Science & Technology Catalogue
January - June 2024
New and Forthcoming Titles

Environment & Sustainability, Life Science, Food & Nutrition, Forensics & Homeland Security,
Apple Academic Press & Jenny Stanford Publishing
Welcome

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Advanced Technologies for Smart Agriculture

Edited by Kalaiselvi K., A. Jose Anand, Poonam Tanwar, Haider Raza
Series: River Publishers Series in Computing and Information Science and Technology
This book brings new smart farming methodologies to the forefront, sparked by pervasive applications with automated farming technology. New indigenous expertise on smart agricultural technologies is presented along with conceptual prototypes showing how the Internet of Things, cloud computing, machine learning, deep learning, precision farming, crop management systems, etc., will be used in large-scale production in the future.

River Publishers
February 2024:420
Hb: 978-8-770-22848-0: £110
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An Introduction to Sustainable Aquaculture

Edited by Daniel Peñalosa Martinell, Francisco Javier Vergara Solana, Marcelo Eduardo Araneda Padilla, Fernando Araneta Garza
This book will serve as an essential guide for students of aquaculture, fisheries management and sustainable food as well as practitioners and policymakers engaged in sustainable fishery development.

Routledge
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American Farming Culture and the History of Technology

Joshua T. Brinkman
Series: Routledge Studies in Food, Society and the Environment
This book will be of great interest to students and scholars of agricultural history, technology and policy, rural studies, the history of science and technology and farming culture in the USA.

Routledge
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Application of Nanotechnology for Resource Recovery from Wastewater

Edited by Jitendra Kumar Pandey, Syed Mohammad Tauseef, Suvendu Manna, Ravi Kumar Patel, Vishal Kumar Singh, Ankit Dasgutra
This book presents a critical overview on the current nanotechnologies that are being utilized for extraction of valuable resources from various industrial and domestic wastes.

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An Introduction to Severe Storms and Hazardous Weather

Jeffrey B. Halverson
This book presents a deep and encompassing survey of severe weather in all its forms. An Introduction to Severe Storms and Hazardous Weather is an exciting new textbook which allows students to learn the principles of atmospheric science through the drama, exhilaration and even tragedy of severe weather.

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Bioremediation for Sustainable Environmental Cleanup

Edited by Anju Malik, Vinod Kumar Garg
The present book, Bioremediation for Sustainable Environmental Cleanup, has a compilation of seventeen chapters comprehensively describing the state-of-the-art on emerging bioremediation approaches employed for sustainable environmental clean-up of diverse environmental pollutants such as metal(loid)s, polycyclic aromatic hydrocarbons, dyes, pesticides, petroleum hydrocarbons, etc., by using bacteria, fungi, algae, higher plants, and novel materials like biohybrids, nano-biomaterials, and graphitic carbon nitride (g-C3N4).

CRC Press
February 2024:322
Hb: 978-1-032-23491-5: £140
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Capacity-Building and the Water-Energy-Food Nexus
Rethinking Integration in the Asia-Pacific
Maureen Papas
Series: Earthscan Studies in Natural Resource Management
The book will be interest to scholars and students within the water, energy and agriculture sectors, sustainability governance and sustainable development. It will also be a valuable resource to those working in governmental organizations and NGOs involved in capacity building and development.

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Circular Economy in the European Union
Organisational Practice and Future Directions in Germany, Poland and Spain
Dagmara Lewicka, Joanna Zarębska, Roman Batko, Beata Tarczyno, Maciej Woźniak, Dariusz Cichon, Monika Pec
Series: Routledge Research in Sustainability and Business
Circular Economy in the European Union: Organisational Practice and Future Directions in Germany, Poland and Spain presents the EU's journey towards a Circular Economy (CE), identifying significant organizational practices in this gradually adopted field among member countries. The book also aims to develop and propose innovative initiatives and practices for implementing CE across various economic sectors in selected EU countries, such as Poland, Spain and Germany.

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Children in Tourism Communities
Sustainability and Social Justice
Marko Koščak, Mladen Knežević, Tony O’Rourke, Tina Šegota
This book explores how children living in tourism destinations are particularly susceptible to the impacts of tourism and how they can be included in public policies, programmes and decision-making. The book is based on original, ground-breaking research with a specific focus on sustainable tourism and development, and it encourages a rethinking of sustainability as a concept and demonstrates how tourism can be utilised as a tool for achieving the sustainable development goals. This will be an important text for students, academics, and instructors in sustainable tourism and development, destination management, culture and heritage, as well as practitioners in these areas.

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Climate Change Action and the Responsibility to Protect
A Common Cause
Ben L. Parr
Series: Routledge Advances in Climate Change Research
This book brings together two important fields in the study of international politics and policy: climate change adaptation and mitigation (climate action) and the Responsibility to Protect (R2P). Both have attracted strong scholarly attention in each of their respective research silos, but there is yet to be a strong research push that explores the relationship between the two.

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Christian Environmentalism and Human Responsibility in the 21st Century
Questions of Stewardship and Accountability
Edited by Katherine M. Quinsey
Series: Routledge Explorations in Environmental Studies
This book comprises original scholarly essays and creative works exploring the implications of Christian environmentalism through literary and cultural criticism, and creative reflection. It draws on a flourishing recent body of Christian ecocriticism and environmental spirituality, but with particular emphasis on the notion of human responsibility. It will appeal to scholars, researchers and upper-level students interested in the relationship between religion and environment, ethics, animal welfare, poetry, memoir and post-secularism.

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Climate Change Adaptation and Green Finance
The Arctic and Non-Arctic World
Gisele Arruda, Lara Johannsdottir
Series: Routledge Advances in Climate Change Research
This book presents specific case studies of climate finance in the Arctic and examines how the green revolution could be a game changer in this sensitive region.

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Hb: 978-1-032-31965-0: £130
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Climate Change is an Opportunity
Why We Need Principled Capitalism
David Blockley

We have an imperative, as never before, to change our ways. Climate change is presenting the entire human race with its greatest ever existential challenge. Like many I feel a growing sense of looming disaster. Yes, we are making some progress, but past agreements are not delivering. In this book I put a case for a new form of principled capitalism based on moral principles rather than utility and profit. I propose ten pillars that include systems thinking as citizens of the world and embracing Modern Monetary theory to guide decisions about macroeconomics and national debt.

Climate, Science and Society
A Primer
Edited by Zeke Baker, Tamar Law, Mark Vardy, Stephen Zehr

Climate, Science and Society: A Primer makes cutting edge research on climate change accessible to student readers.

Climate Security
The Role of Knowledge and Scientific Information in the Making of a Nexus
Matti Goldberg

This book presents an empirical study of the role of knowledge in the making of the climate-security nexus. Climate Security is a must-read for researchers interested in climate-security links, in science-policy interfaces, and in the formation of nexuses in international politics.

Concepts in Smart Societies
Next-generation of Human Resources and Technologies
Edited by Chaudhery Hussain, Antonella Petrillo, Shahid Ul Islam

The book outlines strategies and suggests directions for the development of the “super smart society” which will take responsibility and ensure sustainability by adhering to new smart technologies and skills. The book is intended for a broad audience—those working in material science and engineering, energy, environment, etc. It will serve as a reference for students, industrial institutions, government and independent institutes, individual research groups and scientists working in the field of industrial applications of smart manufacturing design.
Cosmological Readings of Contemporary Australian Literature
Unsettling the Anthropocene
Kathrin Bartha-Mitchell
Series: Routledge Environmental Literature, Culture and Media
This book presents a detailed and innovative reading of contemporary Australian literature in the context of unprecedented ecological crisis. It focuses on notions of colonisation, farming, mining, bioeconomics, technology, environmental justice and sovereignty and offers ‘cosmological readings’ of a diverse range of authors—Indigenous and non-Indigenous—as a challenge to the Anthropocene’s decline narrative. This book will be of particular interest to scholars and students of ecocriticism, environmental humanities, and postcolonial and Indigenous studies, with a primary focus on Australian, New Zealand, Oceanic, and Pacific area studies.

