Environmental Science Engineering Ravi Krishnan

ROJAS MICAH

Algal Biotechnology Elsevier
Agriculture and Food Science Book series aims to bring together leading academic scientists, researchers and research scholars to publish their experiences and research results on all aspects of Agriculture and Food Science. It also provides a premier interdisciplinary platform for researchers, practitioners and educators to present and discuss the most recent innovations, trends, and concerns as well as practical challenges encountered and solutions adopted in the fields of Agriculture and Food Science. High quality research contributions describing original and unpublished results of conceptual, constructive, empirical, experimental, or theoretical work in all areas of Agriculture and Food Science are cordially invited for publication. Authors are solicited to contribute to the book series by submitting articles that illustrate research results, projects, surveying works and industrial experiences that describe significant advances in the following areas, but are not limited to 1. Textile Engineering 2. Agronomy 3. Soil Science 4. Microbiology 5. Phsiology 6. Ecology 7. Epidemology 8. Genetics & Plant Breeding 9. Plant Pathology 10. Entomology 11. Agricultural Biotechnology 12. Environmental Sciences 13. Agricultural Engineering 14. Food Science 15. Waste Management 16. Animal Husbandry and Dairying 17. Agricultural Statistics 18. Food Storage and Preservation 19. Food Technology and Processing 20. Agricultural Sustainability 21. Irrigation 22. Root Morphology Sensing 23. Yield-Monitoring 24. Industrial Crops and Products Engineering 25. Artificial Intelligence in Agriculture 26. Poultry Science 27. Forestry 28. Horticulture 29. Fisheries Science 30. Agriculture Equipments & Smart Technologies 31. Veternary Sciences 32. Contract & Integrated Farming 33. Sericulture

Environmental Resilience and Transformation in times of COVID-19 Discovery Publishing House
Under Contemporary Challenges are environmental issues that have received considerable public support and concern; they include: climate change, acid rain, deforestation, endangered species, biodiversity, ecorisk, cultural resources, and sustainability. For most of these issues, there are scientific agreements and

disagreements; there are many uncertainties, thus views differ widely. These topics are discussed in considerable detail. Notwithstanding uncertainties and differing views on such topics, all of this information is put in a policy context such that progress towards addressing these contemporary challenges can be made while consensus on the nature and extent of the problem and resultant solutions are being developed. The book provides considerable information about many timeless issues. These issues range from resources needed for sustaining the quality of life on the planet: air resources to natural resources.

Annual Report Butterworth-Heinemann
Sustainable Bioprocessing for a Clean and Green Environment: Concepts and Applications highlights the importance of waste to health in which waste is safely converted to value-added products via bioprocess technologies. Providing fundamental concepts and applications, this book also offers readers the methodology behind the operation of a variety of biological processes used in developing valuable products from waste. Features: Discusses synthesis and use of environmentally friendly biobased materials, such as biopolymer films and biobased plasticizers Highlights nanotechnology applications in the treatment of pollution and emphasizes the synthesis of biogenic nanomaterials for environmental remediation Describes the use of biosurfactants and emerging algal technologies, such as applications of microalgae in nutraceuticals and biofuel production Details delignification for lignocellulosic biomass This interdisciplinary book offers researchers and practitioners in chemical engineering, environmental engineering, and related fields a broad perspective on fundamentals, technologies, and environmental applications of sustainable bioprocessing.

Who's Who in Science and Engineering 2008-2009 Springer Science & Business Media
Green Sustainable Process for Chemical and Environmental Engineering and Science: Solvents for the Pharmaceutical Industry aims at providing a detailed overview of applications of green solvents in pharmaceutical industries. It also focuses on providing a detailed literature survey on the green solvents for pharmaceutical analysis, drug design, synthesis, and production, etc. It summarizes the applications of various greens solvents such as water, cyrene, vegetable oils, ionic liquids, ethyl lactate, eutectic solvents, and glycerol in contrast to toxic solvents. This book provides an overview of the use of green solvents for the sustainable and environmentally friendly development of synthetic methodologies for biomedical and pharmaceutical industries. Up-to-date developments towards the development of solvents for pharmaceutical industry Includes latest advances in pharmaceutical analysis and synthesis using green solvents Outlines eco-friendly green solvents for medicinal applications State-of-the-art overview on the exploration of green solvents for pharmaceutical industries

