Green Technologies For Environmental Management And Sustainable Development Giving Better Quality O

Environmental Technology and Sustainability *Appropriate Technologies for Environmental Protection in the Developing World* Emerging Technologies in Environmental Bioremediation **Ionic Liquid-Based Technologies for Environmental Sustainability** Sustainable Green Technologies for Environmental Management Innovative Bio-Based Technologies for Environmental Remediation *Environmental Technologies and Trends* **Smart Technologies for Energy and Environmental Sustainability** *Environmental Technology and Innovations Environmental Sustainability Using Green Technologies* **Emerging Environmental Technologies, Volume II** *Environment, Technology and Sustainability* **Information Technologies in Environmental Engineering Histories of Technology, the Environment and Modern Britain Environmental Technologies, Intellectual Property and Climate Change** *Integrated Environmental Technologies for Wastewater Treatment and Sustainable Development Green Technologies and Environmental Sustainability* Green Technologies to Improve the Environment on Earth **New Technologies and Environmental Innovation** *Finite Media* **Membrane-Based Technologies for Environmental Pollution Control A History of Technology and Environment** *Technology and Environment* **Advances in Ultrasound Technology for Environmental Remediation** Environmental Science and Technology Controlling Environmental Pollution Emerging Technologies for Waste Valorization and Environmental Protection **Advanced Oxidation Technologies** Environmental Treatment Technologies for Municipal, Industrial and Medical Wastes *Environmental Science* **Wastewater Technologies and Environmental Treatment Green Technology and Design for the Environment Frontiers in Water-Energy-Nexus—Nature-Based Solutions, Advanced Technologies and Best Practices for Environmental Sustainability Environmental Bioremediation Technologies Assistive Technologies and Environmental Interventions in Healthcare** Solutions to Environmental Problems Involving Nanotechnology and Enzyme Technology **Technologies for Environmental Management Environmental Technology in the Oil Industry Renewable Energy and Sustainable Technologies for Building and Environmental Applications Green Japan**

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Green Technologies and Environmental Sustainability Jun 16 2021 In the present scenario, green technologies are playing significant role in changing the course of nation ' s economic growth towards sustainability and providing an alternative socio-economic model that will enable present and future generations to live in a clean and healthy environment, in harmony with nature. Green technology, which is also known as clean technology, refers to the development and extension of processes, practices, and applications that improve or replace the existing technologies facilitating society to meet their own needs while substantially decreasing the impact of human on the planet, and reducing environmental risks and ecological scarcities. The concepts of Green Technologies, if endorsed and pervaded into the lives of all societies, will facilitate the aim of the Millennium Development Goals of keeping the environment intact and improve it for the civilization to survive. Green Technologies and Environmental Sustainability is focused on the goals of green technologies which are becoming increasingly important for ensuring sustainability. This book provides different perspectives of green technology in sectors like energy, agriculture, waste management and economics and contains recent advancements made towards sustainable development in the field of bioenergy, nanotechnology, green chemistry, bioremediation, degraded land reclamation. This book is written for a large and broad readership, including researchers, scientists, academicians and readers from diverse backgrounds across

various fields such as nanotechnology, chemistry, agriculture, environmental science, water engineering, waste management and energy. It could also serve as a reference book for graduates and post-graduate students, faculties, environmentalist and industrial personnel who are working in the area of green technologies.

Smart Technologies for Energy and Environmental Sustainability Mar 26 2022 As the application of smart technologies for monitoring environmental activities becomes more widespread, there is a growing demand for solutions that can help analyze the risk factors and impacts on the environment by focusing on energy consumption, storage, and management. This book is designed to serve as a knowledge-sharing platform, focusing on the emerging models, architectures, and algorithms being developed for smart computational technologies that can lead to efficient energy conservation and environmental sustainability.

Emerging Technologies in Environmental Bioremediation Aug 31 2022 Emerging Technologies in Environmental Bioremediation introduces emerging bioremediation technologies for the treatment and management of industrial wastes and other environmental pollutants for the sake of environmental sustainability. Emerging bioremediation approaches such as nano-bioremediation technology, electro-bioremediation technology, microbial fuel cell technology, Modified Ludzack-Ettinger Process, Modified Activated Sludge Process, and phytotechnologies for the remediation of industrial wastes/pollutants are discussed in a comprehensive manner not found in other books. Furthermore, the book includes updated information as well as future directions for research in the field of bioremediation of industrial wastes. This book will be extremely useful to students, researchers, scientists and professionals in the field of microbiology and biotechnology, Bio (chemical) engineers, environmental researchers, eco-toxicology, and many more. Includes the recovery of resources from wastewater Describes the importance of microorganisms in environmental bioremediation technologies Points out the reuse of treated wastewater through emerging technologies Pays attention to the occurrence of novel micro-pollutants Emphasizes the role of nanotechnology in pollutant bioremediation

