

New Books

ENCYCLOPEDIA OF CHEMICAL TECHNOLOGY, Vol. X, edited by Raymond E. Kirk and Donald F. Othmer (Interscience Encyclopedia Inc., New York City, 1953, \$25). The excellency of this encyclopedia has been mentioned in previous reviews in this and other journals. The latest volume continues to uphold that standard of excellency. The paper, printing, and quality of writing are very high. The editors are to be commended on continuing to give us the best in their chemical encyclopedia. The authors of the individual subjects are recognized nationally and include: A. K. Doolittle on Plasticizers; C. Golumbic on Phenols; G. M. Kline on Plastics; J. Klinberg on Superoxides; H. Mark on Polymers; C. E. Morrell on Petroleum Chemicals; and H. H. Shepard on Economic Poisons.

This volume is 976 pages long and gives adequate treatment to a number of important subjects, such as Petroleum and Related Subjects, 141 pages; Phenols, 120 pages; Phosphorus and Its Compounds, 107 pages; Photochemistry and Related Subjects, 73 pages; and Pigments, 82 pages. Although these individual entries are not long enough to be called books, they contain most of the important information to be found in books on the subject. Generally, sufficient information is given so that only one interested in minor details or specific directions or information need refer to special books or to periodicals for additional information.

This volume is up-to-date, including references to publications in 1952. Many references are given for the student who desires to check on specific subjects or extend his knowledge. Cross-references are used frequently in the subject heading and in the actual articles.

These volumes are required reference books for any library, particularly a library which specializes in chemical books and periodicals. Executives, chemists, literature searchers, students, and teachers should find this and the other volumes of the encyclopedia most helpful in work and study.

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ENCYCLOPEDIA OF CHEMICAL TECHNOLOGY, Vol. XI, edited by R. E. Kirk and D. F. Othmer (Interscience Publishers Inc., 250 Fifth Avenue, New York City 1, xvi plus 950 pages, 1953, \$30 per volume singly, \$25 per volume subscription price). Volume XI of this important chemical encyclopedia contains information on subjects arranged alphabetically from polyols to rutin. The physical and editorial formats are the same as those of the preceding volumes, which have appeared at six- to seven-month intervals since 1947. Future volumes are expected at about the same frequency to complete the entire set of 14. There are 80 contributors to this volume, which was assembled by the editorial staff of Janet D. Scott, Anthony Standen, James A. Lecky, and Alberta D. Kelvie. Each subject, whether it is a chemical, raw material, natural material, finished product, process, method or equipment, is discussed in summary fashion by authorities.

The encyclopedia contains much information of practical importance, and it offers the research man a good starting-place for locating data. Some of the subjects which would seem to be of particular interest to Journal readers and which are covered in this volume are proteins, pressure techniques, quaternary ammonium compounds, potentiometry, quality control, resins, rheology, and printing inks. The 32-page section by G. C. Harris on rosin and its derivatives is especially interesting and worthwhile as is the material on quaternary ammonium compounds by Harwood and Cella. The information on pressure techniques is a general summary and not as specific as operating personnel might prefer.

A single volume probably would be of only limited help to the individual worker. However the complete set, although quite expensive, certainly should be a valuable addition to every technical library.

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LOW-TEMPERATURE PHYSICS, by Charles F. Squire (McGraw-Hill Book Company Inc., New York City, x plus 244 pages, \$6.50, 1953). Temperatures in the range 1°-5° K. can be attained with liquid helium, and the availability of commer-

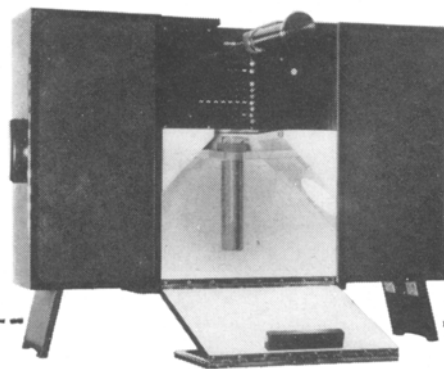
cially built cryostats for the liquefaction of helium make this extremely low-temperature range readily accessible to experimentation. This book is primarily concerned with the properties of matter at these low temperatures. By adiabatic demagnetization of paramagnetic salts, temperatures as low as 0.0004°K. have been reported, but relatively few substances have been examined at temperatures below 1° K. The author gives a good account of the thermal, electrical, and magnetic properties of matter at low temperatures, including the description of such anomalies as the superconductivity of metals and the superfluidity of helium. Three chapters are devoted to structure theories and the thermal and dynamic properties of liquid helium. Experimental methods for the attainment of low temperatures and measurement of properties, although not detailed, are clearly described and illustrated by drawings and photographs and provide a good background for the discussion of the experimental results on the basis of present theoretical treatments. This discussion presumes some knowledge of quantum mechanics and electrodynamics and hardly can be recommended to those without this training. For those interested in either the experimental or theoretical aspects of low-temperature physics, the book will be stimulating.

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The Antara Chemicals Division of GENERAL DYESTUFF CORPORATION, New York City, is now producing a 26% active slurry form of Igepon made from tallow, costing only 9½ cents per pound. This is the first tallow-based synthetic detergent offered in commercial quantities.

The Food and Agriculture Organization of the United Nations, Rome, Italy, has published the May-June 1953, Volume 4, Number 3 issue of World Fisheries Abstracts, which is a bi-monthly review of technical literature on fisheries and related industries.

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