Green Sustainable Process for Chemical and Environmental Engineering and Science CRC Press
Large scale cultivation of macrofungi is possible with fermentation, using easily accessible lignocellulosic agricultural residues applying economical methods to generate substantial biomass, food and biofuels. Bioconversion of lignocellulosic wastes by macrofungi generates value-added fungal nutritional biomass for humans and livestock. Besides commercial cultivation techniques, other topics covered in Advances in Macrofungi: Industrial Avenues and Prospects include: the healing potential of mushrooms, industrial opportunities, mycelium-based products, forest wild mushrooms and industrial applications of white rot fungi. This book reviews the industrial applications and uses of macrofungi. It encourages students and researchers to explore non-conventional sources of nutrition as well as bioactive metabolites to serve as nutraceuticals. It emphasizes the potential of macrofungi as a source of bioactive compounds to remedy human lifestyle diseases especially cancers and cardiovascular ailments along with immunostimulation potential by Cordyceps. This book emphasizes the role of on mushrooms as a source of cosmeceuticals, flavors, essence, scents and perfumes.

Regents' Proceedings Springer Science & Business Media
Environmental Resilience and Transformation in Times of COVID-19: Climate Change Effects on Environmental Functionality is a timely reference to better understand environmental changes amid the COVID-19 pandemic and the associated lockdowns. The book is organized into five themes: (1) environmental modifications, degradation, and human health risks; (2) water resources—planning, management, and governance; (3) air quality—monitoring, fate, transport, and drivers of socioenvironmental change; (4) marine and lacustrine environment; and (5) sustainable development goals and environmental justice. These themes provide an insight into the impact of COVID-19 on the environment and vice versa, which will help improve environmental management and planning, as well as influence future policies. Featuring many case studies from around the globe, this book offers a crucial examination of the intersectionality between climate, sustainability, the environment, and public health for researchers, practitioners, and policymakers in environmental science. Features global case studies to illustrate themes and address issues to support environmental management Offers fundamental and practical understanding of ways to improve and validate predictive abilities and tools in addition to response Examines climate-related trends in the spread of the pandemic Presents different ways forward in order to achieve global goals with a specific focus on SDGs

Geoinformatics New Age International
Advances in Chemical Engineering serial, Volume 60 highlights new advances in the field with this new volume presenting interesting chapters. Each chapter is written by an international board of authors. Provides the authority and expertise of leading contributors from an international board of authors Presents the latest release in the Advances in Chemical Engineering series Includes the latest information on the Circular Economy: Closing the Loop with Chemical Recycling of Solid Plastic Waste

BASICS OF ENVIRONMENTAL SCIENCE AND ENGINEERING Elsevier
The International Conference on Emerging Trends in Engineering, Science and Technology (ICETEST) was held at the Government Engineering College, Thrissur, Kerala, India, from 18th to 20th January 2018, with the theme, “Society, Energy and Environment”, covering related topics in the areas of Civil Engineering, Mechanical Engineering, Electrical Engineering, Chemical Engineering, Electronics & Communication Engineering, Computer Science and Architecture. Conflict between energy and environment has been of global significance in recent years. Academic research needs to support the industry and society through socially and environmentally sustainable outcomes. ICETEST 2018 was organized with this specific objective. The conference provided a platform for researchers from different domains, to discuss and disseminate their findings. Outstanding speakers, faculties, and scholars from different parts of the world presented their

research outcomes in modern technologies using sustainable technologies.

Rice Research for Quality Improvement: Genomics and Genetic Engineering Springer Nature

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.

