

Book Reviews

Ions in Solution: Basic Principles of Chemical Interaction. By John Burgess. Ellis Horwood, Chichester, 1988, pp. 191. Price £15.95.

This book makes an agreeable read because the language is clear and concise and the sections of the different chapters are brief but exhaustive. It gives a complete picture of the structural, kinetic and thermodynamic aspects of the subject-matter. It represents a useful help to those interested in the study of inorganic chemistry in solution. However, researchers can also find some useful hints such as, for instance, those presented in the section 'New Aqua-metal Ions'.

The text is rich in numerical data, graphics and formulae which are simple but always well presented and of easy reading.

Piero Paoletti

Carbyne Complexes (dedicated to Ernst Otto Fischer).

By H. Fischer, P. Hofmann, F. R. Kreissl, R. R. Schrock, U. Schubert, K. Weiss. VCH Verlagsgesellschaft, Weinheim, F.R.G. and VCH Publishers, New York, U.S.A., 1988, xviii + 236 pp. Price DM 145.00. ISBN 3-527-26498-7.

Why stop at carbenes? After the book *Transition Metal Carbene Complexes* (authors: K. H. Dötz, H. Fischer, P. Hofmann, F. R. Kreissl, K. Weiss; VCH publication) six authors, all former colleagues and

coworkers of Nobel Laureate Prof. E. O. Fischer (which explains why the book is subtitled), present an excellent, comprehensive and up-to-date overview of Fischer- and Schrock-type carbyne complexes.

The six chapters of the book cover the following topics: synthesis of Fischer-type carbyne complexes (H. Fischer), solid state structures of carbyne complexes (U. Schubert), electronic structures of transition metal carbyne complexes (P. Hofmann), selected reactions of carbyne complexes (F. R. Kreissl), high oxidation state alkylidyne complexes (J. S. Murdzek and R. R. Schrock), and catalytic reactions of carbyne complexes (K. Weiss). The various sections discuss aspects of general synthetic procedures, solid state structures (including a useful compilation of structurally characterized carbyne complexes with important bond lengths), bonding and electronic structure calculations, reactivity (substitution reactions, modification of the carbyne side chain, reactions with nucleophiles and electrophiles, transfer of the carbyne ligand), organic applications (alkene metathesis and alkyne polymerization either with Fischer- and Schrock-type carbyne complexes). Inspection of these chapters shows that the authors have achieved a high-quality and complete coverage of the subject of the chemistry of mononuclear carbyne complexes with terminally bonded CR ligands. The sections include references up to 1988.

The clear presentation of the material is very pleasing. Thus the book is easy to use and may serve as a guide for this field of organometallic chemistry.

Rino A. Michelin