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Descrizione fisica	1 online resource (xxii, 154 pages) : illustrations
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Soggetti	Environmental engineering - Data processing
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	<p>1. Introduction to chemistry -- 1.1 Matter -- 1.2 Stoichiometry -- 1.3 Reaction types -- 1.4 Quantifying reactions -- 1.5 Organic chemistry -- 1.6 Polymers --</p> <p>2. The atmosphere and the chemistry of air -- 2.1 The composition of the atmosphere -- 2.2 Definitions of gases, fumes, vapors, aerosols, and mists -- 2.3 Primary air pollutants from stationary and mobile sources -- 2.4 Indoor air quality -- 2.5 Eight major air pollutants -- 2.6 Multiple chemical sensitivity -- Bibliography --</p> <p>3. Water quality and water pollution -- 3.1 Chemistry of water -- 3.2 Colloids -- 3.3 Common sources of contamination of water supplies -- 3.4 Chemical oxygen demand and biochemical oxygen demand -- 3.5 Carbon dioxide pollution -- 3.6 Environmental fate and transport of selected water pollutants -- Bibliography --</p> <p>4. The chemistry of hazardous materials -- 4.1 The chemistry of four common elements -- 4.2 The chemistry of some corrosive materials -- 4.3 The chemistry of pyrophoric substances -- 4.4 The chemistry of flammable substances -- 4.5 The chemistry of explosives -- Bibliography --</p> <p>5. Radioactivity and nuclear chemistry -- 5.1 Types of radioactivity -- 5.2 Half-life -- 5.3 Units of radiation -- 5.4 Radiation in the field: decay series of uranium -- Bibliography --</p> <p>6. Introduction to toxicology -- 6.1 The problem -- 6.2 Basic concepts</p>

-- 6.3 More terms and definitions -- 6.4 The dose-response relationship -- 6.5 Example calculations and conversions -- Bibliography --  
7. Special topics -- 7.1 Green chemistry -- 7.2 Persistence of arsenic -- 7.3 The plastic ocean -- 7.4 Endocrine disruptors -- 7.5 Biofuels -- 7.6 Carbon and sulfur markets -- 7.7 Hard water treatments -- 7.8 Nanotechnology -- 7.9 Three important "environmental" disasters -- Bibliography -- Index.

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Sommario/riassunto

This book presents applications of chemistry specific to topics, issues, and problems relevant to environmental engineering. It is the companion volume of Chemistry for Environmental Engineering. Considerable effort has been made to clarify and explain the subjects of air and water quality, including a section on colloids. Other topics include hazardous materials, radiation hazards and sources, toxicology and chemical hygiene, and a final chapter devoted to environmental issues of contemporary interest and importance.

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