

## Book reviews

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### **The chemistry of pollution**

G. Fellenberg

John Wiley & Sons, Chichester, 2000

x + 192 pages. £24.95 (paperback)

ISBN 0-471-61391-6

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This book has been translated from the German version, which is now in its third edition. Thus it is clearly a popular text in Germany, although it appears to have lost something in the translation. The use of English is strange in places and, in general, the text is very terse and often reads more like a review article in a journal than an academic textbook. In addition, the use of short paragraphs jumping between examples does not help the reader's understanding of many of the topics and sometimes distracts from the overall value of the chapter. In terms of contents, the book has a broad (ambitious) coverage, its strength being the chemistry rather than the superficial attempts to relate the material to more generic environmental issues. Indeed, Chapter 9, the last chapter in the book, entitled 'Outlook', with a length of less than a page, has very little value at all. But there is much information crammed into the 192 pages. The author attempts to cover the nature of pollution; atmospheric pollution; ground and surface waters; soil pollution; 'widespread materials'—PCBs, PAHs, organo pesticides; foodstuffs; and 'consumer goods'—using examples of cleaning agents, detergents, paints, cosmetics and toilet articles, and radioactivity.

This is fine as a book to dip into for a brief overview of chemical aspects of pollution from the above sources, although some areas do require some prior knowledge of chemistry to facilitate a full understanding. The frustrating part is that, having got started on a topic, the text stops. There are many examples throughout the book, but strangely there are absolutely no references! The literature listing at the back of the book (23 titles) of other associated texts are all apparently in German. Hence, the non-German speaking reader is left with a little knowledge of many topics, but without guidance as to further reading. This identifies the main problem with this text: it appears to be an almost word-for-word translation into English of a German text, written from the German viewpoint. There are a surprising number of typographical errors and most of the more specific examples (on river pollution, consent limits for gaseous pollutants in the workplace, dietary intake data etc.) relate directly to Germany. All of this distracts from the value of the book to a non-German reader. This is a pity, since clearly the subject matter is well researched and potentially offers an (albeit brief) overview of much appropriate and important pollution chemistry. Unfortunately,

however, given its shortcomings, it is not a book that I could recommend without reservation to undergraduate students, although it does provide an interesting overview for those with a general interest in pollution chemistry.

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### **Ligand field theory and its applications**

B. N. Figgis and M. A. Hitchman

Wiley-VCH, New York, 2000

xviii + 354 pages. £51.95

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This book, planned as the first in a series (*Special Topics in Inorganic Chemistry*) of single-volume introductions to major areas of inorganic chemistry written by experts, sets a high standard for that series. Its senior author, Brian Figgis, wrote an early authoritative volume, *Introduction to Ligand Fields*, published in 1966, that rapidly became a classic, and he has subsequently charted progress in the area in review articles. This new volume, each chapter of which contains several references to other books, review articles or key papers, shows the reader just how far the subject has now progressed.

A short introduction to ligand field theory has routinely been provided in most general inorganic chemistry texts for undergraduates for many years now, and some familiarity with the principles of the subject is expected of most graduates in chemistry. Greater familiarity with the subject is, however, required of those interested in the structural, thermochemical, magnetic or electronic and associated spectroscopic properties of transition-metal compounds, whether extended lattice systems or molecular complexes, and this looks likely to become one of the key source books to which such researchers can refer. It is not intended as an introduction to the subject for the typical undergraduate—it assumes too much prior knowledge of molecular orbital theory, symmetry and group theory to provide an