Handbook Of Environmental Degradation Of Materials

This work provides those involved in water purification research and administration with a comprehensive resource of methods for analyzing water to assure its safety from contaminants, both natural and human caused. The book first provides an overview of major water-related issues in developing and developed countries, followed by a review of issues of sampling for water analysis, regulatory considerations and forensics in water quality and purity investigations. The subsequent chapters cover microbial as well chemical contaminations from inorganic compounds, radionuclides, volatile and semi-volatile compounds, disinfectants, herbicides, and pharmaceuticals, including endocrine disruptors, as well as potential terrorist-related contamination. The last chapter describes the Grainger prize-winning filter that can remove arsenic from water sources and sufficiently protect the health of a large number of people. - Covers the scope of water contamination problems on a worldwide scale - Provides a rich source of methods for analyzing water to assure its safety from natural and deliberate contaminants - Describes the filter that won the $1 million Grainger prize and thereby highlighting an important approach to remediation

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

Handbook of Environmental Degradation of MaterialsWilliam Andrew

Since becoming formally established with an international academic society in the late 1980s, ecological economics has advanced understanding of the interactions between social and biophysical reality. It initially combined questioning of the basis of mainstream economics with a concern for environmental degradation and limits to growth, but has now advanced well beyond critique into theoretical, analytical and policy alternatives. Social ecological economics and transformation to an alternative future now form core ideas in an interdisciplinary approach combining insights from a range of disciplines including heterodox economics, political ecology, sociology, political science, social psychology, applied philosophy, environmental ethics and a range of natural sciences. This handbook, edited by a leading figure in the field, demonstrates the dynamism of ecological economics in a wide-ranging collection of state-of-the-art essays. Containing contributions from an array of international researchers who are pushing the boundaries of the field, the Routledge Handbook of Ecological Economics showcases the diversity of the field and points the way forward. A critical analytical perspective is combined with realism about how economic systems operate and their essential connection to the natural world and society. This provides a rich understanding of how biophysical reality relates to and integrates with social reality. Chapters provide succinct overviews of the literature covering a range of subject areas including: heterodox thought on the environment; society, power and politics, markets and consumption; value and ethics; science and society; methods for evaluation and policy analysis; policy challenges; and the future post-growth society. The rich contents dispel the myth of there being no alternatives to current economic thought and the political economy it supports. The Routledge Handbook of Ecological Economics provides a guide to the literature on ecological economics in an informative and easily accessible form. It is essential reading for those interested in exploring and understanding the interactions between the social, ecological and economic and is an important resource for those interested in fields such as: human ecology, political ecology, environmental politics, human geography, environmental management, environmental evaluation, future and transition studies, environmental policy, development studies and heterodox economics.

Air and Water Pollution Control

Handbook of environmental economics

The Cambridge Handbook of Environmental Justice and Sustainable Development

A Handbook of Environmental Toxicology

Handbook of Environment and Waste Management

The Routledge Handbook of Ecolinguistics is the first comprehensive exploration into the field of ecolinguistics, also known as language ecology. Organized into three sections that treat the different topic areas of ecolinguistics, the Handbook begins with chapters on language diversity, language minorities and language endangerment, with authors providing insight into the link between the loss of languages and the loss of species. It continues with an overview of the role of language and discourse in describing, concealing, and helping to solve environmental problems. With discussions on new orientations and topics for further exploration in the field, chapters in the last section show ecolinguistics as a pacesetter into a new scientific age. This Handbook is an excellent resource for students and researchers interested in language and the environment, language contact, and beyond.

