

hiatus from 1919 to 1936 which will broaden materially during the completion of the fourth edition; as a matter of fact, the ever increasing bulk of the subject means that in the future journal publications will have to await many years for citation in Beilstein. The assurance that through Supplements new discoveries will be incorporated without undue delay stamps the Dictionary as an indispensable reference work of the future for which no adequate substitute is available.

The editorial staff and the publishers are to be congratulated on the correctness of the literature references, the attention given to the accuracy of the descriptive data and the comparative lack of typographical errors.

Chemists the world over will accord unstinted praise to Heilbron's Dictionary and welcome the appearance a year hence of the concluding volume.

J. R. BAILEY

Schwimm-aufbereitung. (The Flotation Concentration of Minerals.) By W. PETERSEN, Lecturer at the Mining College at Freiberg (SA.). Verlag von Theodor Steinkopff, Residenzstrasse 32, Dresden-Blasewitz, Germany, 1936. xii + 337 pp. 93 figs. 15 × 22.5 cm. Price, RM. 18; bound, RM. 19.50.

This monograph presents a well documented account of the application of physico-chemical principles to the separation of valuable minerals from their accompanying gangue minerals. It reviews the significant literature up to 1933. More than half of the text material is concerned with the theoretical aspects of surface chemistry as applied to modern flotation practice. The current methods of flotation of the various minerals are given in tabular form after the general discussion of the reagents used in the flotation of the several groups of minerals.

The author knits together the theoretical and experimental work of surface chemistry with the actual flotation of the minerals. He has accomplished his purpose in a remarkably clear and well organized manner. His ability to condense and correlate the substance of the eight hundred and fifty-nine separate papers, listed in the bibliography and referred to in the text, is in itself unusual and commendable.

The book will be indispensable to all those interested in surface chemistry, and especially to those who are engaged in practical mineral flotation.

C. C. DEWITT

Sulfuric Acid Manufacture. By ANDREW M. FAIRLIE, Consulting Chemical Engineer. American Chemical Society Monograph. Reinhold Publishing Corporation, 330 West 42d Street, New York, N. Y., 1936. 669 pp. 192 figs. 15.5 × 23.5 cm. Price, \$9.75.

This book gives an authoritative and up-to-date account of the manufacture of sulfuric acid by both the nitration and contact methods with special emphasis on industrial practice in America.

For the sake of abbreviation the author has omitted descriptions of obsolete, abandoned procedures and of patented processes or equipment which have never been

reduced to industrial practice. The book definitely gains in clarity and usefulness by this restriction for all users except patent attorneys or others interested in the novelty or patentability of variations from the established practice.

The book gives a detailed and clear description of methods now in use and of the principles of design of the apparatus. It is illustrated by many excellent photographs and drawings and statistical charts. The style is clear and forceful. The discussions as to the trends in the industries with definite predictions as to probable future developments are especially interesting and stimulating.

The book clearly ranks among the very best books on industrial chemistry. The Editors of the Monograph Series of the American Chemical Society are to be congratulated on this splendid addition to their list.

GRINNELL JONES

Cours de Chimie Industrielle. (Industrial Chemistry.)

By G. DUPONT, Professor in the Faculty of Sciences at the University of Paris. Gauthier-Villars, Éditeur, 55 Quai des Grands-Augustins, Paris, France, 1936. Vol. I, vi + 184 pp. Vol. II, ii + 337 pp. 16 × 24.5 cm. Price, fr. 35 + 55.

