

## Book review

*Gmelin Handbuch der Anorganischen Chemie, Ergänzungswerk zur 8. Auflage, Band 19, Borverbindungen, Teil 3, Verbindungen des Bors mit den Nichtmetallen S, Se, Te, P, As, Sb, Si, und mit Metallen*, edited by M. Becke-Goehring, K.-C. Buschbeck und K. Niedenzu, Gmelin Institut für Anorganische Chemie und Grenzgebiete der Max Planck Gesellschaft zur Förderung der Wissenschaften, Springer-Verlag, Berlin/Heidelberg/New York, 1975, x + 201 pages, DM 343, \$ 147.50

This book is a continuation of the new Gmelin series on boron compounds and covers inorganic and organometallic boron compounds with bonds involving boron linked to sulfur, selenium, tellurium, phosphorus, arsenic, antimony, silicon and main group and transition metals. Although strictly inorganic boron compounds such as  $B_2S_3$ ,  $B_2Se_3$ ,  $BPO_4$  and boron phosphides and silicides are covered, many organoboron compounds containing bonds between boron and these heteroatoms are included as well. Discussed in this volume is a wide variety of boron-metal compounds which includes main group and transition metal derivatives of higher boron hydrides and transition metal complexes with boron-containing ligands such as Herberich's borabenzene complexes and transition metal complexes of the borazines. Metal-containing carboranes and carborane-transition metal complexes are not included. Covered also are Lewis acid-base adducts in which a boron-centered Lewis acid is bonded to a Lewis base containing a Group Vb or VIb donor atom or to a Lewis base containing a transition metal donor site, e.g.,  $(\pi-C_5H_5)_2-WH_2 \cdot BF_3$ . Not much seems to have escaped the authors of this volume, but their net did let some compounds with a B-Si or B-Ge bond,  $M^+ [Ph_3B-SiPh_3]^-$  and  $M^+ [Ph_3B-GePh_3]^-$ , slip through.

The present volume is bilingual, mostly German, but a few chapters (those on B-P, B-As, B-Sb, and B-Si compounds) are written in English by authors from the United States. The preface and table of contents are given in both languages and, as always, English (for the chapters written in German) or German (for the chapters written in English) translations of chapter and section headings are provided in the margins. The literature is covered through the end of 1973, but some 1974 references can be found. In the case of boron compounds containing bonds to P, As, Sb, Si and metals, earlier references given in the main Gmelin boron volume (1926) and in the supplementary volume (1954) are not repeated here. This volume is a welcome and useful addition to the boron source literature.

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