

J. Dodson, Australian Nuclear Science and Technology Organisation, Menai, Australia (Ed.)

Changing Climates, Earth Systems and Society

The book covers state-of-the-art considerations on how climate change has and will deliver impacts on major globalised biophysical and societal themes that will affect the way the world functions. Human activity has resulted in changes to atmospheric chemistry and land cover, and caused serious decline in biodiversity. Modifying biogeochemical cycles leads to complex feedbacks. The future climate will have impact on food security and agriculture, water supply and quality, storm and cyclone frequency, shoreline stability, biodiversity and the future of biological resources. Earth scientists might be asked to forecast any potential abrupt or environmental surprises. A sound knowledge of the Earth System will improve the chances of achieving this, by developing climate models that will reduce the degree of uncertainty in regional climate prediction.

Features

► State-of-the-art analysis of climate change impacts on societal relevant themes ► Expert authorities discuss relationship of climate with each theme ► Valuable reference for policy and decision makers ► Global relevance

From the contents

Climate and Oceans.- Desertification.- Climate and Wetlands.- Ice Caps, Antarctica and the Future.- Vegetation and Biodiversity.- Fire and Climate.- Climate and Food Security.- Climate and Human Health.- Climate Change and Global Politics.- Climate Change and Development.- Climate and Global Economics.- Climate Change, Severe Weather and Insurance.

Fields of interest

Climate Change; Meteorology/Climatology; Physical Geography

Target groups

Research

Type of publication

Monograph

L. German, J. J. Ramisch, R. Verma (Eds.)

Beyond the Biophysical Knowledge, Culture, and Politics in Agriculture and Natural Resource Management

Beyond the Biophysical /EM provides a broad overview of agriculture and natural resource management (NRM) scholarship and practice that lies beyond the biophysical, emphasizing instead epistemological, cultural, and political foundations of NRM. The volume is oriented toward professionals with expertise in agriculture and natural resource management scholarship and practice, but who lack exposure to the conceptual and methodological underpinnings of critical theory, the anthropology of development, ecological anthropology, and other relevant scholarship. It therefore follows common standards of academic rigour, but minimizes the use of jargon, integrates detailed case studies with conceptual syntheses, and attempts to move from critique to concrete recommendations for scholarship and practice. The volume seeks to foster a more nuanced and responsible engagement with local communities and the natural world among NRM scholars and practitioners.

Features

► Presents original case studies and conceptual syntheses from Africa, Asia, and Latin America ► Follows common standards of academic rigor while minimizing the use of jargon ► Moves from critique to concrete recommendations for scholarship and practice

Fields of interest

Sustainable Development; Anthropology; Sociology

Target groups

Professional/practitioner

Type of publication

Contributed volume

The Handbook of Environmental Chemistry

Editor-in-chief: A. G. Kostianoy, D. Barceló

Volume 8

S. Sabater, University of Girona, Girona, Spain; D. Barceló, IDAEA-CSIC, Barcelona, Spain (Eds.)

Water Scarcity in the Mediterranean

Perspectives Under Global Change

Water scarcity affects hydrologic resources, systems connectivity, biodiversity, water quality, and river ecosystem functioning. It has direct impacts on economic sectors that use and depend on water, such as agriculture, tourism, industry, energy and transport. The Mediterranean Basin is one of the regions in the world most vulnerable to climate changes, as well as one of the most impacted by human water demand. This volume provides an in-depth view of the water quality and quantity implications of water scarcity. It highlights its possible causes and describes the effects in regions under Mediterranean climate. The topics covered include climate effects, water resources (use, storage and new sources), water quality (chemical and microbiological), and the effects on ecosystems suffering from water scarcity. This book is addressed to scientists and students, but also to managers involved in the necessary decision making process to face future periods of drought.