An innovative resource for materials properties, their evaluation, and industrial applications The Handbook of Materials Selection provides information and insight that can be employed in any discipline or industry to exploit the full range of materials in use today-metals, plastics, ceramics, and composites. This comprehensive organization of the materials selection process includes analytical approaches to materials selection and extensive information about materials available in the marketplace, sources of properties data, procurement and data management, properties testing procedures and equipment, analysis of failure modes, manufacturing processes and assembly techniques, and applications. Throughout the handbook, an international roster of contributors with a broad range of experience conveys practical knowledge about materials and illustrates in detail how they are used in a wide variety of industries. With more than 100 photographs of equipment and applications, as well as hundreds of graphs, charts, and tables, the Handbook of Materials Selection is a valuable reference for practicing engineers and designers, procurement and data managers, as well as teachers and students.

In order to assess the environmental exposure from chemicals in various media, you must know the rate at which a chemical will degrade. Handbook of Environmental Degradation Rates saves you the time and money collecting and evaluating this important information. The Handbook provides rate constant and half-life ranges for various processes and combines them into ranges for different media (air, groundwater, surface water, soils), which can be directly entered into various models. Some of the processes the Handbook includes are aerobic and anaerobic biodegradation, direct photolysis, hydrolysis, and reaction with various oxidants or free radicals (e.g., hydroxyl radical and ozone in the atmosphere). Experimental data are used and cited when available, and validated estimation methods are used when no experimental data are available. Researched and organized by leading experts, Handbook of Environmental Degradation Rates is easy-to-use and is well indexed by chemical name and CAS Number.

This volume consists of 15 chapters and focuses on hazardous chemicals, how they are associated with plastics, and their environmental risks. It includes background information on plastics and additives chemistry, and their observed or potential effects on living organisms as well as the oceanographic aspects of marine debris dispersion. The respective chapters provide insights into the sorption/desorption of chemicals in and out of plastics, the mechanisms and kinetics, but also the scale of the concentrations of chemicals found in marine debris, particularly in microplastics. The occurrence of the various chemicals is analyzed, as well as the distribution profiles of the chemicals in microplastics throughout the world's oceans. The implications of the fact that plastics carry within them several chemicals are discussed in detail. In closing, new research topics that warrant further attention are identified. The book will appeal to all scientists who are already working or interested in starting to work on the topic of marine debris, as well as policymakers, NGOs and the broader informed public.

Routledge Handbook of Ecological Economics

Evaluation of Environmental Pollution

Pesticides

Volume I: Environmental degradation and institutional responses

Handbook of Environmental Economics: Valuing environmental changes

Handbook of Material Weathering, Sixth Edition, is an essential guide to the effects of weathering on polymers and industrial products, presenting theory, stress factors, methods of weathering and testing and the effects of additives and environmental stress cracking. The book provides graphical illustrations and numerical data to examine the weathering of major polymers and industrial products, including mechanisms of degradation, effect of thermal processes, and characteristic changes in properties. The book also discusses recycling, corrosion and weathering, and the weathering of stone. This sixth edition updates this seminal work with recent developments and the latest data. Polymers and industrial plastics products are widely used in environments where they are vulnerable to the effects of weathering. Weathering stress factors can lead to deterioration or even complete failure. Material durability is therefore vital, and products for outdoor usage or actinic exposure are designed so that the effects of artificial and natural weathering are minimized. This book is an important reference source for those involved in studying material durability, producing materials for outdoor use and actinic exposure, research chemists in the photochemistry field, chemists and material scientists designing new materials, users of manufactured products, those who control the quality of manufactured products and students who want to apply their knowledge to real materials. Offers detailed coverage of theory, stress factors and methods of weathering Provides specific information and numerical data for 52 polymers and 42 groups of industrial products, including characteristic changes and degradation mechanisms Discusses major additional topics, such as weathered materials for recycling and the interrelation between corrosion and weathering Provides graphical illustrations and numerical data to examine the weathering of major polymers and industrial products

"This book examines the negative impacts of plastic and explores different biotechnological interventions to plastic pollution. It also generates an awareness of the use of plastics and its impact on the environment, human health, and other ecosystems"--

