

Book reviews

Dictionary of organometallic compounds. Second Edition.

B.J. Aylett, M.F. Lappert and P.L. Pauson (eds.) Chapman and Hall, London, 1995. £2,950
ISBN 0-412-43060-6

The first edition of this Dictionary appeared 10 years ago. It was received with enthusiasm, and rapidly became an important tool for organometallic chemists. This second edition, in five volumes, is even better, for not only are there over 10,000 new entries but the content of each entry has been enhanced. Primary literature has been surveyed to mid-1993 and some important information from 1994 publications is included. The compilation will be updated in supplements, the first of which should appear in late 1995.

The entries now indicate the methods of preparation of each compound and, where relevant, use as a reagent or catalyst. The increasing importance of organometallic compounds in synthesis is recognised by inclusion of an Index of Synthetic Reagents.

As in the case of the first edition, a very valuable feature is that before the entries for each element there appears an index in which the formula of each compound is displayed, usually as a line structure. It is thus very easy and quick to see what types of organic derivatives are known for the element, and it is often examples of general type rather than a particular compound that the reader will wish to find.

This set of volumes is essential for all institutions concerned specifically with research or use of organometallic compounds, but in view of the rapidly increasing importance of organometallic reagents in organic synthesis should also be readily available in all organic laboratories. Indeed, it should be in all chemical reference libraries.

The volumes are beautifully produced, and very strongly bound to stand up to the intensive use they will receive. It is expensive, but it must be costly to compile, and its purchase will be a profitable investment for most

institutions. The Dictionary is also available on CD-ROM.

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Advances in Silicon Chemistry Vol. 2.

G.L. Larson (ed.), JAI Press, Greenwich, CN, 1993,
195 + xi pages, £62.50 USD 97.50
ISBN 1-55938-177-9

This volume bearing a publication date of 1993, was received for review only in the Spring of 1995.

The first volume in the series was outstanding and I awaited this one with much interest. If it excites less enthusiasm it is probably because the subjects are of more specialized interest and not because the accounts are in any way of lower quality. Indeed, the reviews are written authoritatively by leading workers in the fields concerned, and all seem impressively comprehensive and clearly and concisely presented. Literature coverage extends mainly into 1992 with one or two 1993 references. Somewhat unusually for these days there is a reasonably satisfactory subject index, suggesting that there was some direct human input into its compilation.

The reviews are on: (i) α,β -epoxysilanes (by P.L. Hudrlik and A.M. Hudrlik, 89 pages, 308 references); (ii) Gas phase studies of the negative ion chemistry of silicon (by R. Damrauer; 45 pages, 82 references) and (iii) theoretical investigations of the thermochemistry and thermal decomposition of silanes, halosilanes, and alkoxy silanes (by M.S. Gordon, J.S. Francisco and H.B. Schlegel; 48 pages, 218 references). All are very good, but I found especially timely and interesting that by Damrauer, which brings together the remarkable amount of wholly novel information revealed by negative ion studies, much of them carried out by Professor Damrauer and by C.H. Depuy, separately or in association. Though many of the observations can be accounted for