

Book Reviews

Inorganic Reaction Mechanisms, Volume 4, Specialist Periodical Reports,
Senior Reporter, Dr. A. McAuley, The Chemical Society, London, 1976,
Price £23.00.

This Specialist Periodical Report on mechanisms of inorganic reactions reviews the literature published between July 1973 and December 1974. The format and style of writing of this book is much the same as that of previous volumes in this series. A total of 1533 references and 2460 different authors are cited. This in itself is justification for a book intended to keep the reader informed of "recent" publications in a particular area of research.

The volume does a good job in touching all bases pertaining to the various topics of mechanisms of inorganic reactions. The book is divided into four parts, each part is subdivided into chapters. The titles of the parts, the names of the authors, and the pages (in parentheses) of each part are as follows: (I) Electron Transfer Processes, A. McAuley and K.L. Scott, (92); (II) Substitution and Related Reactions, J. Burgess, J.S. Coe, D.N. Hague, P. Moore and G. Stedman, (158); (III) Reactions of Biochemical Interest, D.N. Hague (24); (IV) Organometallic Compounds, R.D.W. Kemmitt and M.A.R. Smith, (110). This reviewer is surprised to find that the largest number of pages are devoted to substitution reactions of Werner type metal complexes and by far the least number of pages to bioinorganic chemistry. Perhaps this will change with future volumes, because the research activity on compounds of biological interest and on organometallic compounds continues to increase.

This volume, like others in the series, is useful. However, it is too bad that references only go until 1974 for a volume which appears in mid 1976. This means that the book is out of date when it appears in print. For example, on page 81 the complex $[\text{Co}(\text{CN})_5\text{O}_2]^{3-}$ is reported to have a linear $\text{Co}-\text{O}-\text{O}$ structure, but on further refinement of their data the same authors now report (Inorg. Chem., 14 (1975) 2595) a bent structure. Similarly on page 82, mention is made of a CO adduct of a cobalt Schiff base complex; an adduct which has been shown (J. Am. Chem. Soc., 97 (1975) 673) not to form. Also, the isomeric structures of $(\text{Cp})_2\text{Ti}(\text{N}_2)$ on page 357 are now known to be incorrect. Clearly, a constant effort should be made to decrease the publication time for such volumes.

The book is well organized, the tables of data should be useful, the printing is satisfactory, and literature reviews appear to be fairly complete. Surely the volume will be a must for most libraries, and it will be particularly worthwhile for persons doing research on inorganic reaction mechanisms.

F. Basolo
Department of Chemistry
Northwestern University
Evanston, Illinois, U.S.A.

Inorganic Chemistry of the Transition Elements, Volume 4, Specialist Periodical Reports, Senior Reporter, Dr. B.F.G. Johnson, The Chemical Society, London, February 1976, Price £27 (U.S. \$74.25).

This book represents the latest issue in the series dealing with the transition elements and covers transition metal chemistry including Lanthanides and Actinides for the period October 1973 to September 1974. Individual chapters deal with the early transition metals, and chemistry of the first transition period from manganese to copper, the chemistry of the noble metals, and the chemistry of scandium, yttrium, the Lanthanides and Actinides. There is also an additional chapter devoted to zinc, cadmium, and mercury, with a subsection dealing with biological aspects of these metals. The senior reporter notes that the various contributors have attempted to be comprehensive and have tabulated a great deal of material, for clarity of presentation. The book is over 500 pages long, well-illustrated and well-referenced. Like its predecessors it possesses an author index but not a subject index. It is obligatory bedtime reading for any transition metal chemist.

This reviewer is concerned, however, about the escalation of the price of these journals which is high even for Fellows of the Chemical Society who obtain a special rate. One wonders whether science would not be better served by the publication of a shorter less expensive report which was less comprehensive and more critical. With the advent of computerized scientific retrieval services, it no longer seems so necessary to have comprehensive reviews which include material of doubtful validity or of doubtful value.

A.B.P.L.