Energy consumption and production have major influences on the economy, environment, and society, but in return they are also influenced by how the economy is structured, how the social institutions work, and how the society deals with environmental degradation. The need for integrated assessment of the relationship between energy, economy, environment, and society is clear, and this handbook offers an in-depth review of all four pillars of the energy-economy-environment-society nexus. Bringing together contributions from all over the world, this handbook includes sections devoted to each of the four pillars. Moreover, as the financialization of commodity markets has made risk analysis more complicated and intriguing, the sections also cover energy commodity markets and their links to other financial and non-financial markets. In addition, econometric modeling and the forecasting of energy needs, as well as energy prices and volatilities, are also explored. Each part emphasizes the multidisciplinary nature of the energy economics field and from this perspective, chapters offer a review of models and methods used in the literature. The Routledge Handbook of Energy Economics will be of great interest to all those studying and researching in the area of energy economics. It offers guideline suggestions for policy makers as well as for future research.

Much applied environmental economics is concerned with the valuation of changes in environmental quality. Obtaining reliable valuation estimates requires attention to theoretical and econometric issues that are often quite subtle. Volume 2 of the Handbook of Environmental Economics presents both the theory and the practice of environmental valuation. It synthesizes the vast literature that has accumulated since the publication of the Handbook of Natural Resource and Energy Economics two decades ago. It includes chapters on individual valuation methods written by researchers responsible for fundamental advances in those methods. It also includes cross-cutting chapters that deal with aspects of welfare theory, uncertainty, experimental methods, and public health that are pertinent to valuation. Throughout the volume, attention is paid to research and policy issues that arise not only in high-income countries, where most of the theory and econometrics that underlie applied valuation methods have been developed, but also in poorer parts of the world. The volume provides a state-of-the-art reference for scholars and practitioners alike.

Handbook of Physical-Chemical Properties and Environmental Fate for Organic Chemicals, Second Edition

China's Soil Pollution and Degradation Problems

Environmental Degradation of Metals

Environmental Degradation and Institutional Responses

Organic Chemicals in the Environment

The Routledge Handbook of Environmental Journalism provides a thorough understanding of environmental journalism around the world. An increasing number of media platforms – from newspapers and television to Internet social media networks – are the major providers of indispensable information about the natural world and environmental risk. Despite the dramatic changes in the news industry that have tended to reduce the number of full-time newspaper reporters, environmental journalists remain key to bringing stories to light across the globe. With contributions from around the world broken down into five key regions – the United States of America, Europe and Russia, Asia and Australia, Africa and the Middle East, and South America – this book provides support for today's environment reporters, the providers of essential news in the 21st century. As a scholarly and journalistic work written by academics and the environmental reporters themselves, this volume is an essential text for students and scholars of environmental communication, journalism, and global environmental issues more generally, as well as professionals working in this vital area.

This 5-volume set allows you to assess the health and environmental effects of chemicals by determining the routes of exposure of the chemical to sensitive organisms. Environmental Fate and Exposure of Organic Chemicals provides relevant facts on how individual chemicals behave in the environment and how humans and environmental organisms are exposed to the chemicals during their production, rise, transport, and disposal. Each chemical is prepared by one of the best-known organizations in environmental fate and exposure and is peer-reviewed by a panel of expert scientists. The information on each chemical includes all experimental values and references for physical properties, all chemical fate studies, and all available monitoring data and interpretative summaries.

China's air pollution is infamous. The haze can make it impossible to see buildings across the street, and the pollution forces schools to close and creates health and morbidity problems, in addition to tremendous environmental degradation. However, China also faces another important environmental problem, which is less well-known to the public: that of soil degradation and pollution. This book provides an overview of the problems related to soil degradation and pollution throughout China, examining how and why current policy has fallen short of expectation. It also examines the challenges faced by policy makers as they attempt to adopt sustainable practices alongside a booming and ever-expanding economy. China's Soil Pollution and Degradation Problems utilizes grey literature such as newspaper articles, NGO reports and Chinese government information alongside academic studies in order to provide an extensive review of the challenges faced by grassroots organizations as they tackle environmental policy failings throughout China. This book will be of great interest to students of environmental pollution and contemporary Chinese studies looking for an introduction to the topics of soil pollution and soil degradation, and for researchers looking for an extensive list of sources and analysis of China's environmental problems more broadly.