Features

► A comprehensive review ► Written by experts in the field ► An invaluable source of information for scientists, students and environmental managers

Fields of interest

Environmental Chemistry; Geochemistry; Analytical Chemistry

Target groups

Research

Type of publication

Reviews

 Earth and Environmental Science

Due June 2010

2010. XII, 300 p. 194 illus., 50 in color. (International Year of Planet Earth) Hardcover

► **approx. € 99,95 | £90,00**
► **approx. * € (D) 106,95 | € (A) 109,95 | sFr 166,00**
ISBN 978-90-481-8715-7



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 Earth and Environmental Science

Due May 2010

2010. VII, 308 p. Hardcover

► **approx. € 98,00 | £88,00**
► **approx. * € (D) 104,86 | € (A) 107,80 | sFr 152,50**
ISBN 978-90-481-8825-3



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 Earth and Environmental Science

Due April 2010

2010. 232 p. Hardcover

► **€ 189,95 | £171,00**
► *** € (D) 203,25 | € (A) 208,94 | sFr 295,00**
ISBN 978-3-642-03970-6



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The Handbook of Environmental Chemistry

Editor-in-chief: A. G. Kostianoy, D. Barceló

Volume 9

H. Atacag Erkurt, Cyprus International University, Nicosia, Turkey (Ed.)

Biodegradation of Azo Dyes

Azo dyes play an important role as coloring agents in the textile, food, and pharmaceutical industry. Due to the toxicity, mutagenicity and carcinogenicity of azo dyes and their breakdown products, their removal from industrial wastewaters has been an urgent challenge. Promising and cost-effective methods are based on their biodegradation, which is treated in this volume. The topics presented by experts in the field include: the classification of azo dyes; toxicity caused by azo dyes; aerobic and anaerobic azo dye biodegradation mechanisms; the role of bacteria, fungi, algae and their enzymes in biodegradation; the impact of redox mediators on azo dye reduction; the integration of biological with physical and chemical processes; the biotransformation of aromatic amines; reactor modelling for azo dye conversion; the biodegradation of azo dyes by immobilized bacteria and fungi and factors affecting the complete mineralization of azo dyes.

Features

► Treats different biodegradation methods so that the reader can compare them ► Describes also the integration of biological with physical and chemical processes ► Each chapter was written by an expert in the field

Fields of interest

Environmental Chemistry; Organic Chemistry; Analytical Chemistry

Target groups

Research

Type of publication

Reviews

The Handbook of Environmental Chemistry

Editor-in-chief: A. G. Kostianoy, D. Barceló

Volume 10

J. Boer, VU University, Amsterdam, The Netherlands (Ed.)

Chlorinated Paraffins

Chlorinated paraffins are one of the last classes of chlorinated compounds that are still being produced worldwide and used in high quantities in many applications. They are particularly used in cutting oils in the metal industry, but also as lubricants, plasticizers, flame retardants and as additives in adhesives, rubber, paints and sealants. This volume covers the state-of-the-art of methods for the synthesis and analysis of chlorinated paraffins. Experts in the field provide an overview of their worldwide occurrence and utilization and describe their toxicological properties. International regulations and production volumes are presented as well as an example of a risk assessment study that was carried out in Japan. This book is a valuable and comprehensive source of information for environmental scientists interested in the occurrence and toxicology of chlorinated paraffins and for authorities and producers.

Features

► A comprehensive review ► Written by experts in the field ► A valuable source of information for environmental scientists interested in the occurrence and toxicology of chlorinated paraffins and for authorities and producers

From the contents

International Regulations.- Synthesis.- Analysis.- Environmental Levels and Fate.- Environmental Toxicology.- Risk Assessment of SCCPs in Japan.

Fields of interest

Environmental Chemistry; Geochemistry; Analytical Chemistry

Target groups

Research

Type of publication

Reviews

The Handbook of Environmental Chemistry

Editor-in-chief: A. G. Kostianoy, D. Barceló

Volume 11

P. Eyerer, Fraunhofer-Institut Chemische Technologie, Pfinztal, Germany (Ed.)

Polymers - Opportunities and Risks I

General and Environmental Aspects

Since their first industrial use polymers have gained a tremendous success. The two volumes of "Polymers - Opportunities and Risks" elaborate on both their potentials and on the impact on the environment arising from their production and applications.

Volume 11 "Polymers - Opportunities and Risks I: General and Environmental Aspects" is dedicated to the basics of the engineering of polymers – always with a view to possible environmental implications. Topics include: materials, processing, designing, surfaces, the utilization phase, recycling, and depositing.

