

Environmental Science By Ravi Krishnan Full Book

A directory to the universities of the Commonwealth and the handbook of their association. Zinc-Based Nanostructures for Environmental and Agricultural Applications shows how zinc nanostructures are being used in agriculture, food and the environment. The book has been divided into two parts: Part I deals with the synthesis and characterization of zinc-based nanostructures such as biogenic, plant, microbial, and actinobacteria mediated synthesis of zinc nanoparticles, Part II is focused on agri-food applications such as antibacterial, antifungal, antimicrobial, plant disease management, controlling post-harvest diseases, pesticide sensing and degradations, plant promotions, ZnO nanostructure for food packaging application, safe animal food and feed supplement, elimination of mycotoxins, and veterinary applications. Part III reviews technological developments in environmental applications such as risks and benefits for aquatic organisms and the marine environment, antiseptic activity and toxicity mechanisms, wastewater treatment, and zinc oxide-based nanomaterials for photocatalytic degradation of environmental and agricultural pollutants. The book discusses various aspects, including the application of zinc-based nanostructures to enhance plant health and growth, the effect on soil microbial activity, antimicrobial mechanism, phytotoxicity and accumulation in plants, the possible impact of zinc-based nanostructures in the agricultural sector as nanofertilizer, enhancing crop productivity, and other possible antimicrobial mechanisms of ZnO nanomaterials. Explores the impact of a large variety of zinc-based nanostructures on agri-food and environment sectors Outlines how the properties of zinc-based nanostructures mean they are particularly efficient in environmental and agricultural application areas Assesses the major challenges of synthesizing and processing zinc-based nanostructured materials 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.

This book provides innovative ideas on achieving sustainable development and using green technologies to conserve our ecosystem. Innovation is the successful exploitation of a new idea. Through innovation, we can achieve MORE while using LESS. Innovations in science & technology will not only help mankind as a whole, but also contribute to the economic growth of individual countries. It is essential that the global problem of environmental degradation be addressed immediately, and thus, we need to rethink the concept of sustainable development. Indeed, new environmentally friendly technologies are fundamental to attaining sustainable development. The book shares a wealth of innovative green technological ideas on how to preserve and improve the quality of the environment, and how to establish a more resource-efficient and sustainable society. The book provides an interdisciplinary approach to addressing various technical issues and capitalizing on advances in computing & optimization for scientific & technological development, smart information, communication, bio-monitoring, smart cities, food quality assessment, waste management, environmental aspects, alternative energies, sustainable infrastructure development, etc. In short, it offers valuable information and insights for budding engineers, researchers, upcoming young minds and industry

professionals, promoting awareness for recent advances in the various fields mentioned above.

An overview of the current state of nanotechnology-based devices with applications in environmental science, focusing on nanomaterials and polymer nanocomposites. The handbook pays special attention to those nanotechnology-based approaches that promise easier, faster and cheaper processes in environmental monitoring and remediation. Furthermore, it presents up-to-date information on the economics, toxicity and regulations related to nanotechnology in detail. The book closes with a look at the role of nanotechnology for a green and sustainable future. With its coverage of existing and soon-to-be-realized devices this is an indispensable reference for both academic and corporate R&D.

The Routledge Handbook of FinTech offers comprehensive coverage of the opportunities, challenges and future trends of financial technology. This handbook is a unique and in-depth reference work. It is organised in six thematic parts. The first part outlines the development, funding, and the future trends. The second focuses on blockchain technology applications and various aspects of cryptocurrencies. The next covers FinTech in banking. A significant element of FinTech, mobile payments and online lending, is included in the fourth part. The fifth continues with several chapters covering other financial services, while the last discusses ethics and regulatory issues. These six parts represent the most significant and overarching themes of FinTech innovations. This handbook will appeal to students, established researchers seeking a single repository on the subject, as well as policy makers and market professionals seeking convenient access to a one-stop guide.

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.

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

This book focuses on the development of physical parameterization over the last 2 to 3 decades and provides a roadmap for its future development. It covers important physical processes: convection, clouds, radiation, land-surface, and the orographic effect. The improvement of numerical models for predicting weather and climate at a variety of places and times has progressed globally. However, there are still several challenging areas, which need to be addressed with a better understanding of physical processes based on observations, and to subsequently be taken into account by means of improved parameterization. And this is all the more important since models are increasingly being used at higher horizontal and vertical resolutions. Encouraging debate on the cloud-resolving approach or the hybrid approach with parameterized convection and grid-scale cloud microphysics and its impact on models' intrinsic predictability, the book offers a motivating reference guide for all researchers whose work involves physical parameterization problems and numerical models.

