

Thorpe's Dictionary of Applied Chemistry

Fourth edition, revised and enlarged. Vol. 10: Plagioclase—Sodium. Pp. xi+913. (London, New York and Toronto: Longmans, Green and Co., Ltd., 1950.) 100s. net.

WITH the advent of the letter "S" in the tenth volume of the new edition of "Thorpe's Dictionary of Applied Chemistry", the editorial board is within sight of the end of its vast undertaking. One further volume ("SO to Z") and a general index will complete the work. The Dictionary does more than give the latest information on plagioclase, sodium and the rest: it epitomizes the present vitally intimate relation between the science of chemistry and its application in technology. The articles have been contributed almost equally from universities and from the chemical and allied industries. They emphasize that advances in chemical technology are now dependent on and inseparable from advances in chemical science, and will only be made by trained scientific workers. This is a lesson of paramount importance to-day when higher technological education is so much under discussion. There is no short cut to the best technology: it can only grow out of the best science.

The level of the articles has been kept remarkably high. Indeed, I cannot remember a volume of 'Thorpe' so full of informative and interesting material. The editors have made an admirable choice of contributors; to choose at random: Wilson Baker on plant pigments; Bate-Smith on preservation of meat by drying; Brock on pyrotechny; Kellaway on snake venoms; A. R. Powell on platinum; Simonsen on pulegone and other terpene subjects, and so on. Symbolically, there are two excellent articles on rubber—one from a strong British team on natural rubber, and one from an equally strong American partnership on synthetic rubber. Another admirable article is that on quinones by a team from the Dyestuffs Division of Imperial Chemical Industries, Ltd.

To sum up, this is an altogether excellent production giving a vast amount of up-to-date information in a clear and understandable form, and at a reasonable price. A small point may be mentioned: Could something be done to make more obvious the authorship of the individual articles? True, the reader has the necessary clues to enable him to solve the mystery; but is there any need for a mystery?

R. P. LINSTEAD

Annual Review of Physical Chemistry

G. K. Rollefson (editor), R. E. Powell (associate editor). Vol. 1. Pp. viii+382. (Stanford, Calif.: Annual Reviews, Inc., 1950.) 6 dollars.

THIS "Annual Review of Physical Chemistry" makes its debut in a volume of eighteen chapters covering a considerable area of the domain of physical chemistry. The majority of the articles are restricted to developments occurring in the period 1948-49 (for example, radiation chemistry, spectroscopy, X-ray structural crystallography, chemical kinetics, photochemistry), but others review more than the past decade (for example, thermochemistry, radioactivity and nuclear theory, theories of valence, experimental molecular structure, statistical mechanics of the crystalline and liquid states).

The articles reflect the modern tendency of physical chemists towards specialization in a particular branch of the subject, for few readers will be able to assimilate the full content of this book in detail. Yet the careful

reader will find that the ideas and techniques of one field of specialization often overlap with and have application in another, so that, paradoxically, he advances his own specialization by a knowledge of some other.

Excluding the section on thermochemistry—which is not a review but a remarkable and invaluable bibliography of 825 references—the individual articles achieve a careful delimitation on their choice of material. In consequence, overcrowding is avoided, and criticism and emphasis have not been sacrificed—as witness, for example, the articles by Crawford and Mann on spectroscopy, Beach on molecular structure, Daniels on chemical kinetics, and Longuet-Higgins and Wheland on theories of valence.

This new series of "Annual Reviews" has made a promising beginning, and physical chemists generally will find it useful and stimulating.

H. A. SKINNER

Geschichte der Chemie in kurzgefasster Darstellung Von Prof. Dr. Georg Lockemann. Band 1: Vom Altertum bis zur Entdeckung des Sauerstoffs. (Sammlung Göschen, Band 264.) Pp. 142+4 plates. (Berlin: Walter de Gruyter und Co., 1950.) 2.40 D. marks.

THIS small book gives a very interesting and competent survey of the history of chemistry from the earliest times to the discovery of oxygen. The author is known for his articles on the subject in German chemical journals and has an excellent knowledge of recent publications on the history of chemistry. His text is therefore based on recent investigations. The amount of information given is quite surprising when the size of the book is considered, and there are eight portraits on art paper at the end. The bibliography contains exclusively German books, and there is not space for detailed references. Some names are given incorrectly, and as these errors are distributed impartially among nationalities, including German, it must be assumed that they are due to careless proof-reading and may be corrected in later printings of this very useful little work.

J. R. P.

Electronics

By P. Parker. Pp. viii+1050. (London: Edward Arnold and Co., 1950.) 50s. net.

THE scope of a course on electronics has undergone a gradual change during the past fifteen years. Before the War what was required was, in general, an introduction to radio communications engineering. In a text-book on this subject one expected to find a brief introduction on electron tubes or radio valves, followed by a discussion on power supplies, amplifiers and oscillators. Propagation of electromagnetic waves and aerial systems would be dealt with fully, and finally a few typical circuits of receivers and transmitters would be examined.

The present volume makes, and needs, no apologies for the fact that the words electromagnetic waves, automatic volume control and telegraphy do not appear in its index. It is intended as an introduction to the physics of electron tubes, and circuits are dealt with only so far as they illustrate the properties of the tube. Vacuum and gas-filled tubes of great diversity are dealt with, including cavity magnetrons, on one hand, and Geiger counters, on the other. Throughout the book there is an emphasis on the physics of the devices considered: thus there is a good introduction to electron optics.