

**NEW! The first complete resource on exposure**

# Exposure Analysis

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Written by experts, **Exposure Analysis** is the first complete resource in the emerging scientific discipline of exposure analysis. A comprehensive source on the environmental pollutants that affect human health, the book discusses human exposure through pathways including air, food, water, dermal absorption, and, for children, non-food ingestion.

The book summarizes existing definitions of exposure, dose, and related concepts and provides the mathematical framework at the heart of these conceptual definitions. Using secondhand smoke as an example, the book illustrates how exposure analysis studies can change human behavior and improve public health. An extensive section on air pollutants considers volatile organic compounds (VOCs), carbon monoxide (CO), fine and ultrafine particles, and the latest personal air quality monitors for measuring individual exposure. Another detailed section examines exposures to pesticides, metals such as lead, and dioxin that may occur through multiple routes such as air, food, and dust ingestion. The book explores important aspects of dermal exposure such as the absorption of volatile organic compounds while showering or bathing and exposure through multiple carrier media. The authors describe quantitative methods that have been validated for predicting the concentrations in enclosed everyday locations, such as automobiles and rooms of the home. They also discuss existing laws and examine the relationship between exposure and national policies.

Defining the new field of exposure analysis, this book provides the basic tools needed to identify sources, understand causes, measure exposures, and develop strategies for improving public health.

## FEATURES

- Defines an emerging discipline that will become an integral part of environmental sciences
- Reviews existing knowledge and methodology of major classes of pollutants such as VOCs, particles, and pesticides
- Presents basic mathematical methods and practical tools used by the exposure analyst
- Discusses exposure aspects of existing laws and the relationship between exposure and national policies
- Highlights the emerging science of the dermal route of exposure to toxic agents

Catalog no. L1663, September 2006, c. 512 pp.  
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