to improve the teaching value. This book may be considered both as a valuable text and as "one of the indispensable reference books of organic chemistry."

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Encyclopedia of chemical technology. Vol. I: ***A to Anthrimides.*** Raymond E. Kirk and Donald F. Othmer. (Eds.) New York: Interscience, 1947. Pp. xxiv + 982. (Illustrated.) $20.00.

This is the first volume of a 10-volume encyclopedia dealing with the practice and principles of modern chemical technology. When completed, it will fill a long-felt need for a comprehensive treatise to which professional chemists and chemical engineers may turn for information on the methods used in the American process industries. It is intended for those in universities and other research institutions, as well as for those who are working in industry.

The work is organized as a specialized encyclopedia and is by no means a handbook or series of monographs. The entire field of chemical technology is covered. The first volume contains nearly 100 articles on industrial chemicals and materials, on unit operations and processes of chemical engineering, and on chemical principles. Of these, 35 titles are of major length, including Absorption, Acetic Acid, Acetylene, Acid-Base Systems, Adhesives, Adsorption, Alcohol (Industrial), Alkali and Chlorine Industries, Alkali Metals and Alkali Metal Alloys, Alkaloids, Alkyd Resins, Alloys, Amination by Reduction, Amino Resins and Plastics, Ammonia, Analytical Chemistry, Anthraquinone and Related Quinonoid Dyes, and others.

The arrangement of the subject matter follows a general plan of grouping together topics that are technologically related. Important chemicals are frequently dealt with in articles under their own name, but those which have similar uses are described under a single heading—for example, Abrasives, and Anesthetics. Others may be grouped because of similarity in processing, or as products of an integrated industry (e.g. chlorine, sodium carbonate, and sodium hydroxide). At times this results in some duplication; the manufacture of aniline is described under Amination by Reduction as well as under Aniline. Numerous cross references are provided in the articles, and the individual name of each substance in alphabetical order directs the reader to the proper group title.

The articles on industrial chemicals and materials include sections on physical and chemical properties, methods of manufacture, uses and applications, specifications and standards, and health and safety factors in handling. There are articles on the chemical engineering unit operations, as well as background articles on physical and organic chemistry, metallurgy, and other subjects which serve as important references in process principles.

The format of the book is pleasing. Subject headings and subheadings are clear, and the quality of the paper and printing are excellent. The volume is strongly bound. These qualities are especially important in an encyclopedia which will have hard usage in libraries. The editors have been fortunate in selecting outstanding authorities to write the articles in this volume. The remaining volumes, which are to be published at the rate of two to three each year, will be anticipated by a host of users.

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The sulfonamides and allied compounds. Elmore H. Northey. (American Chemical Society Monograph Series.) New York: Reinhold, 1948. Pp. xxvii + 660. $15.00.

Dr. Northey's book is an outgrowth of a review prepared and presented at the Symposium on Chemotherapy held at Gibson Island, Maryland, in 1939, under the sponsorship of the Section on Chemistry of the AAAS. "The original review was enlarged and revised under the sponsorship of the Division of Medicinal Chemistry of the American Chemical Society and was published in Chemical Reviews, 27, 85–196 (1940)." Since then, the revolutionary achievements of the sulfonamides in the treatment and control of human and animal diseases have been recognized by everyone. However, the extent of the contributions of the chemists and experimental scientists in the development of this field may not be fully appreciated. Dr. Northey has revised and amplified his previous publication into the present monograph, which emphasizes the "chemical side of the new chemotherapy."

The book opens with a chapter on the "History of Bacterial Chemotherapy," which reviews the development of antibacterial agents, including the discovery of the active azo dyes by the German investigators and the establishment of the role of sulfanilamide in their therapeutic activity by the French. A chapter on "Nomenclature, Classification and Synthesis of Sulfonamide Derivatives" follows. Three chapters are devoted to the classification of the chemical structure and chemotherapeutic activities of sulfanilamide derivatives, one to sulfones and one to compounds related to the sulfones. These chapters, covering over 5,000 compounds, include a brief review of the chemistry and pharmacology of each series, while the tables provide data on structure, melting range, activities, and references to information on other important properties of the drugs. This compilation of data on the sulfonamides and related compounds is of immeasurable value as a reference source for those interested in keeping up with the developments in this field.

A series of 5 chapters on the evaluation of chemotherapeutic activity, relationship of structure to activity, pharmacology, mechanism of action, and evaluation cover the biological phase of the problem. Harold J. White, bacteriologist at the Stamford Research Laboratories of the American Cyanamid Company, wrote the chapter on the "Experimental Evaluation of Chemotherapeutic Activity," and in this he describes *in vitro* and *in vivo* methods for the testing of new chemotherapeutic agents and summarizes in tabular form the experimental results as reported by different investigators on 23 of the better-