Advances in Ultrasound Technology for Environmental Remediation Nov 09 2020 Over the past ten years, innovative technologies have shown that advanced oxidation processes are highly promising when applied to the remediation of polluted water or wastewater as they don ' t generate any sludge or solid material of hazardous nature. Advances in Ultrasound Technology for Environmental Remediation reviews the fundamentals of ultrasound technology and the state of the art developments in " ultrasound-based free radical generation " in environmental remediation and pollution prevention. It also presents the challenges of introducing ultrasound technology into large-scale environmental remediation applications and examines the methods used to improve ultrasound technology. Indeed, ultrasonic systems are extremely sensitive and vulnerable to operational parameters which cannot be controlled without a good knowledge and understanding of physical and chemical phenomena. Advances in Ultrasound Technology for Environmental Remediation features the theory and fundamentals of ultrasound technology and discusses its potential as an alternative method in environmental remediation.

Technologies for Environmental Management Sep 27 2019 The Department of Energy's Environmental Management Program (DOEEM) is one of the largest environmental clean up efforts in world history. The EM division charged with developing or finding technologies to accomplish this massive task, its Office of Science and Technology (OST), has been reviewed extensively, including six reports from committees of the National Research Council's (NRC's) Board on Radioactive Waste Management (BRWM) that have been released since December 1998. These committees examined different components of OST's technology development program, including its decision-making and peer review processes and its efforts to develop technologies in the areas of decontamination and decommissioning, waste forms for mixed waste, tank waste, and subsurface contamination. Gerald Boyd, head of OST, asked the Board on Radioactive Waste Management (BRWM) to summarize the major findings and recommendations of the six reports and synthesize any common issues into a number of overarching recommendations.

Innovative Bio-Based Technologies for Environmental Remediation May 28 2022 Innovative Bio-Based Technologies for Environmental Remediation explores the recent applications of both the latest and broad practical and theoretical aspects of environmental remediation with an aim to combine various innovation-based biotechnology for waste management, waste minimization, and waste to economy. This book summarizes the recent progress of bio-based technologies for environmental remediation at both an experimental and a theoretical model level. An emphasis has been made on trends and the probable future of sustainable techniques to reduce waste and harmful compounds from the environment. Biological-based technologies have low operating costs and involve direct degradation of organic pollutants without the release of toxic intermediates. Recent applications covered in this book include process intensification in bio-based approaches, green technology, phytoremediation, biopolymers, biosurfactants for environmental applications, and other bio-based technologies with sustainable design and the future of remediation are also discussed. This book is an important reference source for environmental scientists and engineers who are seeking to improve their understanding of how bio-based technologies are playing an increasingly important role in environmental remediation. It brings together recent innovations and practices of bio-based technologies for environmental remediation, outlines major bio-based technologies, and discusses biopolymers and biosurfactants for environmental management.

Green Japan Jun 24 2019 As climate change continues to threaten both our economic and ecological well-being, countries around the world are trying to implement green strategies that will simultaneously curb emissions and spur economic growth. Green Japan critically examines the Japanese effort to combine economic growth with commitments to environmental sustainability. Carin Holroyd explores green growth strategies in various industries including conservation, energy, urban development, and international trade. Holroyd ' s comprehensive analysis of how innovation strategies connect with environmental priorities combines a detailed study of government policies with insightful assessments of consumer and market responses. The unevenness of Japan ' s success clearly demonstrates the exceptional technological innovation and creative public policy initiatives that are needed in order to successfully reverse the effects of climate change. Green Japan offers a nuanced and hopeful account of one nation ' s attempts at linking environmental sustainability and continued prosperity.

Advanced Oxidation Technologies Jul 06 2020 Advanced Oxidation Technologies (AOTs) or Processes (AOPs) are relatively new and innovative technologies to remove harmful and toxic pollutants. The most important processes among them are those using light, such as UVC/H2O2, photo-Fenton and heterogeneous photocatalysis with TiO2. These technologies are also relatively low-cost and therefore usef

Emerging Environmental Technologies, Volume II Dec 23 2021 Within the span of last couple of years, the increasing human interference with v- ious natural ecosystems and higher discharge of pollutants has presented numerous challenges to the society related to preserving the nature for a better tomorrow. The challenges also mount pressure on the scienti?c community to invent technologies that would provide solutions to the problems that are man made and also decrease the negative consequences that we are facing because of our own actions. This edited book attempts to present eight technological innovations that have shown potential to provide answers to a few challenges. Like the previous collection, the described innovations in the current volume also cover a range of areas including water and soil pollution, bio-sensors and energy. However, it is to be realized that no combination of technology can be enough to make a sizeable difference. As I said in my last collection, technological advances have to be integrated with a change in social behavior. The philosophy of sustainable development has to be the principle of future planning and growth. In this collection, I am pleased to include an article on noise pollution. Noise is a pollutant of our own behavior and can only be solved by a behavioral change. The change that is either voluntary or enforced by laws. As an environmental scientist noise is not normally a pollutant that would come in mind as a leading pollutant.