Creative Design and Innovation
How to Produce Successful Products and Buildings
Robin Roy
Using many real-world examples and cases, this book identifies key factors and processes that have contributed to the creation of successful new products, buildings and innovations, or resulted in some failures. Such factors include the creativity of individuals and groups, their sources of inspiration, the processes of creative design and innovation, and the characteristics of the products, buildings and innovations themselves. This book is a must-read for a broad audience interested in creativity, design and innovation, including practitioners in design, engineering, architecture and product management, and students and instructors of those subjects.

COVID-19 and Climate Change in BRICS Nations
Beyond the Paris Agreement and Agenda 2030
Edited by Ndivhuho Tsikovhi, Andréa Santos, Xiaolong Zou, Fulufelhetso Ntswera, Irina Zotovna Yarygina, Sriram Divi
Series: Routledge Advances in Climate Change Research
This book provides a quantitative and qualitative overview of the overall impact that the COVID-19 pandemic had on Brazil, Russia, India, China, and South Africa’s (BRICS countries) capacity to re-shape global climate governance and explore areas for mutual cooperation.

Critical Realism and the Objective Value of Sustainability
Philosophical and Ethical Approaches
Gabriela-Lucia Sabau
Series: Routledge Environmental Ethics
This book uses a critical realist approach within a transdisciplinary theoretical framework to examine how sustainability objectively occurs in the natural world and in society. It develops an ethical theory of sustainability as an objective value, rooted not in humans’ subjective preferences but in the holistic web of relationships, interdependencies, and obligations existing among living things on Earth. It will be of interest to students and scholars across fields of inquiry, including sustainability, sustainable development, environmental philosophy and ethics, philosophy of science, ecological economics.

Covid-19 and Global Inequalities
Vulnerable Humans
Victor Jeleniewski Seidler
Series: Routledge Studies in Environment and Health
This timely and powerful autoethnography traces the spread of and responses to Covid-19. It explores the fears, risks, and responses to the global pandemic. It scrutinises values, ethics, responsibilities, and uncertain futures formed by the global health crisis, and validates media and communications strategies, government responses, and political communications at domestic and international levels. It will appeal to a broad academic readership in environmental studies, sociology, philosophy, health studies, cultural studies, gender studies, media, and communication.

Deploying the European Green Deal
Protecting the Environment Beyond the EU Borders
Edited by Mar Campins Eritja, Xavier Fernández-Pons
Series: Routledge Studies in Environmental Policy
Drawing on a range of expert contributions, this book explores how the European Green Deal is being deployed in practice and observes how the EU tries to promote the protection of the environment in third countries.
Desalination and Water Security
Chris Anastasi
This book will be of great interest to those working to alleviate water scarcity and to improve water security. It will also be of interest to those in water resource management, water policy and regulation, and water science and environmental engineering.

Emission Trajectories and Mitigation Schemes for China
Kai Fang, Qifeng Zhang, Yiqi Tang
This book seeks to model the possible emission trajectories and identify the feasible mitigation schemes for China to meet its climate commitments to peak emissions by 2030 and net zero emissions by 2060. In line with these ambitions, China has taken a number of measures to improve energy efficiency and energy structure in recent years. The title will benefit researchers and policy-makers interested in environmental governance, climate policy, environmental economics and sustainable development.

Dielectric Materials for Energy Storage and Energy Harvesting Devices
Edited by Shailendra Rajput, Sabyasachi Parida, Abhishek Sharma, Sonika
Series: River Publishers Series in Energy Sustainability and Efficiency
As the demand for energy harvesting and storage devices grows, this book will be valuable for researchers to learn about the most current achievements in this sector. Sustainable development systems are centered on three pillars: economic development, environmental stewardship, and social. One of the ideas established to achieve balance between these pillars is to minimize the usage of nonrenewable energy sources. Harvesting energy from the surrounding environment and converting it into electrical power is one viable solution to this problem.

Energy Conservation Guidebook
Dale R. Patrick, Stephen W. Fardo, Ray E. Richardson, Brian W. Fardo, Mark Barron
Series: River Publishers Series in Energy Sustainability and Efficiency
Energy Management and Conservation, Fourth Edition, provides a very practical discussion of how energy can be managed and saved in most types of buildings. This edition not only updates the previous edition but adds updated content concerning energy cost reduction/going green to improve the environment. The authors of this book have written several books that use the systems approach. Through the use of the systems approach, the reader will be able to grasp how different parts of a building fit together to form a unit that uses energy efficiently.

Eating in US National Parks
Cosmopolitan Taste and Food Tourism
Kathleen LeBesco
Series: Routledge Food Studies
This book will be of great interest to students and scholars of food studies, tourism and hospitality, sociology of culture, parks and recreation, American studies and environmental studies. The book will also be of interest to parks and recreation decision makers, sustainable tourism leaders and hospitality managers.

Energy, Environment and Geopolitics in Eurasia
Search for Security in the Water-Energy-Food Nexus
Norman A. Graham, Şuhnaz Yılmaz
Series: Routledge Explorations in Environmental Studies
This book advances our understanding of security and its intricate interactions with geopolitics and the environment in Eurasia.

* For full contents and more information, visit: www.routledge.com/9781032596310
English Urban Commons
The Past, Present and Future of Green Spaces

Christopher Rodgers, Rachel Hammersley, Alessandro Zambelli, Emma Cheatle, John Wedgwood Clarke, Sarah Collins, Olivia Dee, Siobhan O’Neill

Series: Earthscan Studies in Natural Resource Management

The book presents a novel examination of urban commons which provides a robust base for education initiatives and future public policy guidance on the protection and use of urban commons as invaluable urban green spaces that offer a diverse cultural and ecological resource for future communities. This book will be of great interest to students and scholars of the commons, green spaces, urban planning, environmental and urban geography, environmental studies and natural resource management.

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Food Justice in American Cities
Stories of Health and Resilience

Sabin O’Hara

Series: Routledge Studies in Food, Society and the Environment

This book documents food-insecurity in urban communities across the United States and asks the question whether emerging urban food and agriculture initiatives can address the food security needs of certain city dwellers. This book will be of great interest to students and scholars of food justice, food security, urban food and agriculture, urban sustainability and sustainable food systems more broadly.

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Essential Oils
Contributions to the Chemical-Biological Knowledge

Edited by Valdir Floréncio da Veiga Jr., Isiaka Ajani Ogunwande, José L. Martinez

Essential oils, well-known for their remarkable properties, have played a ubiquitous role throughout human history. They connect us to our past, invoking memories of childhood places and the aromas of our grandparents' kitchens. From the fragrant scents of ancient Egypt to the natural preservatives found in 15th century Oriental spices, essential oils have the ability to stimulate, numb, and captivate our senses through their effects on the central nervous system.

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Food Policy and Practice in Early Childhood Education and Care

Children, Practitioners, and Parents in an English Nursery

Francesca Vaghi

Series: Routledge Food Studies

This book is about food and feeding in early childhood education and care, offering an exploration of the intersection of children’s food, education, family intervention, and public health policies. The book will particularly appeal to students and scholars in food and health, food policy, childhood studies and medical anthropology. Policymakers and non-governmental bodies working in the domains of children’s food and early years policies will also find this book of interest.

