
The revision by Dr. Heyroth of the earlier edition by Ellis and Wells (362 pages) has resulted in a compilation which is nearly three times the size of the original edition. Such an expansive revision is necessary for a book embracing only the general outline of the original edition; a number of new subjects have been introduced as separate chapters. The book has been written so as to supply a non-mathematical explanation for the theories of radiant energy emission, absorption, and photosynthesis, and a general literature survey of the chemical action of ultra-violet rays. It will be welcomed especially by organic chemists and biochemists as well as commercial workers in fields involving photosynthesis and photo effects. There is an extensive section (270 pages) on organic chemistry, indicating the effects of ultra-violet light on organic compounds and the reactions involved. In a section of nearly the same size (220 pages) the biological applications are thoroughly discussed, this latter section being in the authors’ field of specialization.

An unusually large number of references are given which make the book extremely useful as a guide to further study beyond the scope of the material presented in the text. An unusually complete author and subject index further enhances the usefulness of the book as a standard reference on the subject of the chemical action of ultra-violet rays.

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As stated in the preface, THE LIBRARY KEY is designed to instruct students in senior high schools, students in colleges, and adult readers in the use of a general library. The pamphlet may be used as a text in the course of instruction or by the individual alone. An adequate account of a typical library and its arrangement, the contents of a book with emphasis upon the methods of indexing, the card catalog, and the helpful devices used in such a compilation is presented. This is followed by a summary of the characteristics of dictionaries, encyclopedia, reference books, maps, magazines and their classified indexes, and books, with methods for their selection. For each of these five classes a bibliography of the most important publications is listed. Any person who carefully studies this material will be able to find information of a general nature. To increase confidence in individual ability, there are sets of questions to be answered at the end of each of the chapters. When solved as problems by actual investigation, the questions give valuable experience by putting into practical use the knowledge gained by reading the KEY. The last chapters consist of a discussion of the best methods of organizing bibliographies and note-taking. The appendices give reference books for teachers in normal schools and educators, a method to practice alphabetical arrangement, and a list of common abbreviations used by librarians in preparing their cards.

However, the reviewer is certain that except for general information this pamphlet has nothing to add to the specific problems of a chemist that is not given already in the well-known books on the use of chemical literature. This KEY is the type of publication that includes practically no scientific material. Therefore, the books described are not in a chemical library. The methods advocated for making records and writing references are not those adopted by the American Chemical Society publications. The KEY serves only for a general education in the use of a general library and will offer the professional chemist no additional service that his own books do not give him.

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VALENTINE BARTOW


This textbook is designed for use especially in technical high schools and in industrial and trade schools. The author states that it aims "to give the students a working knowledge of the main facts of industry, including the distribution and production of raw materials and their general properties, transportation, conversion into commercial products, and economic importance."

The subject matter is divided into five chapters, Forest Products, Non-Metallic Minerals, Iron and Steel, Non-Porous Metals, Miscellaneous. Each chapter is concluded with a bibliography. The numerous subdivisions contain fairly extensive glossaries of trade and industrial terms and lists of questions graded into two levels.

It is somewhat unusual to find a textbook today with no photographs. While the use of line drawings in this case was premeditated, the book would have been enhanced by the use of other illustrative materials. In several instances, chemical terms have been used somewhat loosely—e.g., "element" and "unite." In a few cases, more discussion is given to obsolete processes than is necessary for historical purposes. The last two chapters are somewhat less detailed than the others. These items do not seriously affect the general value of the book.

MATERIALS OF INDUSTRY was written for a specialized group of pupils at a definite age level. The author does not lose sight of that fact. He has presented a wide range of topics in a manner which should have value and appeal to the group for whom it is written. Despite the fact that this text was written for other purposes, it should be a useful reference for elementary classes in chemistry. It contains a wealth of information concerning industrial processes not usually available in the high-school library.

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INTRODUCTORY READINGS IN CHEMICAL AND TECHNICAL GERMAN. Edited by J. T. Fotos, Professor of Modern Languages, Purdue University, and J. L. Bray, Head of the School of Chemical and Metallurgical Engineering, Purdue University. John Wiley and Sons, Inc., New York City, 1941. xxvi + 303 pp. 13.5 × 20.5 cm. $2.50.

This, the second of a series of four texts prepared through the cooperation of the School of Chemical Engineering and the Department of Modern Languages at Purdue University, completes the publication of the series (J. Chem. Educ., 15, 247 (1938); 16, 199–200, 306–7 (1939); 17, 550 (1940)). The readings are taken from Stavenhagen’s "Kurzes Lehrbuch der organischen Chemie," Ullmann’s "Enzyklopädie," Eucken and Jakob's "Der Chemie-Ingenieur" and from the journals Stahl und Eisen and Metallurgie. The book is characterized by the same features as its companion volumes. The series is planned for a four-semester course such as has been given successfully for a number of years at Purdue.

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A STUDY OF THE PROBLEMS IN TEACHING THE SLIDE RULE. C. N. Shuster, Ph.D. Bureau of Publications, Teachers College, Columbia University, New York City, 1940. v + 103 pp. 20 tables. 15 × 23 cm. $1.85.

Gives new methods of teaching the slide rule, designed to cut down the number of errors in slide rule computation, with a practical exposition of the principles of approximate computation which apply. It also includes a survey of the types of problems that arise in science and industry and shows that most of them can be solved by use of the slide rule.

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