A History of Technology and Environment Jan 12 2021 This book provides an accessible overview of the ways that key areas of technology have impacted global ecosystems and natural communities. It offers a new way of thinking about the overall origins of environmental problems. Combining approaches drawn from environmental biology and the history of science and technology, it describes the motivations behind many technical advances and the settings in which they occurred, before tracing their ultimate environmental impacts. Four broad areas of human activity are described: over-harvesting of natural resources using the examples of hunting, fishing and freshwater use; farming, population, land use, and migration; discovery, synthesis and use of manufactured chemicals; and development of sources of artificial energy and the widespread pollution caused by power generation and energy use. These innovations have been driven by various forces, but in most cases new technologies have emerged out of fascinating, psychologically rich, human experiences. This book provides an introduction to these complex developments and will be essential reading for students of science, technology and society, environmental history, and the history of science and technology.

Appropriate Technologies for Environmental Protection in the Developing World Oct 01 2022 This book is the first edited compilation of selected, refereed papers submitted to ERTEP 2007. The selected papers either dealt with technologies or scientific work and policy findings that address specific environmental problems affecting humanity in general, but more specifically, people and ecosystems in developing countries. It was not necessary for the work to have been done in a developing country, but the findings and results must be appropriate or applicable to a developing country setting. It is acknowledged that environmental research, technology applications and policy implementation have been demonstrated to improve environmental sustainability and protection in several developed economies. The main argument of the book is that similar gains can be achieved in developing economies and economies in transition. The book is organized into six chapters along some of the key themes discussed at the conference: Environmental Health Management, Sustainable Energy and Fuel, Water Treatment, Purification and Protection, Mining and Environment, Soil Stabilization, and Environmental Monitoring. It is hoped that the contents of the book will provide an insight into some of the environmental and health mana- ment challenges confronting the developing world and the steps being taken to address them.

Integrated Environmental Technologies for Wastewater Treatment and Sustainable Development Jul 18 2021 Integrated Environmental Technologies for Wastewater Treatment and Sustainable Development provides comprehensive and advanced information on integrated environmental technologies and their limitations, challenges and potential applications in treatment of environmental pollutants and those that are discharged in wastewater from industrial, domestic and municipal sources. The book covers applied and recently developed integrated technologies to solve five major trends in the field of wastewater treatment, including nutrient removal and resource recovery, recalcitrant organic and inorganic compounds

detoxification, energy saving, and biofuel and bioenergy production for environmental sustainability. The book provides future directions to young researchers, scientists and professionals who are working in the field of bioremediation and phytoremediation to remediate wastewater pollutants at laboratory and field scale, for sustainable development. Illustrates the importance of various advanced oxidation processes in effluent treatment plants Describes underlying mechanisms of constructed wetland-microbial fuel cell technologies for the degradation and detoxification of emerging organic and inorganic contaminants discharged in wastewater Highlights the reuse and recycling of wastewater and recovery of value-added resources from wastewater Focuses on recent advances and challenges in integrated environmental technologies, constructed wetland-microbial fuel cell, microbial electrochemical-constructed wetlands, biofilm reactor-constructed wetland, and anammox- microbial fuel cell technology for sustainable development Illustrates the importance of microbes and plants in bio/phytoremediation and wastewater treatment

Ionic Liquid-Based Technologies for Environmental Sustainability Jul 30 2022 Ionic Liquid-based Technologies for Environmental Sustainability explores the range of sustainable and green applications of IL materials achieved in recent years, such as gas solubility, biomass pre-treatment, bio-catalysis, energy storage, gas separation and purification technologies. The book also provides a reference material for future research in IL-based technologies for environmental and energy applications, which are much in-demand due to sustainable, reusable and eco-friendly methods for highly innovative and applied materials. Written by eminent scholars and leading experts from around the world, the book aims to cover the synthesis and characterization of broad range of ionic liquids and their sustainable applications. Chapters provide cutting-edge research with state-of-the-art developments, including the use of IL-based materials for the removal of pharmaceuticals, dyes and value-added metals. Describes the fundamentals and major applications of ionic liquid materials Covers up-to-date developments in novel applications of IL materials Provides practical tips to aid researchers who work on ionic liquid applications

Membrane-Based Technologies for Environmental Pollution Control Feb 10 2021 Membrane Based Technologiesfor Environmental Pollution Control explains the application of this green technology while offering a systematic approach for accurately utilizing mathematical modeling methods for optimizing system design and scale-up. The book provides in-depth coverage of membrane processes, materials and modules, along with their potential application in various pollution control systems. Each chapter provides a systematic approach for dynamic model development and solutions. With this reference, researchers and those responsible for the design of pollution control systems will find a source that can maximize their efforts to reduce or prevent pollutants from entering all types of environmental media. Provides a systematic approach for designing membrane technology based systems for pollution reduction or prevention in all types of environmental media Includes case studies to illustrate actual projects to explain the problems and solutions associated with system scale-up Introduces dynamic modeling and analysis for process intensification