Volume 12 "Polymers - Opportunities and Risks II: Sustainability, Product Design and Processing" highlights raw materials and renewable polymers, sustainability, additives for manufacture and processing, melt modification, biodegradation, adhesive technologies, and solar applications.

Features

► Written by leading experts in the field
► A valuable source of information for scientists, environmental managers and decision makers

Fields of interest

Environmental Health; Terrestrial Pollution; Environmental Management

Target groups

Research

Type of publication

Reviews

 Earth and Environmental Science

Due June 2010

2010. 214 p. Hardcover

► **approx. € 189,95 | £171.00**
► **approx. * € (D) 203,25 | € (A) 208,94 | sFr 295,00**
ISBN 978-3-642-11846-3



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 Earth and Environmental Science

Due August 2010

2010. 200 p. Hardcover

► **approx. € 189,95 | £171.00**
► **approx. * € (D) 203,25 | € (A) 208,94 | sFr 295,00**
ISBN 978-3-642-10760-3

 Earth and Environmental Science

Due June 2010

2010. Approx. 400 p. Hardcover

► **approx. € 299,00 | £269.50**
► **approx. * € (D) 319,93 | € (A) 328,90 | sFr 464,00**
ISBN 978-3-540-88416-3



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J. Huang McBeath, J. McBeath, University of Alaska, Fairbanks, AK, USA

Environmental Change and Food Security in China

Features

► Explores indirect and direct relationships between environmental degradation and food security ► Comprehensive treatment of major factors influencing China's food production, consumption and control systems ► Examination of recent controversies—GMOs and human health, "tainted" food products

Contents

Acknowledgements.- List of tables and figures.- 1 Introduction.- 2 Communist role and the food security situation.- 3 Immediate environmental stressors on food security.- Near-term environment stressors: climate change.- 5. Plant diseases pests and food security.- 6 Invasive species and food security.- 7 Biotechnological responses to food security needs.- 8 The legal and institutional framework to address food security needs.- 9 Issues in implementing food security in China.- 10 Summary and conclusions.- Index.

Fields of interest

Agriculture; Political Science; Plant Pathology

Target groups

Research

Type of publication

Monograph

M. K. Hughes, T. W. Swetman, University of Arizona, Tucson, AZ, USA; H. Diaz, NOAA, Colorado, Boulder, USA (Eds.)

Dendroclimatology

Progress and Prospects

With this volume we wish to bring together the world's leading practitioners and users of dendroclimatology to address the question: what has been learned, using tree rings, about natural climate variability and its environmental and social impacts? Our objectives: to review and synthesize the results of the last 30 years, and to identify the needs and opportunities for future work, and: to provide an authoritative evaluation of the strengths and weaknesses of dendroclimatic approaches to reconstructing past climate.

Features

► State-of-the-art review of the current state of dendroclimatology, its contributions over the last 30 years, and its future potential ► Chapters address major strengths and weaknesses associated with the use of tree rings to aspects of paleoclimatology ► Provides a wealth of examples of the use of tree rings in dendroclimatology and its applications to other fields

Fields of interest

Climate Change; Tree Biology; Paleontology

Target groups

Research

Type of publication

Contributed volume

V. P. Mega, Bruxelles, Belgium

Sustainable Cities for the Third Millennium

The Odyssey of Urban Excellence

Offers a 360 degree view of the challenges facing cities at the dawn of the millennium in terms of growth, governance, institutions and infrastructures, environmental well-being, social integration, science, culture and the arts, urban renaissance and planning, local democracy and citizenship One year after the crisis that started in 2008, the book presents responses to overcome the crisis of values and engage in a sustainability path from European and world cities.

From the contents

Cities in an Era of Fragility.- For a New Balance Among Nature, Humans and Artefacts in Cities.- Transport for Sustainable Cities.- Energy for Sustainable Cities.- Competitive and Attractive Cities.- Social Justice and Solidarity in Cities.- The Cities of Sciences, Culture and the Arts.- The Urban Renaissance of the Third Millennium.- The Cities of the Citizens.- Sustainability Indicators: The Benchmarks of Urban Excellence.