Violence and insecurity are among the most important issues facing communities in the 21st century. Both family violence and community violence are rapidly rising in the urbanizing nations of the 'South', and richer nations are also facing increased conce

Corrosion Technology Series/14

Handbook of Environmental Degradation Rates

The Routledge Handbook of Political Ecology

Handbook of Environmental and Sustainable Finance

Hazardous Chemicals Associated with Plastics in the Marine Environment

The use of financial concepts and tools to shape development is hardly new, but their recent adoption by advocates of sustainable environmental management has created opportunities for innovation in business and regulatory groups. The Handbook of Environmental and Sustainable Finance summarizes the latest trends and attitudes in environmental finance, balancing empirical research with theory and applications. It captures the evolution of environmental finance from a niche scholarly field to a mainstream subdiscipline, and it provides glimpses of future directions for research. Covering implications from the Kyoto and Paris Protocols, it presents an intellectually cohesive examination of problems, opportunities, and metrics worldwide. Introduces the latest developments in environmental economics, sustainable accounting work, and environmental/sustainable finance Explores the effects of environmental regulation on the economy and businesses Emphasizes research about the trade-environmental regulation nexus, relevant for economics and business students

This highly practical reference presents for the first time in a single volume all types of environmental degradation a metallic compound may undergo during its processing, storage, and service. Clarifying general and localized corrosion effects, Environmental Degradation of Metals describes the effects of atmospheric exposure, high-temperature gases, soil, water, weak and strong chemicals, liquid metals, and nuclear radiation. It determines whether corrosion can occur under a given set of conditions, shows how improvements in component design can reduce corrosion, and details the high- and low-temperature effects of oxidizing agents. The book also investigates the instantaneous and delayed failure of solid metal in contact with liquid metal, highlights the influence of hydrogen on metal, and profiles radiation effects on metal.

During the last few decades, China has accomplished unprecedented economic growth and has emerged as the second largest economy in the world. This 'economic miracle' has led hundreds of millions of people out of poverty, but has also come at a high cost. Environmental degradation and the impact of environmental pollution on health are nowadays issues of the greatest concern for the Chinese public and the government. The Routledge Handbook of Environmental Policy in China focuses on the environmental challenges of China's rapidly growing economy and provides a comprehensive overview of the policies developed to address the environmental crisis. Leading international scholars and practitioners examine China's environmental governance efforts from an interdisciplinary perspective. Divided into five parts, the handbook covers the following key issues: Part I: Development of Environmental Policy in China - Actors and Institutions Part II: Key issues and Strategies for Solution Part III: Policy Instruments and Enforcement Part IV: Related Policy Fields – Conflicts and Synergies Part V: China's Environmental Policy in the International Context This comprehensive handbook will be an invaluable resource to students and scholars of environmental policy and politics, development studies, Chinese studies, geography and international relations.

This Handbook represents an unprecedented exploration of the positive peace platform. It permits a comprehensive appreciation of the breadth of positive peace that engages with nonviolence, environmental sustainability, social justice and positive relationships scholarship. The work serves as a one-stop shop for scholar/practitioners interested in locating their inquiry and outputs in the field of positive peace and provides readers from a multitude of disciplines and academic departments with a comprehensive overview of the multiplicity of positive peace research in one location. In doing so, the Handbook of Positive Peace securely demarcates and recognizes the positive peace platform in social scientific and humanities academic disciplines.