The book "Ecological and Environmental Science: A Research Perspective" is a compilation of author's original research papers, scientific articles, review articles, popular articles, general articles, and short notes on forest ecology, wetland ecology, plant ecology, bird ecology, and animal ecology. The book is a perfect amalgamation of burgeoning and thrust topics spanning biodiversity, and conservation and management of floral and faunal elements including ecology and biodiversity of phytoplankton, zooplankton, aquatic macrophytes, mangroves, terrestrial plants, animals (butterflies, reptiles, mammals) and birds. It covers ecological and environmental factors affecting abiotic and biotic components prevailed in forest, desert, grassland and wetland habitats and ecosystems. The present book highlights field studies and laboratory investigations carried out by the author during his research journey of 22 years (1998-2020). It discusses phenology, ethnobotanical, ethnomedicinal and aesthetic values of plants, resource use patterns by local inhabitants, socio-cultural aspects, livelihood dependency, rare and endangered plants, animals and birds, anthropogenic pressures, conservation and management strategies of endemic, exotic, and invasive species, and so on. The book covers unique and promising research topics e.g. hydrochemistry, geochemistry, biomonitoring of heavy metals in aquatic and terrestrial plants, metal remediation, environmental modeling, environmental archaeology, environmental bioindicators, environmental forensics, etc. The author believes that this book is a perfect blend of his research work on two integral branches of biology i.e. ecology and environmental science, which will undoubtedly enrich and enhance the knowledge and awareness of laymen and scientific community world over especially in the field of ecology and biodiversity of plants, animals, and birds, associated with physical, chemical, biological, ecological and environmental factors. The present book would certainly be useful and handy as a ready-reference material for students, academicians, researchers, scientists, ecological and environmental consultants, restoration specialists, practitioners, conservationists, and biodiversity managers at regional, national and global platform.

Provides Assessments Of The Impacts, Vulnerabilities And Adaptation Needs For The Key Economic And Ecological Sectors Of India. The Sectors Assessed Include Water, Agriculture, Forestry, Eco-System, Health, Colonial Zones, Energy And Infrastructure. Of Interest To Policy Makers And Researchers. An Excellent Addition To Literature On Global Environmental Assessment Methodology, Policies And Perspectives.

The second book of the Food Biotechnology series, Functional Foods and Biotechnology: Biotransformation and Analysis of Functional Foods and Ingredients highlights two important and interrelated themes: biotransformation innovations and novel bio-based analytical tools for understanding and advancing functional foods and food ingredients for health-focused food and nutritional security solutions. The first section of this book provides novel examples of innovative biotransformation strategies based on ecological, biochemical, and metabolic

rationale to target the improvement of human health relevant benefits of functional foods and food ingredients. The second section of the book focuses on novel host response based analytical tools and screening strategies to investigate and validate the human health and food safety relevant benefits of functional foods and food ingredients. Food biotechnology experts from around the world have contributed to this book to advance knowledge on bio-based innovations to improve wider health-focused applications of functional food and food ingredients, especially targeting non-communicable chronic disease (NCD) and food safety relevant solution strategies. Key Features: Provides system science-based food biotechnology innovations to design and advance functional foods and food ingredients for solutions to emerging global food and nutritional insecurity coupled public health challenges. Discusses biotransformation innovations to improve human health relevant nutritional qualities of functional foods and food ingredients. Includes novel host response-based food analytical models to optimize and improve wider health-focused application of functional foods and food ingredients. The overarching theme of this second book is to advance the knowledge on metabolically-driven food system innovations that can be targeted to enhance human health and food safety relevant nutritional qualities and antimicrobial properties of functional food and food ingredients. The examples of biotransformation innovations and food analytical models provide critical insights on current advances in food biotechnology to target, design and improve functional food and food ingredients with specific human health benefits. Such improved understanding will help to design more ecologically and metabolically relevant functional food and food ingredients across diverse global communities. The thematic structure of this second book is built from the related initial book, which is also available in the Food Biotechnology Series Functional Foods and Biotechnology: Sources of Functional Food and Ingredients, edited by Kalidas Shetty and Dipayan Sarkar (ISBN: 9780367435226) For a complete list of books in this series, please visit our website at: <https://www.crcpress.com/Food-Biotechnology-Series/book-series/CRCFOOBIOTECH>

Advances in Environmental Pollution Management: Wastewater Impacts and Treatment Technologies has been designed to bind novel knowledge of wastewater pollution-induced impacts on various aspects of our environment. The book also contains novel methods and tools for the monitoring and treatment of produced wastewater.

