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## Book Review

*Industrial Applications of the Organometallic Compounds. A Literature Survey*, by

G. J. H. HARWOOD. Chapman and Hall, London, 1963, xi + 451 pages, £ 3/-/-

This book is primarily for the industrial chemist, who can, according to the author's preface, use it to assess rapidly whether any organometallic compounds are likely to provide a solution of a particular problem.

The term "organometallic compounds" in this book covers organic derivatives of all the elements with the exception of the permanent gases, boron, carbon, silicon, phosphorus, and the halogens; it includes not only compounds with carbon-metal bonds, but also those with alkoxy- and aryloxy-metal bonds, and chelate compounds in which organic groups are coordinated to metals through oxygen or nitrogen. The book is essentially a compilation of references to proposed industrial applications of such compounds, and very little critical evaluation has been attempted. There are references in the main survey to patents and papers up to 1960, and an appendix, listing some later references, includes some 1961 papers. There is a very good index, and an appendix giving addresses of chemical manufacturers referred to in the text.

This book will serve adequately the limited purpose for which it was produced, namely, to provide the industrial chemist with references to the technical and patent literature. More general readers will find it interesting if somewhat frustrating to glance at the many and varied claims made for applications of organometallic compounds; this reviewer is left curious to know, for example, whether tetraethylgermane really is used to activate aluminium to be employed in preparation of alkylaluminiums, what quantities of cyclopentadienylniobium chlorides are used as polymerization catalysts for drying oils, alkyl resins and curable silicones, and how many of the very large number of suggested anti-knock additives find their way into commercial motor fuels.

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