whether the book even includes information on a topic of interest.

The usefulness of this book to me is easily seen by the number of places I have already highlighted or marked in some way. Anyone interested in research or managing bioremediation projects will find this book extremely helpful and one that will remain within easy reach on the desktop. If it were not for the high price of this book, I would also highly recommend it as a text book for a graduate-level course on soil remediation, especially a course taught within a biological context with focus on bioremediation strategies. An instructor will find much up-to-date information on various topics of remediation of hazardous waste-contaminated soils that could be incorporated as part of a course, even if the entire book is not selected as the primary text. —W.A. DICK, School of Natural Resources/Soils, The Ohio State University, Wooster, OH 44691.

Soils and The Environment: An Introduction


Soils and The Environment is intended to provide an overview of the interaction of soils within the natural environment, as well as that influenced by human activity. The book is divided into two components; Part A presents a general discussion of soil properties and processes, and Part B addresses soils in relation to the environment.

The book is well written and interesting to read. The organization is logical and the presentation is appropriately illustrated. Part A, Chapters 2 through 6, includes topical discussions of: the soil components, development of soils, sorptive properties of soils, organisms and soil processes, and movement of water, air, solutes, and heat in soil. Part B, Chapters 7 through 12, includes discussions of soil as a medium for plant growth, soil conditions and crop production, soil acidification, heavy metals and radionuclides in soil, the atmosphere, global warming and ozone depletion, and soil erosion and conservation. The book concludes (Chapter 13) with a presentation of typical soil related agronomic and environmental problems and solutions such as maintaining soil fertility, organic farming, pesticides in soils, and soil degradation.

Student interest in soil science has gradually shifted from that of an agronomic perspective to one of an environmental emphasis. In responding to the growing interest in environmental soil science, however, it is important that the agrarian basis remain an essential component. Soils and The Environment is current, encompasses both aspects, and by providing a simplified presentation of a complex topic, is appealing as a text for work assignments, I had to refer to past texts. “Course content was good as was the subject matter .... I know there are better texts available.”

In fairness to the author, poor student recogniti on been due, in part, to the instructor’s requirement for supplemental quantitative presentation, and is in need of more problem solving examples as well as both mathematical (answers provided) and discussion questions at the end of each chapter. Soils and The Environment is presently best suited for courses geared to the community college level. W.W. MILLER, Department of Environmental & Resource Sciences, University of Nevada, Reno, NV 89519.

Geochemical Thermodynamics, 2nd Edition


In their recent work, Anderson and Creny and others in this field have shown that thermodynamics texts are like performances of a Beethoven symphony:

Mostly they do not say anything that has not been said (what is left to say after Gibbs?), but they do add a lot remains in the interpretation, the choices of the authors...are like conductors—their worth is shown in the insights of their interpretation... (from In Geochemistry, Oxford University Press).

By this yardstick, Nordstrom and Munoz offer what is an accessible and appealing to a wide audience of environmental scientists, yet faithful to the original text.

The 13 chapters fall conceptually into three groups. Chapter 1, for example (Chapters 1–4, 71 p.) deals with fundamentals of state, equilibrium, the laws of thermodynamics, and phase equilibria. Throughout this development, the authors are careful to maintain an explicit geochemical context via illustrations, and to provide mathematical help of differential exactness to determine whether a state function; properties and physical meaningful derivatives).

The second group of chapters (5–10, 252 p.) includes classic applications of the fundamentals to gas, aqueous, and solid solutions; minerals; and silicate melts. General issues are introduced first, followed by specific applications that illustrate the use of the fundamentals. A fourth group of chapters (11–13, 92 p.) concludes (Chapter 13) with a presentation of typical soil related agronomic and environmental problems and solutions such as maintaining soil fertility, organic farming, pesticides in soils, and soil degradation.