



Life & Earth Sciences

September to December 2023

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Agri-Innovations and Development Challenges: Engineering, Value Chains and Socio-economic Models

Vanessa Casadella, Dimitri Uzunidis

Innovation is a major challenge for economic development and social progress. Faced with the ecological and food problems that the world is currently experiencing, the legitimacy of innovation takes on its full meaning, particularly in developing countries. As emphasized by international organizations (UN, FAO), building skills and abilities in the agricultural and food sectors are necessary when launching innovation processes for the benefit of suffering populations.

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304 pages • Hardcover
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/ Agriculture / Agronomy



Algae in Agrobiography: Realities and Perspectives

Joel Fleurence

Algae, macroalgae and microalgae can be valuable biological resources in a new, more environmentally friendly form of agriculture known as agrobiography. Indeed, the biological properties associated with algae are frequently relevant for agricultural and zootechnical purposes. It is this aspect that is behind the current popularity of algae in the development of new agricultural practices that are related to plant and animal production, which are referred to as agrobiography.

Algae in Agrobiography offers a current and forward-looking account of algae use: in agriculture and in the sector of food and feed.

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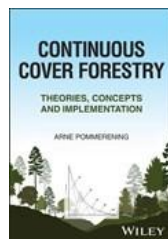


Food in a Just World: Compassionate Eating in a Time of Climate Change

Tracey Harris, Terry Gibbs

Food in a Just World examines the violence, social breakdown, and environmental consequences of our global system of food production, distribution, and consumption. From animals in industrialized farming – but also those reared in supposedly higher-welfare practices – to low-wage essential workers, and from populations being marketed unhealthy diets to the natural ecosystems suffering daily degradation, each step of the process is built on some form of exploitation. While highlighting the broken system's continuities from European colonialism to contemporary globalization, the authors argue th...

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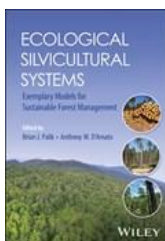
Continuous Cover Forestry: Theories, Concepts and Implementation

A Pommerening

Gain expertise in the development of healthier, more sustainable forests with this indispensable guide

Continuous Cover Forestry (CCF) is an approach to forest management with over a century of history, one which applies ecological principles to the project of developing biologically diverse, structurally complex forests. Long used as the standard forest management method in Central Europe, CCF is generating renewed interest globally for its potential to develop and sustain forests that can withstand climate change impacts, maintain forest biodiversity in the

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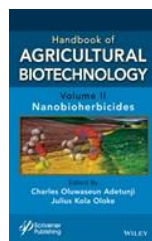
Ecological Silvicultural Systems: Exemplary Models for Sustainable Forest Management

Brian J. Palik, Anthony W. D'Amato

Unleash the natural power and adaptability of forests with this cutting-edge guide

For generations, silvicultural systems have focused largely on models whose primary objective is the production of timber, leading to drastically simplified forests with reduced ecological richness, diversity, and complexity. Ecological silviculture, by contrast, focuses on producing and maintaining forests with "all their parts", that is, with the diversity and flexibility to respond and adapt to global changes. Ecological silviculture seeks to emulate natural development models and sustain healthy forests servi...

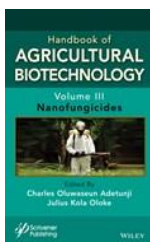
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Handbook of Agricultural Biotechnology, Volume 2: Nanobioherbicides

Charles Oluwaseun Adetunji, Julius Kola Oloke

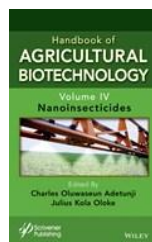
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Handbook of Agricultural Biotechnology, Volume 3: Nanofungicides

Charles Oluwaseun Adetunji, Julius Kola Oloke

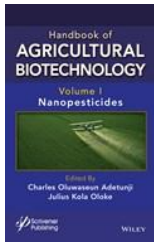
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Handbook of Agricultural Biotechnology, Volume 4: Nanosecticides

Charles Oluwaseun Adetunji, Julius Kola Oloke

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Handbook of Agricultural Biotechnology, Volume 1: Nanopesticides

Charles Oluwaseun Adetunji, Julius Kola Oloke

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Fast Processes in Large-Scale Atmospheric Models: Progress, Challenges, and Opportunities

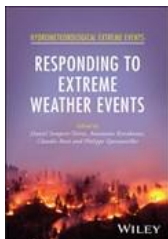
Yangang Liu, Pavlos Kollias, Leo J. Donner

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Improving weather and climate prediction with better representation of fast processes in atmospheric models

Many atmospheric processes that influence Earth's weather and climate occur at spatiotemporal scales that are too small to be resolved in large scale models. They must be parameterized, which means approximately representing them by variables that can be resolved by model grids.

Fast Processes in Large Scale Atmospheric Models: Progress, Challenges and Opportunities explores ways to



Responding to Extreme Weather Events

D Sempere-Torres

An up-to-date discussion of the latest in weather-related event forecasting and management

In *Responding to Extreme Weather Events*, a team of distinguished researchers delivers a timely and authoritative exploration of three international extreme weather projects: ANYWHERE, I-REACT, and BeAWARE. The key contributions from policymaking, science, and industry in each project are discussed, as are the resulting improved measures and technologies for forecasting and managing weather-related extreme events.

