containing selenium and tellurium; its comparative brevity reflects the meagre literature associated with these compounds.

Classification by ring size inevitably results in some duplication in the type of chemistry covered in the two parts. This is, however, a comprehensive reference work with the emphasis on preparative and descriptive detail rather than on mechanistic generalities. Thorough and painstaking reviews of the literature relating to each major parent compound are given, together with critical evaluation and reinterpretation where needed. As in other recent volumes in this series, comprehensive tables of individual compounds, with their associated physical data and literature references, accompany each section.

The authors have paid particular attention to nomenclature, often very confused in this field, and to the compilation of a systematic index. They have adopted the useful device of adding to each page citation pertaining to a listed compound a suffix indicating the type of information available on that page. While this undoubtedly aids the location of specific data concerning individual compounds, the index itself seems oriented almost entirely to this end, and contains few general entries relating to reaction type.

Nevertheless, the volume is an impressive contribution to the reference literature of organo-sulphur chemistry. It should be of value not only to the specialist in sulphur heterocyclics, but also to those interested in the uses and potentialities of many of the systems described, in general organic synthesis.

J. D. HOBSON

NEW JOURNAL

Journal of Molecular Structure

Vol. 1, No. 1 (October 1967). Published bimonthly. Pp. 1–116. Subscription price: 180*s*.; $25; D.fl. 90 per volume (6 issues), plus postage. (Amsterdam: Elsevier Publishing Company, 1967.)

THE increasing application of a wide variety of physical techniques is leading to more and more structural information about molecules. The appearance of a new journal devoted entirely to molecular structure evidences the view that the field deserves a focal point of publication. The editors, Professors Orville-Thomas, Lecomte and Lippert, will cover English, French and German speaking territories. There is an equally distinguished editorial board whose members span North and South America and Europe. A team of this distinction augurs well for the success of the new journal.

One of the criteria of success must be whether the journal can become a real centre of publication of structural studies. It is clearly far too early to attempt to judge this at the present stage. The editors appear to be taking a very wide interpretation of the term "molecular structure". In the first issue of the journal one paper presents new structural information in the sense of internuclear distances and angles; it is a very interesting paper, combining, as it does, both microwave and electron diffraction data in a structural determination. Other papers provide evidence and arguments for certain atomic configurations or molecular conformations. Others provide infrared assignments in terms of assumed structures. Another is concerned with time-dependent interactions and yet another with molecular interactions in solution. Only with further issues will the range of the structural umbrella become clear.

There may well be some who, recognizing the need for journals to meet changing needs, nevertheless fear the contribution that such developments may make to further fragmentation in science. They may feel that these needs might be best met and the dangers averted by the appearance of some such journal as a "European Journal of Chemical Physics". However this may be, it is likely that many will watch with interest the development of this new journal.

D. J. MILLEN

ENZYMES AND MITOCHONDRIA

Methods in Enzymology

Vol. 10: Oxidation and Phosphorylation. Edited by Ronald W. Estabrook and Maynard E. Pullman. Pp. xx + 818. (New York: Academic Press, Inc.; London: Academic Press, Inc. (London), Ltd., 1967.) 236*s*.

THE aim of this volume is, in the words of its editors, "to provide not only the specialist and the advanced student but also investigators from other areas of research with a single authoritative source for the vast and often difficult to retrieve and evaluate methodology associated with mitochondrial research". Contributions by nearly 150 experts in this field assure that the volume is both authoritative and topical. A particularly pleasing aspect of the contents is the inclusion of sections that are neither strictly mitochondrial nor enzymological, but are nevertheless highly relevant to mitochondrial research. For instance, the articles on microbial phosphorylating systems, electron paramagnetic resonance, the preparation of antisera to respiratory chain components, the preparation of respiratory chain mutants of yeast, and the biological applications of ion-specific glass electrodes should stimulate wider use of these potentially penetrating techniques.

Editorial interference is clearly minimal, and however convenient this may have been for the contributors it may lead to some confusion on the part of the reader, and particularly those from other areas of research. For instance, the five different preparations described for various types of NADH dehydrogenase from cardiac muscle could benefit from an independent critique. The reader is also likely to be confused by the section devoted to the preparation of inner and outer mitochondrial membranes, where the fractionation scheme of one article gives results that are diametrically opposed to those of another. Although it is impossible for a book such as this to be both up to date and also non-controversial, an appropriate but unbiased editorial note would assist the uninitiated reader in distinguishing between accepted and disputed methods.

A number of methods described in previous volumes of this series are not redescribed, presumably because the original accounts are still adequate. In at least one case of wide usage, that of optical techniques, the present ready availability and relatively low price of the components required for the assembly of fluorimeters and double-beam spectrophotometers suggests that an extensive article of "do-it-yourself" methods would be widely acceptable.

The volume goes far towards making a central point of reference in the methodology of mitochondrial research; a certain failure in the editors' achievement of their aim is both to be expected and desired from a subject that is still a field of active and novel experimentation. The success of this volume will be judged by the speed with which it renders itself obsolete or inadequate.

P. B. GARLAND

APPLIED ENZYME KINETICS

Design of Active-Site-Directed Irreversible Enzyme Inhibitors

The Organic Chemistry of the Enzymic Active-Site. By B. R. Baker. Pp. xiii + 325. (New York and London: John Wiley and Sons, Inc., 1967.) 108*s*.

STUDIES of enzyme inhibition have important implications in many areas of biochemistry and medicine, and