

Environmental and Pollution Science, I. Pepper, C.P. Gerba, M.L. Brusseau (Eds.), 2nd ed. Elsevier/Academic Press, Burlington, MA (2006). 552 pp., US\$ 89.95, 8 1/2 × 11 format, ISBN: 0-12-551503-0

This book, which is a successor to a 1996 text entitled *Pollution Science*, is intended to be used by science-based junior/senior-level undergraduate students having such diverse backgrounds as environmental science, hydrology, earth science and environmental engineering.

Environmental and Pollution Science has 32 chapters published under six major headings. Given the overwhelming amount of material in the book, a comprehensive review of each chapter is not feasible. Therefore, I am simply going to list the chapter titles to illustrate the wide and comprehensive coverage of the topic:

Part 1: Processes Affecting Fate and Transport of Contaminants

1. The extent of global pollution.
2. Physical–chemical characteristics of soils and the subsurface.
3. Physical–chemical characteristics of waters.
4. Physical–chemical characteristics of the atmosphere.
5. Biotic characteristics of the environment.
6. Physical processes affecting contaminant transport and fate.
7. Chemical processes affecting contaminant transport and fate.
8. Biological processes affecting contaminant transport and fate.

Part 2: Monitoring, Assessment, and Regulation of Environmental Pollution

9. Physical contaminants.
10. Chemical contaminants.
11. Microbial contaminants.
12. The role of environmental monitoring in pollution science.
13. Environmental toxicology.
14. Risk assessment.
15. Environmental laws and regulations.

Part 3: Land and Water Pollution Mitigation

16. Soil and land pollution.
17. Subsurface pollution.
18. Surface water pollution.
19. Soil and groundwater remediation.
20. Ecosystem restoration and land reclamation.

Part 4: Atmospheric Pollution

21. Sensory pollutants, electromagnetic fields and radiofrequency radiation.
22. Indoor air quality.
23. Atmospheric pollution.
24. Global change.

Part 5: Waste and Water Treatment and Management

25. Industrial and municipal solid waste treatment and disposal.
26. Municipal wastewater treatment.

27. Land application of biosolids and animal wastes.
28. Drinking water treatment and water security.

Part 6: Emerging Issues in Pollution Science

29. Genetically engineered crops and microbes.
30. Antibiotic-resistant bacteria and gene transfer.
31. Pharmaceuticals and endocrine disruptors.
32. Epilogue: is the future of pollution history?

As an environmental engineer and one who has taught air, water and hazardous waste courses, I was tempted to attempt to try to find lapses in the coverage of these topics. Not surprisingly, I did find some topics not as well covered as I would have liked for use in an engineering course. But given the focus of the text, i.e., environmental science majors, these omissions are not a major detriment. For example, indoor air quality, atmospheric pollution and global change were covered well, but industrial air pollution control was not. Conversely, water pollution control and water treatment (both dealing with municipalities) were thoroughly discussed. I was surprised, but delighted, to see coverage of land application of biosolids (a topic of personal research interest). The discussion was very well done.

Clearly, the editors faced a space dilemma and had to choose topics most relevant to their prospective audience which was not mainly engineering students.

I was amazed at the liberal, or should I say copious, use of color photographs and diagrams in the book. This material was somewhere between excellent and superb. Other material was found in “information boxes” and “case study boxes.” Questions and problems were found at the end of each chapter along with short reference lists.

This is one of the most enjoyable and very reasonably priced books that I have reviewed recently. Its coverage of the topic, in the main, is excellent. I am sure it will be widely adopted by its intended audience.

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Annually, Dr. Merv Fingas (an editor of this journal) sends me the proceedings of Environment Canada’s AMOP technical