Environmental Technologies and Trends Apr 26 2022 1 Introduction.- 2 Drinking Water.- 2.1 Drinking Water Production: Processes and Emerging Technologies.- 2.2 Adsorption of Organic Micropollutants onto Activated Carbon Fibers: Cloth and Felt.- 2.3 Removal of Micropollutants in Some Ozone Contactors: Efficiency and Simulation.- 2.4 Pervaporation and Membrane Stripping: Potentialities on Micropollutants Removal from Water.- 3 Air Pollution.- 3.1 Industrial Air Pollution: Removal of Dilute Gaseous Vapors.- 3.2 Development of Trickle-Bed Air Biofilter.- 3.3 Deodorization in Wastewater Treatment Plants by Wet-Scrubbing on Packed Column and Chlorine Oxidation.- 3.4 Regeneration by Induction Heating of Granular Activated Carbon Loaded with Volatile Organic Compounds.- 4 Wastewater Treatment.- A Biological Treatment.- 4.1 Effect of the Grease Solubilization and the Optimal Process Monitoring on the Grease Aerobic Digestion.- 4.2 Membrane Gas Liquid Contactors in Water and Wastewater Treatment.- 4.3 The Biological Treatment of High Effluent Flowrates: A Review of the Hydrodynamic Conditions and Possibilities.- 4.4 Multiphase Reactors for Biological Treatment of Urban Wastewaters.- B Physical-Chemical Treatment.- 4.5 Physical Chemical Treatments for Wastewater.- 4.6 Hydrocyclone Based Treatment Methods for Oily Wastewaters.- 4.7 Application of Membrane Separation Processes to Oily Wastewater Treatment: Cutting Oil Emulsions.- 4.8 Electrochemical Degradation of Organic Pollutants for Wastewater Treatment: Oxidation of Phenol on PbO2 Anodes.- 4.9 Treatment of Aqueous Organic Wastes by Molecular Oxygen at High Temperature and Pressure: Wet Air Oxidation Process.- 5 Hazardous Waste Management.- 5.1 Hazardous Wastes Treatments.- 5.2 Advanced Method for the Treatment of Organic Aqueous Wastes: Wet Peroxide Oxidation - WPO(R), Laboratory Studies and Industrial Development.- 5.3 Heavy Metals Recovery by Electrolyzing Technique: The 3.P.E. Technology.- 5.4 An Overview of Plasma Arc Technology Applied Research Projects for the Vitrification of Hazardous Wastes.- 5.5 Permeable Barriers to Remove Cd and Cr from Groundwater.- 6 Soil and Groundwater Contamination.- 6.1 How Technology is Improving Decision Marking for Environmental Restoration.- 6.2 Soil Decontamination Using Electrokinetics, with Application to Urban Residual Sludges.- 6.3 A Systematic Approach to Groundwater Management.- 7 Environmental Trends and Policy Perspectives.- 7.1 Technology Transfer and Utilization.- 7.2 Environmental Technologies and Regulations.- 7.3 Holistic Approach to Environmental Problems.- 7.4 Environmental Forecasting and Technology Trends.- 7.5 Privatization of the Environmental Infrastructure.- 7.6 Increased Use of Economic

Instruments in Environmental Policy.- 7.7 Industry Trends.- 7.8 Industrial Ecology - Going Beyond Pollution Prevention.- 7.9 Summary.

Controlling Environmental Pollution Sep 07 2020 New introductory textbook designed for a one-semester course in environmental technology. Created to appeal to a range of students, it combines lucid presentations of environmental technologies with fascinating stories and biographies illustrating milestones in environmental science and engineering.

Environmental Science and Technology Oct 09 2020 Designed for both professional and student use, the new Second Edition includes recent improvements in the application of new technologies and materials on the environment. It also places greater emphasis on the three environmental media of air, water, and soil and discusses how technology can be used to mitigate contamination of all three.

New Technologies and Environmental Innovation Apr 14 2021 'Joseph Huber's book contains a wealth of information on technological environmental innovations. The scrutiny of this material leads to powerful conclusions, with which scholars should concern themselves. Highly recommended.' - Ren é Kemp, Maastricht University, The Netherlands 'This timely and impressive volume brings technology back into the centre of discussions and debates on environmental reform. In articulating an ecological modernisation perspective, Joseph Huber presents an inspiring, optimistic and at times provocative assessment of the potential and future role of radical technological innovations in greening production-consumption cycles.' - Arthur P.J. Mol, Wageningen University, The Netherlands In this insightful book, Joseph Huber investigates the life cycle analysis of technological and environmental innovations (TEIs). TEIs are new technologies, products and practices which have benign environmental effects and which can increase eco-efficiency. More importantly, they can also improve 'metabolic consistency', thus laying the foundations for a sustainable industrial ecology.

