

Book Reviews

Handbuch der Präparativen Anorganischen Chemie. Second Edition. Volume II. Edited by GEORG BRAUER. Ferdinand Enke Verlag, Stuttgart W. Hasenbergsteige 3, Germany, 1962. xii + 727 pp. 15 × 25 cm. Price, DM 108.¹

Reference is made to a review by Professor J. Kleinberg of Volume I of this two volume collection of inorganic preparations. [*Inorg. Chem.*, 2, 663 (1963)]. The general comments are also applicable to Volume II.

Chapters 19 through 29 of Section 2 of the book describe the preparation of most of the transition metals and many of their compounds. Chapter titles are: (19) Copper, Silver and Gold; (20) Zinc, Cadmium and Mercury; (21) Scandium, Yttrium and the Rare Earth Metals; (22) Titanium, Zirconium, Hafnium and Thorium; (23) Vanadium, Niobium and Tantalum; (24) Chromium, Molybdenum, Tungsten and Uranium; (25) Manganese; (26) Rhenium; (27) Iron; (28) Cobalt and Nickel; (29) Platinum Metals. Section 3, Special Classes of Materials, completes the text with the following five chapters: (1) Absorbents and Catalysts; (2) Hydroxo Salts; (3) Iso and Heteropoly Acids and Their Salts; (4) Carbonyls and Nitrosyls; (5) Alloys and Intermetallic Compounds. Sixteen authors contributed to this second volume.

Excellent indices to both volumes are found in Volume II. A formula index, name index, and equipment index are given.

This reviewer also found the physical characteristics of the substances prepared useful, and the lists of references complete and up to date.

This two volume set provides a wealth of preparative information and should prove to be very valuable to any chemist interested in preparative inorganic chemistry. No comparable compendium is available at present on this rapidly advancing subject.

(1) An English translation of Volume I is available through Academic Press, and an English translation of Volume II will soon be available.

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The literature is surveyed completely up to the end of 1949. Of course the thorough compilation of the almost incalculable number of papers results in a considerable delay between that date and the publication of the work. This gap could have been particularly serious as some very important investigations in some of the above mentioned fields [e.g., sulfur-nitrogen or sulfur-halogen compounds] have been made during the past 12 years. Fortunately, in all cases the authors have given brief descriptions of results [e.g., new methods for the preparation of SF₄, S₂Cl₂, S₂I₂] reported as recently as 1963. New reviews are referred to in an appropriate manner. In an admirable way the new Gmelin fills a serious gap, particularly when one considers the great scientific and technical importance of the compounds reviewed here.

A well equipped chemical library is not complete without this volume.

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MAX SCHMIDT

Modern Electroplating. Second Edition. Edited by FREDERICK A. LOWENHEIM. John Wiley and Sons, Inc., 605 Third Avenue, New York 16, N. Y., 1963. xvi + 769 pp. 16 × 24 cm. Price, \$16.00.

This book is properly described by the following excerpt from the dust jacket of the book.

"The book gives detailed directions for making up and operating solutions for the plating of all important metals and alloys. Chapters are included on fundamental principles, methods of testing and control, and various special topics, such as electrophoretic deposition, conversion coating, and others. Each plating process is discussed by an expert on that process."

To those interested in plating, the book would be useful.

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Schwefel, Teil B Lieferung 3, System-Nummer 9, Gmelins Handbuch der Anorganischen Chemie. [Sulfur, Part B Section 3, System Number 9, Gmelins Handbook of Inorganic Chemistry.] Verlag Chemie, G.m.b.H., Weinheim Bergstrasse, 1963. In German (German-English table of contents, English headings and subheadings on the margins). 745 pp., 245 graphs. 17 × 25 cm. Price, \$153.00.

This volume concludes the discussion of the sulfur compounds started in sections 1 and 2 of this series. In the first 161 pages the solubility of SO₂ in water and aqueous solutions is reviewed. The following 238 pages are devoted to the oxidation of such solutions with and without catalysts. Then the compounds containing sulfur and nitrogen only, including amides and imides (30 pages), are discussed, followed by the large and important group of sulfur compounds containing oxygen and hydrogen in addition to nitrogen (136 pages). The contents of the next 50 pages are the sulfur fluorides and the fluorides of sulfur acids. The review of the binary sulfur-chlorine compounds together with the oxygen and/or nitrogen containing S-Cl compounds covers 116 pages, whereas the corresponding bromine and iodine compounds are discussed in 6 and 5 pages, respectively.

BOOKS RECEIVED

February, 1964

LÁSZLÓ ERDEY. "Theorie und Praxis der Gravimetrischen Analyse." Band I. "Theoretischer Teil." Akadémiai Kiadó, Publishing House of the Hungarian Academy of Sciences, Alkotmány U. 21, Budapest V, Hungary. 1964. 382 pp. \$9.00.

F. G. R. GIMBLETT. "Inorganic Polymer Chemistry." Butterworth, Inc., 7235 Wisconsin Ave., Washington 14, D. C. 1963. ix + 452 pp. \$17.50.

HAROLD HILTON. "Mathematical Crystallography and the Theory of Groups of Movements." Dover Publications, Inc., 180 Varick St., New York 14, N. Y. 1963. xii + 262 pp. \$2.00.

International Union of Pure and Applied Chemistry. "Oils and Fats." Butterworth, Inc., 7235 Wisconsin Ave., Washington 14, D. C. 1962. v + 180 pp. \$9.50.

A. TAYLOR and BRENDA J. KAGLE. "Crystallographic Data on Metal and Alloy Structures." Dover Publications, Inc., 180 Varick St., New York 14, N. Y. 1963. 263 pp. \$2.25.