

Soil Pollution, Processes and Dynamics, by B. Yaron, R. Calvet, R. Prost, Springer, Berlin, 1996, 313 pp., 105 figures and 46 Tables, £92.50, ISBN: 3-540-60927-X

The preface notes that the soil is the medium through which pollutants move from the land surfaces to groundwater. The book addresses a basic overview of the processes governing the behavior of pollutants as affected by soil constituents and environmental factors. The book consists of four parts and 10 chapters:

- 1 Part I: The Interacting Materials
 - 1.1 Chapter 1: The Soil as a Porous Medium
 - 1.2 Chapter 2: The Soil Pollutants
1. Part II: Pollutants Partitioning Among Soil Phases
 - 1.1 Chapter 3: Pollutants-Soil Solution Interactions
 - 1.2 Chapter 4: Volatilization into the Soil Atmosphere
 - 1.3 Chapter 5: Retention of Pollutants on and Within the Soil Solid Phase
1. Part III: Pollutant Behavior in Soils
 - 1.1 Chapter 6: Reversible and Irreversible Retention -Release and Bound Residues
 - 1.2 Chapter 7: Transformation and Metabolite Formation
 - 1.3 Chapter 8: Pollutants Transport in the Soil Medium
1. Part IV: Prediction and Remediation
 - 1.1 Chapter 9: Modeling the Fate of Pollutants in the Soil
 - 1.2 Chapter 10: Risks and Remedies

As can be concluded from the Contents, the authors present a comprehensive, but not exhaustive review of the current knowledge concerning soil pollution. One of the consequences is that the book is descriptive rather than profoundly mathematical. For example, the boundary conditions of the presented differential equations (describing transport) are not discussed and solutions not derived. Nonequilibrium transport models are presented, but I have missed correlations for the mass transfer coefficients (these have my warm interest). On the other hand, the authors illustrate various interesting processes via a number of examples from the literature and from their own results.

Summarizing, the book covers a broad field, is clearly written and hence, may serve (under-)graduate students in the fields of agricultural, chemical, civil and environmental engineering, and also serve as an introduction book to specialists.

H.J.H. Brouwers

Microbial Transformation and Degradation of Toxic Organic Chemicals, L.Y. Young and C.E. Ceriglia Eds.

The book is organised in four parts. It starts with a discussion of microbial versatility and contaminant types. Part two covers the microbiology and biochemistry of contaminant biodegradation with chapters on petroleum hydrocarbons, reductive dechlorination of PCBs, cometabolism of chlorinated aliphatic hydrocarbon solvents, halogenated