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Flood Risk and Community Resilience
An Interdisciplinary Approach

Lindsey Jo McEwen


This book would be ideal for those researching flood risk management, alongside scholars and non-scholars alike who are interested in finding ways of adapting to environmental hazards working with local communities.

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Future Autonomous Road Vehicles

Joseph Giacomin

This book provides a comprehensive overview of the past, present and future of autonomous road vehicles for professionals and students. It brings together the key historical developments in autonomous road vehicle design and the primary explorations of the design possibilities from science fiction. It also introduces five of the most popular future-facing speculative approaches used by designers, with science fiction prototyping identified as best suited to autonomous road vehicle application. Of use to those interested in the psychological, sociological and ethical factors involved in automotive design, human centred design, industrial design and technology.

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Global Forest Carbon
Policy, Economics and Finance

Runsheng Yin
Series: The Earthscan Forest Library

This book is essential reading for professionals and policymakers working at the intersection of forest policy, carbon storage and climate change, as well as students and researchers in the fields of forestry, natural resource management, climate change and nature-based solutions.

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Good Education in a Fragile World
The Value of a Collaborative and Contextualised Approach to Sustainability in Higher Education

Edited by Alan Bainbridge, Nicola Kemp
Series: Routledge Studies in Sustainable Development

This edited collection aims to provoke discussion around the most important question for contemporary higher education – what kind of education is needed to restore the health and wellbeing of the planet and ourselves now and for generations to come? Introducing a conceptual framework called the ‘Paradox Model’, the book explores the tensions that underpin the challenge of developing sustainability in higher education in the 21st century. It will be an engaging volume for academics and educators from a wide range of disciplines in higher educational settings interested in translating sustainability theory into educational practice.

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eBook: 978-1-003-28651-6
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Global Forest Visualization
From Green Marbles to Storyworlds

Lynda Olman, Birgit Schneider
Series: Routledge Focus on Environment and Sustainability

This book will be of great interest to students and scholars of forest studies, climate change, science communication, visualization studies, environmental communication and environmental conservation.

Routledge
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Governing Natural Resources for Sustainable Peace in Africa
Environmental Justice and Conflict Resolution

Edited by Obasesam Okoi, Victoria R Nalule
Series: Earthscan Studies in Natural Resource Management

This book examines the dynamics of natural resource conflicts in Africa, and explores the different governance approaches for securing sustainable peace. Drawing on a range of disciplinary perspectives, this book will be of interest to students and scholars of natural resource governance, peace and conflict studies, environmental policy and justice, sustainable development, security studies and African studies more widely.

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Globalisation and Livelihood Transformations in the Indonesian Seaweed Industry

Edited by Zannie Langford
Series: Earthscan Food and Agriculture

This book explores the rapidly changing seaweed industry in Indonesia, the largest global producer of carrageenan-bearing seaweeds. This book will be of great interest to students and scholars of aquaculture, the food system, agricultural economics, rural studies and sustainable development.

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Guerrilla Ecologies
Green Capital, Nature, and the Politics of Catastrophe

John Maerhofer
Series: Routledge Studies in Environmental Justice

This book intervenes in contemporary debates about climate activism, militancy and strategy. Building upon the crucial work of scholars and activists such as Carolyn Merchant, Ursula Heise, Raj Patel, Joan Martinez Alier, Neil Smith, and Mark Dowie, the book discusses and regenerates key principles of guerrilla ecology. It brings together discussion on key topics in a range of contexts including biopiracy and biocolonialism, indigenous resistance, extractivism, anti-imperialism, ecotage, and eco-militancy. It will attract scholarly readers from diverse spaces in the environmental humanities, environmental and climate justice, radical ecology and philosophy.

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Hb: 978-1-032-45486-3: £130
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ICML 55.0 – Optimized Lubrication of Mechanical Physical Assets Overview

The International Council for Machinery Lubrication (ICML), USA
Series: River Publishers Series in Energy Engineering and Systems
ICML 55.0 is part of a series of standards documents that represent the ICML 55® International Lubrication Standard. It is designed to provide an overview of a lubrication management system and processes applicable to the effective management of physical assets related to lubrication, its principles, and terminology. ICML 55.0 is intended for use in association with ICML 55.1, Requirements for the Optimized Lubrication of Mechanical Physical Assets, ICML 55.2, Guideline for the Optimized Lubrication of Mechanical Physical Assets, and ICML 55.3, Auditors’ Standard Practice and Policies Manual.

Impact Investing for a Sustainable Planet

Impact Investing for a Sustainable Planet guides investors in supporting entrepreneurs to scale business models which maximize positive impact outcomes, including climate and nature-based solutions. EcoEnterprises Fund is a longstanding leader in the impact investing industry, which helps advance sustainable entrepreneurial ventures and promote environmental stewardship in Latin America.

ICML 55.1 – Requirements for the Optimized Lubrication of Mechanical Physical Assets

The International Council for Machinery Lubrication (ICML), USA
Series: River Publishers Series in Energy Engineering and Systems
ICML 55.1 is part of a series of standards documents that represent the ICML 55® International Lubrication Standard. ICML 55.1 details the twelve Lubrication Management Plans/Auditable Elements that an organization must establish, document, manage, and maintain to satisfy the organization’s lubrication asset management strategy and system, and to successfully certify to the ICML 55 standard. ICML 55.1 is intended for use in association with ICML 55.0, Optimized Lubrication of Mechanical Physical Assets Overview, ICML 55.2, Guideline for the Optimized Lubrication of Mechanical Physical Assets, and ICML 55.3, Auditors’ Standard Practice and Policies Manual.

Indigenous Practice and Community-Led Climate Change Solutions

The Relevance of Traditional Cosmic Knowledge Systems

This book centers Indigenous knowledge and practice in community-led climate change solutions.

ICML 55.2 – Guideline for the Optimized Lubrication of Mechanical Physical Assets

The International Council for Machinery Lubrication (ICML), USA
Series: River Publishers Series in Energy Engineering and Systems
ICML 55.2 is part of a series of standards documents that represent the ICML 55® International Lubrication Standard. ICML 55.2 is designed to take an in-depth look at the twelve Lubrication Management Plans/Auditable Elements outlined in ICML 55.1, to illustrate the value of each element (the Why?), and provide the reader with many “how to” examples. Included are many “punch lists” of typical requirements an auditor would look for to prove compliance readiness for certification purposes.

Industrial Crops

Bioresources to Biotechnology

The book covers how Innovative biotechnology can expand the markets for agricultural producers worldwide, reduce environmental degradation, and provide alternatives to fossil carbon-derived products and energy. Aspect of entrepreneurial biotechnology and bioprospecting are also covered.
Innovation and Sustainability in Governments and Companies: A Perspective to the New Realities
Edited by Ernesto Leon-Castro, Manoj Sahni, Fabio Blanco-Mesa, Victor Alfaro-Garcia, Jose Merigo
Series: River Publishers Series in Multi Business Model Innovation, Technologies and Sustainable Business
Innovation and sustainability are issues that have become very relevant in recent years. This book presents a compilation of investigations on these topics, divided into those applied in government or enterprises. The objective is to demonstrate to the audience how these issues have been worked around the world and in different scenarios. Among the papers, there are works related to economic variables, imports, exports, and analysis in different sectors such as tourism, agriculture, education, and even in countries in general.

