

## Book Review

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**Organometallic compounds in the environment (2nd edition)**

Wiley-VCH, 2003,  
434 pp; price £115.  
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In the preface to the new edition of this book, first published in 1986, the editor notes the abundance, in the scientific literature, of research on organometallic compounds in the environment. He observes that this is not always easily accessible to the reader and states that *Organometallic Compounds in the Environment* is designed as 'a single-volume source of information for this area'. I think it is in this context that readers will find this text most successful. Readers should approach the book foremost as an important source of academic research findings in the field and not as an easy 'bedside' read, so to speak.

After the first chapter, of which more below, each chapter is essentially a finely honed literature review on the organometallic compound in question, each containing up-to-date findings and numerous collations of data to enlighten any researcher, lecturer or student. The first chapter is perhaps the most instantly 'readable' of the entire book and successfully expresses, within its 55 pages, a sense of the complexity of environmental

organometallic chemistry whilst clearly and succinctly conveying the basic concepts required for further understanding. The remaining chapters, each covering a single organometallic compound (or, in the case of Chapter 10, a sort of 'pick-and-mix' of organometallic compounds) are, as stated before, more concerned with communicating the accumulated, and most recent, research findings. Therefore, each chapter may be read in isolation of the others, depending on the information required by the reader at any particular time.

Each chapter contains much to enlighten and inform the reader, not just in the comprehensive collations of research findings, but in the wider discussions that take place. To quote just one example: an interesting and informative strand within Chapter 5 questions the reasons (still unknown) for the absorption of toxic arsenate and its conversion to arsenosugars by certain marine organisms. Concise tables of data are included throughout the book, and these will be very useful to many readers; for example, concentrations of organometals in different environmental compartments are comprehensively listed in several chapters and the chapter on organolead compounds includes a two-page table on the lead content of petrol in every country of the world. The latter may be of only passing interest to many readers, but it is an example of the kind of

attention to detail that will be of value to individuals. Analytical advances, so vital for progressing our knowledge, are covered in detail throughout the book, and attention is given, in individual chapters, to future research areas.

Amidst all this valuable data and research detail, there are snippets of information of a lighter nature. So, for example, amidst the impressive and comprehensive catalogue of research findings that comprises the chapter on organotin compounds in the environment, we learn that clearing the hull of the *Queen Elizabeth II* of algae, weeds and shellfish in 1978 (by TBT) resulted in fuel cost savings of 12% per year. In a similar vein, in Chapter 2 the connection between mercury and the phrase 'mad as a hatter' is made: for the uninitiated, mercury (a neurotoxin) was once used in the hat-making industry.

But it is as a 'one-stop-source' of research information that this book should be most highly recommended. For anyone interested in the chemistry, behaviour, fate and toxicity of the various organometallic compounds in the environment, this text will be a valuable addition to the library.

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