The book is quite well illustrated, and the bibliography, which has 274 entries but is by no means complete, gives a good introduction to the subject. It would have been valuable to have had more entries in the subject index. The book is certainly a good and well informing publication in this special field of modern astrophysics.

H. VON KLÜBER

Applied Optics and Optical Engineering

A Comprehensive Treatise. Edited by Rudolf Kingslake. Vol. 3: Optical Components. Pp. xiv+374. (New York: Academic Press, Inc.; London: Academic Press, Inc. (London), Ltd., 1965.) 120*s*.

THIS book reviews the optical and mechanical problems involved in designing and manufacturing optical components. There is a broad treatment of the lens design process and separate chapters sketch the characteristics of the main types of lens system—photographic objectives, microscope objectives, and eyepieces and magnifiers. It is, perhaps, not surprising in a volume of this kind that there is some overlap between the general review and the more detailed chapters, but cross-references are not always given in the text. There are chapters on the manufacture of lens systems, on lens testing, and on the coating of mirrors. The design and production of spectacle lenses are dealt with separately, and there is a chapter on plane mirror and prism systems.

The volume will be useful to those entering, or broadening their interest in, the field of optical technology; in many parts of the subject the treatment is insufficiently detailed to enable them to tackle specific design and production problems without further study, but it does present the overall picture in a useful way and indicate the line of approach.

R. S. LONGHURST

Handbook of Chemistry and Physics

A Ready-Reference Book of Chemical and Physical Data. Edited by Robert C. Weast and Samuel M. Selby. Forty-seventh edition. Pp. xxviii+1,858. (Cleveland, Ohio: The Chemical Rubber Company: Oxford: Blackwell Scientific Publications, Ltd., 1966.) $17.50; 168*s*.

THE *Handbook of Chemistry and Physics* really needs no introduction. It is now as much part of the scientific scene as the Bunsen burner, and it is just as handy to have around. Although "handbook" is now something of a misnomer, with more than 1,800 quarto pages, a vast amount of information is compressed into it.

Each edition is larger than the last, and the forty-seventh is no exception. It has about 150 more pages than the forty-sixth and contains more than twenty new tables. The most useful addition will probably turn out to be the new table of gravimetric functions and their logarithms. Others include tables of the properties of magnetic materials, new information in plastics and carbohydrates, and a greatly revised classification of elementary particles.

The book has the same format as the previous edition, which makes the information very easy to find. It is undoubtedly well worth 8 guineas (£8 8*s*.).

J. SPENCER

Isotopes in Experimental Pharmacology

Edited by Lloyd J. Roth. Pp. xiv+488. (Chicago and London: The University of Chicago Press, 1965.) 90*s*.

THE general availability of isotopes since the Second World War has provided enormous stimulus to the definition of metabolic pathways. Routes of biosynthesis have been well defined for metabolites elaborated by the plant kingdom. In the animal world, and particularly in human medicine, the use of isotopically labelled compounds of potential medicinal interest has enabled a solution to be provided to many of the problems concerning the distribution and metabolism of drugs. Since the thalidomide incident this area of experimental pharmacology and toxicology has acquired a great sense of urgency and importance. In this context therefore it is particularly appropriate that a volume dealing with the use of isotopes in experimental pharmacology together with their application to problems in neuropharmacology and toxicology should recently have been published.

Isotopes in Experimental Pharmacology reports thirty-six contributions made at an international conference held at the University of Chicago in 1964 to discuss the general subject of isotopes and their application to the various aspects of experimental pharmacology. The conference, the first to consider this topic, was held under the auspices of the U.S. Atomic Energy Commission, the International Atomic Energy Agency and the Rockefeller Foundation Grant for Nuclear Medicine.

Seven general areas of investigation formed the subject for the conference, the boundaries of which may be most readily appreciated from the list of these areas: isotopic labelling of drugs; activation analysis; autoradiography; compartment analysis and dynamic measurements; drug biotransformation; biochemical pharmacology; and deuterium effects.

Like all similar publications, the contributions are uneven in length, content and significance. Indeed, several of the contributions are so brief that they might with advantage have been omitted entirely. Despite this minor criticism, however, the book is a most valuable contribution to those topics previously designated. The publication is extremely well produced, copiously illustrated with appropriate graphs and formulae, and by present-day standards extremely modestly priced.

It will constitute a permanent source of reference, particularly for the appropriate literature, for those concerned with this rapidly developing branch of pharmacology.

W. B. WHALLEY

Enzymes in Serum

Their Use in Diagnosis. By Keith S. Henley, Ellen Schmidt, and Friedrich W. Schmidt. (A Monograph in the Bannerstone Division of American Lectures in Living Chemistry.) Pp. xi+120. (Springfield, Ill.: Charles C. Thomas, 1966.) $5.75.

THE authors intended this monograph as a primer for clinicians and also hoped that it would be useful to clinicians setting up or expanding clinical laboratories. The first half is thus devoted to methodology and pathophysiology. In this, techniques are inadequately described for a beginner, although the professional will find the bibliography excellent. There is no guidance as to the most practical current methods. Commendably, international units are used throughout; although for phosphatases and amylase, for example, there is no international substrate and corrections to 25° C may be unreliable in human work. Older units in brackets would have been a great help to most readers.

The second half, on diagnostic applications, opens with the liver and biliary system and has the excellence we expect of these authors. The section on heart is also good. Those on skeletal muscle and cancer are not helpful, possibly reflecting current limitations in diagnosis, but more could have been said on following the progress of cancer, a major part of work today. The final five chapters are impartial surveys in other fields, with again good bibliography. This book thus seems designed for the American market. British clinicians may find the second half valuable, but it is hoped they will leave the choice and execution of methods to professionals, who will undoubtedly find the bibliography throughout invaluable.

J. R. HOBBS