Handbook of Solid Waste Management

This book presents a new way of viewing contaminated soil as a resource that in many instances can be recovered. The Reuse and Recycling of Contaminated Soils addresses the waste problem associated with contaminated soil and considers alternatives that are environmentally sound, cost-effective, and time efficient. It provides thorough coverage of practical issues associated with reuse and recycling.

Waste Management and Resource Recovery

The concept of transdisciplinary engineering was developed in the 1980s, based on the concept that different phases of a product life cycle should be conducted concurrently and initiated as early as possible within the Product Creation Process. This handbook offers a practical handbook of material and energy balances, scientific and engineering fundamentals, and best practices for solving new and emerging problems by covering materials, design, packaging processes, machinery, and waste management in one book. It also provides the necessary foundation for students and professionals working in the field of chemical engineering to develop new and emerging technologies. By covering materials, design, packaging processes, machinery, and waste management in one book, the book enables the reader to take a lifecycle approach to food packaging. The Handbook addresses questions related to film grades, types of packages for different foods, types of packaging, machinery, and waste management. Additionally, the book provides a review of new and emerging technologies. Two chapters cover the development of barrier films for food packaging and the regulatory and safety aspects of food packaging, as well as practical guidance for engineers and scientists in the field of food packaging.

Handbook of Research on Waste Management Techniques for Sustainability

This book is the go-to resource for professionals in the mining industry. The SME Mining Reference Handbook was the first concise reference published in the mining field and it quickly became the industry standard. It sits on almost every mining engineer's desk or bookshelf with worn pages, tabs to find most used equations, and personal notes. It has been the unchallenged single reference and the first source of information for countless engineers and professionals engaged in mining, exploration, mineral processing, and environmental compliance and reclamation. With its exhaustive trove of charts, graphs, tables, equations, and guidelines, the Handbook of Research on Waste Management Techniques for Sustainability gives an overview of the latest research, advancements and applications in the field and will be of interest to researchers, design practitioners, and educators.

Membranes for Industrial Wastewater Recovery and Re-use

Less expensive and more environmentally appropriate than conventional engineering approaches, constructed ecosystems are a promising technology for environmental problem solving. Undergraduates, graduate students, and working professionals need an introductory text that details the biology and ecology of this rapidly developing discipline, known as Membranes for Industrial Wastewater Recovery and Re-use. The book considers alternatives that are environmentally sound, cost-effective, and time efficient. It provides thorough coverage of practical issues associated with reuse and recycling.

Using the Engineering Literature

With the encroachment of the Internet into nearly all aspects of work and life, engineers have an effect, directly and indirectly, on almost all aspects of our lives, and it is vital that they find the right information at the right time to create better products and processes. Comprehensive and up to date, this book fills a gap in the literature, providing critical information in a user-friendly format.

Plastic Films in Food Packaging

Plastic Films in Food Packaging offers a practical handbook for engineers, scientists and managers working in the food industry. It provides a tailor-made package of science and engineering fundamentals, best practice techniques and guidance on new and emerging technologies. By covering materials, design, packaging processes, machinery, and waste management in one book, the book enables the reader to take a lifecycle approach to food packaging. The Handbook addresses questions related to film grades, types of packages for different foods, types of packaging, machinery, and waste management. Additionally, the book provides a review of new and emerging technologies. Two chapters cover the development of barrier films for food packaging and the regulatory and safety aspects of food packaging, as well as practical guidance for engineers and scientists in the field of food packaging.
Information Sources of Political Science

This new edition of 'Chemistry of the Environment' emphasises several major concepts proving to be essential to the practice of environmental chemistry at the beginning of the new millennium.

PRO 40: International RILEM Conference on the Use of Recycled Materials in Buildings and Structures

In a world where waste incinerators are not an option and landfills are at over capacity, cities are hard pressed to find a solution to the problem of what to do with their solid waste. Handbook of Solid Waste Management, 2/e, offers a solution. This handbook offers an integrated approach to the planning, design, management, and economical and environmentally responsible solid waste disposal system. Let twenty industry and government experts provide you with the tools to develop a solid waste management system capable of disposing of waste in a cost-efficient and environmentally responsible manner. Focusing on the six primary functions of an integrated system—source reduction, toxicity reduction, recycling and reuse, composting, waste-to-energy combustion, and landfilling—they explore each technology and examine its problems, costs, and legal and social ramifications.

The Reuse and Recycling of Contaminated Soil

Ecological Engineering

Recycling of Plutonium

In a world in which legislation promotes the recycling of wastewater new technologies are emerging that can fulfill such a remit. The papers that comprise this volume explore those technologies and explain what is driving and what is preventing their widespread implementation.

