

Advances in Organometallic Chemistry, Vol. 24; edited by F.G.A. Stone and R. West, Academic Press, Orlando etc., 1985, ix + 470 pages, US\$ 87.50; £69.00. ISBN 0-12-031124-0.

This latest addition to an excellent series continues the well-established pattern. There are seven review articles, all by leading practitioners in the field.

The first review (38 pages; 100 references - many multiple) is on "The Remarkable Features of (η^4 -Conjugated Diene)zirconocene and -hafnocene Complexes", and is by G. Erker, C. Krüger, and G. Müller. It is a fairly detailed and well informed review, many of the original contributions having been made by the authors. I could see only one reference later than 1983.

The second review (45 pages, 128 references), by W.L. Gladfelter, is on "Organometallic Metal Clusters Containing Nitrosyl and Nitrido Ligands," and is a well presented account of the synthesis and chemical physical properties of these interesting complexes. The third (44 pages, 231 references), by W.E. Geiger and N.G. Connelly, presents a timely and authoritative account of "The Electron-Transfer Reactions of Polynuclear Organotransition Metal Complexes," and complements the review of the reactions of the related mononuclear complexes which appeared in Vol. 23.

Recent progress in the rapidly developing field of "Organometallic Lanthanide Chemistry" is the subject of the fourth review (47 pages, 121 references), and the fifth (69 pages, 63 references), by N. Wiberg, is Part 2 of "Silyl, Germyl, and Stannyl Arenes"; it is concerned with "Derivatives of Triazene N_3H_3 , Tetrazene N_4H_4 , and Pentazene N_5H_5 " (derivatives of diazene having been considered in Vol. 23), and is packed with concisely presented information. The sixth review is on the "Photochemistry of Alkyl, Alkylidene, Alkylidyne Complexes of the Transition Metals" (103 pages, 197 references), and is a very well organized account of advances in the period 1977-1983.

The final chapter (98 pages, 214 references and a selected bibliography) on "X-Ray Structural Analyses of Organolithium Compounds", by W.N. Setzer and P. von R. Schleyer will be greatly welcomed by all those interested in the rapidly growing range of structures which organolithium compounds can adopt. Much factual information is clearly set out, and valuable original comments and interpretations are offered where appropriate. The review will be frequently cited for many years to come.

Overall this is a vintage volume in the series.

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