It is clearly printed on a good grade of paper.

The sections dealing with silver and gold appear to be quite complete, but that dealing with the platinum metals

leaves the analytical chemistry of the group some twenty years out-of-date, owing to the fact, unfortunately, that consideration is not given to work done in recent years, the aim of which has been to replace the traditional methods of separation and of determination with others more in keeping with modern requirements of accurate chemical analysis. The section on the platinum metals, therefore, is more of historical interest than of practical value.

RALEIGH GILCHRIST

**Annual Survey of American Chemistry.** Volume X, 1935. Edited by CLARENCE J. WEST, Director, Research Information Service, National Research Council. Published by Reinhold Publishing Corporation, 330 West 42d Street, New York, N. Y., 1936. 487 pp. 14 × 22 cm. Price, \$5.00.

It is advisable to list the topics reviewed in the latest volume of the annual Survey of American Chemistry because lack of space and the growing output of American chemists have made necessary the limitation of the fields covered in any one volume. The subjects included in Volume X are as follows: Theories of solution, the kinetics of homogeneous gas reactions, molecular structure, thermodynamics and thermochemistry, contact catalysis, inorganic chemistry, 1933-1935, analytical chemistry, 1934 and 1935, applications of X-rays in metallurgy, ferrous metallurgy, the platinum metals, electroorganic chemistry, aliphatic compounds, carbocyclic compounds, heterocyclic compounds, alkaloids, food chemistry, insecticides and fungicides, gaseous fuels, 1934 and 1935, petroleum chemistry and technology, detergents and detergent chemistry, cellulose and paper, synthetic plastics, rubber, unit processes in organic synthesis, chemical economics (1931-1935).

The amount of space given to any one research is necessarily small, but it is possible to find any details desired through the use of the complete list of references appended to each Chapter. It is of interest to note that the book contains over 4800 references—a fact that indicates the productivity of American chemists.

The high standard of the past has been maintained. The writer joins the editor in the belief that "the success of the series is due to the cordial and unselfish coöperation of the authors who have given so freely of their knowledge and experience." The editor also deserves praise for the excellence with which he has done his work.

JAMES F. NORRIS

## BOOKS RECEIVED

November 15, 1936-December 15, 1936

KONRAD BERNHAUER. "Gärungschemisches Praktikum." Verlag von Julius Springer, Linkstrasse 23-24, Berlin W 9, Germany. 249 pp. RM. 12.60.

KARL K. DARROW. "The Renaissance of Physics." The Macmillan Company, 60 Fifth Ave., New York, N. Y. 306 pp. \$3.00.

TH. DE DONDER AND PIERRE VAN RYSSELBERGHE. "Thermodynamic Theory of Affinity. A Book of Principles." Stanford University Press, Stanford Univ., Calif. 142 pp. \$3.00.

MAURICE DÉRIBÉRÉ. "Les Applications Industrielle du rH. Le Potential d'Oxydo-Réduction." Dunod, Éditeur, 92 Rue Bonaparte, Paris, France. 98 pp.

F. G. DONNAN AND ARTHUR HAAS. "A Commentary on the Scientific Writings of J. Willard Gibbs. Vol. I. Thermodynamics. Vol. II. Theoretical Physics." Yale University Press, New Haven, Conn. 742 + 645 pp. \$10.00.

N. FEATHER. "An Introduction to Nuclear Physics." The Macmillan Company, 60 Fifth Ave., New York. 213 pp. \$3.00.

R. H. GRIFFITH. "The Mechanism of Contact Catalysis." Oxford University Press, 114 Fifth Ave., New York, N. Y. 208 pp. \$5.00.

JOSEPH H. KEENAN AND FREDERICK G. KEYES. "Thermodynamic Properties of Steam, Including Data for the Liquid and Solid Phases." John Wiley and Sons, Inc., 440 Fourth Ave., New York, N. Y. 89 pp. + separate tables. \$2.75.

HUBERT MARTIN. "The Scientific Principles of Plant Protection with Special Reference to Chemical Control." Longmans, Green and Co., 114 Fifth Ave., New York, N. Y. 379 pp. \$8.00.

ALWIN MITTASCH. "Über Katalyse und Katalysatoren." Verlag von Julius Springer, Linkstrasse 23-24, Berlin W 9, Germany. 65 pp. RM. 3.60.

A. SANFOURCHE. "Le Contrôle Analytique dans l'Industrie Chimique Minérale." Masson et Cie., Éditeurs, 120 Boulevard Saint-Germain, Paris, France. 547 pp. Fr. 120.

H. A. STUART AND H. G. TRIESCHMANN. "Lichtzerstreuung." Akademische Verlagsgesellschaft m. b. H., Sternwartenstrasse 8, Leipzig C, 1, Germany. 191 pp. RM. 24.

ROBLEY WINFREY. "Statistical Analyses of Industrial Property Retirements." Bulletin 125, Iowa Engineering Experiment Station. Iowa State College of Agriculture and Mechanic Arts, Ames, Iowa. 176 pp.

"Gmelins Handbuch der anorganischen Chemie. System-Nummer 22, Kalium." Lieferung 1. Verlag Chemie G. m. b. H., Corneliusstrasse 3, Berlin W 35, Germany. 246 pp. RM. 28.50.

"Gmelins Handbuch der anorganischen Chemie. System-Nummer 59, Eisen." Teil A, Lieferung 8. Verlag Chemie G. m. b. H., Corneliusstrasse 3, Berlin W 35, Germany. 184 pp. RM. 24.37.