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.

This book provides the fundamental aspects of the diverse ranges of

nanostructured materials (0D, 1D, 2D and 3D) for energy and environmental applications in a comprehensive manner written by specialists who are at the forefront of research in the field of energy and environmental science.

Experimental studies of nanomaterials for aforementioned applications are discussed along with their design, fabrication and their applications, with a specific focus on catalysis, energy storage and conversion systems. This work also emphasizes the challenges of past developments and directions for further research. It also looks at details pertaining to the current ground – breaking of nanotechnology and future perspectives with a multidisciplinary approach to energy and environmental science and informs readers about an efficient utilization of nanomaterials to deliver solutions for the public.

This edited volume contains a selection of refereed and revised papers originally presented at the International Symposium on Signal Processing and Intelligent Recognition Systems (SIRS-2014), March 13-15, 2014, Trivandrum, India. The program committee received 134 submissions from 11 countries. Each paper was peer reviewed by at least three or more independent referees of the program committee and the 52 papers were finally selected. The papers offer stimulating insights into Pattern Recognition, Machine Learning and Knowledge-Based Systems; Signal and Speech Processing; Image and Video Processing; Mobile Computing and Applications and Computer Vision. The book is directed to the researchers and scientists engaged in various field of signal processing and related areas.

Many books offer information about the world's most populous country, but few make sense of what is truly at stake. Thirty of the world's leading China experts—affiliates of Harvard's renowned Fairbank Center for Chinese Studies—answer key questions about where this new superpower is headed and what makes its people and their leaders tick.

This book discusses how nanostructured materials play a key role in helping address environmental challenges. Employing nanostructured materials in catalysis can increase the efficient decomposition of toxic pollutants in air, water, and soil. This multidisciplinary book discusses the most promising nanostructured materials made-up of metals, metal oxides, metal chalcogenides, multi-metal oxides, carbon nanostructures, and hybrid materials that can address environmental remediation. It provides a well-referenced introduction to newcomers from allied disciplines and will be valuable to researchers in academia, industry, and government working on solutions to environmental problems. Provides a state-of-the-art review of key concepts of nanostructured materials in environmental science Discusses the most promising nanostructured materials that can assist with environmental remediation Illustrates challenges and opportunities for development, experimental design, methodology, and interpretation of results.

Environmental Toxicity of Nanomaterials focuses on causes and prevention of environmental toxicity induced by various nanomaterials. In sixteen chapters it

describes the basic principles, trends, challenges, and future directions of nanoecotoxicity. The future acceptance of nanomaterials in various industries depends on the impacts of nanomaterials on the environment and ecosystem. This book analyzes the safe utilization of nanotechnology so the tremendous prospect of nanotechnology can be achieved without harming either living beings or the environment. *Environmental Toxicity of Nanomaterials* introduces nanoecotoxicity, describes various factors affecting the toxicity of nanomaterials, discusses various factors that can impart nanoecotoxicity, reviews various studies in the area of nanoecotoxicity evaluation, and describes the safety and risk assessment of nanomaterials. In addition, the book discusses strategies for mitigating nanoecotoxicity. Lastly, the authors provide guidelines and protocols for nanotoxicity evaluation and discuss regulations for safety assessment of nanomaterials. In addition to environmental toxicologists, this book is aimed at policy makers, industry personnel, and doctoral and postdoctoral scholars.

Anthropogenic emissions of ammonia cause a host of environmental impacts, including loss of biodiversity, soil acidification and formation of particulate matter in the atmosphere. Under the auspices of the UNECE Convention on Long Range Transboundary Air Pollution, around 80 international experts met to review the state of scientific knowledge. This book reports their analysis. It concludes that threshold levels for ammonia effects have been underestimated and sets new values, it assesses the independent evidence to verify reported reductions in regional ammonia emissions, and it reviews the uncertainties in modelling ammonia, both in "hot spots" and at the regional scale.

