Handbook Of Solid Waste Management

The remediation of environmental pollutants has become a relevant topic within the field of waste management. Advances in biological approaches are a potential tool for contamination and pollution control. The Handbook of Research on Microbial Tools for Environmental Waste Management is a critical scholarly resource that explores the advanced biological approaches that are used as remediation for pollution cleanup processes. Featuring coverage on a broad range of topics such as biodegradation, microbial dehalogenation, and pollution controlling treatments, this book is geared towards environmental scientists, biologists, policy makers, graduate students, and scholars seeking current research on environmental engineering and green technologies.

Table of contents

The Handbook of Environmental Health-Pollutant Interactions in Air, Water, and Soil includes Nine Chapters on a variety of topics basically following a standard chapter outline where applicable with the exception of Chapters 8 and 9. The outline is as follows:1. Background and status2. Scientific, technological and general information3. Statement o

Special features of this book include: practical "how to" instructions, state/federal regulations-plus overview, lab waste management, interpretations of regulations, enforcement, generator checklist, and complete coverage. This handbook is an excellent resource for hazardous waste managers, safety managers, lab managers, occupational health/safety workers, hazardous waste brokers, and small business managers. Disposal facilities, trade associations, consultants, administrators, attorneys, unions, and industrial hygienists will find this practical guide useful as well.

International Best Practices and Case Studies

Handbook of Solid Waste Disposal

RCRA Hazardous Wastes Handbook

Hazardous and Radioactive Waste Treatment Technologies Handbook

Seminars on Environmental Problems, Programs, and Prospects

Handbook of Environment and Waste Management

Presenting effective, practicable strategies modeled from ultramodern technologies and framed by the critical insights of 78 field experts, this vastly expanded Second Edition offers 32 chapters of industry- and waste-specific analyses and treatment methods for industrial and hazardous waste materials-from explosive wastes to landfill leachate to w

Radioactive wastes are generated from a wide range of sources, including the power industry, and medical and scientific research institutions, presenting a range of challenges in dealing with a diverse set of radionuclides of varying concentrations. Conditioning technologies are essential for the encapsulation and immobilisation of these radioactive wastes, forming the initial engineered barrier required for their transportation, storage and disposal. The need to ensure the long term performance of radioactive waste forms is a key driver of the development of advanced conditioning technologies. The Handbook of advanced radioactive waste conditioning technologies provides a comprehensive and systematic reference on the various options available and under development for the treatment and immobilisation of radioactive wastes. The book opens with an introductory chapter on radioactive waste

characterisation and selection of conditioning technologies. Part one reviews the main radioactive waste treatment processes and conditioning technologies, including volume reduction techniques such as compaction, incineration and plasma treatment, as well as encapsulation methods such as cementation, calcination and vitrification. This coverage is extended in part two, with in-depth reviews of the development of advanced materials for radioactive waste conditioning, including geopolymers, glass and ceramic matrices for nuclear waste immobilisation, and waste packages and containers for disposal. Finally, part three reviews the long-term performance assessment and knowledge management techniques applicable to both spent nuclear fuels and solid radioactive waste forms. With its distinguished international team of contributors, the Handbook of advanced radioactive waste conditioning technologies is a standard reference for all radioactive waste management professionals, radiochemists, academics and researchers involved in the development of the nuclear fuel cycle. Provides a comprehensive and systematic reference on the various options available and under development for the treatment and immobilisation of radioactive wastes Explores radioactive waste characterisation and selection of conditioning technologies including the development of advanced materials for radioactive waste conditioning Assesses the main radioactive waste treatment processes and conditioning technologies, including volume reduction techniques such as compaction

A comprehensive, single-source reference of current issues in solid waste management designed as an aid in decision-making and assessment of future trends. Covers public perceptions, legislation, regulation, planning and financing, and technologies and operation. Reviews the evolution of waste management since the passage of the Resource Conservation and Recovery Act of 1976, amended in 1978, 1980 and 1984. Examines common and divergent public and private concerns, including an in-depth review of public perceptions and their effect on planning and implementation. Also includes a discussion of the inadequacies of most waste quantity and composition estimates, with techniques for adequate evaluation. Looks at the misunderstanding and controversy over source separation and issues in municipal resource recovery from the viewpoint of the private scrap process industry. Also includes an unprecedented examination of the problem of bulky waste logistics and its effect on current disposal practice, and case histories and the current status of energy recovery from industrial waste. With over 500 tables, graphs, and illustrations.

