

The field of high pressure X-rays, in particular, is developing so rapidly that this section is necessarily quite out of date by now.

In a very rough way, one could say that Volume 1 covers "physical" phenomena and Volume 2, "chemical" material. There is, however, much of interest to the physical chemist or chemical physicist in Volume 1, and the shock wave chapter in Volume 2 is of definite value to the physicist. The articles are largely self-contained, and a person interested in a particular area could readily buy and use one volume only.

The quality of figures and of printing is generally good. The one complaint the writer would make is concerning the variety of pressure units used. These include bars and kilobars atmospheres, dynes per sq. cm., and kilograms per sq. cm. This adds an entirely unnecessary confusion to the study of different chapters.

It is probably of interest to compare these volumes with the recent book, "Solids Under Pressure" (Paul and Warschauer, Editors). The treatment of solids and, in particular, physical phenomena in solids is much more thorough in the latter book, but, of course, the subject matter of the present volumes is considerably more comprehensive. The quality of the individual chapters is comparable.

There has been a considerable increase in interest in high pressure phenomena in the past fifteen years, stimulated in part by the synthesis of diamond, but in large part also by an increased understanding of the importance of interatomic distance as a parameter for understanding the physics and chemistry of matter. With the development of more and more very different techniques for studies to be made with vastly different purposes in mind, and to test theories with little or no overlap, it is becoming less and less feasible to consider "high pressure" *per se* as an intelligible area for a conference or a book. In the future, high pressure results should and will be included in conferences and books on cohesive energies, chemical kinetics, molecular spectroscopy, chemical synthesis, electronic structure, etc.

If, indeed, this is the swan song of the general and comprehensive book on high pressure, then it is ending on a very fine note.

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**The Chemistry of Beryllium. Topics in Inorganic and General Chemistry.** By D. A. EVEREST, The National Chemical Laboratory, Teddington, Great Britain. American Elsevier Publishing Co., Inc., 52 Vanderbilt Ave., New York 17, N. Y. 1964. 151 pp. 14 × 22 cm. Price, \$8.00.

This is the first of a projected series of monographs to appear under the collective title "Topics in Inorganic and General Chemistry." Dr. Everest has surveyed the chemistry of beryllium and presented it in a concise but readable book that is not too difficult for a junior or senior chemistry major. A teacher can find in it fresh and interesting examples to illustrate general chemical principles. The chemist who wishes to become acquainted with beryllium chemistry should start here although he will need to go to the original literature for more detail before beginning research in the field. The numerous references afford easy access to the literature, which appears to have been covered through early 1963.

After a brief historical introduction the behavior of the  $\text{Be}^{+2}$  ion in aqueous solution is discussed with the emphasis on its hydrolysis. The preparation and behavior of the salts of oxyacids, the halides, and complexes (including the oxide carboxylates) are treated in the next three chapters. Two chapters on simple binary compounds other than the halides and on organoberyllium compounds end the review of beryllium compounds. The last four chapters cover extractive metallurgy, analytical chemistry, health hazards, and nuclear properties. Applications of beryllium compounds are not discussed except as examples. By relating and comparing the behavior of one compound or class of compounds with the others as he goes along the author largely avoids the choppy, disconnected effect that is so common in a compound by compound enumeration.

In view of the general level of the presentation, I think more explanation and interpretation of Diebler and Eigen's work on  $\text{BeSO}_4$  solutions is needed; the equation on p. 11 is certainly not

clear. The phase equilibrium diagram for  $\text{BeF}_2$  on p. 41 should have been simplified or else all of the features it shows should have been discussed. There are, I feel, some occasional infelicities of style that indicate the publisher did not exercise proper editorial care. There are few misprints, and these minor.

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## BOOKS RECEIVED

May, 1964

- JACQUES BÉNARD. "L'Oxydation des Métaux." Tome II. "Monographies." Gauthier-Villars, 55 quai des Grands-Augustins, Paris, France. 1964. 517 pp. \$13.00.
- E. EDWARD BITTAR. "Cell pH." Butterworth, Inc., 7235 Wisconsin Ave., Washington 14, D. C. 1964. 129 pp. \$5.75.
- GIUSEPPE BRUNI. "Chimica Generale E Inorganica." Tamburini Editore, Milano, Italy. 1964. 725 pp. L, 7.000.
- E. F. CALDIN. "Fast Reactions in Solution." John Wiley and Sons, Inc., 605 Third Ave., New York 16, N. Y. 1964. 306 pp. \$7.50.
- NICHOLAS D. CHERONIS and T. S. MA. "Organic Functional Group Analysis by Micro and Semimicro Methods." Interscience Publishers, John Wiley and Sons, Inc., 605 Third Ave., New York 16, N. Y. 1964. 696 pp. \$25.00.
- A. D. CROSS. "An Introduction to Practical Infra-red Spectroscopy." Butterworth, Inc., 7235 Wisconsin Ave., Washington 14, D. C. 1964. 86 pp. \$3.50.
- AD. DAVY DE VIRVILLE and J. FELDMANN. "Proceedings of the Fourth International Seaweed Symposium. Biarritz-September 1961." The Macmillan Co., 60 Fifth Ave., New York 11, N. Y. 1964. 467 pp. \$15.00.
- JOHN O. EDWARDS. "Inorganic Reaction Mechanisms." W. A. Benjamin, Inc., 2465 Broadway, New York 25, N. Y. 1964. 190 pp. \$7.00.
- A. A. ELDRIDGE, G. M. DYSON, A. J. E. WELCH, and D. A. PANTONY, Editors. "Supplement to Mellor's Comprehensive Treatise on Inorganic and Theoretical Chemistry." Volume VIII. Supplement I. "Nitrogen (Part I)." John Wiley and Sons, Inc., 605 Third Ave., New York 16, N. Y. 1964. 619 pp. \$50.00.
- LEROY EYRING, Editor. "Progress in the Science and Technology of the Rare Earths." Volume 1. The Macmillan Co., 60 Fifth Ave., New York 11, N. Y. 1964. 532 pp. \$17.50.
- ROBERT F. GOULD, Editor. "Advances in Chemistry Series 44. Amino Acids and Serum Proteins." Special Issues Sales, American Chemical Society, 1155 Sixteenth St., N.W., Washington, D. C. 1964. 154 pp. \$5.50.
- JOEL H. HILDEBRAND and RICHARD E. POWELL. "Principles of Chemistry." 7th Ed. The Macmillan Co., 60 Fifth Ave., New York 11, N. Y. 1964. 405 pp. \$7.50.
- International Union of Pure and Applied Chemistry. "The Chemistry and Biochemistry of Fungi and Yeasts. Proceedings of the Symposium on the Chemistry and Biochemistry of Fungi and Yeasts held in Dublin, Ireland, 18-20 July 1963." Butterworth, Inc., 7235 Wisconsin Ave., Washington 14, D. C. 1963. 181 pp. \$8.50.
- GERALD W. KING. "Spectroscopy and Molecular Structure." Holt, Rinehart, and Winston, Inc., 383 Madison Ave., New York, N. Y. 1964. 482 pp. \$10.75.