The Routledge Handbook of Ecolinguistics

Handbook of Water Purity and Quality

Routledge Handbook of Environmental Journalism

Nature and Society

Addressing the persistent environmental threat of organic chemicals with a fresh approach to degradation and transformation processes, Organic Chemicals in the Environment: Mechanisms of Degradation and Transformation, Second Edition examines a wide range of compounds as well as abiotic and microbiological reactions mediated by microorganisms

Industry pays an enormous price for material degradation. The Handbook of Environmental Degradation of Materials outlines these costs, but more importantly, explains how to measure, analyze, and prevent environmental degradation for a wide range of indsutrial materials. Experts from around the world share how a diverse set of industries cope with the degradation of metals, polymers, reinforced concrete, clothing, and wood under adverse environmental conditions such as weather, seawater, and fire. Case studies show how organizations from small consulting firms to corporate giants design and manufacture products that are more resistant to environmental effects. By implementing these standards companies of all sizes should realize savings beneficial to their operations.

Nothing stays the same for ever. The environmental degradation and corrosion of materials is inevitable and affects most aspects of life. In industrial settings, this inescapable fact has very significant financial, safety and environmental implications. The Handbook of Environmental Degradation of Materials explains how to measure, analyse, and control environmental degradation for a wide range of industrial materials including metals, polymers, ceramics, concrete, wood and textiles exposed to environmental factors such as weather, seawater, and fire. Divided into sections which deal with analysis, types of degradation, protection and surface engineering respectively, the reader is introduced to the wide variety of environmental effects and what can be done to control them. The expert contributors to this book provide a wealth of insider knowledge and engineering knowhow, complementing their explanations and advice with Case Studies from areas such as pipelines, tankers, packaging and chemical processing equipment ensures that the reader understands the practical measures that can be put in place to save money, lives and the environment. The Handbook's broad scope introduces the reader to the effects of environmental degradation on a wide range of materials, including metals, plastics, concrete,wood and textiles For each type of material, the book describes the kind of degradation that effects it and how best to protect it Case Studies show how organizations from small consulting firms to corporate giants design and manufacture products that are more resistant to environmental effects

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Emerging Environmental Contaminants?
Routledge Handbook of Energy Economics
The Palgrave Handbook of Positive Peace
Handbook for the Field Assessment of Land Degradation
Handbook of Environmental Economics

Pesticides play an important role in controlling pests that carry diseases and threaten crop production. In recent years, however, there has been increased concern about the adverse impacts of pesticides and their degradation products on public health and the environment. A considerable amount of work is being done to develop nonchemical methods of

Written by an international team of authors from a range of educational, medical and research establishments, this book is an essential reference for advanced students and researchers in the areas of environmental sciences, ecology, agriculture, environmental health and medicine, in addition to industry and government personnel responsible for environmental regulations and directives. A Handbook of Environmental Toxicology focuses on two key aspects: human disorders and ecotoxicology as affected by major toxins originating from biological sources and pollutants, as well as radiation generated spontaneously or as a result of anthropogenic activity. A diverse array of these potentially harmful agents regularly appear in the atmosphere, soil, water and food, compromising both human health and biodiversity in natural and managed ecosystems.

The environment is one of the defining issues of our times, and it is closely linked to questions and dilemmas surrounding economic development. Southeast Asia is one of the world's most economically and demographically dynamic regions, and it is also one in which a host of environmental issues raise themselves. The Routledge Handbook of the Environment in Southeast Asia is a collection of 30 chapters dealing with the most significant scholarly debates in this rapidly growing field of study. Structured in four main parts, it gives a comprehensive regional overview of, and insight into, the environment in Southeast Asia. Wide-ranging and balanced, this handbook promotes scholarly understanding of how environmental issues are dealt with from diverse theoretical perspectives. It offers a detailed empirical understanding of the myriad environmental problems and challenges faced in Southeast Asia. This is the first publication of its kind in this field; a helpful companion for a global audience and for scholars of Southeast Asian studies from a variety of disciplines.

