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Book Review

Works intended for notice in this column should be sent direct to the Book-Review Editor (R. O. Gould, University of Edinburgh, West Mains Road, Edinburgh EH9 3JJ, Scotland). As far as practicable books will be reviewed in a country different from that of publication.

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Stereochemistry of organometallic and inorganic compounds. Edited by IVAN BERNAL. Pp. x + 246. Amsterdam: Elsevier, 1987. Price Dfl 195.00, US\$ 95.00.

The publication of Volume 2 of this series reflects the enormous current interest in the coordination chemistry of macrocyclic ligands, and fills a gap in the review literature that has developed since the publication of G. A. Melson's *Coordination Chemistry of Macrocyclic Compounds* in 1979. The volume consists of three chapters. The first, 'Stereochemistry of Metallic Macrocyclics' by Jan C. A. Boeyens and Susan M. Dobson (102 pp., 208 references), gives an excellent account of the conformational characteristics of transition-metal-coordinated macrocycles. The article reviews the chemistry of both large and small ring N-, S- and P-donor systems, and relates the observed stereochemistries at the metal centre (obtained usually by X-ray crystallography) with conformational properties and preferences of the coordinated ligand. Chapter 2 by H.-J. Buschmann on 'Thermodynamic and Stereochemical Aspects of the Macrocyclic and Cryptate Effects' (84 pp., 149 references) is equally successful, and concentrates on O-donor polyether crown and cryptate chemistry. A good historical perspective is retained throughout, and the many thermodynamic parameters quoted are restricted to compact tables, thus

making the article very approachable and informative. Perhaps the least successful chapter in this volume is the last one by Karen E. Matthes and David Parker on 'Stereochemical Aspects of Macrocyclic Complexes of Transition Metal Ions' (36 pp., 100 references). This article deals with selected aspects of the chemistry of second- and third-row transition-metal ions and also includes sections on copper, nickel, manganese and chromium. Reviewing a vast topic such as macrocyclic chemistry, by its very nature, necessitates selectivity. However, considering its title, this article is short and the examples too selective. It might have been more successful if this section had been incorporated into Chapter 1 to give two large chapters on transition- and main-group-element chemistry respectively. This notwithstanding, Chapter 3 concentrates on unusual aspects of heavy-metal macrocyclic chemistry and, therefore, gives an important overview of new developments in this area.

In general, Volume 2 is an excellent addition to this series. Most importantly, each chapter concentrates on work in the recent literature (up to mid-1986) and the timeliness of this well produced volume is therefore retained.

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