Environmental Analytical Chemistry. 2nd Edition. Edited by *F. W. Fifield* and *P. J. Haines*. Blackwell Science, Oxford 2000. 512 pp., paperback £ 24.99.—ISBN 0-632-05383-6

The authors' declared aim in this book is to bring together environmental chemistry and analytical chemistry in a way that can be clearly understood. Certainly quite a task! Unfortunately it must be said at the outset that the authors have only partially achieved that bold ambition.

The book's 20 chapters are arranged in two parts, the first devoted to general analytical principles and methods, and the second using that as the basis for discussing applications to problems of environmental analysis. The authors begin with an outline of the present status of environmental analysis, explaining, for the benefit readers new to the subject, the basic characteristics of analytical methods and how they are used. Then, correctly (and in contrast to many well-established textbooks of analytical chemistry), they go straight into the processing and interpretation of analytical data and the calculation of error limits. Unfortunately, however, they do not introduce the reader at this point to such important matters as calibration, limits of detection, and the validation and reproducibility of analytical methods. Unfortunately, this superficiality is typical of many parts of the book, and appears in other parts of the first 12 chapters that are devoted to analytical methods. There are many instances where one has ask why minor points deserved to be treated in such detail, or even mentioned at all, whereas other essential ones have been unaccountably omitted or merely touched on. One need only point to the long description of NMR spectroscopy, in contrast to the extremely brief treatments of ICP and ICP–MS methods, which does not reflect the extent to which these methods are used in practice. Of course, one cannot expect an introductory textbook of this kind to provide extensive and detailed treatments like those in monographs on analytical chemistry, but concise treatments appropriately focussed on the key topics would have improved the book. Also one must question whether a chapter on basic chemical principles needs to discuss concepts such as chemical bonding or acid–base theory; here the authors should have relied on their readers already having such knowledge. However, despite these reservations, the first 12 chapters of the book provide a satisfactory overview of the most frequently used analytical methods (conventional elemental analysis, thermal analysis, electroanalytical methods, spectroscopy, and chromatography), in other words the main repertoire of modern analytical methods. In addition to these conventional techniques there are very useful descriptions of the use of biological indicators, the measurement of ionizing radiations, and radionuclides; by including these the book stands apart from others in the same subject area.

The following eight chapters, which are concerned with actual problems in environmental analysis, create a more positive impression than the part on analytical methods. As well as describing analyses of different environmental media, this second part discusses some other advanced analytical methods that are appropriate to special problem areas. The chapters range over the broad field of environmental chemistry, with contributions not only on the three main environmental compartments (soil, water, atmosphere) but also on special problem areas such as old toxic waste tips, ecotoxicology, and radioactive contamination. Here, even the reader not directly involved in analytical or environmental chemistry can learn something of the complexity of the many kinds of environmental analysis problems that must nowadays be addressed. In these sections, the treatment of technical matters such as sampling, selectivity, and analytical methodology is appropriately brief, to avoid burdening the reader with too much difficult detail. Nevertheless (and this is certainly what gives the book its special appeal), it clearly emerges that solving environmental analytical problems requires interdisciplinary detective work and a high level of expertise in using the whole range of analytical techniques. Thus, the book achieves at least a part of its declared aims, although it can only serve as an hors d'oeuvre to lead one into further reading on the subject. The book contains examples and exercise problems in many places as an aid to individual study and deeper understanding; however, it would also have been useful to provide a more comprehensive and up-to-date bibliography (with comments) in each chapter. The quality of the figures seriously fails to do justice to the book; in a third edition the publishers need to provide more than these poorly scanned drafts.

To summarize, the book can serve as an introduction to environmental analysis and environmental chemistry, and is also suitable for readers with only a limited knowledge of chemistry. The attempt to strike a balance between an elementary presentation and building a solid foundation of knowledge is unsuccessful in some parts; too often the descriptions are superficial or not sufficiently relevant and up-to-date.

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Chiral Catalyst Immobilization and Recycling. By *Dirk E. De Vos, Ivo F. J. Vankelecom* and *Pierre A. Jacobs*. Wiley-VCH, Weinheim 2000. xx + 320 pp., hardcover DM 248.00 (ca. € 126).—ISBN 3-527-29952-1

Since Ojima's first book on *Catalytic Asymmetric Synthesis* in 1993 and the recent second edition, it is hard to set a new benchmark in this area. However, those books are focused on stereocontrolled catalysis in solution, and very little is mentioned about the rapidly growing field of immobilized chiral catalysts. Recently, De Vos, Vankelecom, and Jacobs took a completely new approach as editors of *Chiral Catalyst Immobilization and Recycling*. They have attracted a wide variety of highly recognized experts from industry and academia, and have thus managed to present this topic in a balanced and attractive way.

The book is divided into 12 chapters, four of which are of a more general nature, introducing concepts, supports, and separation techniques for immobi-

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