The Handbook of Environmental Economics focuses on the economics of environmental externalities and environmental public goods. Volume I examines environmental degradation and policy responses from a microeconomic, institutional standpoint. Its perspective is dynamic, including a consideration of the dynamics of natural systems, and global, with attention paid to issues in both rich and poor nations. In addition to chapters on well-established topics such as the theory and practice of pollution regulation, it includes chapters on new areas of environmental economics research related to common property management regimes; population and poverty; mechanism design; political economy of regulation; experimental evaluations of policy instruments; and technological change.

Freshwater Microplastics
Mechanisms of Degradation and Transformation, Second Edition
Handbook of Environmental Degradation of Materials
Handbook of Research on Energy and Environmental Finance 4.0
Routledge Handbook of the Environment in Southeast Asia

Handbook in Environmental Economics, Volume 4, the latest in this ongoing series, highlights new advances in the field, with this new volume presenting timely chapters on Modeling Ecosystems and Economic Systems, Framing Sustainability Policy Questions: Who Leads – Ecology or Economics?, Valuing Natural Capital Within an Integrated Economic Ecological, Developing Economies, Urbanization, Climate Change and Health, Viewing Environmental Policy Instruments for Domestic and International Perspective, Quasi experimental Estimation of Environmental Policies, Environment Macro, The Rules for Formal and Informal Institutions in Managing Environmental Resources, and How Should Uncertainty Be Integrated into the Methods for Policy Evaluation? Answers key policy questions facing environmental agencies in developed and developing economies Integrates insights from economics and ecology as part of several key chapters Presents the latest on efforts to review and evaluate the new literatures on field and quasi experiments in environmental economics Provides the first substantive review of environmental macro economics

The Routledge Handbook of Political Ecology presents a comprehensive and authoritative examination of the rapidly growing field of political ecology. Located at the intersection of geography, anthropology, sociology, and environmental history, political ecology is one of the most vibrant and conceptually diverse fields of inquiry into nature-society relations within the social sciences. The Handbook serves as an essential guide to this rapidly evolving intellectual landscape. With contributions from over 50 leading authors, the Handbook presents a systematic overview of political ecology's origins, practices and core concerns, and aims to advance both ongoing and emerging debates. While there are numerous edited volumes, textbooks, and monographs under the heading 'political ecology,' these have tended to be relatively narrow in scope, either as collections of empirically based (mostly case study) research on a given theme, or broad overviews of the field aimed at undergraduate audiences. The Routledge Handbook of Political Ecology is the first systematic, comprehensive overview of the field. With authors from North and South America, Europe, Australia and elsewhere, the Handbook of Political Ecology provides a state of the art examination of political ecology; addresses ongoing and emerging debates in this rapidly evolving field; and charts new agendas for research, policy, and activism. The Routledge Handbook of Political Ecology introduces political ecology as an interdisciplinary academic field. By presenting a 'state of the art' examination of the field, it will serve as an invaluable resource for students and scholars. It not only critically reviews the key debates in the field, but develops them. The Handbook will serve as an excellent resource for graduate and advanced undergraduate teaching, and is a key reference text for geographers, anthropologists, sociologists, environmental historians, and others working in and around political ecology.

Transport and transformation processes are key for determining how humans and other organisms are exposed to chemicals. These processes are largely controlled by the chemicals' physical-chemical properties. This new edition of the Handbook of Physical-Chemical Properties and Environmental Fate for Organic Chemicals is a comprehensive series in four volumes that serves as a reference source for environmentally relevant physical-chemical property data of numerous groups of chemical substances. The handbook contains physical-chemical property data from peer-reviewed journals and other valuable sources on over 1200 chemicals of environmental concern. The handbook contains new data on the temperature dependence of selected physical-chemical properties, which allows scientists and engineers to perform better chemical assessments for climatic conditions outside the 20–25-degree range for which property values are generally reported. This second edition of the Handbook of Physical-Chemical Properties and Environmental Fate for Organic Chemicals is an essential reference for university libraries, regulatory agencies, consultants, and industry professionals, particularly those concerned with chemical synthesis, emissions, fate, persistence, long-range transport, bioaccumulation, exposure, and biological effects of chemicals in the environment. This resource is also available on CD-ROM

