

engineering and as a reference book for practicing engineers.” In my opinion, the authors have met their goals superbly. The only thing lacking, and that is a minor criticism, is problems for potential student assignment. Their inclusion would have enhanced (not that the book needs much enhancement) the book’s use as a student text.

Let not that minor criticism dissuade you from acquiring book. It is the best-written, most comprehensive and well-illustrated text I have reviewed recently. The subject is covered well in the following chapters:

1. Introduction;
2. Sludge quantities and characteristics;
3. Thickening and dewatering;
4. Aerobic digestion;
5. Anaerobic digestion;
6. Alkaline stabilization;
7. Composting;
8. Thermal drying and incineration;
9. Comparison of energy consumption;
10. Beneficial use of biosolids.

As I read the book, I made a list of aspects that impressed me. They are as follows:

- Much data are provided on sludge processing systems;
- Foreign treatment systems are discussed and data provided (the senior author is Russian and there are numerous references to the Russian literature);
- Provision of numerous worked examples of process calculations;
- Thorough coverage of the topic (I was surprised, but pleased, to even see a reference to sludge treatment in my home city of Toledo, Ohio, where I was privileged to help develop the Cement Kiln Dust sludge treatment system).

In conclusion, I reiterate my admiration for the writers’ thorough coverage of the topic. Unlike many books, the authors did not digress into a host of unrelated material. They stuck to the topic.

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Industrial Hygiene Simplified: A Guide to Anticipation, Recognition, Evaluation and Control of Workplace Hazards, F.R. Spellman. Government Institutes/Scarecrow Press, Lanham, MD (2006). 363 pp., Price: US\$ 99.00, 8.5 × 11 soft cover, ISBN: 0-86587-019-2

Spellman begins this book with the following statement:

“According to the Occupational Safety and Health Administration (OSHA), industrial hygiene is the science of anticipating, recognizing, evaluating, and controlling workplace conditions that may cause workers injury or illness. Industrial hygienists use environmental monitoring and analytical methods to detect the extent of worker exposure. They also evaluate employee engineering, administrative controls, and other methods, such as personal protective equipment (PPE), designed to control or guard against potential health hazards in the workplace.”

This book will be a tremendous asset to those professionals given the foregoing task. It is written by a well published author (I found at least four citations to his prior books in the references).

On the back cover, the publisher notes that the book is “. . . a straightforward response to the need for a hands-on resource that focuses on modern industrial hygiene practice. It is intended for in-field use, corporate training settings, and for those involved in such disciplines as industrial technology, manufacturing technology, industrial engineering, engineering technology, occupational safety, management, and supervision.”

In the body of the book, the reader will find the following well-written chapters.

1. What is industrial hygiene?
2. Industrial hygiene/safety terminology
3. Hazard communication, occupational environmental limits, and air monitoring and sampling
4. Indoor air quality and mold control
5. Noise and vibration
6. Radiation
7. Thermal stress
8. Ventilation
9. Personal protective equipment
10. Toxicology: biological and chemical hazards
11. Ergonomics
12. Engineering design and controls

The writing is clear, definitions are supplied when needed, and equations are supplied for calculations when appropriate. Reference lists and suggested reading are found at the end of each chapter.

Readers new to the field will be well-served by the information in Chapter 2 which is entitled “Industrial Hygiene/Safety Terminology.” That chapter contains more than 20 pages of definitions of terms.

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Hazardous Substances & Human Health: Exposure, Impact and External Cost Assessment at the European Scale, T.M. Bachmann. Elsevier, Amsterdam, The Netherlands (2006). 612 pp., US\$ 135.00, ISBN: 0-444-52218-2

This book is the eighth in Elsevier's series of books entitled "Trace Metals and Other Contaminants in the Environment." It is not for the faint-hearted, as the author has produced a very detailed technical look at the subject.

In the preface, the author writes:

"This book sets out to improve the reliability of cost-benefit analyses particularly of hazardous substances present in air, water, soil and food. It suggests that the human health risk assessment of chemicals is performed in a bottom-up analysis that is based on spatially resolved multimedia modelling approach. In order to allow for cost-benefit analyses to be conducted, this approach is accompanied by monetary valuation of human health impacts."

I would find it difficult to improve on a further description of the book which is found on the back cover. It reads:

"There is widespread public concern about the presence of hazardous chemicals in air, soil, water and food. Policy makers have therefore adopted a series of limit or target values regulating emissions and concentration levels of these substances. Such policy decisions need to be made in a balanced way, taking environmental protection as well as a well-functioning economy into account. The main problem, however, is to compare the costs for achieving these targets with the benefits to society of having a lower exposure to hazardous substances.

This book sets out to improve the reliability of cost-benefit analyses of so-called multimedia hazardous substances. It suggests that human health risk assessments of these chemicals be performed in a bottom-up analysis supplemented by monetary valuation of human health impacts, yielding so-called external costs. Results for the priority metals selected show that their external costs are small compared to those of classical air pollutants and involve rather long time horizons, touching on intergenerational equity within sustainable development. When further hazardous substances are

included, the total external costs attributable to contaminants would be more substantial."

Bachmann's very detailed technical analysis of external costs is beyond the scope of my normal reading so a technical evaluation of what he presents is not included here. I note, however, that he has been very thorough in his scrutiny of the literature and provides more than 500 citations to support his conclusions.

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Bioterrorism Preparedness: Medicine-Public Health-Policy, N. Khardori (Ed.). Wiley-VCH, Weinheim, Germany (2006). 276 pp., Price: US\$ 165.00, ISBN: 3-527-31235-8

All too often, the news media report another terrorism event. This review is being written just after the series of train bombings in India and the flap over potential bombing of passenger airplanes on the Britain-US route. While most of the catastrophic terror incidents to date have involved explosives, this book discusses one incident in the United States that involved anthrax. That incident and other bioterrorism incidents are the focus of this text.

Problems with microbes have long been known as the author of the chapter on anthrax notes. This biological material was discussed in writing in Egypt and Mesopotamia more than 5000 years ago. It also appeared in the Bible in the book of Exodus which describes a plague that was quite likely due to anthrax (which is more scientifically described as *Bacillus anthracis*).

"Bioterrorism has been defined by the Centers for Disease Control as 'the intentional release of viruses, bacteria, or toxins for the purpose of harming or killing civilians.'"

And given the current state of world affairs, bioterrorism may well be the next challenge to authorities. Relatives of anthrax such as botulinum (*Clostridium botulinum*), ebola, or a host of other dangerous organisms are possible agents of death.

In the preface, Khardori notes:

"The book Bioterrorism Preparedness – A Medicine – Public Health – Policy has been prepared with the hope of being useful to medical students, healthcare providers, infection control practitioners, public health professionals, and legal professionals involved in health policy issues. The first two chapters provide a historical perspective and overview of potential agents of bioterrorism and bioterrorism preparedness. These two chapters will hopefully provide a quick reference to a variety of issues related to bioterrorism. The third chapter, 'Care of Children in the Event