

in animals where species differences in metabolism could be significant. Interestingly, in the case of formaldehyde, two different approaches to risk assessment are presented: one is based on linear extrapolation of nasal cancer data in rats, and the other is based on the view that exposure to levels below the threshold for nasal sensory irritation would incur a negligible cancer risk. Overall, this chapter should stimulate interest and debate among those concerned with the effects of air pollution and those involved in cancer risk assessment in a wider context.

The fourth chapter, written by Roy Harrison, is concerned with setting health-based air quality standards. It provides a very clear exposition of the regulatory processes involved and what the standards are meant to convey in terms of health protection. A number of controversial areas are thoughtfully discussed, such as the existence of thresholds for genotoxic carcinogens, particulates and ozone. This chapter touches upon diverse issues such as risk perception and the cost-benefit considerations of standard setting. Overall, a highly stimulating and informative chapter.

The penultimate chapter, written by Morton Lippman, furnishes an authoritative account of the basis for the US EPA standards for particulate matter and ozone. There is a detailed explanation of the composition and sources of airborne particulates, and a balanced and intelligent analysis of the relevant epidemiological evidence, with due acknowledgement of the areas of uncertainty. This is compulsory reading for those with an interest in the health effects of air pollution.

The topic of the final chapter, written by Paul Harrison, is that of indoor air pollution. It provides a salient reminder of the fact that the majority of the general population spend most of their time indoors, and overall, indoor exposures dominate in almost every sense over those from external air. This chapter draws attention to the importance of considering the potential confounding influences of indoor air exposures when interpreting epidemiological evidence on the effects of outdoor air pollution. The information in this chapter is likely to serve as a real eye-opener to many readers, and it helps to put whole topic of outdoor air pollution in perspective.

This book is highly recommended to all those health professionals who wish to keep in touch with current knowledge and thinking on the subject of air pollution and health. Furthermore, in view of the commonality of the issues, this book will be highly relevant to all those involved in occupational health risk assessment.

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Risk Assessment: Logic and Measurement, M.C. Newman, C.L. Strojan (Eds.), Ann Arbor Press, Chelsea, MI, 1998, \$65.00, 352 pp., ISBN: 1-57504-048-4

The origin of the information in this book was a seminar (whose title was the same as the book's title) held at the Savannah River Ecology laboratory in 1996. Printed are 14 major chapters (there are two others comprising a short introduction and conclusion)

divided into two major sections: Logic framework (five chapters); Measurement (seven chapters).

In the summary, the editors wrote:

“Risk assessment is based on the principle that if sufficient information is known about a system and the various factors that affect it, then the probability of certain adverse events happening can be estimated with some degree of confidence. This principle is the foundation upon which the entire insurance industry is built, and it is the same principle that forms the basis for human and ecological risk assessment.

While relatively simple in concept, risk assessments can be difficult to carry out, particularly for complex systems where adequate information may not exist. This is frequently the case for ecological systems, which are usually characterized by many interacting species that vary over time and space, and which may be subject to multiple, competing risks at the same time.”

Indeed, risk assessment is complex, but the process, and especially the development of a scientific base, for it are well-described by the contributors to this book.

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Semiconductor Safety Handbook: Safety and Health in the Semiconductor Industry, Richard A. Bolmen, Fr., Ed., Noyes Publications, Park Ridge, NJ, 1998, \$86.00, 610 pp., ISBN: 0-8155-1418-2

Computers have revolutionized our way of life and given that “computer chips: are the essential component of computers,” it is not surprising that the industry that produces them has flourished—and so have its own, unique environmental health safety (EH&S) problems. Thus, this book, whose purpose is to “provide a current, single source reference for many of the primary semiconductor EH&S technologies and disciplines.” To this end, the editor solicited manuscripts from 17 experts.

It has the following 11 Chapters:

- Injury and Illness of Semiconductor Workers: Experience and Epidemiologic Studies
- Environmental Compliance in the Semiconductor Industry: Detection, Correction and Prevention
- Chemical Hazards in Semiconductor Operations
- Industrial Hygiene
- Electrical Hazards
- Radiation Safety
- Recognition, Evaluation and control of Some Plasma Processing Hazards
- Fire Protection Technology for Semiconductor Operations
- Building and Fire Codes Impacting the Semiconductor Industry
- Gases and Gas Equipment
- Toxic Gas Monitoring