Emerging Technologies for Waste Valorization and Environmental Protection Aug 07 2020 This book features carefully selected articles on emerging technologies for waste valorization and environmental protection. The term “ waste valorization ” is used particularly in engineering, economics, technology, business, environmental and policy literature to refer to any unit operation or collection of operations targeted at reusing, recycling, composting or converting wastes into useful products or energy sources without harming the environment. The book discusses the rudimentary concept, and describes a range of emerging technologies in the field, including nano, fuel-cell and membrane technologies, as well as membrane bioreactors. It also examines in detail essential and common processes in waste valorization, such as rigorous chemical engineering applications, mathematical modeling and other trans-disciplinary approaches. The chapters present high-quality research papers from the IconSWM 2018 conference.

Environmental Sustainability Using Green Technologies Jan 24 2022 Environmental Sustainability Using Green Technologies explains the role of green engineering and social responsibility in the development of chemicals, processes, products, and systems. Examining the relationship between economy, ecology, and equality—key factors in developing a sustainable society—this book covers several aspects of environmental sustainability, explores ways to use resources and processes more responsibly, and describes the tools required to overcome various challenges. It outlines the biotechnological applications, techniques, and processes needed to secure sustainable development and ensure long-lasting future success. Insightful and highly comprehensive, this body of work addresses: Wastewater treatment technologies Nanomaterials in environmental applications Green synthesis of ecofriendly nanoparticles The role of phytoremediation in maintaining environmental sustainability Algal biosorption of heavy metals Mass production of microalgae for industrial applications Integrated biological system for the treatment of sulfate rich wastewater Anaerobic digestion of pharmaceutical effluent Treatment of textile dye using bioaccumulation techniques Production of biosurfactants and their applications in bioremediation Biodegradable polymers Microbial fuel cell (MFC) technology Biodiesel from nonedible oil using a packed bed membrane reactor Production of ecofriendly biodiesel from marine sources Pretreatment techniques for the enhancement of biogas production A review of source apportionment of air pollutants by receptor models and more Environmental Sustainability Using Green Technologies provides excellent reference material that aids and supports sustainability, and offers practical guidance for professors, research scholars, industrialists, biotechnologists, and workers in the applied field of environmental engineering.

Green Technology and Design for the Environment Mar 02 2020 Recent developments have successfully changed our approach to practical applications of engineering by improving the methods of design and manufacturing, for example, shorter development cycles. The text focuses on directing such new methods towards a specific ecological purpose.

Technology and Environment Dec 11 2020 Technology and Environment is one of a series of publications designed to bring national attention to issues of the greatest importance in engineering and technology during the 25th year of the National Academy of Engineering. A "paradox of technology" is that it can be both the source of environmental damage and our best hope for repairing such damage today and avoiding it in the future. Technology and Environment addresses this paradox and the blind spot it creates in our understanding of environmental crises. The book considers the proximate causes of environmental damage â € "machines, factories, cities, and so on â € "in a larger societal context, from which the will to devise and implement solutions must arise. It helps explain the depth and difficulty of such issues as global warming and

hazardous wastes but also demonstrates the potential of technological innovation to have a constructive impact on the planet. With a range of data and examples, the authors cover such topics as the "industrial metabolism" of production and consumption, the environmental consequences of the information era, and design of environmentally compatible technologies.

Environmental Bioremediation Technologies Dec 31 2019 Bioremediation is an eco-friendly, cost-effective and natural technology targeted to remove heavy metals, radionuclides, xenobiotic compounds, organic waste, pesticides etc. from contaminated sites or industrial discharges through biological means. Since this technology is used in in-situ conditions, it does not physically disturb the site unlike conventional methods i.e. chemical or mechanical methods.

Environment, Technology and Sustainability Nov 21 2021 This second volume in the Technologies of Architecture series – the only series of books tuned to the architectural technology syllabus – explores the environmental influences on building design. Looking particularly at sustainable building, a holistic view is taken, so that the influence of any one set of choices on other areas – such as the trade-off of daylighting against thermal insulation, or the balance needed between heating and ventilation – are not overlooked. The authors discuss available technologies for establishing a suitable microclimate within buildings, for managing the transmission of sound and for minimizing the exploitation of scarce energy and of other resources. Using the perspective of a designer who needs a sound scientific basis for arriving at the optimum outcome, this valuably informative volume is ideal for architectural technology students, as well as first and second year architecture students.

