Synthesis of macrocycles — The design of selective complexing agents. Progress in macrocyclic chemistry, Volume 3, edited by R.M. Izatt and J.J. Christensen, John Wiley & Sons, New York, Chichester, Brisbane, Toronto, Singapore, 1987, xi + 447 pages, £57.50. ISBN 0-471-82589-1.

This volume is appropriately dedicated to Charles J. Pedersen, the father of macrocyclic polyether ligands, and it is indeed a book of which to be proud. It is a multi-author volume, containing seven chapters, all focused at ligand design and synthesis. The first review (D.H. Busch and C. Cairns; 51 pages; 130 refs.) is concerned with the design of ligands for inclusion complexes, and ranges from the template reactions used for macrocyclic synthesis to superstructured ligands for dioxygen binding. The second chapter (L.F. Lindoy; 40 pages; 68 refs.) considers strategies for metal ion recognition, and focuses on O_2N_2 macrocycles and M^{II} (M = Ni, Co, Cu, Zn, Cd and Pb) systems. The third chapter (C.D. Gutsche; 73 pages; 157 refs.) describes the fascinating chemistry of the calixarenes (molecular "baskets"), and is followed by a discussion (P.G. Potvin and J.-M. Lehn; 73 pages; 200 refs.) of cation and anion receptors, catalysts and carriers. The fifth review (S. Lifson, C.E. Felder, A. Shanzer and J. Libman; 67 pages; 72 refs.) discusses biomimetic macrocyclic molecules, and is followed by a short and egocentric overview (W. Kiggen and F. Vögtle; 28 pages; 71 refs.) of phanes containing three or more bridges. The final and longest chapter (E. Weber; 83 pages; 173 refs.) describes crystalline neutral molecule inclusion compounds in macrocyclic hosts. The book concludes with an author index and a useful subject index.

The scope and parentage of the articles in this volume speak to its utility and quality. In dealing exclusively with synthesis, it deals with the centre of this burgeoning field (indeed, isn't synthesis at the heart of all the important areas of chemistry?). Moreover, the reviews also describe the design concepts and strategies, laying the groundwork for the next generation of ligands. Chemistry is about control, and these ligands offer the ultimate in designer overcoats. This book is beautifully produced, being type-set with extremely clear illustrations (which are so essential in this field). Every home should have one.

School of Chemistry and Molecular Sciences.
University of Sussex, Brighton, BN1 9QJ (Great Britain)

Kenneth R. Seddon

Stereochemical and Stereophysical Behaviour of Macrocycles. Stereochemistry of Organometallic and Inorganic Compounds, Volume 2; edited by I. Bernal, Elsevier, Amsterdam, Oxford, New York, Tokyo, 1987, x + 246 pages, Dfl.195.00, US$95.00. ISBN 0-444-42815-1.

This volume is a multi-author compilation, featuring three reviews concerned with various aspects of the stereochemistry of macrocyclic complexes. The first (J.C.A. Boeyens and S.M. Dobson; 102 pages; 208 refs.) is a thoughtful and carefully analysed discourse which considers the heart of the matter, the specific stereochemistry of metallic macrocyclic complexes, and is followed by an extremely useful overview (H.J. Buschmann; 83 pages; 149 refs.) of the thermodynamic and

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