River Publishers
December 2023
Hb: 978-8-770-22844-2: £110
eBook: 978-1-032-62396-2
* For full contents and more information, visit: www.routledge.com/9788770228442

Living with Energy Poverty
Perspectives from the Global North and South
Edited by Paola Velasco Herrejón, Breffní Lennon, Niall P. Dunphy
Series: Routledge Explorations in Energy Studies
Living with Energy Poverty: Perspectives from the Global North and South expands our collective understanding of energy poverty and deepens our recognition of the phenomenon by engaging with the lived experiences of energy-poor households across different contexts.

Routledge
December 2023
Hb: 978-1-032-52818-2: £130
Pb: 978-1-032-52819-9: £35.99
eBook: 978-1-003-40853-6
* For full contents and more information, visit: www.routledge.com/9781032528199

Japan’s Withdrawal from International Whaling Regulation
Edited by Nikolas Sellheim, Joji Morishita
This book examines the impact and implications of Japan’s withdrawal from the International Convention for the Regulation of Whaling (ICRW), which came into effect in July 2019. This book will be of great interest to students and scholars of environmental law and governance, biodiversity conservation and sustainable development, as well as policymakers involved in international environmental and conservation agreements.

Routledge
December 2023
Hb: 978-1-032-16887-6: £130
* For full contents and more information, visit: www.routledge.com/9781032168876

Local Responses to Mine Closure in South Africa
Dependencies and Social Disruption
Edited by Sethulego Matebesi, Lochner Marais, Verna Nel
Series: Routledge Studies of the Extractive Industries and Sustainable Development
This book will be of interest to students and scholars researching the social impacts of mining and the extractive industries, social geography and sustainable development, as well as policymakers and practitioners working with mine closure and social impact assessments.

Routledge
February 2024
Hb: 978-1-032-51043-9: £130
* For full contents and more information, visit: www.routledge.com/9781032510439

Judging Extreme Weather
Climate Science in Action
Randy Cerveny
Written by the World Meteorological Organization (WMO) Rapporteur of Weather and Climate Extremes, this book addresses the reality of extreme weather—how does it occur; how do we measure it; and what does it mean for our future.

Routledge
February 2024
Hb: 978-1-032-43570-1: £84.99
* For full contents and more information, visit: www.routledge.com/9781032435725

Materials and Sustainability
Building A Circular Future
Julia L F Goldstein, Paul Foulkes-Arellano
This book examines sustainable manufacturing, from the extraction of materials to processing, use and disposal, and argues that significant changes in all of the above are needed for the world to progress toward a more circular economy.

Routledge
April 2024
* For full contents and more information, visit: www.routledge.com/9781032529325
Poetry and the Global Climate Crisis
Creative Educational Approaches to Complex Challenges

Edited by Amatoritsero Ede, Sandra Lee Kleppe, Angela Sorby
Series: Research and Teaching in Environmental Studies

This book demonstrates how human beings can become sensitised to, and intervene in, environmental degradation by writing, reading, analysing and teaching poetry. Theoretical and practice-based essays provide a diversity of approaches and voices that will be useful in the classroom and beyond. Encompassing work from or about Oceania, Africa, Europe, North America, Asia, and Antarctica, it explores how poetry can make readers climate-ready and climate-responsive through creativity, empathy and empowerment. It will appeal to educational professionals engaged in teaching environmental, sustainability, and development topics, particularly from a humanities-led perspective.

Mining, Mobility, and Social Change in the Global South
Regional Perspectives

Edited by Gerardo Castillo Guzmán, Matthew Himley, David Breton
Series: Routledge Studies of the Extractive Industries and Sustainable Development

This volume focuses on how, why, under what conditions, and with what effects people move across space in relation to mining, asking how a focus on spatial mobility can aid scholars and policymakers in understanding the complex relation between mining and social change. This book will be of great interest to students and scholars of mining and the extractive industries, spatial politics and geography, mobility and migration, development, and the social and environmental dimensions of natural resources more generally.

New Perspectives on Transboundary Water Governance
Interdisciplinary Approaches and Global Case Studies

Edited by Luis Paolo Batista da Silva, Wagner Costa Ribeiro, Isabella Battistello Espindola

This book presents a novel examination of transboundary water governance, drawing on global case studies and applying new theoretical approaches. This book will be of interest to students and scholars of water resource governance from a wide variety of disciplines, including geography, international relations, global development and law. It will also be of interest to professionals and policymakers working on natural resource governance and international cooperation.

Prospects of Hydrogen-Fueled Power Generation

Edited by Anoop Kumar Shukla, Onkar Singh, Ali J. Chamkha, Meeta Sharma
Series: River Publishers Series in Power

Prospects of Hydrogen-Fueled Power Generation brings together experts to explore the various challenges and opportunities of hydrogen as a fuel in power generation, transportation, storage, and safety. Special interest is given to proton exchange membrane fuel cell (PEMFC) fuel cells, hydrogen energy, and the conversion methods. The usage of clean fuel in road transportation, marine transportation, and the power generation sector are also discussed in detail, additionally, performance investigations reveal information about the system’s energy and exergy analysis.

Principles of Sustainable Aquaculture

Edited by Kyungeun Sung, Patrick Isherwood, Richie Moalosi
Series: Earthscan Food and Agriculture

Principles of Sustainable Aquaculture is essential reading for students and scholars in aquaculture and water resource governance, and sustainable agriculture and sustainable food systems more broadly. It will also be of interest to professionals working in the aquaculture and fisheries industries.

Research Journeys to Net Zero
Current and Future Leaders

Edited by Kyungeun Sung, Patrick Isherwood, Richie Moalosi
Series: Research and Teaching in Environmental Studies

This book provides useful insight into how academics from diverse disciplinary backgrounds such as science, engineering, technology, social science, policy, design, architecture, built environment, business, and management, have been conducting research into how to realise net zero emissions to address climate change. It presents the highest calibre research and impact activities carried out in the UK, Europe, North America, Australia, Asia, and Africa. This interdisciplinary book is applicable to a range of fields, and it will be of great interest to researchers, students, practitioners, and decision makers working towards the goals of net zero and decarbonisation.
Environment & Sustainability

12

Resilient Landscapes
Post-crisis Local Development and Sustainable Society

Edited by Matteo Clemente, Jesús Rodrigo Comino, Francesco M. Chelli

In recent years, resilient districts have become territorial contexts for projects designed to respond to the needs of local communities, through the exploitation of landscape peculiarities to overcome the economic crisis. This volume offers a comprehensive insight on sustainable development of local territories. It recommends the planning of local interventions through the integration of sustainable development with resilience of local systems.

CRC Press
January 2024:212
Hb: 978-0-367-77393-9: £120
eBook: 978-1-003-17116-4

* For full contents and more information, visit: www.routledge.com/9780367773939

Sand Dunes of the Northern Hemisphere: Distribution, Formation, Migration and Management
Volume 2: Characteristics, Dynamics and Provenance of Sand Dunes in the Northern Hemisphere

Edited by Lu Qi, Mahesh K. Gaur, Victor R. Squires

Sand dunes are common aeolian landforms and are found on over ~40% of the Earth’s land surface. Distribution and characteristics of sand dunes in the northern hemisphere are the major focus. Practical advice on how to deal with migrating dunes and a description of proven practices are presented. The application of recently available high-resolution satellite data for mapping and change detection and a summary of advances in techniques for characterising the mineralogy of sand is explained.

CRC Press
January 2024:308
Hb: 978-1-032-26943-6: £145
eBook: 978-1-003-29062-9

* For full contents and more information, visit: www.routledge.com/9781032269436

Routledge Handbook of Climate Change Impacts on Indigenous Peoples and Local Communities

Edited by Victoria Reyes-García

Series: Routledge Environment and Sustainability Handbooks

This Handbook examines the diverse ways in which climate change impacts Indigenous peoples and local communities and considers their response to these changes.