Fields of interest

Sustainable Development; Urbanism; Environmental Management

Target groups

Research

Type of publication

Monograph

 Biomedical and Life Sciences

Due May 2010

2010. X, 340 40 illus., 20 in color. (Advances in Global Change Research, Volume 35) Hardcover

► **approx. € 129,95 | £116.95**
 ► **approx. € (D) 139,05 | € (A) 142,94 | sFr 201,60**
 ISBN 978-1-4020-9179-7



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 Earth and Environmental Science

Due May 2010

2010. X, 340 p. (Developments in Paleoenvironmental Research, Volume 11) Hardcover

► **€ 99,95 | £90.00**
 ► *** € (D) 106,95 | € (A) 109,95 | sFr 155,50**
 ISBN 978-1-4020-4010-8



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 Earth and Environmental Science

Due June 2010

2010. 169 p. 12 illus. in color. Hardcover

► **approx. € 95,60 | £86.00**
 ► **approx. * € (D) 102,29 | € (A) 105,16 | sFr 145,00**
 ISBN 978-1-4419-6036-8



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H. Stroo, HydroGeoLogic Inc., Ashland, OR, USA;
C. Ward, Rice University, Houston, TX, USA (Eds.)

In Situ Remediation of Chlorinated Solvent Plumes

This volume provides a review of the past 10 to 15 years of intensive research, development and demonstrations on the in situ remediation of dissolved chlorinated solvents. The intended audience includes the decision makers and practicing engineers and hydrogeologists who will select, design and operate these remedial systems, as well as researchers seeking to improve the current state-of-the-art. Our hope is that this volume will serve as a useful resource to assist remediation professionals in applying and developing the technology as effectively as possible.

Features

► The editors and chapter authors have produced a well-written and up-to-date treatise that we hope will prove to be a useful reference for those making decisions on remediation of chlorinated solvents, for remediation practitioners, and for those involved in development of advanced technology for the in situ remediation of dissolved chlorinated solvents in groundwater

Fields of interest

Environmental Management; Waste Management/
Waste Technology; Waste Water Technology /
Water Pollution Control / Water Management /
Aquatic Pollution

Target groups

Research

Type of publication

Contributed volume

P. Zdruli, M. Pagliai, S. Kapur, A. Faz Cano (Eds.)

Land Degradation and Desertification: Assessment, Mitigation and Remediation

Features

► Worldwide perspectives of land degradation and desertification ► State-of-the-art techniques in erosion measurements ► Ancient and modern knowledge in soil conservation ► Links environmental conservation with sustainable development ► Analyse past and present climate change effects on ecosystems

Contents

Introduction.- Background papers.- Land degradation and mitigation in Africa.- Algeria.- Ethiopia.- Kenya.- Morocco.- Nigeria.- South Africa.- Suda.- Tunisia.- Uganda.- Land degradation and mitigation in asia.- China.- India.- Indonesia.- Iran.- Kazakhstan.- Kuwait.- LAO PDR.- Lebanon.- Malaysia.- Thailand.- Turkey.- Yemen.- Land degradation and mitigation in Europe.- Albania.- Austria.- Czech Republic.- Greece.- Italy.- Poland.- Romania.- Spain.- United Kingdom.- Land degradation and mitigation in the Americas.- Argentina.- Bolivia.- Brazil.- Canada.- Mexico.- USA.- Subject Index.

Fields of interest

Nature Conservation; Soil Science & Conservation;
Sustainable Development

Target groups

Research

Type of publication

Collected works

 Earth and Environmental Science

Due April 2010

2010. Approx. 690 p. 176 illus., 114 in color.
(SERDP ESTCP Environmental Remediation Technology)
Hardcover

► € 69,95 | £62.99
► * € (D) 74,85 | € (A) 76,95 | sFr 109,00
ISBN 978-1-4419-1400-2



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 Earth and Environmental Science

Due May 2010

2010. Approx. 490 p. Hardcover

► approx. € 129,95 | £117.00
► approx. * € (D) 139,05 | € (A) 142,94 |
sFr 202,00
ISBN 978-90-481-8656-3



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