

work in this area. Other chapters then cover speciation work for individual elements (and their environmental organometallic compounds where relevant), namely mercury, lead, tin, arsenic, selenium, chromium and aluminium. A final chapter describes the important networking aspects of this work.

The book is written from a European perspective, where the situation of numerous national efforts easily allows separate work to be done, followed up by discussion as a whole. The book is edited by Dr Philippe Quevauviller of the Standards, Measurements and Testing Bureau of DCXII of the EU, the inspirator and coordinator of much work in this area. No more knowledgeable, enthusiastic and able editor for a work of this nature could possibly be selected. The present reviewer writes as one who has engaged in the process and can vouch for the value of a summative work such as this. It will be on all our bookshelves!

P. J. CRAIG

De Montfort University, Leicester, UK

Organosilicon chemistry IV—From molecules to materials

N. Auner and J. Weis (eds)

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This volume is the fourth in the series covering the lectures and posters presented at the now well-established Münchner Silicontage meetings, this latest one held in April 1998. The book follows a similar format to its predecessors with most contributions being about four to seven pages long. There are 124 contributions as well as an Introduction, and an Author and a Subject Index.

The book opens with an Introduction by the editors that covers some of the differences between carbon and silicon chemistry together with a brief description of a selection of the newer trends in organosilicon chemistry. There is no obvious division of the many contributions by either the original type of conference presentation or subject area, but the indexes compensate for this so that it is not a problem. The contributions are, however, grouped roughly according to subject. The opening few papers (*ca* 32 pages) are devoted to the increasingly important area of silicon biotechnology, including

biomineralization of silica and Si- and Ge-containing amino acids. This is followed by about 15 papers (*ca* 120 pages) on the still-popular area of small reactive molecule silicon compounds containing double bonds or divalent silicon centres. There are then about 26 contributions concerning new synthetic methods and structures of stable monomeric silicon compounds that could be used as synthons in a wide range of further chemistry. This section will be of interest to many chemists, as silicon is now used so widely in general synthesis of organometallic compounds. There are then shorter sections dealing with silicon compounds containing metals, five- and six-coordination at silicon, and the increasingly important silsesquioxanes. These are followed by more than 200 pages devoted to many aspects of polymers containing silicon (polysiloxanes, polysilanes, polycarbosilanes etc.), and this area then makes a natural progression into the field of ceramics containing silicon and other 'materials' such as silica and elemental silicon. The format thus follows the subtitle for the book, *From Molecules to Materials*, very well and demonstrates the extraordinary range of compounds and applications in which silicon is to be found in modern chemistry. The wide range of topics covered illustrates the strength of German chemistry in this field, since almost all of the contributions are, as in former volumes, from either German or Austrian groups. This is a treasure trove for organosilicon chemists, all of whom will find many articles of interest. The only disappointment may be for those who use organosilicon chemistry purely for organic synthesis. The focus here is very much on chemistry at the silicon atom and rather less on how it might be of advantage for the organic chemist.

As in previous volumes, the layout of the book is clear, the figures are well reproduced and the overall impression is excellent. Unfortunately the sheer size of the book is starting to make its price go beyond reach for personal purchase. This is a pity, as one of the strengths of the book is its coverage; many other books of conference proceedings provide only a relatively small range of long chapters derived from plenary or invited lectures. Here we get an excellent feel for what is going on across the whole range of organosilicon chemistry. The book can be recommended to any library where organometallic chemistry is covered and also to individuals with a serious interest in organosilicon chemistry.

PAUL D. LICKISS

Imperial College London, UK