This is a brief and quite elementary textbook of industrial chemistry. Volume I discusses unit processes of chemical engineering (64 pages) and fuels (110 pages). The second volume is devoted to inorganic chemical industries (315 pages). It is announced that a third volume to be published later will cover metals and alloys, and fourth and fifth volumes will deal with the organic chemical industries. Many inorganic industries are omitted altogether, including mineral pigments, insecticides, aluminum sulfate, chromates, barium salts, potassium permanganate and trisodium phosphate. A few lines are devoted to perborates, but the much more important borax and boric acid industries are omitted. The drawings are numerous and crude, and highly diagrammatic. The book is far from being up-to-date if judged by comparison with the American chemical industries. For example, there is no allusion to the direct absorption of ammonia by superphosphate of lime; and the manufacture and uses of bromine are discussed without mention of its direct recovery from ocean water or its use in making ethylene dibromide for use in "ethyl gasoline."

The book may be recommended to American chemical students as a means of learning chemical French. The style is clear, there are few unnecessary indefinite adjectives, and the chemical vocabulary is varied.

GRINNELL JONES

BOOKS RECEIVED

April 15, 1936–May 15, 1936

EMIL ABDERHALDEN, Editor. "Handbuch der biologischen Arbeitsmethoden. Abt. IV. Fermentforschung. Teil 1/2, Heft 10." Urban und Schwarzenberg, Friedrichstrasse 105B, Berlin W 24, Germany. 206 pp. RM. 13.

