

The third volume will deal with the role of migration and the interrelations between economic and demographic variables. The whole project promises to be an important contribution to the study of American economic history and development. E. GREBENTK

### Advances in Enzymology and Related Subjects of Biochemistry

Vol. 22. Edited by F. F. Nord. Pp. v+567. (New York: Interscience Publishers, Inc.; London: Interscience Publishers, Ltd., 1960.) 105s.

THE twenty-second volume of this useful series contains three articles on metabolic topics, two about the mechanism of action of enzymes, one on practical techniques, two on more biological topics, and one on pure chemistry.

The sections of metabolism reviewed are the synthesis and hydrolysis of sulphate esters (by A. B. Roy), the biochemistry of sulphonium compounds, particularly with regard to transmethylation (by S. K. Shapiro and F. Schlenk), and the biosynthesis of cholesterol (by G. Popjak and J. W. Cornforth). The last-mentioned review follows appropriately the review on carotenoid synthesis in the previous volume.

An important article by D. E. Koshland on "The Active Site and Enzyme Action" summarizes the methods which may be used to label and identify the active centre of an enzyme, as well as putting forward some conclusions about the chemical mechanism of enzymatic catalysis. S. Shifrin and N. O. Kaplan discuss the binding of coenzymes by enzymes, principally in cases where this may be studied by spectroscopic methods.

The genetic control of enzyme activity, and the induced synthesis of enzymes, are considered in articles by J. R. S. Fincham and H. O. Halvorson respectively. These two articles emphasize the increasing interest in 'enzyme biology'.

Two articles are of great practical importance to the practising enzymologist. F. Turba gives a valuable account of the purification of enzymes by column chromatography, with many well-documented examples. J. Baddiley and N. A. Hughes give an up-to-date account of the chemical methods now available for the synthesis of nucleotide coenzymes and their analogues. E. C. WEBB

### Röntgenstrahlinterferenzen

Von Max von Laue. Unter Mitarbeit von E. H. Wagner. Dritte, neubearbeitete und erweiterte Auflage. Pp. x+476. (Frankfurt am Main: Akademische Verlagsgesellschaft, 1960.) 75 D.M.

IT is always interesting and instructive to read a book written by the founder of a subject and to see how he considers that it has developed since it began. Laue's book has, of course, been a standard work for many years and most other text-books have been based on it, either directly or indirectly. Modern treatment of diffraction theory, for example, is much nearer to Laue's treatment than to the more vital and productive, but less clearly rigorous, treatment through Bragg's law.

It is interesting, and not a little salutary, to see the difference between Laue's treatment of X-ray diffraction and that of British authors. He justifies this third edition by stating that a great deal of progress has recently been made in research on the structure of crystals; yet this section of the book looks curiously old-fashioned, with its diagrams of

diamond, graphite and fluorspar. The author's interests lie much more in diffraction by imperfect structures—liquid crystals, temperature-affected lattices and deformed crystals—than in the structures in which workers in Britain are mainly interested. The names that appear frequently in our text-books—Bernal, Lonsdale, Hodgkin, etc.—are scarcely mentioned in this book, but the elegant diffraction work of Hosemann and Renninger is given considerable prominence.

It is sad to think that Laue's death in an accident has withdrawn the founder of the subject from among us and that he will not be present next year at the fiftieth anniversary celebrations of his great idea in Munich. This book will serve as a constant memorial to him. H. LIPSON

### Modern Physics

By M. S. Smith. Pp. ix+254. (London: Longmans, Green and Co., Ltd., 1960.) 15s. net.

THIS is a lively and well-written account of the way physics has developed in the past sixty or seventy years. The author has a refreshingly original style and has attempted to convey the spirit of the investigations he describes as well as the essential detail; he has avoided the rather dreary repetition of standard diagrams and tables that so many text-books adopt.

He is, however, rather unrealistic in claiming that it will serve as an introduction to the subject for sixth formers and undergraduates; it can scarcely yet be claimed, for example, that a detailed consideration of Schrödinger's equation is merely introductory. The book is much more likely to be useful to the more mature physicist who wishes to have a readable survey of atomic and nuclear physics and who may wish to have some help in straightening out his ideas for presentation to others.

Moreover, the book scarcely justifies its title; it contains nothing of solid-state physics, biophysics or modern developments in optics. Admittedly a book of this size and modest cost could not be expected to be so general, but the title ought to have been more specific.

The book is attractively produced and misprints and mistakes seem to be few. But it was copper sulphate, not zinc sulphide, that was first used to diffract X-rays (p. 40); the field of a dipole is inverse cube, not inverse fourth-power (p. 72); and the word 'anticipate' is incorrectly used on p. 80. H. LIPSON

### Laboratory Management and Techniques

By J. A. Edwards. Pp. xvi+207. (London: Butterworth and Co. (Publishers), Ltd., 1960.) 35s.

THE author makes clear in his introduction that this book does not pretend to deal with the higher problems of laboratory administration as this subject has been so adequately covered by E. S. Hiscocks in his excellent book (*Laboratory Administration*, London, 1956). A reading of Mr. Edwards' book, however, reveals that he too is dealing largely with administrative matters. The essential difference appears to be one of point of view. Mr. Edwards' conception of laboratory management is that of a laboratory steward. This conception is, in my opinion, better suited to the organization of teaching laboratories than to industrial and research laboratories. The value of the contents of the main part of the book