

Book reviews

Tin in Organic Synthesis: by M. Pereyre, J.-P. Quintard and A. Rahm, Butterworths, London, 1987, 342 pages, £65.00, ISBN 0-408-01435-0.

This book is an up to date account of the uses of tin compounds in organic synthesis, written by three experienced practitioners in this field. The volume is divided into four sections, the first being an introduction to organotin chemistry. This is something of a whistle-stop tour, with the mechanistic aspects of organotin chemistry relevant to synthesis highlighted. Part two details synthetic applications involving tin hydrogen bonds, covering reduction of organic halides, carbonyl compounds, thio, seleno, and telluro compounds, nitrogen compounds and carbon carbon double bonds. This is a very detailed and comprehensive account, though it tends to be somewhat indigestible. Its weakest point is that few comparisons with alternative strategies are made, and few of the positive advantages of choosing tin reagents are presented.

Part three of the book deals with synthetic applications involving tin–carbon bonds. This includes consideration of the formation of carbon hydrogen bonds by protolysis of carbon–tin bonds, halodemetalation, oxidation, metallation and trans-metallation, and formation of carbon–carbon bonds. The final section describes synthetic applications involving tin heteroatom bonds with chapters on tin alkoxides, tin enolates, oxides, peroxides, and esters.

This is a good account of tin in organic synthesis with many useful details. However, the emphasis is very much on the tin rather than the synthesis, and I am not convinced that this will persuade the novice in the field to investigate the use of tin compounds in a practical rather than a “paper” sense. Somewhat more emphasis on the type of organic transformation to be achieved rather than the type of tin compound to be used would have been useful. The book is well produced, with attractive text layout and diagrams. The bibliography is good (if rather curiously presented, with a strange mixture of upper and lower case fonts) and contains references into 1985. The index seems complete and helpful. At £65.00 this book is rather too expensive for individual purchase, but it should be a useful library reference work. It is an interesting specialist text for the organometallic chemist, but in this I fear it may have missed its aim to be of more general interest to the synthetic organic chemist.