Histories of Technology, the Environment and Modern Britain Sep 19 2021 Histories of Technology, the Environment and Modern Britain brings together historians with a wide range of interests to take a uniquely wide-lens view of how technology and the environment have been intimately and irreversibly entangled in Britain over the last 300 years. It combines, for the first time, two perspectives with much to say about Britain since the industrial revolution: the history of technology and environmental history. Technologies are modified environments, just as nature is to varying extents engineered. Furthermore, technologies and our living and non-living environment are both predominant material forms of organisation – and self-organisation – that surround and make us. Both have changed over time, in intersecting ways. Technologies discussed in the collection include bulldozers, submarine cables, automobiles, flood barriers, medical devices, museum displays and biotechnologies. Environments investigated include bogs, cities, farms, places of natural beauty and pollution, land and sea. The book explores this diversity but also offers an integrated framework for understanding these intersections.

Environmental Technologies, Intellectual Property and Climate Change Aug 19 2021 Many disciplines are relevant to combating climate change. This challenging book draws together legal, regulatory, geographic, industrial and professional perspectives and explores the role of technologies in addressing climate change through mitigation, adaptation and information gathering. It explores some key issues. Is intellectual property part of the solution, an obstacle to change or peripheral? Are there more important questions? Do they receive the attention they deserve? and from whom? This innovative book will play an important role in stimulating holistic discussion and action on an issue of key importance to society.

Environmental Technology and Sustainability Nov 02 2022 Environmental Technology and Sustainability: Physical, Chemical and Biological Technologies for Clean Environmental Management provides a dependable source of information on the fundamental scientific evidence involved in environmental protection and sustainable development. The book provides the basic natural sciences that underpin the understanding, development and application of environment technologies that support a clean inhabitable world that includes environmental technologies and sustainable, renewable energy systems. It considers the science and technology for environmental benefits, including the development of both smarter, cleaner technologies for environmental protection, conservation, and more. Provides methods and processes for CO2 Sequestration Focuses on technologies for reducing greenhouse gases and for biofuel production Outlines issues surrounding contaminated water and provides solutions for water management Describes problems facing air pollution, including sources and mitigation Includes contaminated soil management

Assistive Technologies and Environmental Interventions in Healthcare Nov 29 2019 Providing a holistic and client-centered approach, Assistive Technologies and Environmental Interventions in Healthcare explores the individual ' s needs within the environment, examines the relationship between disability and a variety of traditional and cutting-edge technologies, and presents a humanistic discussion of Technology-Environment Intervention (TEI). Written by a multidisciplinary team of authors, this text introduces readers to a variety of conceptual practice models and the clinical reasoning perspectives. It also provides insight into how designers go about solving human-tech problems, discusses best practices for both face-to-face and virtual teams, and looks at the psychological, sociocultural, and cognitive factors behind the development and provision of assistive technologies. Examines a wide range of technologies and environmental interventions Demonstrates how a better understanding of the complexity of human interaction with both the physical and social environment can lead to better use of technology Explores the future of technology and research in TEI Complete with a

range of learning features such as keywords, case studies and review questions, this book is ideal for undergraduate and graduate students in occupational therapy and other related health professions, as well as those undertaking certification and board examinations.

Renewable Energy and Sustainable Technologies for Building and Environmental Applications Jul 26 2019 This diverse resource on renewable energy and sustainable technologies highlights the status, state of the art, challenges, advancements and options in areas such as energy recovery systems, turbine ventilators, green composites, biofuels and bio-resources for energy production, wind energy, integrated energy-efficient systems, thermal energy storage, natural ventilation & day-lighting systems, and low carbon technologies for building and environmental applications. It is designed to serve as a reference book for students, researchers, manufacturers and professionals working in these fields. The editors have gathered articles from world-leading experts that clearly illustrate key areas in renewable energy and sustainability. The distinct role of these technologies in future endeavors is stressed by taking into account the opportunities to contribute with new approaches, methods and directions for building and environmental applications. The in-depth discussion presented in this book will give readers a clear understanding of every important aspect of each technology ' s applications, optimum configuration, modifications, limitations and their possible improvements.

Environmental Technology and Innovations Feb 22 2022 This book covers a wide range of topics within enviromental engineering and technologies including: · General environmental engineering · Clean energy and sustainability · Water and wastewater management · Public health and environment. The application areas range from emerging pollutants of air, soil and water environment, remediation technologies, clean energy and sustainability of biofuels, waste to energy, water and wastewater management, public health and the environment, quality and safety of food production to environmental planning and management and policies for cities and regions. The papers cover both theory and applications, and are focused on a wide range of sectors and problem areas. Integral demonstrations of the use of reliability and environmental engineering are provided in many practical applications concerning major technological approaches. Environmental Technology and Innovations will be of interest to academics and professionals working in a wide range of industrial, governmental and academic sectors, including water and waste management, energy generation, fuel production and use, protection of natural heritage, industrial ecology, man health protection and policy making.