Featuring a stellar international cast list of leading and cutting-edge scholars, The Routledge Handbook of the Political Economy of the Environment presents the state of the art of the discipline that considers ecological issues and crises from a political economy perspective. This collective volume sheds new light on the effect of economic and power inequality on environmental dynamics and, conversely, on the economic and social impact of environmental dynamics. The chapters gathered in this handbook make four original contributions to the field of political economy of the environment. First, they revisit essential concepts and methods of environmental economics in the light of their political economy. Second, they introduce readers to recent theoretical and empirical advances in key issues of political economy of the environment with a special focus on the relationship between inequality and environmental degradation, a nexus that has dramatically come into focus with the COVID crisis. Third, the authors of this handbook open the field to its critical global and regional dimensions: global issues, such as the environmental justice movement and inequality and climate change as well as regional issues such as agriculture systems, air pollution, natural resources appropriation and urban sustainability. Fourth and finally, the work shows how novel analysis can translate into new forms of public policy that require institutional reform and new policy tools. Ecosystems preservation, international climate negotiations and climate mitigation policies all have a strong distributional dimension that chapters point to. Pressing environmental policy such as carbon pricing and low-carbon and energy transitions entail numerous social issues that also need to be accounted for with new analytical and technological tools. This handbook will be an invaluable reference, research and teaching tool for anyone interested in political economy approaches to environmental issues and ecological crises.

Routledge Handbook of Environmental Policy in China
Handbook of Materials Selection
The Rising Environmental and Human Health Impacts of Plastic Pollution
The Routledge Handbook of the Political Economy of the Environment
Human Disorders and Ecotoxicology

Despite the global endorsement of the Sustainable Development Goals, environmental justice struggles are growing all over the world. These struggles are not isolated injustices, but symptoms of interlocking forms of oppression that privilege the few while inflicting misery on the many and threatening ecological collapse. This handbook offers critical perspectives on the multi-dimensional, intersectional nature of environmental injustice and the cross-cutting forms of oppression that unite and divide these struggles, including gender, race, poverty, and indigeneity. The work sheds new light on the often-neglected social dimension of sustainability and its relationship to human rights and environmental justice. Using a variety of legal frameworks and case studies from around the world, this volume illustrates the importance of overcoming the fragmentation of these legal frameworks and social movements in order to develop holistic solutions that promote justice and protect the planet's ecosystems at a time of intensifying economic and ecological crisis.

This book is open access under a CC BY 4.0 license. This volume focuses on microscopic plastic debris, also referred to as microplastics, which have been detected in aquatic environments around the globe and have accordingly raised serious concerns. The book explores whether microplastics represent emerging contaminants in freshwater systems, an area that remains underrepresented to date. Given the complexity of the issue, the book covers the current state-of-research on microplastics in rivers and lakes, including analytical aspects, environmental concentrations and sources, modelling approaches, interactions with biota, and ecological implications. To provide a broader perspective, the book also discusses lessons learned from nanomaterials and the implications of plastic debris for regulation, politics, economy, and society. In a research field that is rapidly evolving, it offers a solid overview for environmental chemists, engineers, and toxicologists, as well as water managers and policy-makers.

"This book will summarize the latest trends and attitudes in Energy & Environmental Finance (EEF), balancing empirical research with theory, applications, and actual case studies and discussing the emergence, role, and current practices of EEF"--

Handbook of Environmental Fate and Exposure Data for Organic Chemicals
Handbook of Material Weathering