Routledge
December 2023:408
Hb: 978-1-032-41213-9: £205
 Pb: 978-1-032-46531-9: £35.99
eBook: 978-1-003-38213-3

* For full contents and more information, visit: www.routledge.com/9781032412139

Social Transformation for Climate Change
A New Framework for Democracy

Nicholas Low

This book argues that social transformation is both necessary and possible if democracies are to respond effectively to the climate crisis without social collapse.

Routledge
January 2024:230
Hb: 978-1-032-46530-2: £130
eBook: 978-1-003-38213-3

* For full contents and more information, visit: www.routledge.com/9781032465302

2ND EDITION

Routledge Handbook of Sustainable Design

Edited by Rachel Beth Egenhoefer

Series: Routledge Environment and Sustainability Handbooks

This handbook considers the design, not only of artifacts, but of structures, systems, and interactions in the context of sustaining our shared planet. This revised edition introduces new and updated chapters, as well as a new section on pedagogy for sustainable design. With authors from around the world, design is positioned in context with recent crises such as global pandemics, racial reckoning, political unrest, and natural disasters. This handbook will be invaluable to researchers, students, and practitioners across all subdisciplines of design, architecture, business, energy management, visual arts, and environmental studies, among others.

Routledge
March 2024:640
Hb: 978-1-032-43033-1: £205
 Pb: 978-1-032-46531-9: £35.99
eBook: 978-1-003-38213-3

* For full contents and more information, visit: www.routledge.com/9781032430331

Solar Photovoltaic System Modelling and Analysis

T. Mariprasath, P. Kishore, K. Kalyankumar

Series: River Publishers Series in Power

This book outlines the global opportunity to increase solar photovoltaic (PV) plant energy yields through modelling and analysis. Because it is endlessly available in Earth’s atmosphere, solar PV energy extraction is rising faster than all other renewable energy sources worldwide. Thus, technological improvements are needed to lower the cost of solar PV per watt every year.

River Publishers
April 2024:88
Hb: 978-8-770-04090-7: £52.99
eBook: 978-8-770-04090-7

* For full contents and more information, visit: www.routledge.com/9788770040907
Solid Waste Management

Chemical Approaches, Volume 1

*Edited by* Garima Chauhan, Surajbhan Sevda

This book is an edited collection of various chemical approaches used for valorization of solid wastes, particularly, waste electrical and electronic equipment, plastic waste, and agro-residue waste, that provide research insights into the concept “waste-to-energy.” Covering a variety of interdisciplinary topics on waste treatment and resource recovery makes the book one for all that serves as an excellent reading material for engineers, science scholars, entrepreneurs, and organizations who are working in the field of waste management.

CRC Press
December 2023:340
Hb: 978-1-032-03900-8: £140
eBook: 978-1-003-18960-2

* For full contents and more information, visit: www.routledge.com/9781032039008

Stopping Climate Change

Policies for Real Zero

*Paul Ekins*

Series: Routledge Studies in Environmental Policy

Written by one of the leading experts in the field, Paul Ekins, Stopping Climate Change provides a comprehensive overview of what is required to achieve Real Zero carbon dioxide emissions by 2050, and negative emissions thereafter, which is the only way to stop human-induced climate change.

Routledge
November 2023:462
Hb: 978-1-032-57140-9: £130
Pb: 978-1-032-57141-6: £35.99
eBook: 978-1-003-43800-7

* For full contents and more information, visit: www.routledge.com/9781032571416

Sustainable Food Procurement

Legal, Social and Organisational Challenges

*Edited by* Mark Stein, Maurizio Mariani, Roberto Caranta, Yiannis Polychronakis

This book will be of great interest to students, researchers, policymakers and public and private-sector representatives interested in public procurement, food policy and law, sustainable food sourcing and supply chain management.

Routledge
February 2024:216
Hb: 978-1-032-48616-1: £130
eBook: 978-1-003-61294-2

* For full contents and more information, visit: www.routledge.com/9781032486161

Sustainable Futures for Climate Adaptation

Wearing Our Ecology

*Benedict Anderson*

This book argues that we must radically adapt humanity and reform society, cities, buildings, and our approach to migration in order to coexist in harmony with our natural environments. It explores the concept of ‘wearing our ecology’, where human mobility is synchronised with the environment, merging people with landscapes, topographies, and geographies. Touching on themes of adaptive urban design, racial and gender segregation and inequality, and climate apocalypticism, this book will be valuable reading for researchers, scholars, and upper-level students in the fields of urban studies, migration studies, human geography, ecology, politics, and design.

Routledge
December 2023:234
Hb: 978-1-032-43862-7: £130
eBook: 978-1-003-18960-2

* For full contents and more information, visit: www.routledge.com/9781032438627

Teaching Climate Change

Science, Stories, Justice

*Vandana Singh*

Series: Research and Teaching in Environmental Studies

Teaching Climate Change: Science, Stories, Justice shows educators how climate change can be taught from any disciplinary perspective and in a transdisciplinary way, drawing on examples from the author’s own classroom.

Routledge
December 2023:246
Hb: 978-1-032-27858-2: £130
eBook: 978-1-003-43800-7

* For full contents and more information, visit: www.routledge.com/9781032278599

2ND EDITION

Terrapsychological Inquiry

Restoring Our Relationship with Nature, Place, and Planet

*Craig Chalquist*

Terrapsychological Inquiry takes seriously our intense inner responses to the state of the natural world. This new edition has been revised throughout and offers fresh insights into how Terrapsychological Inquiry, a field with roots in depth psychology, ecopsychology, and Hermetic philosophy, can also be used as an ecospiritual path. Thoroughly updated with a new chapter and added discussion questions and exercises at the end of each chapter, this introduction to an evolving research methodology will be of great interest to students and scholars of environmental psychology, ecotherapy, and environment and sustainability studies more generally.

Routledge
December 2023:212
Hb: 978-1-032-61294-2: £130
Pb: 978-1-032-61295-9: £35.99
eBook: 978-1-003-61294-2

* For full contents and more information, visit: www.routledge.com/9781032612942

www.routledge.com
The Avocado Debate
Honor May Eldridge
Series: Changing Planet
Whether smashed on toast or hailed as a super-food, the avocado has taken the world by storm, but what are the environmental and social impacts of this trendy fruit? This book is essential reading for all who are interested in learning more about the food system, sustainable diets and the relationship between farming and the environment.

The Hydrocene
Eco-Aesthetics in the Age of Water
Bronwyn Bailey-Charteris
Series: Routledge Environmental Humanities
This book challenges conventional notions of the Anthropocene and champions the Hydrocene: the Age of Water. It presents the Hydrocene as disruptive, conceptual epoch and curatorial theory, emphasizing water’s pivotal role in contemporary art. It urgently highlights the transformative power of eco-visionary artists in reshaping human-water relations. At the confluence of contemporary art, curatorial theory, climate concerns and environmental humanities, this is essential reading for researchers, curators, artists, students and anyone seeking to reconsider their connection with water and advocate for climate justice.

The Component
A Personal Odyssey towards Another Normal
Kas Oosterhuis
Series: River Publishers Series in Social, Urban, Economic and Environmental Sustainability
The Component: A Personal Odyssey towards Another Normal is Oosterhuis' personal account of four decades of architectural and societal thinking, designing, building, and theorizing. It is an orchestrated yet non-linear series of subjects all leading toward the creation of a parallel world called "Another Normal." Another Normal is as of now a hypothetical parallel world. Nomadic international citizens are the inhabitants of Another Normal. Urged by the climate crisis, the food, energy, and water nexus, and the COVID-19 pandemic.