Handbook of Electronic Waste Management: International Best Practices and Case Studies begin with a brief summary of the environmental challenges associated with the approaches used in international e-waste handling. The book's authors offer a detailed presentation of e-waste handling methods that also includes examples to further demonstrate how they work in the real world. This is followed by data that reveals the geographies of e-waste flows at global, national and subnational levels. Users will find this resource to be a detailed presentation of e-waste estimation methods that also addresses both the handling of e-waste and their hazardous effect on the surrounding environment. Includes case studies to illustrate the implementation of innovative e-waste treatment technologies Provides methods for designing and managing e-waste management networks in accordance with regulations, fulfilment obligations and process efficiency Reference guide for adapting traditional waste management methods and handling practices to the handling and storage of electronic waste until disposal Provides e-waste handling solutions for both urban and rural perspectives

Handbook of Advanced Industrial and Hazardous Wastes Management

Waste

Concise Handbook of Waste Treatment Technologies
Handbook of Recycling
A Practical Guide
Municipal Solid Waste Management Handbook

This volume provides in-depth coverage of environmental pollution sources, waste characteristics, control technologies, management strategies, facility innovations, process alternatives, costs, case histories, effluent standards, and future trends in waste treatment processes. It delineates methodologies, technologies, and the regional and global effects of important pollution control practices. It focuses on specific industrial and manufacturing wastes and their remediation. Topics include: heavy metals, electronics, chemical, and textile manufacturing.

Waste: A Handbook for Management gives the broadest, most complete coverage of waste in our society. The book examines a wide range of waste streams, including: Household waste (compostable material, paper, glass, textiles, household chemicals, plastic, water, and e-waste) Industrial waste (metals, building materials, tires, medical, batteries, hazardous mining, and nuclear) Societal waste (ocean, military, and space) The future of landfills and incinerators Covering all the issues related to waste in one volume helps lead to comparisons, synergistic solutions, and a more informed society. In addition, the book offers the best ways of managing waste problems through recycling, incineration, landfill and other processes. Co-author Daniel Vallero interviewed on NBC's Today show for a segment on recycling Scientific and non-biased overviews will assist scientists, technicians, engineers, and government leaders Covers all main types of waste, including household, industrial, and societal Strong focus on management and recycling provides solutions

The Handbook of Environment and Waste Management, Volume 1, Air and Water Pollution Control, is a comprehensive compilation of topics that are at the forefront of many technical advances and practices in air and water pollution control. These include air pollution control, water pollution control, water treatment, wastewater treatment, industrial waste treatment and small scale wastewater treatment. Internationally recognized authorities in the field of environment and waste management contribute chapters in their areas of expertise. This handbook is an essential source of reference for professionals and researchers in the areas of air, water, and waste management, and as a text for advanced undergraduate and graduate courses in these fields.

"With specialized and succinct coverage, this book provides readers with an integrated overview of various waste treatment technologies and related issues. Instead of dealing separately with each type of waste material, the book summarizes important waste treatments from a holistic perspective. This guidebook is written for early career professionals, non-specialists, and specialists seeking to understand waste and its proper management and disposal techniques"--

Solid Waste Management Handbook
Handbook of Industrial and Hazardous Wastes Treatment
The Solid Waste Handbook
Handbook of Sustainable Concrete and Industrial Waste Management
State-of-the-art for Practitioners, Analysts, and Scientists
A how-to and why manual for farm, municipal, institutional and commercial composters