The authors cover the entire crisis management cycle, from awareness and early warning to effa

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Data Analysis for the Geosciences: Essentials of Uncertainty, Comparison, and Visualization

Liemohn

Overview of more advanced analysis techniques, including visualization, periodicity, model uncertainty quantification, and machine learning, and when these are applicable towards the concept of uncertainty, the scientific method, and how uncertainty plays a role in discovery

Undergraduate students in STEM disciplines need to gain an appreciation of the uncertainties surrounding observations and model results. This uncertainty strongly governs the interpretation of the values and especially the comparison of several values. Students are usually

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Fire, Smoke, and Health: Tracking the Modeling Chain from Flames to Health and Well-Being

Tatiana V. Loboda, Nancy H. F. French, Robin C. Puett

A transdisciplinary approach to investigating relationships between biomass burning and human health outcomes

Where and when wildfires occur, what pollutants they emit, how the chemistry of smoke changes in the atmosphere, and what impact this air pollution has on human health and well-being are questions explored across different scientific disciplines.

Fire, Smoke, and Health: Tracking the Modeling Chain from Flames to Health and Well-Being is designed to create a foundational knowledge base allowing

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Helicities in Geophysics, Astrophysics and Beyond

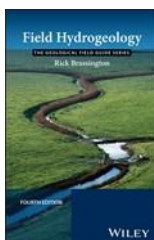
Kirill Kuzanyan, Nobumitsu Yokoi, Manolis Georgoulis, Rodion Stepanov

Presents cutting-edge studies of helicities from different research fields

Helicities play essential roles in numerous geophysical, astrophysical, and magnetohydrodynamic phenomena, thus are studied from various disciplinary viewpoints.

Helicities in Geophysics, Astrophysics, and Beyond draws together experts from different research fields to present an interdisciplinary and integrated approach to helicity studies. This synthesis advances understanding of the fundamental physical processes underlying various

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Field Hydrogeology (5th Edition)

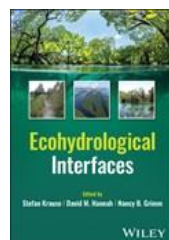
Rick Brassington

Field Hydrogeology Pocket-sized field workbook for students studying hydrogeology at undergraduate and postgraduate levels

The fully revised Fifth Edition of *Field Hydrogeology* serves as a comprehensive guide to conducting a hydrogeological study, beautifully presented with full colour photos and diagrams throughout, in a practical pocket size for easy use in the field. This new edition includes recent developments in the environmental regulations, with particular focus on the use of innovative technology.

New topics in the Fifth Edition include the monitoring of

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Ecohydrological Interfaces

Stefan Krause, David M. Hannah, Nancy B. Grimm

Comprehensive overview of the process dynamics and interactions governing ecohydrological interfaces

Summarizing the interdisciplinary investigation of ecohydrological interface function, this book advances the understanding of their dynamics across subject boundaries. Overall, it offers a detailed explanation of the underlying processes and interactions governing ecohydrological interface functioning from the micro scale to the ecosystem and regional scale.

The multidisciplinary team of authors integrates and compares knowledge of the functioning of different

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Remediation of Heavy Metals: Sustainable Technologies and Recent Advances

R Selvasembian

Meet the challenge of contaminated soil with a range of sustainable tools

The remediation of soils which have been polluted by trace metals is an increasingly significant environmental challenge in an industrialized global economy. The ongoing revolution in green technologies, however, has seen a range of sustainable methods emerge for remediating soils, water, and other aspects of the environment polluted by trace metals. By putting them into practice, environmental researchers and industrial professionals will be able to improve soil and groundwater quality and public

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In the Name of Sharks

François Sarano, Stephen Muecke

Twenty metres below water, the oceanographer François Sarano came face to face with a five-and-a-half metre great white shark. Seduced by the gentle elegance of this majestic creature, Sarano experienced a profound sense of affinity with her as they swam side by side, shoulder to shoulder, eye to eye, cutting a single figure through the ocean depths. It was an experience which made him realise the depth of our ignorance of the lives of sharks, leading him to become a passionate advocate for their protection.

Drawing on the latest scientific research on the biology and ethology of sharks and the...



Principles of Anatomy and Physiology, Sixteenth Edition + Study Guide International Adaptation Set

GJ Tortora

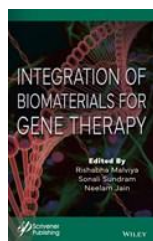
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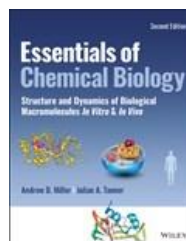


Integration of Biomaterials for Gene Therapy

Rishabha Malviya, Sonali Sundram, Neelam Jain

This book comprises of research and review articles from leading researchers with multidisciplinary experience. It discusses many broad topics, including nanoparticle-enabled gene therapy, inorganic nanocarrier-based gene delivery, non-viral delivery of nucleic acid, biocompatible hydrogels, silk, and polysaccharides-based gene delivery. Other gene delivery topics discussed include the use of smart and engineered biomaterials, combined therapy with growth factors and cell transportation, and the prospects and challenges in the treatment of different diseases, including cancer.