Advances in Macrofungi Academic Press

Approx.494 pages Approx.494 pages

Encyclopedia of Environmental Science and Engineering UM Libraries

Environmental Science is one of the most important areas of research and study in present time and its application in every aspect of life has also increased . Keeping this in view, almost all Indian Universities have introduced it as a compulsory course. This book is intended to suit the needs of graduate and postgraduate students pursuing environmental studies. To save the natural environment, a good and effective understanding of environmental science is needed. Environmental science is a term that has been widely used in recent years and its manifestations can range from environmental awareness learning through complex and expensive environmental study to operational research studies of environmental educations systems.

NASA's Fiscal Year 1999 Budget Request, Parts I-IV CRC Press

Examination is as old as education itself. The examination process is the past phase of teaching and learning. Traditionally, the examination, has been a very tough exercise, fearful enough for students. However, with changing times, the procedure of conventional examination has changed. Now, the modern concept of examination is quite progressive and scientific. The educationists have introduced new terms like evaluation and measurement. Under evaluation, the level of knowledge and learning is weighted and under measurement, a learner is gauged and allotted score of marks.

Environmental Science and Engineering Selfypage Developers Pvt Ltd.

Over the past decade the world has seen the rise of the fascinating and diverse field currently recognized as nanotechnology. This book covers a broad spectrum of topics within nanotechnology, including synthesis techniques, various innovative characterization techniques, growth mechanisms of nanomaterials, the physics and chemistry of nanomaterials, diverse functionalization methods, and the various applications of nanomaterials in biology, therapeutics, energy, food science, and environmental science. It also discusses applications of nanostructured materials, integrative applications such as nano- and micro-electronic sensor devices, as well as agricultural and environmental remediation applications. The book also includes a discussion of advances in functionalized nanomaterials (0D, 1D, 2D and 3D) and covers the early stages of the development of functionalized nanostructures, considering the future for 2D nanomaterials and 3D objects. Additionally, it includes a chapter on nanomaterial research development that highlights work on the life-cycle analysis of nanostructured materials and toxicity aspects. This book proves useful for researchers and professionals working in the field of nanomaterials and green technology, as well as in the field of nanotechnology. It should be useful to students and specialized researchers in a number of disciplines ranging from biology, chemistry, and materials science to engineering and manufacturing in both academia and industry.

Environmental Science And Engineering (anna University) New Age International

The purpose of this workshop is to spread the vast amount of information available on semiconductor physics to every possible field throughout the scientific community. As a result, the latest findings, research and discoveries can be quickly disseminated. This workshop provides all participating research groups with an excellent platform for interaction and collaboration with other members of their respective scientific community. This workshop’s technical sessions include various current and significant topics for applications and scientific developments, including • Optoelectronics • VLSI & ULSI Technology • Photovoltaics • MEMS & Sensors • Device Modeling and Simulation • High Frequency/ Power Devices • Nanotechnology and Emerging Areas • Organic Electronics • Displays and Lighting Many eminent scientists from various national and international organizations are actively participating with their latest research works and also equally supporting this mega event by joining the various organizing committees.