The Composting Handbook provides a single guide to the science, principles and best practices of composting for large-scale composting operations facing a variety of opportunities and challenges converting raw organic materials into a useful and marketable product. Composting is a well-established and increasingly important method to recycle and add value to organic by-products. Many, if not most, of the materials composting treats are discarded materials that would otherwise place a burden on communities, industries, farms and the environment. Composting converts these materials into a valuable material, compost, that regenerates soils improving soils for plant growth and environmental conservation. The Composting Handbook expands on previously available resources by incorporating new information, new subjects and new practices, drawing its content from current scientific principles, research, engineering and industry experience. In both depth and breadth, it covers the knowledge that a compost producer needs to succeed. Topics include the composting process, methods of composting, equipment, site requirements, environmental issues and impacts, business knowledge, safety, and the qualities, uses and markets for the compost products. The Composting Handbook is an invaluable reference for composting facility managers and operators, prospective managers and operators, regulators, policy makers, environmental advocates, educators, waste generators and managers and generally people interested in composting as a business or a solution. It is also appropriate as a textbook for college courses and a supplemental text for training courses about composting or organic waste management. Created in conjunction with the Compost Research and Education Foundation (CREF) Includes the latest information on composting and compost, providing the first comprehensive resource in decades Written with focus on both academic and industrial insights and advances

Sustainability is a growing area of research in ecology, economics, environmental science, business, and cultural studies. Specifically, sustainable waste disposal and management is a growing concern as both solid and liquid wastes are rapidly expanding in direct correlation with population growth and improved economic conditions across regions. The Handbook of

Research on Waste Management Techniques for Sustainability explores the topic of sustainable development in an era where domestic and municipal waste is becoming a concern for both human and environmental health. Highlighting a number of topics relating to pollution, green initiatives, and waste reduction in both the public and private sector, this research-based publication is designed for use by environmental scientists, business executives, researchers, graduate-level students, and policymakers seeking the latest information on sustainability in business, medicine, agriculture, and society.

Winner of the International Solid Waste Association's 2014 Publication Award, Handbook of Recycling is an authoritative review of the current state-of-the-art of recycling, reuse and reclamation processes commonly implemented today and how they interact with one another. The book addresses several material flows, including iron, steel, aluminum and other metals, pulp and paper, plastics, glass, construction materials, industrial by-products, and more. It also details various recycling technologies as well as recovery and collection techniques. To completely round out the picture of recycling, the book considers policy and economic implications, including the impact of recycling on energy use, sustainable development, and the environment. With contemporary recycling literature scattered across disparate, unconnected articles, this book is a crucial aid to students and researchers in a range of disciplines, from materials and environmental science to public policy studies. Portrays recent and emerging technologies in metal recycling, by-product utilization and management of post-consumer waste Uses life cycle analysis to show how to reclaim valuable resources from mineral and metallurgical wastes Uses examples from current professional and industrial practice, with policy and economic implications

This landmark new book sets the standard for planning, performing, and interpreting investigations for solid and hazardous waste sites and selecting appropriate locations for ground-water monitoring. It covers the technical components of assessment monitoring programs that define both the rate and extent of contamination and provide design criteria for aquifer remediation. Technical tools are discussed in detail to provide background techniques such as flow net constructions, cross section instructions, and documentation standards. More than 500 figures and tables illustrate the author's structured holistic program for examining the physical, chemical, and environmental factors of a site for waste disposal. The technical aspects of site assessments regarding contaminated ground-water evaluation and remediation are also covered in detail. Learn the

fundamentals of site assessments This classic guide explains the fundamentals of a technical approach to site assessments. It is the principle text used for training EPA regional project managers for Superfund sites. The book uses a practical, step-by-step format to walk you through the following tasks:

Recycled and Artificial Aggregate, Innovative Eco-friendly Binders, and Life Cycle Assessment

