



ELSEVIER

Journal of Hazardous Materials 124 (2005) 255–258

**Journal of  
Hazardous  
Materials**

www.elsevier.com/locate/jhazmat

## Book reviews

**K. Clive Thompson, Kirit Wakhia, Andreas P. Loibner (Eds.), *Environmental Toxicity Testing*, CRC Press/Blackwell Publishing Ltd., Oxford, UK, 2005, 408 pp., £129.95, ISBN: 1-4051-1819-9.**

Environmental toxicity testing is evolving as an important component of environmental control going beyond simple chemical analysis of toxic compounds. This book does that by examining new issues regarding environmental toxicity tests such as identification of pertinent tests including and evaluation of their reproducibility, robustness and cost. Also examined are the advantages, benefits and drawbacks of the strategies and methods proposed.

The editors succinctly describe the book's contents in the preface thusly:

“A historical perspective on effective management of the environment is presented in Chapter 1, which provides a comprehensive overview of the subject. This is followed by a chapter on effective monitoring of environmental toxicity, including aspects of quality control. Quality control is of fundamental importance in environmental toxicity testing, but it fails to achieve a prominence comparable with routine chemical analysis parameters. In Chapter 3, the fundamental concepts of ecotoxicological testing and evaluation are described, with explanations of the relevant methodology and systems. The extent of variability and standardisation of testing are clarified.

The rationale for the utilisation of toxicity tests and the inference of data employing different techniques is discussed in Chapter 4. Monitoring of the quality of water and soil ecotoxicological techniques are likely to assume greater importance with the implementation of the EU Water Framework Directive and the EU soil assessment strategy. Aspects relevant to the aquatic environment are conveyed in Chapter 5, and biological methods available for the assessment of the terrestrial environment are described in Chapter 6.

Chapters 7 and 8 on biomarkers and genotoxic substances clarify these two controversial areas of increasing importance.

Chapter 9 examines legislation in a global context, with examples from the UK, the Netherlands, Germany and the

USA. It is evident that the strategies adopted are country-dependent. The penultimate chapter is an illustrative case study from the petroleum industry, which illustrates the use of a robust, pragmatic approach to a complex problem.

The final chapter provides an insight into the future, highlighting likely new developments that should improve environmental toxicity testing in respect of relevance of tests, improvements in efficiency and, ultimately, reductions in costs.”

Contributors, numbering 31 (in addition to the editors), represent a wide variety of researchers from Europe and North America. The book is well written and contains numerous references to the scientific literature. As such, it represents a significant resource to those interested in environmental preservation.

G.F. Bennett\*

*The University of Toledo, Department of Chemical and  
Environmental Engineering, Mail Stop 305  
Toledo, OH 43606-3390, USA*

\*Tel.: +1 419 531 1322; fax: +1 419 530 8086  
*E-mail address: gbennett@eng.utoledo.edu*

20 April 2005

Available online 27 June 2005

doi:10.1016/j.jhazmat.2005.04.029

**Suthan S. Suthersan, Fred C. Payne, *In Situ Remediation Engineering*, CRC Press, Boca Raton, FL, 2005, 531 pp., US\$ 129.95, ISBN 1-56670-653-X.**

In the introduction to this book, the authors succinctly outline the application of this technology utilized to treat contaminated sites: “The realization that mass removal efficiencies can be significantly enhanced using air as an extractive media instead of or in addition to water led to the development and application of in situ extractive technologies such as soil vapor extraction and in situ air sparging.”

The next major development, in situ remediation, was the utilization of in situ non-extractive technologies such as fun-