

vibrational spectra, photoelectron spectra and ^{11}B and ^{14}N NMR spectra, with many tables of data and some figures.

The discussion of carboranes, begun in Part 3 of the boron series, is continued in Part 6. The topics covered include the electronic structure of *closo*-carboranes, both theoretical aspects and experimental data such as acid dissociation constants, electrochemical data and results from spectroscopy; carboranes containing heteroatoms as cage constituents, transition metal complexes of carborane anions; carborane polymers, including the very stable carborane-siloxane polymers. The carborane-transition metal complexes are treated in detail in Gmelin volumes devoted to the respective transition metals. In the present volume these complexes merely are tabulated and very little information (color and melting point) is given. NMR data of heterocarboranes are given in a separate chapter.

Both German and American authors have contributed to these three volumes and hence some chapters are in the German language, some in English. As usual, English translations of preface, table of contents, chapter and section headings are provided. Literature coverage is as up-to-date as possible, usually through the end of 1973, but some later references are given in some chapters.

One hopes that a subject and a formula index will become available immediately upon conclusion of this multivolume boron series. Only when a listed compound can be found easily and quickly will this series realize its full potential. In fact, a formula index for each separate volume of the boron series would have been well worth the effort required to put it together, as far as your reviewer is concerned.

Another six volumes can be expected in this series. The editors and authors have done a very fine job thus far in providing boron chemists with the literature support which is such an essential component of a research effort.

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International Review of Science. Inorganic Chemistry Series Two, Vol. 4. Organometallic Derivatives of the Main Group Elements, B.J. Aylett, Volume Editor, Butterworth & Co., London/University Park Press, Baltimore, 1975, 417 pages, \$37.50.

The book is the fourth of ten volumes in the second series of authoritative reviews of inorganic chemistry covering the period, 1971/1972. The principle goal of this volume is to provide a comprehensive overview of the significant developments in the area of organometallic chemistry of the main group elements for that period. Volume four contains ten chapters covering the elements in groups IA-VA and IIB, excluding phosphorus. Certain chapters are reserved for review of the organometallic chemistry of individual elements (e.g. B, Si, Ge, Mg) owing

to the quantity of effort expended in the area. The remaining chapters review the congeneric elements.

Each chapter is written by a recognized expert and active contributor to the field. The presentations clearly reflect the authors' personal viewpoint regarding the major biennial accomplishments. As in most review publications each chapter is preceded by a table of contents and appended with references. Additionally, the volume contains a rather complete general index. Particularly noteworthy for clarity and cognition are the chapters by H. Bürger (Silicon, Part B) and A.J. Bloodworth (Zn, Cd, Hg).

As with most review publications, little attention is given to literary style and emphasis is placed on covering the maximum quantity of material in a limited amount of space. Except for the chapter on tin and lead, structural formulae and reaction equations are plentiful. Surprisingly, little use is made of tables to summarize important physical and chemical property data. In this reviewer's opinion the most serious weaknesses of volume four are (a) the sparsity of discussion of controversial topics, (b) the lack of identification of important areas for future development, (c) the very considerable time between review period and publication date, and (d) competition with at least two similar organometallic review publications (*viz. Annual Surveys of the Journal of Organometallic Chemistry* and the *Chemical Society Specialist Report on Organometallic Chemistry*). Despite these drawbacks volume four, and, particularly, the series two set, are useful and rewarding to peruse, and recommended for library or individual bookshelves.

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