The Path to Net Zero for the Fashion Industry
Five Strategies for Decarbonisation
Simon J. Kew
This book uses a quantitative science-based approach to explain where the greenhouse gas emissions emitted by the fashion industry are generated and it explores what strategies can be deployed to achieve Net Zero by 2050. It aims to demystify the source of emissions from the industry, breaking down in detail their origin, while identifying the steps that can be taken when designing and sourcing new products. This book serves as a practical guide for designers, buyers, and the fashion industry in general to develop and understand approaches and strategies to reduce energy consumption and the resulting GHG emissions to reach Net Zero.

The Economics of Estuary Restoration in South Africa
Douglas J. Crookes
Series: Routledge Focus on Environment and Sustainability
This book examines the economic costs and benefits of the ecological restoration of estuaries, utilising case studies from South Africa. This book will be of great interest to students and scholars of environmental management and restoration, ecological economics, ecosystem services and environmental conservation.

The Role of Law in Transboundary River Basin Disputes
Cooperation and Peaceful Settlement
Chukwuebuka Edum
This book will be of great interest to students and scholars interested in water resource management, water law, environmental politics, conflict resolution and sustainable development more generally.
The Routledge Handbook of Catalysts for a Sustainable Circular Economy

Edited by Hanna Lehtimäki, Leena Aarikka-Stenroos, Ari Jokinen, Pekka Jokinen
Series: Routledge Environment and Sustainability Handbooks
This handbook leads the way in accelerating the transition to a sustainable circular economy by introducing the concept of a catalyst as a positive and enhancing driving force for sustainability. It presents theoretical insights, contextualized case studies, and participatory methodologies, which identify different catalysts, including technology, innovation, business models, management and organisation, regulation, sustainability policy, product design, and culture. It is a valuable tool for researchers, academics, and policymakers in the fields of circular economy, sustainability transitions, environmental studies, business, and the social sciences more broadly.

Routledge
November 2023:642
Hb: 978-1-032-21244-9: £205
* For full contents and more information, visit: www.routledge.com/9781032212449

Toxicology of Amphibian Tadpoles

Edited by Eduardo Alves de Almeida, Juliane Silberschmidt Freitas
Anuran amphibians are among the animal groups with the highest rate of population decline on the planet. Among the factors driving this decline are environmental pollutants, whose negative effects on larvae and tadpoles are still relatively little studied. This is the first book devoted entirely to studying the effects of environmental pollutants on amphibian tadpoles.

CRC Press
January 2024:334
Hb: 978-0-367-54967-1: £100
ebook: 978-1-003-09139-4
* For full contents and more information, visit: www.routledge.com/9780367549671

The Spatial Organization of Urban Agriculture in the Global South

Food Security and Sustainable Cities
Ada Górná
Series: Earthscan Food and Agriculture
This book will be appeal to students and scholars, as well as decision makers, interested in the issues of urban sustainability, food security, spatial development and alternative food systems.

Routledge
April 2024:248
Hb: 978-1-032-54440-3: £130
* For full contents and more information, visit: www.routledge.com/9781032544403

Transdisciplinary Research, Sustainability, and Social Transformation

Governance and Knowledge Co-Production
Tom Dedeurwaerdere
Series: Routledge Studies in Sustainability
This book addresses the gap in the existing literature on the governance of transdisciplinary research partnerships in transformational sustainability research by exploring the governance of knowledge co-production on socio-ecological system dynamics. It proposes solutions for addressing collective action challenges in transdisciplinary partnerships in an accessible and interdisciplinary manner to a large audience of sustainability scholars and practitioners. It will be of interest to students and researchers of sustainable development, social ecological transition, and science policy, whilst also being a useful resource for engineers, QSE managers and policy makers.

Routledge
December 2023:196
Hb: 978-1-032-62427-3: £130
Pb: 978-1-032-62424-2: £35.99
ebook: 978-1-032-62429-7
* For full contents and more information, visit: www.routledge.com/9781032624242

The Zen of Ecopoetics
Cosmological Imaginations in Modernist American Poetry
Enaiê Mairê Azambuja
Series: Routledge Environmental Literature, Culture and Media
This book is the first comprehensive study investigating the cultural affinities and resonances of Zen in early twentieth-century American poetry and its contribution to current definitions of ecopoetics. Bringing together a range of texts and perspectives and using an interdisciplinary approach that draws on Eastern and Western philosophies, including Zen and Taoism, posthumanism and new materialism, this book adds to and extends the field of ecocriticism into new debates. The book will be of interest to scholars, researchers and students in ecocriticism, literary theory, poetry and religious studies.

Routledge
December 2023:206
Hb: 978-1-032-41571-0: £130
* For full contents and more information, visit: www.routledge.com/9781032415710

Tree Plantation Extractivism in Chile
Territories, Fundamental Human Needs, and Resistance
Alejandro Mora-Motta
Series: Routledge Studies of the Extractive Industries and Sustainable Development
This book will be of great interest to students and scholars of the extractive industries, development studies, political ecology, and natural resource governance.

Routledge
March 2024:272
Hb: 978-1-032-48856-1: £130
* For full contents and more information, visit: www.routledge.com/9781032488561
University Engagement with Farming Communities in Africa

Community Action Research Platforms

Edited by Anthony Egeru, Megan Lindow, Kay Muir Leresche
Series: Earthscan Food and Agriculture
This book explains and explores how collaborations can be built and strengthened between African universities and farming communities to address real-world contemporary challenges. This multidisciplinary book holds appeal for university leaders, higher education, agrifood and development specialists, researchers and practitioners, policy-makers and development agencies engaged in African agriculture and rural development, higher education and sustainable growth.

Routledge
December 2023:328
Hb: 978-1-032-48120-3: £130
Pb: 978-1-032-48118-0: £31.99
* For full contents and more information, visit: www.routledge.com/9781032481180

Why Biodiversity Matters

Nigel Dudley
Series: Changing Planet
All life on Earth has the right to exist, but as we teeter on the verge of a sixth extinction this book discusses why biodiversity matters and why we should care if species go extinct. This book is essential reading for all those concerned with sustaining our planet, and all who inhabit it, in the face of climate breakdown, biodiversity loss and ecological collapse.

Routledge
December 2023:144
Hb: 978-0-367-35591-3: £84.99
ebook: 978-0-429-34667-5
* For full contents and more information, visit: www.routledge.com/9780367365202

Unlocking Energy Efficiency

Maximizing Utility Savings with Zero Equipment Investment

2ND EDITION

Roger Brown
Series: River Publishers Series in Energy Sustainability and Efficiency
This book will reveal cost reductions and how to slash your energy costs without having to invest a lot of money. You don’t need to spend a lot to save a lot! The three pillars of cost reduction are discussed: assembling your options and analysing your risk, developing options with your utility, and cutting out obvious waste in your operation. Those who will benefit from this exceptional and unique text are business owners, CFOs, plant managers, plant engineers, and energy managers.

