

The next three chapters deal with thermodynamic, kinetic, mechanistic and redox aspects of the macrocycles. These chapters too provide a useful survey but do not attempt a comprehensive review. Redox behaviour is discussed in terms of the specific factors which determine redox behaviour in macrocycles, and mainly but not exclusively in relation to nickel and copper complexes. The final chapter deals briefly with naturally occurring macrocycles such as cyclic antibiotics, cytochromes, vitamin B₁₂ etc. The book covers a great deal of ground but lacks a really comprehensive or detailed coverage of any specific issue. To have done so would have obviously produced a much larger work. Thus the book will be invaluable to those newly entering the field and wishing to obtain an overview, or to experts in one area of macrocyclic chemistry requiring a broader perspective. It will not be so useful to the expert looking for further enlightenment in his own field.

The Editor's desk

Carbon Dioxide Activation by Metal Complexes by Arno Behr. VCH, Weinheim, 1988. 161 pp. DM 160.00. ISBN 3-527-26903-7.

This book appears to provide a fairly comprehensive review of the subject of CO₂ activation by transition metal complexes. Both stoichiometric and catalytic reactions relating to the reactions of CO₂ with various hydrocarbons, mediated in some way by metal complexes, are discussed in detail. Photocatalytic and electrocatalytic reactions are not included.

Such a book is a useful addition to the literature at this time when there is concern about the increasing concentration of CO₂ in the Earth's atmosphere. As pointed out by the author, there are many chemical reactions which could be used to transform CO₂ into useful products wherever it occurs in higher than normal concentrations. The vast majority of the 800 literature references are from the 1975–1985 decade, reflecting the recent research activity in this area. Although the publisher implies that the literature is covered up to 1987, it seems unlikely that this is so since there are only a handful of references from 1986 and 1987.

The layout of the book is in four chapters, with the first two being relatively short and introductory in nature. These first two chapters provide a general background and discuss the aims of the book. The third and fourth chapters constitute the bulk of the book and discuss, respectively, stoichiometric and catalytic reactions of CO₂. A large portion of each of these chapters is devoted to quite detailed discussions of work from the author's laboratory, which makes the book a little unbalanced. In some places unnecessary detail is included.

The book is clearly written and well presented except for a significant number of typos. I would recommend it to anyone working in this area, with the qualification that it is expensive for a book of this size.

Elaine S. Dodsworth