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Book reviews

Inorganic Reactions and Methods, Vol. 13, The Formation of Bonds to Group-I, -II, and -IIIB Elements, A.P. Hagen (Ed.), VCH, New York, 1991, xxviii + 571 pages. DM 308; £119. ISBN 0-89573-263-7

Most readers of this review will know by now that this series of volumes (initiated by the late Professor J.J. Zuckermann) aims to describe all inorganic reaction chemistry by showing how all the possible bonds between the elements of the Periodic Table are formed. This volume is concerned with (a) formation of bonds to B, Al, In and Tl (sub-divided into formation of Group-IIIB–IIIB element bonds; Group-IIIB–Group-IA or Group-IIA bonds, Group-IIIB–Group-IB or Group-IIB bonds, Group-IIIB–transition or –inner-transition metal bonds, Group III–Group-0 element bonds, and formation of borides); (b) formation of bonds to the Group-IA and Group-IIA metals (sub-divided into formation of Group-IA or Group-IIA to Group-IA or Group-IIA metal bonds, Group-IA or Group-IIA to Group-IB or Group-IIB element bonds, Group-IA or Group-II to Group-IB or Group-IIB element bonds, Group-IA or Group-IIA to transition and inner-transition metal bonds, Group-IA or Group-IIA to Group-0 elements); and (c) formation of the bonds to Group-IB or Group-II elements (sub-divided into formation of Group-IB or Group-IIB to Group-IB or Group-IIB metal bonds, Group-IB or Group-IIB to transition metal bonds, Group-IB or Group-IIB to Group-0 bonds). (In trying to define the content concisely I could not help thinking how much better it would have been if the IUPAC-favoured 1–18 numbering for the groups of the Periodic Table had been used for this series.) A substantial part (162 pages) of the volume is devoted to borides, and provides a very useful account of this important topic, including methods of growing crystals of such materials.

Contributors to this volume are: M.G. Barker, N. Bartlett, J.J. Bour, J.R. Chipperfield, J.R. Etourneau, P. Hubberstey, K.J. Klabunde, T. Lundström, H. Pastor, P. Peshev, R.J. Pulham, P. Rogl, G. Schmid, L.J. Steggarda, M.J. Taylor, J.W.A. van der Velden, and F.A. Vollenbroek. They provide an impressive body of organized information.

The author and formula indexes together take up 161 pages of the book, and there is also a brief (5 page) subject index.

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Colin Eaborn

Inorganic Reactions and Methods. Vol. 9. Formation of Bonds to C, Si, Ge, Sn, Pb (Part 1), A.P. Hagen (Ed.), VCH, New York, 1991, xxvi + 604 pages. DM 385.00; £136.00. ISBN 3-527-26267-9 and 0-89573-259-9

It will be possible to assess the overall value of this ambitious series (initiated by the late Professor J.J. Zuckermann) only when it is complete, but in the meantime some of the volumes are of considerable use even in isolation, and this is one such. It deals with methods of forming bonds between the elements of Group 14 (IVB)