Waste Age and Recycling Times

Handbook of Environmental Health, Volume II

Sustainability through Circular Economy

Handbook of Hazardous Waste Management for Small Quantity Generators

Handbook on Household Hazardous Waste

The collection, transportation and subsequent processing of waste materials is a vast field of study which incorporates technical, social, legal, economic, environmental and regulatory issues. Common waste management practices include landfilling, biological treatment, incineration, and recycling – all boasting advantages and disadvantages. Waste management has changed significantly over the past ten years, with an increased focus on integrated waste management and life-cycle assessment (LCA), with the aim of reducing the reliance on landfill with its obvious environmental concerns in favour of greener solutions. With contributions from more than seventy internationally known experts presented in two volumes and backed by the International Waste Working Group and the International Solid Waste Association, detailed chapters cover: Waste Generation and Characterization Life Cycle Assessment of Waste Management Systems Waste Minimization Material Recycling Waste Collection Mechanical Treatment and Separation Thermal Treatment Biological Treatment Landfilling Special and Hazardous Waste Solid Waste Technology & Management is a balanced and detailed account of all aspects of municipal solid waste management, treatment and disposal, covering both engineering and management aspects with an overarching emphasis on the life-cycle approach.

By combining integrated solid waste management with the traditional coverage of landfills, this new edition offers the first comprehensive guide to managing the entire solid waste cycle, from collection, to recycling, to eventual disposal. * Includes new material on source reduction, recycling, composting, contamination soil remediation, incineration, and medical waste management. * Presents up-to-date chapters on bioreactor landfills, wetland mitigation, and landfill remediation. * Offers comprehensive coverage of the role of geotechnical engineering in a wide variety of environmental issues.

Many books have been written on hazardous waste and nuclear waste separately, but none have combined the two subjects into one single-volume resource. Hazardous and Radioactive Waste Treatment Technologies Handbook covers the technologies, characteristics, and regulation of both hazardous chemical wastes and radioactive wastes. It provides an overview of recent waste technologies. A reference for scientists and engineers, the handbook focuses on waste-related thermal and non-thermal technologies, separation techniques, and stabilization technologies. It includes information on the DOE and DOD waste matrix located at various sites. It reveals current R&D activities in each technology and what improvements can be made in the future. A detailed schematic diagram illustrates

each technology so that the process can be explicitly understood. In addition, the handbook covers relative life-cycle cost estimates for treatment systems using various technologies. With contributions from an international panel and extensively peer-reviewed, Hazardous and Radioactive Waste Treatment Technologies Handbook provides the latest information on waste remediation technologies and related regulations. Often in the field you will encounter more than one type of hazardous waste. This handbook gives you the design information you need to decide which technology to use and how to design the equipment for your particular needs. You can then incorporate appropriate technologies into a mixed waste treatment system.

This definitive Handbook, authored by the publishing division of the leading and the largest association in the field of waste management, provides information on virtually every aspect of recycling. The chapters, written by leading international authorities, cover such topics as collection of recyclables, recycling costs, safety in recycling facilities, available technology for collection and processing of waste products, and profitability of waste products. Introductory material in the form of "waste profiles" is included at the beginning of the Handbook, providing an excellent general reference on all of the various recyclables, from newspapers to batteries. The Handbook also covers legislative issues related to recycling, including legislation in Germany, France, Britain, and Canada, and how these overseas regulations affect recycling in the United States.

Handbook of Research on Resource Management for Pollution and Waste Treatment

Handbook on Solid Waste Management in Buildings

Industrial Waste Treatment Handbook

Handbook of solid waste technology & management

Materials and Energy Recovery

Sustainability Through Circular Economy

The Handbook of Sustainable Concrete and Industrial Waste Management summarizes key research trends in recycling and reusing concrete and industrial waste to reduce their environmental impact. This volume also includes important contributions in collaboration with the CRI-TEST Innovation Lab, Naples – Acerra. Part one discusses eco-friendly innovative cement and concrete and reviews key substitute materials. Part two analyzes the use of industrial waste as aggregates and the mechanical properties of concrete containing waste materials. Part three discusses differences between innovative binders, focusing on alkali-activated and geopolymer concrete. Part four provides a thorough overview of the life cycle assessment (LCA) of concrete containing industrial wastes and the impacts related to the logistics of wastes, the production of the concrete, and the management of industrial wastes. By providing research examples, case studies, and practical strategies, this book is a state-of-the-art reference for researchers working in construction materials, civil or structural engineering, and

engineers working in the industry. Offers a systematic and comprehensive source of information on the latest developments in sustainable concrete; Analyzes different types of sustainable concrete and innovative binders from chemical, physical, and mechanical points of view; Includes real case studies showing application of the LCA methodology.

