

Journal of Organometallic Chemistry, 114 (1976) C38–C40
© Elsevier Sequoia S.A., Lausanne — Printed in The Netherlands

Book reviews

Mechanisms of Oxidation by Metal Ions; by D. Benson (Halton College of Further Education, Widnes, Cheshire, Great Britain), Elsevier Scientific Publishing Co., Amsterdam, 1976, viii + 225 pages, 20 figs., US \$33.95, Dfl. 85.00.

As part 10 of the series, "Reaction Mechanisms in Organic Chemistry," this book focuses primarily on the mechanistic aspects of the oxidation of organic compounds with metal ions. In keeping with the introductory nature of this series of monographs, the treatment is designed more as a summary to whet the appetite of the reader rather than overwhelming him with details (already largely covered in Volume 7 of "Comprehensive Chemical Kinetics"). After a cursory introductory chapter, metal ions are divided into three classes: one-equivalent oxidants such as Co(III), V(V), Ce(IV), Mn(III), and Cu(II), two-equivalent oxidants [Pb(IV), Tl(III), Hg(II) and Pd(II)] and multi-equivalent oxidants [Cr(VI) and Mn(VI)] in their reactions with various hydrocarbons, alcohols, and carbonyl compounds. The role of reactive intermediates such as free radicals and carbonium ions as well as the interplay with wholly inorganic reaction mechanisms are nicely interwoven. The contents of the subject index, which includes only specific reactions between metal ions and organic compounds, fairly well summarizes the emphasis of the book. For a short and pocketbook sized, introductory book the price is outrageous. It is not clear which market the publishers intended this book to serve since it is too dear for the casual but informed reader and not sufficiently comprehensive, critical nor up-to-date for the specialist.

Department of Chemistry,
Indiana University,
Bloomington, Indiana 47401 (U.S.A.)

JAY K. KOCHI

International Review of Science. Physical Chemistry, Series Two, Volume 11: Chemical Crystallography. J.M. Robertson, volume editor. Butterworths, London, 1975, 228 pages, £13.45.

The format for this second volume is the same as for the first (1972/1973): authoritative, specialized articles by recognized experts under the editorship of J.M. Robertson. Although the volume should appeal to the chemical crystallographer there are several features that make it less than attractive to the organometallic chemist. First, there is the explicit grouping of articles from diverse areas of chemistry under the umbrella of chemical crystallography. This reviewer prefers series in which the grouping is by chemical area (e.g.,