

Book reviews

Organometallic Syntheses, Vol. 3; edited by R.B. King (University of Georgia, Athens, GA) and J.J. Eisch (State University of New York, Binghamton, NY), Elsevier, Amsterdam, 1986, xx + 663 pages, ISBN 0-444-42607-8, Dfl 445.– (approx. US\$ 198.–).

Earlier volumes of this series, written by R.B. King (Vol. 1, 1965) and J.J. Eisch (Vol. 2, 1981) covered the syntheses of organometallic compounds of transition metals and main group elements respectively. For the third and subsequent volumes the authors have come together as editors for a series of short articles commissioned from a world-wide group of practising organometallic chemists. In volume 3 there are syntheses for 87 transition metal compounds and 102 compounds of main group elements. Each article consists of an introduction, outlining available procedures and factors determining the choice between them, a clearly set out laboratory method, and further brief sections giving properties, reactions, e.g., in further syntheses, and references.

The main problem associated with the compilation of a book of this kind is in the selection of compounds for inclusion. If the preparation of a particular compound in high yield from readily available starting materials has been clearly and adequately described in a widely available journal, all that is required by another researcher is a reference to the original publication. If, however, a compound proves to have potential which was unforeseen at the time it was first made, and the original account of its synthesis is incomplete or not widely accessible, an authoritative recipe in the format of the present volume is of considerable value. A book such as this is especially important when a key organometallic compound has been made by several methods and the person who needs it for the first time is uncertain which of the possible preparative routes is most straightforward. He also needs to know whether there are hidden snags of which the original authors were not fully aware. Then the experience of someone with coworkers who have compared the several reported procedures is of particular value.

All the syntheses submitted to the present volume were reviewed, though it is not clear whether they were tested in the laboratory, by chemists engaged in research in organometallic chemistry and the comments of the reviewers were passed on to the authors. This practice, together with the considerable and wide experience of the two editors, has ensured that the standard of the work is high and that it will be an essential purchase for libraries in institutions where there is research in organometallic chemistry. The use of camera ready copy, however, with variations in type face and type size and in the number of lines per page, makes the appearance messy. The publisher has also managed to include a considerable amount of blank space, so that the book is much shorter than is indicated by the number of pages.