The intensification of agriculture and food production in recent years has led to an increase in the production of food co-products and wastes. Their disposal by incineration or landfill is often expensive as well as environmentally sensitive. Methods to valorise unused co-products and improve the management of wastes that cannot be reused, as well as techniques to reduce the quantity of waste produced in the first place, are increasingly important to the food industry. With its distinguished editor and array of international contributors, Waste management and co-product recovery in food processing reviews the latest developments in this area and describes how they can be used to reduce waste. The first section of the book provides a concise introduction to the field with a particular focus on legislation and consumer interests, principle drivers of waste management. Part two addresses the minimisation of biowaste and the optimisation of water and energy use in food processing. The third section covers key technologies for co-product separation and recovery, such as supercritical fluid extraction and membrane filtration, as well as important issues to consider when recovering co-products, such as waste stabilisation and microbiological risk assessment. Part four offers specific examples of waste management and co-product exploitation in particular sectors such as the red meat, poultry, dairy, fish and fruit and vegetable industries. The final part of the book summarises advanced techniques, to dispose of waste products that cannot be reused, and reviews state of the art technologies for wastewater treatment. Waste management and co-product recovery in food processing is a vital reference to all those in the food processing industry concerned with waste minimisation, co-product valorisation and end waste management. Looks at the optimisation of manufacturing procedures to decrease waste, energy and water use Explores methods to valorise waste by co-product recovery Considers best practice in different sectors of the food industry

It is necessary to understand the extent of pollution in the environment in terms of the air, water, and soil in order for both humans and animals to live healthier lives. Poor waste treatment or pollution monitoring can lead to massive environmental issues, such as diminishing valuable resources, and cause a significant negative impact on society. Solutions, such as reuse of waste and sustainable waste management, must be explored to prevent these adverse effects. The Handbook of Research on Resource Management for Pollution and Waste Treatment is a collection of innovative research that examines waste and pollution treatment methods that can be adopted at local and international levels and examines appropriate resource management strategies for environmentally related issues. Featuring coverage on a wide range of topics such as soil washing, bioremediation, and runoff handling, this book is ideally designed for environmentalists, engineers, waste management professionals, natural resource regulators, environmental policymakers, scientists, academicians, researchers, and students seeking current research on viable resource management methods for the regeneration of their immediate environment.

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, and management of economical and environmentally responsible solid waste disposal system. Let twenty industry and government experts provide you with the tools to design 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.

Handbook on Waste Management

A Handbook on Solid Waste Management

Solid Waste Technology and Management, 2 Volume Set

Recycling Handbook

Handbook of Waste Management and Co-Product Recovery in Food

Processing

Handbook of Research on Waste Management Techniques for Sustainability

The significant challenges associated with managing waste continues to attract international scholarly attention. This international handbook scrutinizes both developed and developing economies. It comprises original contributions from many of the most prominent scholars researching this topic. Consisting primarily of empirical research efforts - though theoretical underpinnings are also explored thoroughly - the Handbook serves to further the understanding of the behaviors of waste generators and waste processors and the array of policies influencing these behaviors.

p="" The issue and finding the green solution of Solid Waste Management are important challenges throughout the world. This book explores cutting edge developments in Circular Economy and Sustainability on Solid Waste Management, current research perspectives, existing problems on solid waste management system, industrial development and the latest green methodology for in Solid Waste conversion and regenerate products and materials, environmental solutions, social awareness and development on solid waste management and the future perspectives of Circular Economy for industrial revolution 4.0 with the mission of green chemistry and engineering on solid waste management. It focuses on chapters from different researchers, faculty members, scientists and engineers, industrialist and experts from different countries working on the Circular Economy on Solid Waste Management. It also features the importance of integration of multi-disciplinary research fields on Circular Economy for Sustainable Development. It provides latest development in and current research perspectives, technology development, and critical thinking and societal requirements and development on Circular Economy of Solid Waste Management to researchers, scientists, engineers, environmental managers, policy makers, and Experts of Energy Division of Government and Private Organization and Industries. ^

This updated edition examines the latest regulatory and judicial developments involving the Resource Conservation and Recovery Act (RCRA) and provides a clear, practical explanation of its requirements. New issues addressed in this edition include the new provisions regarding recycling, the corrective action program, and the regulation of combustion units; changes in enforcement policy, civil and criminal liability, and citizen suits; and new regulations regarding land disposal, underground storage tanks, facilities siting, and municipal solid waste management.