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Essentials of Chemical Biology (2nd Edition)

Andrew D. Miller, Julian A. Tanner

Essentials of Chemical Biology Discover a detailed knowledge of concepts and techniques that shape this unique multi-discipline

Chemical Biology is devoted to understanding the way that Biology works at the molecular level. This is a problem-driven multi-discipline, incorporating as it does Organic, Physical, Inorganic, and Analytical Chemistry alongside newer emerging molecular disciplines. In recent years, Chemical Biology has emerged as a vibrant and growing multi-discipline distinct from Biochemistry that is focused on the quantitative analyses of the structures and functions of biological molecules.

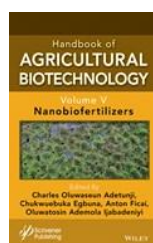
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Cell Biology

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Next-Generation Nanochitosan for Enhanced Crop Production and Food Security

Charles Oluwaseun Adetunji, Maulin P. Shah, Mohammed Bello Yerima, Daniel Ingo Hefft, Jay Singh, Shyam S. Pandey, Ravindra Pratap Singh

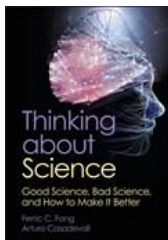
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Handbook of Agricultural Biotechnology, Volume 5: Nanobiofertilizers (2nd Edition)

Charles Oluwaseun Adetunji, Chukwuebuka Egbuna, Anton Fica, Oluwatosin Ademola Ijabadeniyi

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Thinking about Science: Good Science, Bad Science, and How to Make It Better

Ferric C Fang, Arturo Casadevall

Thinking about Science: Good Science, Bad Science, and How to Make It Better

A riveting exploration of the world of science, diving headfirst into its triumphs and tribulations.

Penned by seasoned microbiologists Ferric C. Fang and Arturo Casadevall, this book offers a comprehensive analysis of the scientific enterprise through various lenses, including historical, philosophical, and personal.

From their unique vantage points as researchers, clinicians, and educators, Fang and Casadevall dissect the

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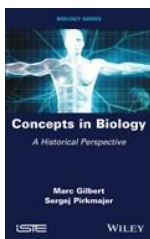
Fifty Years of Evolution in Biological Research: Progress and Decline

Jacques Balthazart

Research in biology and all basic sciences has undergone profound transformations in recent decades. We have seen the development of extremely sophisticated techniques, allowing us to study, in an objective manner, questions that were still considered science fiction at the end of the 20th century. All of this has allowed us to develop an in-depth knowledge of vast subjects, such as the biology of the brain, for example.

Fifty Years of Evolution in Biological Research presents a panorama of these different technical advances. However,

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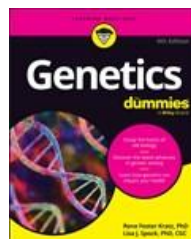
Concepts in Biology: A Historical Perspective

Marc Gilbert, Sergej Pirkmajer

This book provides a comprehensive review of the history of concepts of the endocrine, nervous and immune systems throughout the last century.

Historically, these systems were long considered as compartments that performed separate and different functions. However, a breakthrough occurred when advances in genetics and cellular and molecular biology techniques revealed that these systems shared molecular entities (such as cytokines, hormones and neurotransmitters) with their cognate receptors.

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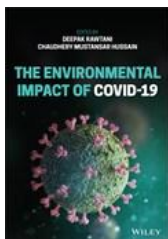
Genetics For Dummies (4th Edition)

Rene Fester Kratz, Lisa Spock

Evolve your knowledge of the fast-moving world of genetic research

Genetics For Dummies shines a light on the fascinating field of genetics, helping you gain a greater understanding of how genetics factors into everyday life. Perfect as a supplement to a genetics course or as an intro for the curious, this book is packed with easy-to-understand explanations of the key concepts, including an overview of cell biology. You'll also find tons of coverage of recent discoveries in the field, plus info on how genetics can affect your health and wellbeing. Whole-genome sequencing, genetic disease treatm...

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The Environmental Impact of COVID-19

Deepak Rawtani, Chaudhery Mustansar Hussain

THE ENVIRONMENTAL IMPACT OF COVID-19 Discover the wider environmental effects of the COVID-19 pandemic with this up to date resource from leading voices in the field

The Environmental Impact of COVID-19 delivers an insightful analysis of various environmental aspects of the COVID-19 pandemic that have caused global concern. The book discusses the transmission of COVID-19 in the environment, the pandemic's environmental impact, risk mitigation and management, management of COVID-related waste, and the environmental implications of the virus.

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Mushroom Biotechnology for Improved Agriculture and Human Health

Charles Oluwaseun Adetunji, Chukwuebuka Egbuna, Oluwatosin Ademola Ijabadeniyi, Samantha C. Karunarathna

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