River Publishers
March 2024:224
Hb: 978-8-770-04041-9: £94.99
* For full contents and more information, visit: www.routledge.com/9788770040419

Women and the Collaborative Art of Gardens

From Antiquity to the Present

Edited by Victoria E. Pagán, Judith W. Page
Series: Routledge Environmental Literature, Culture and Media
This book explores the garden and its agency in the history of the built and natural environments, as evidenced in landscape architecture, literature, art, archaeology, history, photography, and film. The contributors to this collection unseat common assumptions about the role of women in gardens to make manifest the significant ways in which women write themselves into the accounts of garden design, practice, and history. The book will be of interest to scholars and students of gardens and culture, ancient Rome, art history, British literature, medieval France, film studies, women’s studies, photography, African American Studies, and landscape architecture.

Routledge
November 2023:196
Hb: 978-1-032-46407-7: £130
ebook: 978-1-003-38154-9
* For full contents and more information, visit: www.routledge.com/9781032464077

Urban Resilience and Climate Change in the MENA Region

Nuha Eltinay, Charles Egbo
Series: Routledge Focus on Environment and Sustainability
This book provides an overview of the geopolitical context and climate change risk profile of the Middle East and North Africa (MENA) Region.

Routledge
January 2024:136
* For full contents and more information, visit: www.routledge.com/9781032435429
A Holter for Parkinson’s Disease Motor Symptoms: STAT-On™

Edited by Joan Cabestany, Angels Bayés
Series: River Publishers Series in Biotechnology and Medical Research

A new information and communication technology (ICT) has been deployed in the battle against Parkinson’s disease, a neurodegenerative disorder that is both progressive and disabling with significant impact on quality of life. This book explains the experience following from the achieved results in the REMPARK project on Parkinson’s disease management up to the launch of a new medical product to the European market, STAT-ON™.

Advanced Nanotechnology in Plants

Methods and Applications

Edited by Jen-Tsung Chen

Nanotechnology uses nanomaterials/nanoparticles that can penetrate plant cells and interact with intracellular organelles and metabolites impacting plant growth, development, physiology, and biochemistry. Advanced Nanotechnology in Plants: Methods and Applications explores emerging plant nanotechnology, covering advanced methods and applications with an emphasis on the mitigation of plant diseases and environmental stressors. This technology can lead to the improvement of crop quality and yield to face the challenge of global climate change with an expanding global population.

A Test of Morals

Surgical, Ethical, and Psychosocial Considerations in Human Head Transplantation

L. Allen Furr

While transplanting human heads is not a new concept, the idea has largely been relegated to religious lore or as a plot device in science fiction. But now, a surgical plan to perform the complex procedure exists, and though most physicians question head transplantation’s medical veracity, bioethicists have challenged the surgery on moral grounds. A Test of Morals compiles and examines the ethical questions that dog those who advocate for conducting this most radical of medical proposals in order to determine if society should move forward and allow head transplantation to occur.

Advancement of Melatonin Research in Plants

Multi-Faceted Role in Regulating Development and Stress Protection

Edited by Aryadeep Roychoudhury

This book will initiate and introduce the readers to the state-of-the-art developments and trends in this field of study and will largely cater the scientific need of scientists engaged in melatonin research across the globe. The book will be unique of its kind and will highly draw the attention of scientific and research communities engaged in the field of melatonin research.

Actinomycetes in Marine and Extreme Environments

Unexhausted Sources for Microbial Biotechnology

Edited by İpek Kurtboke

The discovery and development of antibiotics has been one of the most significant advances in medicine. In a golden era lasting from the 1940s to the late 1960s, antibiotic research provided mankind with a wide range of structurally diverse and effective agents for the treatment of microbial infections. Since then, actinomycetes, most notably members of the genus Streptomyces, have uninterruptedly proved to be a particularly rich source of antibiotics and other therapeutic and biotechnologically important compounds.

Advances in Diagnosis and Management of Phytonematodes

P. Parvatha Reddy

Advances in Diagnosis and Management of Phytonematodes provides information on various aspects of diagnosis and eco-friendly nematode management. It explains at length nematode diagnosis—morphological, biochemical and molecular—and management strategies—regulatory, physical, cultural, chemical, biological, host resistance and integrated management methods. Print edition not for sale in India.
Advances in Plant Disease Management

Volume I: Fundamental and Basic Research

Edited by Pranjib K. Chakrabarty, Kalyan K. Mondal, Mahender S. Saharan, Charudatta Mayee, J. Kumar

Advances in Plant Disease Management: Fundamental and Basic Research (Vol I) is an invaluable compilation for researchers, students, stakeholders, and policymakers in agriculture. The book aims to offer the latest understanding of fundamental and basic research fronts towards managing diseases of crop plants. After clearly explaining how the updated knowledge on the host immune system and pathogen’s interplay with the host as unraveled through genomics, bioinformatics, and molecular studies.

CRC Press
December 2023:346
Hb: 978-1-032-51606-6: £110
* For full contents and more information, visit: www.routledge.com/9781032516066

Agroecology

Sustainable Ecosystem

Anand M. R., Poojitha Kommireddy, Seenappa C., Kalyana Murthy K. N., Ningaraju G. K.

This book intends to provide the core elements of a curriculum for teaching agroecology at colleges and universities. Print edition not for sale in India.

CRC Press
December 2023:248
Hb: 978-1-032-62775-5: £77.99
ebook: 978-1-032-62777-9
* For full contents and more information, visit: www.routledge.com/9781032627755

Allele Mining for Genomic Designing of Fruit Crops

Edited by Chittaranjan Kole, Kenta Shirasawa, Anil Kumar Singh

Series: Nextgen Agriculture

Deliberates on the concept, strategies, tools, and techniques of allele mining in fruit crops and its application potential in genome elucidation and improvement including studying allele evolution, discovery of superior alleles, discerning new haplotypes, assessment of intra- and interspecific similarity alongside gene expression and gene prediction. It will be useful for various plant science disciplines including genetics, genomics, molecular breeding, agronomy, and bioinformatics, the scientists in seed industries, policy-makers and funding agencies interested in crop improvement.

CRC Press
March 2024:408
Hb: 978-1-032-47909-5: £150
* For full contents and more information, visit: www.routledge.com/9781032479095

Allele Mining for Genomic Designing of Vegetable Crops

Edited by Chittaranjan Kole, Tusar Kanti Behera, Prashant Kaushik

Series: Nextgen Agriculture

This book deliberates on the concept, strategies, tools, and techniques of allele mining in vegetable crops and its application potential in genome elucidation and improvement including studying allele evolution, discovery of superior alleles, discerning new haplotypes, assessment of intra- and interspecific similarity, and studies of gene expression and gene prediction.

CRC Press
June 2024:328
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Allele Mining for Genomic Designing of Cereal Crops

Edited by Chittaranjan Kole, Sharat Kumar Pradhan, Vijay Tiwari

Series: Nextgen Agriculture

This book deliberates on the concept, strategies, tools, and techniques of allele mining in cereal crops and its application potential in genome elucidation and improvement including studying allele evolution, discovery of superior alleles, discerning new haplotypes, assessment of intra- and interspecific similarity, and studies of gene expression and gene prediction. Available gene-pools in global germplasm collections specifically consisting of wild allied species and local landraces for almost all major crops have facilitated allele mining.

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Edited by Azamal Husen

Series: Exploring Medicinal Plants

Antimalarial Medicinal Plants provides information on bioactive compounds and therapeutic potentials of several antimalarial plant species found around the globe. The book evaluates these plant species with respect to their biology, diversity, distribution, and pharmacological values.

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Antimicrobial Resistance in Agriculture and its Consequences

Edited by Arti Gupta, Ram Prasad
Series: Current Trends in Antimicrobial Research
This book offers comprehensive coverage of all manifestations of resistance in combating infectious diseases and explores advances in antimicrobial resistance in agriculture and their applications in the fight against microbes. Discusses and compares biological, biochemical, and structural aspects of resistance and its evolution. This is a comprehensive tool covering all manifestations of antimicrobial resistance, with microbial resistance genes.