Handbook of Solid Waste ManagementMcGraw Hill Professional

Sustainable Solid Waste Management

Handbook of Solid Waste Management and Waste Minimization Technologies

A Systems Engineering Approach

Handbook of Solid Waste Management

Design of Landfills and Integrated Solid Waste Management
Pollutant Interactions in Air, Water, and Soil

Written by leading practitioners, this updated edition looks at household hazardous waste and its collection/management, including chapters on planning a facility, marketing to affect behavior change, and encouraging extended product stewardship. Includes information on new regulations and advances and a comprehensive reference section.

This book presents the application of system analysis techniques with case studies to help readers learn how the techniques can be applied, how the problems are solved, and which sustainable management strategies can be reached.

This Handbook is an authoritative reference for process and plant engineers, water treatment plant operators and environmental consultants. Practical information is provided for application to the treatment of drinking water and to industrial and municipal wastewater. The author presents material for those concerned with meeting government regulations, reducing or avoiding fines for violations, and making cost-effective decisions while producing a high quality of water via physical, chemical, and thermal techniques. Included in the texts are sidebar discussions, questions for thinking and discussing, recommended resources for the reader, and a comprehensive glossary. Two companion books by Cheremisinoff are available: Handbook of Air Pollution Control Technologies, and Handbook of Solid Waste Management and Waste Minimization Technologies. * Covers the treatment of drinking water as well as industrial and municipal wastewater * Cost-efficiency considerations are incorporated in the discussion of methodologies * Provides practical and broad-based information in one comprehensive source

Industrial Waste Treatment Handbook provides the most reliable methodology for identifying which waste types are produced from particular industrial processes and how they can be treated. There is a thorough explanation of the fundamental mechanisms by which pollutants become dissolved or become suspended in water or air. Building on this knowledge, the reader will learn how different treatment processes work, how they can be optimized, and the most efficient method for selecting candidate treatment processes. Utilizing the most up-to-date examples from recent work at one of the leading environmental and science

consulting firms, this book also illustrates approaches to solve various environmental quality problems and the step-by-step design of facilities. Practical applications to assist with the selection of appropriate treatment technology for target pollutants Includes case studies based on current work by experts in waste treatment, disposal, management, environmental law and data management Provides glossary and table of acronyms for easy reference

Standard Handbook for Solid and Hazardous Waste Facility Assessments

A Handbook for Management

Handbook of Electronic Waste Management

Handbook of Research on Microbial Tools for Environmental Waste Management

Handbook of Advanced Radioactive Waste Conditioning Technologies

Handbook of Solid Waste Management and Waste Minimization Technologies is an essential tool for plant managers, process engineers, environmental consultants, and site remediation specialists that focuses on practices for handling a broad range of industrial solid waste problems. In addition to equipment and process options, the author presents information on waste minimization practices that can be used in conjunction with or can provide alternatives to equipment and process investments. Environmental cost accounting measures and energy-efficient technologies are provided. Valuable information for those concerned with meeting government regulations and with the economic considerations (such as fines for violations and cost-effective methods) is presented in a practical manner. Included in the text are sidebar discussions, questions for thinking and discussion, recommended resources for the reader (including Web sites), and a comprehensive glossary. Two companion books by Cheremisnoff are available: Handbook of Water and Wastewater Treatment Technologies, and Handbook of Air Pollution Control Technologies. Covers leading edge technology and standard equipment for managing industrial solid waste problems Valuable in meeting government regulations Presents in-depth analysis of the financial impact of alternative technologies available

Handbook of Water and Wastewater Treatment Technologies

The Composting Handbook

Air and Water Pollution Control