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Book reviews

Organotin Chemistry; by I. Omae, Elsevier, Amsterdam, 1989, viii + 355 pages, Dfl. 270.00, $142.00. ISBN 0-444-87456-9. (Available from Elsevier Science Publishers, P.O. Box 330, 1000 AH Amsterdam or Elsevier Science Publishing Co. Inc., P.O. Box 882, Madison Square Station, New York, NY 10159.)

This volume is number 21 in the *Journal of Organometallic Chemistry Library* series, and is intended as a introduction to organotin chemistry for researchers and graduate students in organic and pharmaceutical chemistry and other branches of organometallic chemistry. The sweep is therefore broad, and the aim is to put the subject in context rather than to give detailed and comprehensive coverage.

The introductory chapter on elemental tin and tin compounds is similar to that in most standard texts on inorganic chemistry. The next chapter gives a systematic summary of the methods for the conversion of the starting materials, tin(IV) chloride or metallic tin, into tetraorganotins or organotin halides. How these compounds are converted into a range of other organotin derivatives, and reactions such as hydrostannation and hydrostannolysis, are described in two further chapters. The four remaining chapters cover organic syntheses with organotin compounds, the structures of organotin compounds, spectroscopic investigations, and applications of organotin compounds, e.g. as PVC stabilisers, catalysts, wood preservatives, and antifoulants.

The book has both strengths and weaknesses. The strengths are that it provides a balanced and broadly based introduction for the non-specialist and new graduate student, that it brings together in a handy concise form information about the various ways in which a problem in organotin chemistry may be tackled, and that it gives useful compilations of structural and spectroscopic (IR, NMR and Mössbauer) data. The English is good, the writing is clear, the camera-ready presentation is uniform and pleasing, and there is a reasonable index. The most recent references are to the 1988 literature. The weaknesses become apparent when the book is used to follow up the preparations, properties, and reactions of individual compounds. Then it is found that many references are to other books and secondary sources, rather than to the original papers, which would be required, for example, to carry out a synthesis or check a physical measurement. Many of the references are to the Japanese literature. The author has rendered a considerable service to those whose principal language is English by drawing attention to that work, but researchers will still have to seek out and translate original sources to obtain details of particular compounds or reactions. It is asking a lot to expect a book to satisfy both the specialist and the non-specialist at the same time. The expert in organotin chemistry may well quibble about the details, but this book provides a good summary of the subject for students and others who wish to see it as a whole.

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