Organometallic Syntheses. Vol. 2. Non-transition-Metal Compounds; by J.J. Eisch, Academic Press, New York etc., 1981, xiv + 194 pages, U.S. $29.50.

This book (which has only just been received from the publishers) actually appeared about one year ago, but is nevertheless being reviewed because of its considerable interest to readers of this journal.

Volume 1 of this set (by R.B. King) dealing with transition metal compounds, appeared as long ago as 1965. Those who have been engaged in experimental work on non-transition metal compounds in the 17 years since then will regret that this second volume was not available to them much earlier, but their welcome for it will be no less warm because of that.

Part I (84 pages) is essentially a laboratory manual describing general experimental techniques for investigating the chemistry of organometallic compounds of non-transition metals, and covers the establishment of anhydrous and anaerobic media, the carrying out of organometallic reactions, the purification and characterization of the products, and safety measures. It will be of value to all practitioners in the field, but especially helpful for newcomers. Part II (98 pages) gives details of methods of preparations of 85 well chosen representative organometallic compounds arranged by groups of the Periodic Table, and in all cases the procedures described have been developed or tested in the author's laboratory.

Finally there are four appendices. The first consists of a list of reviews or books on organometallic compounds of the main groups which will serve as a useful guide to the newcomer (though surprisingly there is no mention of the invaluable 12 volume set of books on Organosilicon Compounds by V. Chvalovský and J. Rathouský). The second appendix is a list of suppliers (unfortunately, but probably inevitably, all located in the U.S.A.) of reagents for organometallic chemistry, the third is a table of information on special solvents for organometallic reagents, and the fourth a Periodic Table of the main group elements with atomic weights.

The book, which has a good index of compounds, is well produced, and represents excellent value at today's prices. Laboratories in which non-transition metal organometallics are used regularly or even occasionally (and these days that must include the great majority of those concerned with organic chemistry) cannot afford to be without it.

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