

*Zerovalent Compounds of Metals*: by L. Malatesta and S. Cenini, Academic Press, New York/San Francisco/London, 1974, v + 241 pages, \$19.75.

This book's coverage is more limited than its title might suggest. Metal carbonyls, as such, and complexes containing only unsaturated hydrocarbons have been excluded, leaving complexes of tertiary phosphines and related ligands as the primary center of attention.

The book is divided into two distinct parts. Part 1, entitled, "The stabilization of low oxidation states of transition metals", is concerned with the nature of metal-ligand bonding in low oxidation state complexes. The authors discuss the controversy concerning the  $\pi$ -acceptor character of ligands in terms of the data available from a variety of studies (spectroscopic, theoretical, kinetic and thermodynamic) and show that few unambiguous conclusions can be drawn. Nevertheless, they have performed a positive service in organizing and presenting this data.

Part 2, "Complexes with trivalent P, As, and Sb derivatives", surveys the chemistry of such compounds. A total of 130 pages is devoted to nickel, palladium, and platinum, with tables summarizing known  $ML_n$ ,  $ML_2$  (alkene), and  $ML_2$  (alkyne) complexes and their methods of synthesis. The reactions of  $ML_2Z$  ( $Z = L$ , acetylene, dioxygen, etc.) species also receive extensive discussion. On the other hand, complexes of other transition metals with Group V ligands are covered in 10 pages. Furthermore, a nine-page section on isocyanide complexes is included, seemingly as an afterthought.

The authors have provided much useful information, but access to their efforts is not easy. There is no author index and both the table of contents and the subject index are brief. Literature coverage is to the end of 1972, which necessarily means that some sections are already severely dated. The availability of this book should benefit those interested in the chemistry of phosphine complexes of the nickel triad metals. Unfortunately, it does not effectively fill a more general need.

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*Advances in Inorganic Chemistry and Radiochemistry*, Vol. 17, edited by H.J. Emeléus and A.G. Sharpe, Academic Press, New York/San Francisco/London, 1975, vii + 402 pages, \$ 35.00, £ 16.80.

The newest volume of this series contains seven reviews on inorganic topics. None of these reviews is devoted wholly to any area of organometallic chemistry, but some do cover aspects of metal-carbon bonded compounds.

"Inorganic Compounds Containing the Trifluoroacetate Group", by C.D. Garner and B. Hughes, deals with both main group and transition metal compounds. Trifluoroacetates merit being singled out this way in view of their exceptional reactivity, compared to other metal carboxylates. A few organometallic