Book Reviews

Handbuch der Katalyse. Vol. 3: ***Biokatalyse.*** G. M. Schwab. (Ed.) Vienna: Springer, 1941; Ann Arbor, Mich.: J. W. Edwards, 1945. Pp. 622. $19.00.

This extremely valuable volume contains five parts, all of which are of considerable interest to the enzymologist. The opening section (46 pp.), by A. Schäffner, is concerned with the general properties of enzymes, their preparation, and the nature of enzyme action. The second and longest section (245 pp.), prepared by H. Kraut, M. Rohdewald, Ä. Weischer, and E. Kofranyi, deals with the hydrolysing enzymes, which are classified and are individually considered in terms of their occurrence, estimation, preparation, and properties.

The third section, which is the only one printed in English, is a complete (214 pp.) and well-documented treatise on biological oxidation-reduction catalysts by K. A. C. Elliott. Although the book is now several years old, this section is an invaluable aid to the investigator who wishes to obtain a detailed account of the oxidative enzymes as a basis for the study of current reports. Students and teachers will find a wealth of material that is not available in any other more recent source. The section includes 8 chapters, one of which is an excellent chapter on "Carriers."

The fourth section, by A. Schäffner and H. J. Jakowatz, is entitled "Viruses From the Standpoint of Catalysis and Autocatalysis" (39 pp.). It is concerned mainly with the mechanism by which the normal cell proteins are rebuilt into virus protein.

The fifth section, by G. M. Schwab and F. Rost, is concerned with enzyme models (37 pp.) and provides a summary of many catalyses which simulate enzymatic catalysis.

The volume includes an extensive author and subject index.

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Inorganic syntheses. (Vol. II.) W. Conard Fernelius. (Ed.-in-Chief.) New York-London: McGraw-Hill, 1946. Pp. xii+293. (Illustrated.) $4.00.

This second volume of a series giving tested procedures for the preparation of inorganic substances is characterized by the same high standards as the well known Volume I, and it should be on the bookshelf of anyone who has occasion to prepare or purify inorganic substances. The great virtue of the book, like its predecessor, is that every procedure has been critically evaluated and tested independently in a laboratory other than that in which it originated. The names of the original authors as well as those who checked the method are given under each procedure. In this connection the following quotation from the Preface is pertinent: "Inasmuch as the syntheses in Inorganic Syntheses originate from individual contributors, the editors have been perturbed to find specific references to Volume I that do not mention the individual contributor. The editors prefer that Inorganic Syntheses be considered as a periodical when references are given and that credit be given to the contributor."

The syntheses are arranged in 8 chapters, numbered according to the groups in the Mendeleev periodic table. Each of the 81 methods given starts with a brief introduction, which is followed by a detailed procedure and finally by a short discussion of the properties of the substance concerned. Each synthesis concludes with key references to the original literature. In many instances two or more alternate procedures are supplied. Very well-executed drawings of special apparatus accompany many of the procedures.

Since the inclusion of any synthesis in a given chapter on the basis of the periodic table is somewhat arbitrary, a list of syntheses which are presented in other chapters but which might have been included in the chapter in question are given at the beginning of each chapter. Cumulative subject and formula indexes to both volumes render easy the location of any particular syntheses.

The nomenclature adopted in this volume conforms, in general, with the rules recommended in 1940 by the Committee for the Reform of Inorganic Chemical Nomenclature of the International Union of Chemistry, and with *Chemical Abstracts* usage. These rules are explained by Janet D. Scott in a 10-page appendix.

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General biology. (2nd ed.) Perry D. Strausbaugh and Bernal R. Weimer. New York: John Wiley; London: Chapman & Hall, 1947. Pp. viii + 718. (Illustrated.) $4.75.

After a concise treatment of protoplasm and the cell, the second edition of Strausbaugh and Weimer's *General biology* proceeds rapidly to a consideration of carbohydrate synthesis in plants. The succeeding chapters deal in logical sequence with digestion and absorption, food transportation, respiration, and excretion in both plants and animals. In a text so complete and well illustrated as this, no objection should be offered to the parallel consideration of transpiration in plants and excretion in animals as long as adequate contrasts are drawn. The new chapter on hormones and auxins is thoroughly up to date. Growth and reproduction are considered in the same chapter, and meiosis is postponed wisely until the chapter on heredity.

The usual survey of the animal and plant kingdoms is well balanced within the confines of 200 pages. Ecology and evolution are given a broad presentation in the next two chapters.

The style of the book attains conciseness without the dull, laconic quality sometimes observed in texts covering so broad a field. Physiological concepts are stressed at a level that is neither superficial nor confusing in technicalities.

Index and glossary are combined, and bibliographies are eliminated except for occasional footnotes. Long book lists serve no practical purpose, since most instructors prefer to select their own supplementary readings.

The typography and well-labeled illustrations are excellent and, for a full-year course, the text is highly recommended.

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