Environmental Treatment Technologies for Municipal, Industrial and Medical Wastes Jun 04 2020 Environmental Treatment Technologies for Municipal, Industrial and Medical Wastes will provide the reader with a simple and clear path to analyze the full range of options to manage/treat any solid, hazardous, or medical waste problems/issues at hand. This book aims to disseminate information on available remediation treatment technologies to developing and developed countries. It also includes adequate information on all available treatment technologies for different types and categories of waste (hazardous, non-hazardous municipal solid waste, and medical waste). The technologies are grouped into the following categories: Containment technology; Soil washing; Thermal treatment; Vapor extraction; Bioremediation including Phytoremediation; Plasma/Incineration; Other Physical/Chemical treatments. It enlightens the effect of emissions during remediation activities on climate change and suggests measures to identify and control such emissions. It also covers the application of remote sensing technologies with examples and the impending issues of proper disinfection and disposal of COVID-19 related waste pertaining to the current pandemic. It is intended for almost anyone — ranging from college students and early career professionals interested in environmental pollution control, to graduate students, researchers and experienced professionals. This book will: cover several recent developments on various treatment technologies, including in situ applications and their emission/migration control methods including remote sensing technologies; deal with municipal solid waste, their treatment/disposal methods, recycling, and reuse in addition to the hazardous and medical waste management program; assist civil/environmental engineering students and local community organizations in evaluating the impact of an industry and its associated waste produced on-site; and cover how best to treat/manage the waste to arrive at a safe operation without impacting human health and the local environment.

Finite Media Mar 14 2021 While digital media give us the ability to communicate with and know the world, their use comes at the expense of an immense ecological footprint and environmental degradation. In Finite Media Sean Cubitt offers a large-scale rethinking of theories of mediation by examining the environmental and human toll exacted by mining and the manufacture, use, and disposal of millions of phones, computers, and other devices. The way out is through an eco-political media aesthetics, in which people use media to shift their relationship to the environment and where public goods and spaces are available to all. Cubitt demonstrates this through case studies ranging from the 1906 film The Story of the Kelly Gang to an image of Saturn taken during NASA's Cassini-Huygens mission, suggesting that affective responses to images may generate a populist environmental politics that demands better ways of living and being. Only by reorienting our use of media, Cubitt contends, can we overcome the failures of political elites and the ravages of capital.

Sustainable Green Technologies for Environmental Management Jun 28 2022 Our Earth is considered as a natural system which organizes and controls itself. However, the present scale of anthropogenic activity is unprecedented in the history of mankind compelling the intelligentia to ponder over the scientific causes of the problems, processes and sustainable and

pragmatic solutions. The current rate of resource use and consumption pattern are depleting the planet ' s finite resources and damaging life-supporting ecosystems. A large number of toxic substances are increasingly found in air, water, soil, and flora and fauna. We are in the midst of a period of increasing interconnected and complex global challenges that seek action across temporal and spatial scales, diverse sectors, and concerted efforts from global citizens. The environment on account of human ' s action has been experiencing imbalances and ecological catastrophe. Environmental issues like global climate change, biodiversity loss, the rapid depletion of natural resources, degradation of global commons, stratospheric ozone depletion have been restricting the safe operating space and transgressing the planetary boundaries endangering the existence of human societies. The global environmental problems if not scientifically managed may end up in the civilizational collapse. Nevertheless, the underlying commonality among these environmental issues is interrelatedness, complexity, and difficulty in identifying and implementing solutions. The global environmental challenges can be managed by adopting sustainable green technologies which dovetails the principles of environmental sustainability with social and ecological sustainability. Green growth is construed as a new development paradigm that sustains economic growth while at the same time ensuring environmental sustainability.

Environmental Technology in the Oil Industry Aug 26 2019 This significantly updated second edition of a classic work on the subject identifies the issues and constraints for each stage in the production of petroleum products – what they are, who is imposing them and why, their technical and financial implications. It then looks in detail at the technological solutions which have been found or are being developed. It also places these developments in their legal and commercial context.

Environmental Science May 04 2020 This book presents the current aspects of environmental issues in view of chemical processes particularly with respect to two facets: social sciences along with chemistry and natural sciences. The former facet explores the environmental economics and policies along with chemical engineering or green chemistry and the latter the various fields of environmental studies. The book was conceptualized in the form of e-learning content, such as PowerPoint presentation, with explanatory notes to a new style of lectures on environmental science in a university at undergraduate level. Each chapter of the book comprises a summary of the contents of the chapter; a list of specific terms and their explanation; topics that can be taken up for discussion among college students, mainly freshmen in liberal arts, and for enhancing general knowledge; and problems and solutions using active learning methods.

