

from hydrocarbons to aromatics to heteroaromatics, carbonyls, iminium cations, thiols, thiol ethers, flavins and light-induced reactions at dyestuffs.

Finally Part D, dealing with inorganic substrates has six chapters, involving the activation of molecular oxygen, studies of dioxygen complexes, electron transfer in hexacoordinate inorganic complexes, supramolecular systems, and organometallic compounds, etc. There are also seven chapters dealing with the applications of photoinduced electron transfer including photocatalysis on semiconductors, intramolecular electron transfer, solar energy, information storage, microlithography and drug-induced photosensitization.

The topics considered in these four volumes are extremely diverse and cover the field very effectively. This is of course not a comprehensive coverage of the field but it does provide some information on any aspects that one might be interested in. Newcomers to the field would greatly profit by working through these books while experts in the field will also gain a great deal by having all this information at their fingertips.

All the books have detailed subject and author indexes. They are printed by photo-offset from the original manuscript, and for the most part, this has been successful. It does mean, however, that the actual typeface varies from one chapter to another. Nevertheless, the presentation is excellent.

The Editor's desk

Critical Stability Constants — Volume 6, 2nd Supplement. Compilers, Robert M. Smith and Arthur E. Martell. Plenum, New York, 1989. 643 pp. Price U.S. \$95.00. ISBN 0-306-43104-1.

This reviewer remembers with pleasure referring frequently to the first compilation of stability constants published by the Chemical Society in 1964. The information contained therein was a magnificent key to understanding or at least rationalizing the binding of ligands of all kinds to a wide variety of metals. Such data were also invaluable in rationalizing metal-ligand bonding in the class A, B format just being recognized at that time. Since then there have been a series of supplements to this work, culminating in this volume which supplements early data to 1985. Earlier volumes tended to present a wide variety of often conflicting data for a given metal-ligand fragment. The less-expert reader had difficulty in deciding which number to choose. In this volume, the editors have made the critical comparison themselves and present the values they consider most reliable. References to the less-reliable numbers are, however, included. The procedure developed to make this critical choice is presented in detail in the Introduction.

This supplement covers a wide range of organic ligands (including their protonation equilibria), inorganic halides, oxyanions etc. In addition, there is a bibliographic listing of many ligands which were considered by the authors but not included in this volume.

By looking up a specific ligand *and* referring back to its entry in earlier supplements, one obtains a complete survey of the stability constants for that ligand up to 1985.

We owe a debt of gratitude to Drs. Smith and Martell for bringing this compilation to the literature. Arthur Martell is especially to be congratulated for having been involved in the initiation of this series in the early 1960s and for having stayed with it all these years.

The Editor's desk

Inorganic Reactions and Methods, Volume 10 (The Formation of Bonds to C, Si, Ge, Sn, Pb, (Part 2)) edited by A.P. Hagen (Founding Editor, J.J. Zuckerman), VCH, New York, 506 pp. ISBN 0-89573-260-2. Price DM 410; subscription price DM 354.

Inorganic Reactions and Methods is a series of books designed to present the art of synthetic inorganic chemistry. Eighteen volumes are planned and they are based upon bond formation and type of reaction. The editors have developed a logical but somewhat complex framework upon which all the data can be presented. These are not review chapters but rather a continuous series of subsections which deal in a stepwise fashion with the formation of a particular bond. The production of this book relies heavily upon the computer and sophisticated word processing capabilities thereof.

Thus the first chapters deal with the formation of compounds between elements of group 4 (carbon, silicon, germanium, tin, lead) and those of group 3B (boron, aluminium, gallium, indium, thallium). A typical set of subheadings would start with formation of C-B bonds and then a subsection for boron hydrides and then a further subsection by addition to olefins and acetylenes. Thus the reader is led through a series of subsections dealing with consecutive aspects of the formation of a particular bond. Running heads on every page are three layers deep, indicating exactly where one is in the text with respect to this set of subheadings.

All the information in this book has been collected from contributing authors, of whom there are 12 in this volume. The information for any particular process is given in considerable depth such that the reader has a very clear idea of what is involved. Obviously there is also very extensive referencing to the material presented.