December 2004, a tsunami swept over the coasts of Indonesia, Sri Lanka, India, Thailand, and other South Asian countries, leaving hundreds of thousands dead and many more without the resources to rebuild their lives. With casualties as far away as Africa, the aftermath was overwhelming: ships could be spotted miles inland; cars floated in the ocean; legions of the unidentified dead—an estimated 225,000—were buried in mass graves; relief organizations struggled to reach rural areas and provide adequate aid to survivors. *The Indian Ocean Tsunami: The Global Response to a Natural Disaster* is the first comprehensive assessment of the environmental, social, and economic costs of this tragedy. Soon after the tsunami, an international team of geographers, geologists, anthropologists, and political scientists traveled to the most damaged areas to observe and document the tsunami's impact. *The Indian Ocean Tsunami* draws on data collected by this team. Editors Pradyumna P. Karan and Shanmugam P. Subbiah, along with contributors from multiple disciplines, examine numerous issues that arose in the aftermath of the tsunami, such as inequities in response efforts, unequal distribution of disaster relief aid, and relocation and housing problems. *The Indian Ocean Tsunami* is organized into several sections, the first of which deals with the ecological destruction of the tsunami. It includes case studies and photographs of the damage in Japan, Indonesia, South India, and other areas. The second section analyzes the economic and social aspects of the aid

responses, specifically discussing the role of NGOs in tsunami relief, the strengths and weaknesses of the reconstruction process, and the lessons the tsunami offers to those who are responsible for dealing with future disasters. In the tsunami's aftermath, the inadequacies of governmental and privately funded aid and the challenge of rehabilitating devastated ecosystems quickly became apparent. With this volume, Karan and Suhbiah illuminate the need for the development of efficient, socially and environmentally sustainable practices to cope with environmental disasters. They suggest that education about the ongoing process of recovery will mitigate the effects of future natural disasters. Including maps, photographs, and statistical analyses, *The Indian Ocean Tsunami* is a clear and definitive evaluation of the tsunami's impact and the world's response to it.

In India, you can still find the kabaadiwala, the rag-and-bone man. He wanders from house to house buying old newspapers, broken utensils, plastic bottles—anything for which he can get a little cash. This custom persists and recreates itself alongside the new economies and ecologies of consumer capitalism. *Waste of a Nation* offers an anthropological and historical account of India's complex relationship with garbage. Countries around the world struggle to achieve sustainable futures. Assa Doron and Robin Jeffrey argue that in India the removal of waste and efforts to reuse it also lay waste to the lives of human beings. At the bottom of the pyramid, people who work with waste are injured and stigmatized as they deal with sewage, toxic chemicals, and rotting garbage. Terrifying events, such as atmospheric pollution and childhood stunting, that touch even the wealthy and powerful may lead to substantial changes in practices and attitudes toward sanitation. And innovative technology along with more effective local government may bring about limited improvements. But if a clean new India is to emerge as a model for other parts of the world, a “binding morality” that reaches beyond the current environmental crisis will be required. Empathy for marginalized underclasses—Dalits, poor Muslims, landless migrants—who live, almost invisibly, amid waste produced predominantly for the comfort of the better-off will be the critical element in India's relationship with waste. Solutions will arise at the intersection of the traditional and the cutting edge, policy and practice, science and spirituality.

Designed as a text for all undergraduate students of engineering for their core course in Environmental Science and Engineering and for elective courses in environmental health engineering and pollution and control engineering for students of civil engineering, this comprehensive text, now in its Second Edition provides an in-depth analysis of the fundamental concepts. It also introduces the reader to different niche areas of environmental science and engineering. The book covers a wide array of topics, such as natural resources, disaster management, biodiversity, and various forms of pollution, viz. water pollution, air pollution, soil pollution, noise pollution, thermal pollution, and marine pollution, as well as environmental impact assessment and environmental protection. This

edition introduces a new chapter on Environment and Human Health. **KEY FEATURES** : Gives in-depth yet lucid analysis of topics, making the book user-friendly. Covers important topics, which are adequately supported by illustrative diagrams. Provides case studies to explore real-life problems. Supplies review questions at the end of each chapter to drill the students in self-study.