- F. ALTEN AND M. TRÉVEL, Editors. "Ergebnisse der Agriculturchemie." IV Band, 1935. Verlag Chemie, G. m. b. H., Corneliusstrasse 3, Berlin W 35, Germany. 229 pp. RM. 12.
- FLOYD E. BARTELL. "Laboratory Manual of Colloid and Surface Chemistry." Lithoprinted by Edwards Brothers, Inc., Ann Arbor, Mich. 187 pp. \$2.50.
- W. E. BRADT. "Study Units in General Chemistry. A Laboratory Manual." With "A Guide for the Instructor." D. Appleton-Century Company, 35 West 32d St., New York, N. Y. 178 pp. + 30 pp. \$1.50 + \$0.25.
- JACQUES BUSSIT. "Recherches Analytiques sur l'Arginine et l'Histidine." Hermann et Cie., Éditeurs, 6 Rue de la Sorbonne, Paris, France. 100 pp. Fr. 20.
- A. VON BUZÁGH. "Kolloidik. Eine Einführung in die Probleme der modernen Kolloidwissenschaft." Verlag von Theodor Steinkopff, Residenzstrasse 32, Dresden-Blasewitz, Germany. 323 pp. RM. 15; bound, RM. 16.50.
- S. FLÜGGE AND A. KREBS. "Experimentelle Grundlagen der Wellenmechanik." Verlag von Theodor Steinkopff, Residenzstrasse 32, Dresden-Blasewitz, Germany. 236 pp. RM. 16; bound, RM. 17.
- H. FREUNDLICH. "Thixotropy." Hermann et Cie., Éditeurs, 6 Rue de la Sorbonne, Paris, France. 50 pp. Fr. 12.
- M. HANSEN. "Der Aufbau der Zweistofflegierungen. Eine kritische Zusammenfassung." Verlag von Julius Springer, Linkstrasse 23-24, Berlin W 9, Germany. 1100 pp. RM. 87.
- F. A. HENGLEIN. "Grundriss der chemische Technik. Ein Lehrbuch für Studierende der Chemie und des Ingenieurfaches, ein Übersichtsbuch für Chemiker und Ingenieure im Beruf." Verlag Chemie, G. m. b. H., Corneliusstrasse 3, Berlin W 35, Germany. 470 pp. RM. 22.40.
- I. M. KOLTHOFF AND E. B. SANDELL. "Textbook of Quantitative Inorganic Analysis." The Macmillan Company, 60 Fifth Ave., New York, N. Y. 749 pp.
- ANDRÉ LALANDE. "Les Thermostats pour les Températures Moyennes." Hermann et Cie., Éditeurs, 6 Rue de la Sorbonne, Paris, France. 54 pp. Fr. 15.
- W. MUND. "l'Action Chimique des Rayons Alpha en Phase Gazeuse." Hermann et Cie., Éditeurs, 6 Rue de la Sorbonne, Paris, France. 51 pp. Fr. 15.
- M. QUINTIN. "Activité et Interaction Ionique. I. Exposé Théorique." Hermann et Cie., Éditeurs, 6 Rue de la Sorbonne, Paris, France. 33 pp. Fr. 8.
- FOSTER DEE SNELL AND CORNELIA T. SNELL. "Colorimetric Methods of Analysis, Including Some Turbidimetric and Nephelometric Methods." D. Van Nostrand Company, Inc., 250 Fourth Ave., New York, N. Y. 766 pp.
- HANS STOBBE, Editor. "J. C. Poggendorffs Biographisch-literarisches Handwörterbuch für Mathematik, Astronomie, Physik mit Geophysik, Chemie, Kristallographie und verwandte Wissensgebiete." Band VI: 1923-1931. I Teil, A.-E. Verlag Chemie, G. m. b. H., Corneliusstrasse 3, Berlin W 35, Germany. 72 + 696 pp. RM. 63 75.
- R. SUTRA. "Contribution a l'Étude de la Constitution de l'Amidon." Hermann et Cie., Éditeurs, 6 Rue de la Sorbonne, Paris, France. 64 pp. Fr. 15.
- WILLIAM A. TILDEN. Revised by S. Glasstone. "Chemical Discovery and Invention in the Twentieth Century." E. P. Dutton and Co., 286-302 Fourth Ave., New York, N. Y. 492 pp. \$4.00.
- ARTHUR I. VOGEL. "Elementary Practical Chemistry." Blackie and Son, Ltd., 50 Old Bailey, London E. C. 4, England. 220 pp.
- WALTER WEISS. "Blätter: Bestimmungstabelle zur Benutzung bei mikroskopischen Arbeiten." Walter Weiss, Bergstrasse 59, II, Dresden A 24, Germany. 78 pp. RM. 3.
- "Abridged Scientific Publications from the Kodak Research Laboratories." Vol. XVI, 1933-1934. Published by the Eastman Kodak Company, Rochester, N. Y. 223 pp.
- "Annual Reports on the Progress of Chemistry for 1935." Vol. XXXII. Issued by the Chemical Society, Burlington House, London W 1, England. 10s./6d., post-age 6d.
- "Collected Scientific Papers of Sir William Bate Hardy." Published under the Auspices of the Colloid Committee of the Faraday Society. The Macmillan Company, 60 Fifth Ave., New York, N. Y. 922 pp. \$18.00.
- "Gmelins Handbuch der anorganischen Chemie. System-Nummer 35. Aluminium." Teil A, Lieferung 4. Verlag Chemie, G. m. b. H., Corneliusstrasse 3, Berlin W 35, Germany. 148 pp. RM. 18.
- "Gmelins Handbuch der anorganischen Chemie. Aluminium-legierungen Patentsammlung." 2 Teil. By A. Grützner and G. Apel. Verlag Chemie, G. m. b. H., Corneliusstrasse 3, Berlin W 35, Germany. 526 pp. RM. 40.50.
- "Gmelins Handbuch der anorganischen Chemie. System-Nummer 4. Stickstoff." Lieferung 2. Verlag Chemie G. m. b. H., Corneliusstrasse 3, Berlin W 35, Germany. 324 pp. RM. 26.25.
- "Gmelins Handbuch der anorganischen Chemie. System-Nummer 55. Uran und Isotope, mit einen Anhang über Transurania." Verlag Chemie, G. m. b. H., Corneliusstrasse 3, Berlin W 35, Germany. 278 pp. RM. 34.50.
- "Vom Wasser. Ein Jahrbuch für Wasserchemie und Wasserreinigungstechnik." X Band, 1935. Verlag Chemie, G. m. b. H., Corneliusstrasse 3, Berlin W 35, Germany. 330 pp. RM. 17.25.