

*Principles of Organometallic Chemistry*; by G. E. Coates, M. L. H. Green, P. Powell and K. Wade. Methuen, London, 1968; x + 259 pages, 28s.

This paperback volume is not to be thought of as a condensed version of the recently published third edition of "Organometallic Compounds" by three of the above authors. The emphasis is much more on principles and generalisations, and furthermore some elements (*e.g.*, arsenic and silicon) are included which were omitted from the larger treatment.

This is a first class book which should become the standard text in the field, and it can be recommended without qualification. It succeeds admirably in its aim of being suitable for undergraduates, but its use should certainly not be confined to them. At the price it represents a rare bargain.

The coverage is well indicated by the chapter headings, which are as follows: General Survey; Methods of formation of metal-carbon bonds of the main group elements; Organometallic compounds of the elements of the first three periodic groups; Organometallic compounds of elements of main groups IV and V; Organometallic compounds of the *d*-block transition elements: classification of ligands and theories of bonding; Preparation of Organotransition metal compounds; Reactions and structures of organometallic compounds of the transition elements; The organic chemistry of ferrocene and related compounds; Organometallic complexes formed from acetylenes; The role of organotransition metal complexes in some catalytic reactions.

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*Organohalosilanes. Precursors to Silicones*; by R. J. H. Voorhoeve, Elsevier, Amsterdam, 1967; xiv + 423 pages, Dfl. 70.— (£7.5.0)

This book is essentially for the specialist. Its value lies in the authoritative and comprehensive account of the direct synthesis of organosilicon halides from organic halides and silicon in the presence of catalysts, which occupies 162 pages. The author has himself made substantial contributions to the knowledge of this industrially important reaction, and the mechanism he proposes is entirely reasonable. Unfortunately there is so much disagreement between the results of various workers in the field that few conclusions can be reached with certainty.

The remainder of the book is, in effect, a general survey of organosilicon compounds, since organosilicon halides play such a central role in organosilicon chemistry. This survey is satisfactory within its limitations, but it adds little to accounts already available in other books.

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