Book review

Principles and Applications of Organotransition Metal Chemistry; by J.P. Collman and L.S. Hegedus, University Science Books, Mill Valley, California, 1980, 715 pages, $30.00; £12.75.

Courses given by the authors to graduate classes are the basis of this very substantial volume, which, as may therefore be expected, aims to instruct rather than to give comprehensive coverage. It could, however, fairly claim to instruct comprehensively, and even though there are fewer words per page than from a conventional printing, the volume is remarkable value for money and within the means of graduate students to whom it is principally directed.

I would imagine that readers of this review who are active in this field will wish to examine this book for themselves, and they will find a clear statement of the scope of the treatment on pages 1—6 of the book. More briefly, the reader is first introduced to the formalisms and simpler bonding schemes of transition metal chemistry, and the entry to organometallic complexes is then made through a long chapter which surveys the principal characteristics of the organic ligands, active ligands such as H^- and O_2, and the supporting ligands that are to be encountered in the later chapters. Two further substantial chapters follow which deal with oxidative addition/reductive elimination processes and with insertion reactions, and the remaining 380 pages then deal with the catalysed and stoichiometric reactions involving transition metal hydrides and organometallic complexes.

Throughout, the significant principles are emphasized and the more instructive topics are singled out for more detailed presentation. The references are up to date (even up to early 1980) and there is an effective index.

It deserves to be, and I hope it will become, a very popular textbook.

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