Organoboron Compounds in Organic Synthesis; by B.M. Mikhailov and Yu.N. Bubnov, Harwood Academic Publishers, New York etc., 1984, xxxiv + 781 pages, U.S. $224.00. ISBN 3-7186-0113-3.

This book is a translation of a Russian text which appeared in 1983. It aims to present a systematic account of the vast amount of information available on the synthesis and reactions of various types of boron compounds and their use in preparative organic chemistry. It is far more than an account of the use of hydroboration, and is to my mind the most effective text on organoboron compounds generally, not just on their use in synthesis. Its value is all the greater because of its thorough coverage of contributions from the U.S.S.R., which so often receive inadequate notice in the West. (It is of interest that twice as many citations refer to one of the authors, B.M. Mikhailov, as to Herbert C. Brown, and even after allowance for the Russian tendency to publish everything at least twice that represents a very major contribution.)

The book begins with a brief introduction followed by a useful comprehensive account of the nomenclature of organoboron compounds, mainly following the I.U.P.A.C. rules. The main text is divided into five parts as follows: alkyl- and aryl-boranes (434 pages); boracyclanes (49 pages); alkenylboranes (73 pages); allylboranes (100 pages); alkynyl- and allenyl-boranes (24 pages); esters of thioboric and organothioboron acids (28 pages). There are extensive subject and author indexes.

Not only methods of preparation and reactions of the various types of compounds are described; physical properties (especially IR and NMR data) are also summarized, and brief accounts given of the mechanisms of the main reactions. Although no cut-off date for references is mentioned, I saw a good number of references to 1981 papers but none to later publications. The translation (which is described as 'revised' — it would be of interest to know exactly what the revision comprised) is exceptionally good.

This authoritative book should be of great value to both organoboron chemists and organic chemists, and it is unfortunate that the price is so high. It has to be accepted that the price of specialized texts is determined essentially by the estimated potential sales, not the sales by the price. The publishers evidently see the book as selling very largely only to a limited number of reference libraries, but I suspect that its appeal to organic chemists will be such that the greater number of sales resulting from a markedly lower price would have increased the overall return at the same time as bringing it to the wide readership it deserves.

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