

reagents available, surpassing even the Grignard reagents in the variety of their reactions. Perhaps other organometallic chemists will rise to meet this challenge. If they are to make new and exciting discoveries, they will need Professor Brown's favorite attitudes: optimism and enthusiasm.

*Department of Chemistry
Washington State University
Pullman, Washington 99163 (U.S.A.)*

D.S. MATTESON

Progress in Inorganic Chemistry, Volume 16; edited by S.J. Lippard, Wiley-Interscience, New York, 1972, 630 pages, \$15.95, £7.50.

There are three reviews within this volume: Halides and Oxyhalides of the Early Transition Series and Their Stability and Reactivity in Nonaqueous Media; by R.A. Walton, Stereochemical and Electronic Structural Aspects of Five-Coordination; by J.S. Wood, and Transition Metal Complexes Containing Carbenoid Ligands; by F.A. Cotton and C.M. Lukehart.

Of these three, the first will provide something of a challenge to the casual reader, due primarily to the extraordinary density of factual material presented. The high ratio of references cited to the number of pages (650 references, 194 pages of text) is, in one sense, an index of this; for comparison the section on metal-carbenoid complexes covers 119 pages and contains 139 references.

This article can only be considered to serve as an exhaustive literature survey of this area. In my opinion such an article is particularly timely. One is aware of the current extensive effort involving applications of transition metal halides as precursors to the catalytic systems; for example, olefin metathesis reactions generally begin with higher oxidation state molybdenum, tungsten or rhenium halides or oxides. No doubt an in-depth survey of this subject by a knowledgeable inorganic chemist will stimulate work in this area. And if one wishes an article for a general survey there are available other alternatives such as D.L. Kepert's book, "The Early Transition Metals", which has just appeared.

Wood's article on Five Coordination appears now following substantial (though perhaps waning?) research efforts on this subject. Since the last major review article on five coordination appeared six years ago, the appearance of Wood's review at this time appears appropriate. The author, rightly I think, has concentrated on five-coordinate transition metal complexes; earlier treatments dealt more with molecular compounds of the main group elements. There is in this article a very good section on the electronic structures of transition metal complexes, and a complete summary of structural data on five coordinate species.

Unfortunately the article on Carbenoid-Metal Complexes by Cotton and Lukehart appears just after another article on the same subject in *Chemical Reviews* by Cardin, Cetinkaya

and Lappert. The article here is certainly a good one, inclusive, reasonably up to date (references through 1971); the authors, who have worked in this area, are clearly perceptive to the significance of the work and to its trends for the future. If there is one criticism it is a minor one; the section on structure and bonding appears to be somewhat over-emphasized whereas the subject of chemical reactivity is under-emphasized.

The subject of carbenoid-metal complexes is still relatively new, and was certainly appropriate for a review. No doubt its appearance will catalyze further work in this area.

Overall, one can only give this book an excellent rating; it is certainly consistent with the high quality of its predecessors. Certainly the *Progress in Inorganic Chemistry Series* has contributed a lot to this area of chemical study and it will continue to do so.

Department of Chemistry
University of Wisconsin
Madison, Wisconsin 53706 (U.S.A.)

PAUL M. TREICHEL, Jr.

Errata

J. Organometal. Chem., Vol. 44, No. 2 (November 1st, 1972)

Page C34

The last line of Table 1 should become:

$J_{\alpha D}$	—	~ 7.3	—	—
$J_{\alpha\beta}$	—	—	7.0	7.8

Footnote *d* should read:

^d Computer simulated spectra, δ values are ± 0.002 ppm and J values are ± 0.01 Hz.