Integrated Solid Waste Management

This book provides a basic understanding of waste management problems and issues faced by modern society. Scientific, technical, and environmental principles are emphasized to illustrate the processes of municipal and industrial solid wastes and liquid wastes, and the nature of impacts resulting from waste disposal and disposal in the environment. Economic, social, legal, and political aspects of waste management are also addressed. Environmental issues and concerns receive thorough coverage in discussing waste reduction, resource recovery, and efficient and economic disposal systems. Other specific topics include recycling, physical and chemical processing, the biological treatment of waste solids, incineration, pyrolysis, and energy recovery, hazardous wastes, and landfill management. The role of government and other institutions in waste management and resource recovery matters is also detailed. Discussion questions, worked examples, and end-of-chapter problems reinforce important concepts. Waste Management and Resource Recovery is particularly suitable as a text in waste management courses in environmental science or engineering programs. It also works well as a reference for practitioners in the waste management field.

Computational Science and Its Applications – ICSICT 2014

The products we purchase and use are assembled from a wide range of naturally occurring and manufactured materials. But too often we create hazards for the ecosystem and human health as we mine, process, distribute, use, and dispose of them. Until recently, most research has focused on the waste end of material cycles. This book argues that the safest and least costly point at which to avoid environmental damage is when materials are first designed and selected for use in industrial production. Materials Matter presents convincing evidence that we can use fewer materials and eliminate the use of many toxic chemicals by focusing directly on material (chemical) use when designs are developed. It also shows how manufacturers can save money by increasing the effectiveness of material use and reducing the use of toxic chemicals. It advocates new directions for the material sciences and government policies on materials. And it argues that manufacturers, suppliers, and customers need to set more socially responsible policies for products and services to achieve higher environmental and health goals.

Christians in an Age of Wealth

Volume is indexed by Thomson Reuters: CPCI-S (WoS). The search for ever more novel materials, to meet the ever-increasing demands of modern civilization for building, operating and maintaining its infrastructures, will continue as long as mankind seeks to conserve the Earth's resources, and yet keep up with the new technological challenges created by the latest inventions and discoveries.

Environmental Engineering

The first edition described the concept of Integrated Waste Management (IWM), and the use of Life Cycle Inventory (LCI) to provide a way to assess the environmental and economic performance of solid waste systems. Actual examples of IWM systems and published accounts of LCI models for solid waste are now appearing in the literature. To draw out the lessons learned from these experiences a significant part of this 2nd edition focuses on case studies—both of IWM systems, and of where LCI has been used to assess such systems. The 2nd edition also includes updated chapters on waste generation, waste collection, central sorting, biological treatment, thermal treatment, landfill and materials recycling. This 2nd edition also provides a more user-friendly model (IWM-2) for waste managers. To make it more widely accessible, this edition provides the new tool in Windows format, with greatly improved input and output features, and the ability to compare different scenarios. A detailed user's guide is provided, to take the reader through the use of the IWM-2 model, step by step. IWM-2 is designed to be an "entry level" LCI model for solid waste - user-friendly and appropriate to users starting to apply life cycle thinking to waste systems - while more expert users will also find many of the advanced features of the IWM-2 model helpful. IWM-2 is delivered on CD inside the book.

Environmental Engineers' Handbook

Second Edition. In this book, Craig Blomberg addresses the tough questions about the place and purpose of wealth in a Christian's life. He points to the goodness of wealth, as God originally designed it, but also surveys the Bible's many warnings against making an idol out of money. So are material possessions a blessing for whom we should long for? And what are the dangers that the use or abuse of material possessions can produce? Blomberg expounds upon how the sharing of goods and possessions is the key safeguard against both greed and covetousness. He expands on the concept of giving generously, even sacrificially, so that those who need, demonstrating how Christians can participate in God's original good design for abundance and demonstrate the world-altering gospel of Christ. Is there any one key to keeping possessions in their proper, God intended perspective? Are there limits on how rich we should become or on how poor we should allow others to get? What does a truly Christian economic system look like? How does the Bible's teaching on wealth fit into the gospel?

5th International PhD Symposium in Civil Engineering

Bridging the Centuries with SAMPE's Materials and Processes Technology

The first handbook covering all aspects of recycling. Table of Contents: Evaluation of Recycling; Recyclable Materials; Facilities Design and Recycling Equipment; Recycling Implementation and Control; Product Development from Recyclable Materials.

Materials Matter

This sixth volume in the SAGE Series on Green Society covers the consumption, availability, and distribution of energy and other resources in the personal consumer environment.

Introduction to Green Chemistry

Immersed in their on-demand, highly consumptive, and disposable lifestyles, most urban Americans take for granted the technologies that provide them with potable water, remove their trash, and process their wastewater. These vital services, however, are the byproduct of many decades of development by engineers, sanitarians, and civic planners. In The Sanitary City, Mark Rosekloski assembles a comprehensive, thoroughly researched and referenced history of sanitary services in urban America. He examines the
evolution of water supply, sewage systems, and solid waste disposal during three distinct eras: The Age of Miasmas (pre-1880); The Bacteriological Revolution (1880-1945); and The New Ecology (1945 to present-day). Originally published in 2000, this abridged edition includes updated material. The Sanitary City is an essential resource for those interested in environmental history, environmental engineering, science and technology, urban studies, and public health. Winner of: George Perkins Marsh Prize from the American Society for Environmental History Urban History Association Prize for the best book in North American Urban History Abel Wolman Prize from the Public Works Historical Society Sidney Edelstein Prize from the Society for the History of Technology

Handbook of Research on Advancements in Environmental Engineering A comprehensive bibliography of American and international politics covers print and electronic materials published in English, primarily in the U.S. and U.K., with most chapters arranged by reference format, then alphabetically by title.