Wastewater Technologies and Environmental Treatment Apr 02 2020 This proceedings book provides the latest developments on water as a unique resource that can meet the fundamental needs of human beings and ecosystems. Wastewater generated in industrial, commercial, residential and sensible places must take care as it may pollute the ground and surface water if not treated properly. Environmental pollution discharged from industrial, commercial, residential and sensible places must take care as it may pollute the air, water and land if not treated properly. Most of the design and development of wastewater technologies and environmental treatment were unable to take load as there is huge amount of wastewater and environmental pollution that was generating every day. This threatens the sustainable development, and it needs to solve in accurate, reliable, urgent and timely. Our interest is sustainable innovative and technological transfer approaches which can be used available for supporting, operationalizing and delivering sustainable wastewater technologies and environmental treatment. The authors hope that the book covers possible spectrum of wastewater technologies and environmental treatment to high level of environmental protection, clean and green management lessons, identifies the barriers for transformative change and then informs agenda and initiatives for the sustainable development. ICWTET2020 is dedicated to wastewater technologies and environmental treatment, with a focus on the high level of environmental protection. The aim of the ICWTET2020 is to disseminate current knowledge and sustainable development, share experience and lessons learned and stimulate discussion and reflection, thus promoting a sustainable paradigm shift. The final purpose is to contribute transformative change towards sustainable development through dissemination of sustainable wastewater technologies and environmental treatment.

Frontiers in Water-Energy-Nexus—Nature-Based Solutions, Advanced Technologies and Best Practices for Environmental Sustainability Jan 30 2020 This volume includes selected contributions presented during the 2nd edition of the international conference on WaterEnergyNEXUS which was held in Salerno, Italy in November 2018. This conference was organized by the Sanitary Environmental Engineering Division (SEED) of the University of Salerno (Italy) in cooperation with Advanced Institute of Water Industry at Kyungpook National University (Korea) and with The Energy and Resources Institute, TERI (India). The initiative received the patronage of UNESCO – World Water Association Programme (WWAP) and of the International Water Association (IWA) and was organized with the support of Springer (MENA Publishing Program), Arab Water Council (AWC), Korean Society of Environmental Engineering (KSEE) and Italian Society of Sanitary Environmental Engineering Professors (GITISA). With the support of international experts invited as plenary and keynote speakers, the conference aimed to give a platform for Euro-Mediterranean countries to share and discuss key topics on such water-energy issues through the presentation of nature-based solutions, advanced technologies and best practices for a more sustainable environment. This volume gives a general and brief overview on current research focusing on emerging Water-Energy-Nexus issues and challenges and its potential applications to a variety of environmental problems that are impacting the Euro-

Mediterranean zone and surrounding regions. A selection of novel and alternative solutions applied worldwide are included. The volume contains over about one hundred carefully refereed contributions from 44 countries worldwide selected for the conference. Topics covered include (1) Nexus framework and governance, (2) Environmental solutions for the sustainable development of the water sector, (3) future clean energy technologies and systems under water constraints, (4) environmental engineering and management, (5) Implementation and best practices Intended for researchers in environmental engineering, environmental science, chemistry, and civil engineering. This volume is also an invaluable guide for industry professionals working in both water and energy sectors.

Information Technologies in Environmental Engineering Oct 21 2021 This monograph contains recent studies in eco-informatics, promising ideas and new challenges in information management for supporting sustainability in companies and other organization. The scope of this book includes sets of solutions which show different stakeholders ' viewpoints on sustainability. In individual chapters, authors discuss the role which Environmental Information Systems (EIS) play in the environmental conscious functioning of enterprise. New models, methods and tools supporting sustainability are presented. Emphasis is placed on the innovative approach to eco-friendly organization and coordination of transport, logistics processes and operations management. The information management and decision making in manufacturing and service organizations is highlighted. The scope of this monograph also encompasses topics related to the modeling and monitoring of climate change.

Solutions to Environmental Problems Involving Nanotechnology and Enzyme Technology Oct 28 2019 Nanotechnology and Enzyme Technology Combined to Address Environmental Problems discusses how nanotechnology and enzyme technology work independently and together to help researchers and environmental professionals learn about this revolutionary and cross-disciplinary field. Nanotechnology has provided a range of nanomaterials, some of which are helpful in the protection of the environment and climate. They can be used to improve durability against mechanical stress, help in cleaning, enhance energy efficiency as insulation, save energy consumption during transportation due to catalytic properties, and more. This book highlights this technology as it continues to provide solutions for various environmental problems. Covers air and water pollution remediation in the developing field of combining nanotechnology with enzyme technology Reviews the sustainability potentials of combining nanotechnology and enzyme technology, including energy production Applies current research and utilization to a variety of environmental issues, including pollution and energy production

Green Technologies to Improve the Environment on Earth May 16 2021 The aim of this book is to compile some of the green technologies applied to improve the environment on Earth. The success of these technologies is built from humility; from this ethical principle, the concept of honest broker is defined in this work. Some of the biggest environmental problems, such as soil pollution by heavy metals and pollution from the mining industry and massive coal plants, are also addressed. Additional subjects depicted here include geothermal energy, plasma technology, and the correct use of electric vehicles, and demonstrate a promising scenario to diminish greenhouse gases. Likewise, caring for wildlife is essential; the correct use of certain technologies depicted here can contribute to their conservation.