This book brings together, and integrates the three principal areas of environmental engineering water, air, and solid waste management. It introduces a unique approach by emphasizing the relationship between the principles observed in natural purification processes and those employed in engineered systems. First, the physical, chemical, mathematical, and biological principles that define, measure and quantify environmental quality are described. Next, the processes by which nature assimilates waste material are discussed and the natural purification processes that form the basis of engineered systems are detailed. Finally, the engineering principles and practices involved in the design and operation of environmental engineering works are covered at length. Written in a lucid style and offering abundant illustrations and problems, the book provides a treatment of environmental engineering that can be understood by a wide range of readers.

This open access book discusses the impact of human-induced global climate change on the regional climate and monsoons of the Indian subcontinent, adjoining Indian Ocean and the Himalayas. It documents the regional climate change projections based on the climate models used in the IPCC Fifth Assessment Report (AR5) and climate change modeling studies using the IITM Earth System Model (ESM) and CORDEX South Asia datasets. The IPCC assessment reports, published every 6–7 years, constitute important reference materials for major policy decisions on climate change, adaptation, and mitigation. While the IPCC assessment reports largely provide a global perspective on climate change, the focus on regional climate change aspects is considerably limited. The effects of climate change over the Indian subcontinent involve complex physical processes on different space and time scales, especially given that the mean climate of this region is generally shaped by the Indian monsoon and the unique high-elevation geographical features such as the Himalayas, the Western Ghats, the Tibetan Plateau and the adjoining Indian Ocean, Arabian Sea, and Bay of Bengal. This book also presents policy relevant information based on robust scientific analysis and assessments of the observed and projected future climate change over the Indian region. Advanced information technology infrastructure is increasingly being employed in the Earth sciences to provide researchers with efficient access to massive central databases and to integrate diversely formatted information from a variety of sources. These geoinformatics initiatives enable manipulation, modeling and visualization of data in a consistent way, and are helping to develop integrated Earth models at various scales, and from the near surface to the deep interior. This book uses a series of case studies to demonstrate computer and database use across the geosciences. Chapters are thematically grouped into sections that cover data collection and management; modeling and community computational codes; visualization and data representation; knowledge management and data integration; and web services and scientific workflows. Geoinformatics is a fascinating and accessible introduction to this emerging field for readers across the solid Earth sciences and an invaluable reference for researchers interested in initiating new cyberinfrastructure projects of their own.

Modern Media, Elections and Democracy explores how the modern media functions in a democracy, especially during elections, when it performs the crucial role of educating people

and moulding public opinion. At such times, it becomes an arena for public debate and sometimes even a check against the abuse of power. The book analyses the constraints that curb the immense power of the media. It takes up issues that restrict free political debate and, in response, studies the statutory provisions that defend and protect freedom of expression. In this context, the author refers to many legal suits, case studies, jurisprudence governing election coverage, international standards for media practices, and so on. The book identifies ways in which various forms of media exert influence on politics and argues that the modern media—in all its forms—is expanding the scope of political pluralism.

This book endeavours to highlight the untapped potential of Smart Agriculture for the innovation and expansion of the agriculture sector. The sector shall make incremental progress as it learns from associations between data over time through Artificial Intelligence, deep learning and Internet of Things applications. The farming industry and Smart agriculture develop from the stringent limits imposed by a farm's location, which in turn has a series of related effects with respect to supply chain management, food availability, biodiversity, farmers' decision-making and insurance, and environmental concerns among others. All of the above-mentioned aspects will derive substantial benefits from the implementation of a data-driven approach under the condition that the systems, tools and techniques to be used have been designed to handle the volume and variety of the data to be gathered. Contributions to this book have been solicited with the goal of uncovering the possibilities of engaging agriculture with equipped and effective profound learning algorithms. Most agricultural research centres are already adopting Internet of Things for the monitoring of a wide range of farm services, and there are significant opportunities for agriculture administration through the effective implementation of Machine Learning, Deep Learning, Big Data and IoT structures.

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.

This book provides an overview of the diversified soil regimes in India. In addition to the historical advances in soil research and its limitations, it describes the monitoring of various soil conditions and soil uses to improve productivity. Discussing topics such as climate, geology and geomorphology, major soil types and their classification, soil mineralogy and clays, soil micromorphology, soil biogeochemistry, benchmark soils, land evaluation and land use planning, soil health and fertility and soil resilience, the book highlights the multiple uses of soils in industry, human health care, mitigation of challenges due to climate change and construction. It also presents measures for a brighter future of soil science in India, such as imposing organic farming principles toward sustainable agriculture in the context of the second green revolution besides alleviating the poverty and providing the employment opportunities among the farming communities in India.

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