Transdisciplinary Engineering: Crossing Boundaries Interest in green chemistry and clean processes has grown so much in recent years that topics such as fluorine bifacial catalysis, metal organic frameworks, and process intensification, which were barely mentioned in the First Edition, have become major areas of research. In addition, government funding has ramped up the development of fuel cells and bioreactors. This reflects the evolving focus from pollution remediation to pollution prevention. Copiously illustrated with more than 800 figures, the Third Edition provides an update from the frontiers of the field. It features supplementary exercises at the end of each chapter relevant to the chemical examples introduced in each chapter. Particular attention is paid to a new concluding chapter on the use of green metrics as an objective tool to demonstrate proof of synthesis plan efficiency and to identify where further improvements can be made through fully worked examples relevant to the chemical industry. NEW AND EXPANDED RESEARCH TOPICS Metalorganic frameworks Metrics Solid acids for alkylation of isobutene by butanes Carbon molecular sieves Mixed micro- and mesoporous solids Organocatalysis Process intensification and gas phase enzymatic reactions Hydrogen storage for fuel cells Reactive distillation Catalysts in action on an atomic scale UPDATED AND EXPANDED CURRENT EVENTS TOPICS Industry resistance to inherently safer chemistry Nuclear power Removal of mercury from vaccines Removal of mercury and lead from primary explosives Biofuels Uses for surplus gyleer New hard materials to reduce wear Electronic waste Smart growth Traditional green chemistry topics, including catalysis, benign solvents, and alternative feedstocks. It also discusses relevant but less frequently covered topics with chapters such as "Chemistry of Long Wear" and "Population and the Environment." This coverage highlights the importance of chemistry to everyday life and demonstrates the benefits expanded the exploitation of green chemistry can have for society.

The Sanitary City: This textbook introduces students to mass and energy balances and focuses on basic principles for calculation, design, and optimization as they are applied in industrial processes and equipment. Written primarily for undergraduate programs in chemical, energy, mechanical, and environmental engineering, the book can also be used as a reference by technical staff and design engineers interested who are in, and/or need to have basic knowledge of process engineering calculation. Concepts and techniques presented in this volume are highly relevant within many industrial sectors including manufacturing, oil/gas, green and sustainable energy, and power plant design. Drawing on 15 years of teaching experiences, and with a clear understanding of students' interests, the authors have adopted a very accessible writing style that includes many examples and additional citations to research resources from the literature, referenced at the ends of chapters.

Environmental Engineers' Handbook on CD-ROM

Core List for an Environmental Reference Collection This book addresses decision making in reverse logistics, which concerns the integration of used and obsolete products back into the supply chain as valuable resources. It covers a wide range of aspects, related to distribution, production, procurement, marketing, and supply chain management. For each topic, it highlights key managerial issues in real-life examples and explains which quantitative models are available for addressing them. By treating a broad range of issues in a unified way, the book offers the reader a comprehensive view on the field of reverse logistics.

Recycling and Reuse of Material Found on Superfund Sites In this concise, engaging, and provocative work, Richard Porter introduces readers to the economic tools that can be applied to problems involved in handling a diverse range of waste products from business and households. Emphasizing the impossibility of achieving a zero-risk environment, Porter focuses on the choices that apply in real world decisions about waste. Acknowledging that effective waste policy integrates knowledge from several disciplines, Porter focuses on the use of economic analysis to reveal the costs of different policies and therefore how much can be done to meet goals to protect human health and the environment. With abundant examples, he considers subjects such as landfills, incineration, and illegal disposal. He discusses the international trade of waste, hazardous waste, and toxic issues, and special topics such as recycling, and solid waste management. The book offers a valuable resource for environmental engineers, students, and researchers in the areas of solid waste management and groundwater pollution control. This user-friendly textbook is an essential source of reference for professionals and researchers in the areas of solid waste management and groundwater pollution control, and as a text for advanced undergraduate and graduate courses in these fields.


McCraw-Hill Recycling Handbook, 2nd Edition Protecting the global environment is a one-sided-mind goal for all of us. Environmental engineers take this goal to task, meeting the needs of society with technical innovations. Revised, expanded, and fully updated to meet the needs of today's engineer working in industry or the public sector, the Environmental Engineers' Handbook, Second Edition is a single source of current information. It covers in depth the interrelated factors and principles that affect our environment and how we have dealt with them in the past, are dealing with them today, and how we will deal with them in the future. This stellar reference addresses the ongoing global transition in cleaning up the remains of abandoned technology, the prevention of pollution created by existing technology, and the design of future zero emission technology. Béla G. Lipták speaks on Post-Oil Energy Technology on the AT&T Tech Channel.

Copyright code: 2190e6c677935fd9b446c773e92baq