

wise insoluble problem of "shifting of the poles" and accompanying climatic changes.

Apart from all matters of controversy, this volume, with its accumulation of facts and literature, will be of great service to all who are interested in problems of distribution.

R. RUGGLES GATES

MARINE BIOLOGICAL LABORATORY,  
WOODS HOLE, MASSACHUSETTS

### ORGANIC CHEMISTRY OF SULFUR

*The Organic Chemistry of Sulfur. Tetravalent Sulfur Compounds.* By CHESTER MERLE SUTER. 858 pp. 6×8½ in. Bound in dark green cloth. New York: John Wiley and Sons, Inc.; London: Chapman and Hall, Ltd. \$10.00. 1944.

THE author states in the preface that this book is intended to serve as a reference work for those interested in the chemistry of those organic sulfur compounds which, broadly speaking, may be regarded as derivatives of sulfuric acid. The chapter headings are, therefore: I. Esters of Sulfuric Acid (94 pp.); II. Aliphatic Sulfonic Acids (101 pp.); III. The Preparation of Aromatic Sulfonic Acids (186 pp.); IV. The Properties and Reactions of Aromatic Sulfonic Acids (71 pp.); V. and VI. Derivatives of Aromatic Sulfonic Acids. 1. Sulfonyl Halides, Esters, and Anhydrides (121 pp.), 2. Sulfonamides and Related Compounds (85 pp.); and VII. Sulfones (117 pp.).

Encyclopedic in the field it covers, it is a veritable mine of information. References to all important literature on the subject, as recorded in *Chemical Abstracts* up to January 1, 1942, and totaling many thousands, are included. In recognition of the vast amount of time and labor which the author has expended in the preparation of a volume which makes all organic chemists his debtors, it is to be hoped that the welcome accorded it will be correspondingly cordial and that in due course of time we shall see from his pen other volumes treating with similar thoroughness and skill the remaining branches of the subject.

Each chapter opens with a detailed table of contents, showing the order in which the subject matter is classified and presented, and closes with a consolidated register of the references cited in the text. In addition to these references, there are innumerable tabular lists of compounds distributed throughout the text. Methods of preparation, general properties and reactions, derivatives of various kinds, industrial and medical applications, all are discussed in due course. A comprehensive index (83 pp.) is supplied.

In its chosen domain, the book is *facile princeps*, and is most heartily recommended. In paper, type, printing and binding, the book is fully up to the usual high Wiley standards.

MARSTON T. BOGERT

COLUMBIA UNIVERSITY

### INDUSTRIAL CHEMISTRY

*Industrial Chemistry.* By WILLIAM THORNTON READ. 3rd edition. v + 631 pp. New York: John Wiley and Sons, Inc. 1943. \$5.00.

THE third edition of Professor Read's well-known volume follows very closely the general plan and arrangement of previous editions.

A first section of six chapters discusses the approach to chemical engineering and serves as an excellent elementary introduction for readers who may be generally interested in the subject or who are approaching it for the first time.

The next four chapters discuss materials and equipment and are designed to give the general reader an introduction to the subjects of unit operations, materials of construction, power plant chemistry and related matter. The remaining seventeen chapters, 450 pages, are devoted to about twenty of the chemical industries of outstanding importance.

The volume represents a thorough revision of the previous editions and brings all the subjects treated up to date except for progress in the war interests. The author notes that the present world situation throws most statistical matter out of balance, and therefore, in general, bases economic data and so forth on the prewar figures.

About thirty pages of new matter have been added, including especially additions in the chapters on rubber, plastics and protective coatings; and, in fact, all the chapters represent much more than a revision of previous manuscript since in most cases the material is entirely rewritten.

The book is very readable, and the concise, entertaining style of the author is evident throughout, though the author has had the cooperation of recognized authorities in each field treated. The book should be welcomed by all those who have found the first and second editions useful and should reach a wide circle of new readers.

W. D. TURNER

COLUMBIA UNIVERSITY

### PHYSICAL BIOCHEMISTRY

*Physical Biochemistry.* By HENRY B. BULL. New York: John Wiley and Sons. iv + 340 pp. \$3.75. 1943.

THIS book is a short summary of many physicochemical principles and methods which have been applied in biochemical research. A noteworthy feature is the large number of references to the literature, particularly that of the last decade. More space is devoted to the presentation of principles than to the discussion of their application. While some of the equations are logically derived from fundamentals, many others must be accepted on faith. Particular