

REVIEWS

Advances in Enzymology, Vol. II. Edited by F. F. Nord and C. H. Werkman. (Interscience Publishers, Inc., New York), 1942. Pp. viii + 374. Price \$ 5.50.

This series has entered its second year and the contents of the present volume are as fundamentally important and interesting as the contributions published in the first volume. The scope of the series, as envisaged in the introduction to the series, has been extended to cover the fields of vitamins and hormones; an article on Vitamin K by its discoverer and an informative review on the adrenal cortical hormones have been included.

Twelve contributions comprise the volume and first of these on bacterial viruses concludes with a highly suggestive discussion of the host-virus relationships. The author has advanced several speculative hypotheses on this fascinating subject which includes the pregnant suggestion that the synthesis of new virus demands not only the utilisation of the storage products of the cell but also the short-lived intermediate products of metabolism. The author adds, "The virus makes use of the metabolic machinery of the cell for its own needs. The oxidation-reduction cycle and the phosphorylation cycle of some cell metabolite may directly be involved. Such a study will require the analysis of the growth of the host and of virus in the presence of a variety of substrates and inhibitors under aerobic and anaerobic conditions. In the opinion of the reviewer, the problem of the autocatalytic synthesis in the cell may be approached in this manner with promise of success".

The kinetics of hydrolytic enzymes and their bearing on methods of measuring enzyme activity, discussed by Van Slyke will prove useful to workers in the field of enzyme chemistry. Bergman has classified the specific interrelationships among the large number of proteolytic enzymes, in the light of his own work. Enzymatic properties of peptidases are reviewed by Johnson and Barger. Special mention should be made of the exceedingly valuable review on the heterotrophic assimilation of carbon dioxide contributed by the very same authors who were the first to describe this phenomenon as an experimentally accomplished concept. Those interested in this latest and spectacular advance of biochemistry can, with profit, turn to this stimulating and comprehensive review. Other reviews in the volume include articles on diamin-oxidase—an enzyme not extensively studied, respiratory and fermentative enzyme mechanisms associated with *Aspergilli*, cellulose decomposition by micro-organisms and a unified hypothesis of the reciprocal integration of carbohydrate and fat metabolism. A highly speculative and labour-ed review on the chemistry of tea fermentation is also to be found in the volume.

This volume represents an even greater improvement over the first of the series; the publishers deserve all praise not only for the

beautiful get-up of the volume but also for their venturesome and praiseworthy enterprise.

Temperature Control. By A. J. Ansley. (Chapman and Hall, Ltd., London), 1942. Pp. viii + 126. Price 13s. 6d.

The regulation and control of temperature in any system is an important and frequently needed laboratory technique, the fundamental principles and practice of which are to be found in many texts on experimental physical chemistry, in special monographs, and also scattered in several contributions on pure and applied sciences. Recently an impressive volume of contributions to a symposium on "Temperature—its Measurements and Control in Science and Industry" (covering 1375 pages) has been published by Messrs. Reinhold Publishing Corp., New York, and reviewed in *Current Science*, Vol. 10, p. 415. There is, however, still scope for a handy volume expounding the principles with complete practical details for a judiciously selected number of equipments for the control and regulation of temperatures as used in the laboratories and industries. The book under notice, though it purports to be one such volume, is however, a strange medley of useful but frequently extremely elementary informations, clothed in somewhat cumbersome and inadvertent wordings and of statements which are incorrect. Thus on page 5, regarding vapour pressure control, the author states that "it is superior to the direct expansion of a liquid method owing to the extensive range which can be obtained by increasing or decreasing the liquid charge contained in the sensitive phial or capsule". Again he states, "The disadvantage of this type is that since vaporisation of the liquid is a straight line function, the differential of the control over a wide temperature range will vary considerably". The book contains many other similar statements. On page 9, in an elementary description of the potentiometric method of measurement of e.m.f. of thermo-couples, it is said that in the null position when the galvanometer G shows no deflection, the e.m.f. of the couple is equal to that of the cell F! The following sentence from page 82 is hard to beat: "The liquid whose rotary power is desired is contained in a glass cylinder placed horizontally between the relevant optical parts of the refractometer" (italics ours).

There are besides quite a few printers' errors and the figure 20 on page 36 is printed upside down. Although the publishers have not been sparing in their usual high standards of printing and production, the book needs drastic revision and correction. RAU.

A First Course in Algebraic Geometry. By B. B. Bagl, Government Officers' Colony, Dharwar, 1941. Pp. vi + 264. Price Rs. 2-12-0. This book is written by Professor Bagl, a well-known author of several text-books in