IoT-Based Smart Waste Management for Environmental Sustainability

Springer Nature
Environmental Science And Engineering Pertain To A Systematic Analysis Of The Natural And Man-Made World Encompassing Various Scientific, Economic, Social And Ethical Aspects. Human Impacts Leading To Large-Scale Degradation Of The Environment Have Aroused Global Concern On Environmental Issues In The Recent Years. The Apex Court Has Hence, Issued Directive To Impart Environmental Literacy To All.In This Book The Fundamental Concepts Of Environmental Science And Engineering Have Been Introduced And Analyzed In A Simple Manner Strictly As Per The Anna University Iind And Iiird Semester Syllabus. Besides The Undergraduate Students Of All Disciplines The Book Will Also Be Useful For Those Appearing In Various Competitive Exams Since Environmental Issues Now Find A Focus In Most Of Such Examinations. The Contents Of The Book Will Be Of Interest To All Educationists, Planners And Policy Makers.Key Features Of The Book Include A Simple And Holistic Approach With Illustrations, Tables And Specific Case Studies Mainly In The Indian Context. The Basic Terminologies Have Been Defined In The Text While Introducing The Topics And Some Useful Terms Mentioned In The Text Have Been Explained In The Glossary For An Easy Grasp By Students Of All Disciplines.
Futuristic Trends in Agriculture Engineering & Food Sciences Academic Press
This book consolidates and summarizes smart technologies like IoT, edge computing, and AI used in different aspects of waste material management, mitigation, and recycling for a sustainable environment. One of the cases explains how IoT-based systems and wireless sensors can be used to continuously detect common pollutants such as volatile organic compounds (VOCs), carbon monoxide, and particulate matter (PM) and how the data collected are used to assess the overall air quality and determine actions for improvements. A collection of practical case studies, this book provides a comprehensive knowledge in smart waste management to readers in universities, research centers, and industries.
Physics of Semiconductor Devices CRC Press
Systems-Level Modelling of Microbial Communities: Theory and Practice introduces various aspects of modelling microbial communities and presents a detailed overview of the computational methods which have been developed in this area. This book is aimed at researchers in the field of computational/systems biology as well as biologists/experimentalists studying microbial communities, who are keen on embracing the concepts of computational modelling. The primary focus of this book is on methods for modelling interactions between micro-organisms in a community, with special emphasis on constraint-based and network-based modelling techniques. A brief overview of population- and agent-based modelling is also presented. Lastly, it covers the experimental methods to understand microbial communities, and provides an outlook on how the field may evolve in the coming years.
Emerging Nanomaterials for Advanced Technologies Springer Nature
This interdisciplinary book incorporates various aspects of environment, ecology, and natural disaster management including cognitive informatics and computing. It fosters research innovation and discovery on basic science and information technology for addressing various environmental problems, while providing the right solutions in environment, ecology, and disaster management. This book is a unique resource for researchers and practitioners of energy informatics in various scientific, technological, engineering, and social fields to disseminate original research on the application of digital technology and information management theory and practice to facilitate the global transition toward sustainable and resilient energy systems. Cognitive informatics is also the need of the hour and deals with cutting-edge and multidisciplinary research area that tackles the fundamental problems shared by modern informatics, computation, software engineering, AI, cybernetics, cognitive science, neuropsychology, medical science, systems science, philosophy, linguistics, economics, management science, and life sciences, which this book also presents.
Introduction to Environmental Engineering and Science CRC Press
Algae are sunlight-driven cell factories, and can efficiently absorb CO2 and convert light energy to chemical energy such as lipid, starch and other carbohydrates and release O2. Algal feedstock is a promising resource for bioproduct production, given its high photosynthetic efficiency for producing biomass compared to conventional crops. Microalgae can be used for flue-gas and wastewater bioremediation. This book highlights recent breakthroughs in the multidisciplinary areas of algal biotechnology and the chapters feature recent developments from cyanobacteria to eukaryotic algae, from theoretical biology to applied biology. It also includes the latest advancements in algal-based synthetic biology, including metabolic engineering, artificial biological system construction and green chemicals production. With contributions by leading authorities in algal biotechnology research, it is a valuable resource for graduate students and researchers in the field, and those involved in the study of photosynthesis and green-cell factories.
Environmental Informatics Butterworth-Heinemann
Medicinal plant-based synthesis of nanoparticles from various extracts is easy, safe, and eco-friendly. Medicinal and herbal plants are the natural source of medicines, mainly due to the presence of secondary metabolites, and have been used as medicine since ancient times. Secondary Metabolites from Medicinal Plants: Nanoparticles Synthesis and their Applications provides an overview on medicinal plant-based secondary metabolites and their use in the synthesis of different types of nanoparticles. It explores trends in growth, characterization, properties, and applications of nanoparticles from secondary metabolites including terpenoids, alkaloids, flavonoids, and phenolic compounds. It also explains the opportunities and future challenges of secondary metabolites in nanoparticle synthesis. Nanotechnology is a burgeoning research field, and due to its widespread application in almost every branch of science and technology, it creates many new opportunities. As part of the Exploring Medicinal Plants series, this book will be of huge benefit to plant scientists and researchers as well as graduates, postgraduates, researchers, and consultants working in the field of nanoparticles.