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Antimicrobials in Food Science and Technology

Edited by Arti Gupta, Ram Prasad
Series: Current Trends in Antimicrobial Research
The demands of producing high quality, pathogen-free food rely increasingly on natural sources of antimicrobials to inhibit food spoilage organisms, foodborne pathogens, and toxins. The recent developments and innovations of new antimicrobials from natural sources for a wide range of applications requires that knowledge of traditional sources for food antimicrobials is combined with the latest technologies in identification, characterization, and applications. This book explores around novel, natural sources of antimicrobials as well as the latest developments in using well-known antimicrobials in food.

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Antimicrobials in Food Science and Technology

Appliend Environmental Genomics

Edited by Oliver F. Berry, Clare E. Holleley, Simon N. Jarman
Applied Environmental Genomics synthesises the latest and most exciting uses of genomic technologies for environmental science and management. With an emphasis on diversity of applications and real-world demonstrations, leading researchers have contributed detailed chapters on innovative approaches to obtaining critical management-relevant information about the natural world. These chapters are complemented by perspective sections written by environmental managers who describe their experiences using genomics to support evidence-based decisions.

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Aquatic Environment Management

Pramod Kumar Pandey, Amit Pande
This reference book collates traditional and modern applications of remote sensing in aquatic ecosystem monitoring. It covers conventional assessment methods like sampling, surveying, and chlorophyll estimation. Advanced remote sensing technology provides timely spectral information for quantitative and qualitative assessment of water changes, volume, and vegetation. The book discusses space-borne, airborne, and drone geospatial data. The book is meant for scientists, professionals, and policymakers working in environmental sciences, remote sensing, and geology.

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Applied Entomology

Insect Ecology and Integrated Pest Management

Lakshman Chandra Patel
The subject of Entomology deals with the scientific study of insects in a diverse manner. It has two parts: Insect Morphology, Anatomy and Systematic and Insect Ecology and Integrated Pest Management (IPM). This book applies to students, researchers, extension workers, farmers and other stakeholders. Print edition not for sale in India.

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Archer Fish Biology

Simon Kumar Das
This book unveils the secrets of archerfish, covering everything from their morphology to their unique feeding techniques, digestion physiology, and reproductive intricacies. It serves as an essential resource for students, researchers, conservation biologists, and anyone curious about the biology of archerfish, as well as fish biology in general. Readers can immerse themselves in chapters that discuss identification techniques, age, and growth, feeding physiology, and much more.

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Artificial intelligence in Pharmaceutical Sciences

Edited by Mullaiacharam Bhupathyraaj, K. Reeta Vijaya Rani, Musthafa Mohamed Essa

This cutting-edge reference book discusses the intervention of artificial intelligence in the fields of drug development, modified drug delivery systems, pharmaceutical technology, and medical devices development. The comprehensive book includes an overview of Artificial Intelligence in pharmaceutical sciences and applications in the drug discovery and development process. It discusses the role of machine learning in the automated detection and sorting of pharmaceutical formulations. It covers nanosafety, and the role of AI in predicting potential adverse biological effects. The book is meant for academicians, students and industry experts in pharmaceutical sciences and medicine.

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Asphyxia in Neonates

Miljana Z. Jovandaric

In severe asphyxia, lipid peroxidation occurs. Neonatal lipid concentration may indicate the severity of asphyxia and be an additional parameter of cooling therapy. This book describes the results of research into the impact oxygen deficits in neonates. The physiological consequences of asphyxiated newborn infants include changes in the pH of plasma and changes in lipid concentrations. These changes can result in apoptosis, loss of cell membrane integrity, and damage to the brain.

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Assisted Reproduction in Wild Mammals of South America

Edited by Alexandre Rodrigues Silva

South America has one of the greatest riches in the world in terms of biodiversity. Despite all this richness, recent reports warn of different threats to this biodiversity. As a strategy to reduce the rate of loss of animal species, the development and application of assisted reproduction techniques (ARTs) for their conservation currently stands out.

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Bacterial Cellulose
Production, Scale-up, and Applications

Edited by Vinod Kumar, Saurabh Saran, Ashok Pandey, Carlos Ricardo Soccol

This reference book provides updated information on the production and industrial significance of bacterial cellulose. Bacterial cellulose is a natural fiber produced by certain microbes, mainly bacteria which belong to the Acetobacter genera. The book discusses its applications in different industrial sectors like food, pharmaceutical, energy and wastewater treatment. It covers the production of cellulose from conventional and renewable feedstocks. It includes topics like downstream processing, characterization, and chemical modification of bacterial cellulose. The book is meant for industry experts and researchers of applied microbiology, bioprocesses, and industrial microbiology.

CRC Press
December 2023:180
Hb: 978-1-032-46177-9: £125
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Biodegradation of Toxic and Hazardous Chemicals
Remediation and Resource Recovery

Edited by Kashyap K Dubey, Kamal K Pant, Ashok Pandey, Maria Ángeles Sanromán

This timely reference book discusses the biotechnological applications of microorganisms as a crucial solution for the sustainable management of different types of toxic pollutants. It reviews the sustainable biodegradation approach and resource recovery for different kinds of pollutants like plastic wastes, pharmaceutical wastes, pesticides, and textile industry wastes. The book provides an understanding of biotechnology-based interventions toward a zero-waste route.

CRC Press
April 2024:428
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Biodegradation of Toxic and Hazardous Chemicals
Detection and Mineralization
Edited by Kashyap K. Dubey, Kamal K. Pant, Ashok Pandey, Maria Ángeles Sanromán
Series: Sustainable Industrial and Environmental Bioprocesses
This reference book discusses the applications of microorganisms as a crucial solution for the sustainable management of toxic pollutants. It describes the microbial remediation of different kinds of pollutants like wastewater, antibiotics, and toxic chemicals. It highlights the technical, scientific, regulatory, safety, and societal impacts of various sustainable biodegradation approaches. The book describes various sensors in environmental pollution monitoring and pollutant detection.

Biofusicides: Eco-Safety and Future Trends
Novel Sources and Mechanisms, Volume 2
Edited by Kamel A. Abd-Elsalam, Mousa A. Alghuthaymi, Salah M. Abdel-Momen
The current volume focuses on novel sources of biofungicides, primarily providing complete knowledge of microbial and phytochemical fungicides, study antifungal activity mechanisms as well as their role in disease management in plants, and fungicide bioremediation. The use of biofungicides as eco-friendly alternative to typical synthetic fungicides is projected to play a significant role in organic farming in the future.

Biofuels
Scientific Explorations and Technologies for a Sustainable Environment
Edited by Samudra Banik, Debasis Bagchi
Biofuels are promising eco-friendly renewable energy alternatives, simultaneously curbing the dependence on depleting fossil fuel reserves, reducing the global carbon footprint. However, there have been technological constraints deterring the global-wide scale adoption of biofuel. Biofuels: Scientific Explorations and Technologies for a Sustainable Environment presents a comprehensive analysis of different types of biofuels.
Biomass Hydrolyzing Enzymes
Basics, Advancements, and Applications

*Edited by Reeta Rani Singhania, Anil Kumar Patel, Héctor A. Ruiz, Ashok Pandey*

This reference book provides advanced knowledge about lignocellulosic biomass production and its application in biomass hydrolysis. Lignocellulosic biomass is the most abundant ubiquitous and renewable raw material in the world. Though biomass can be deconstructed by other means, biological ways through enzymes are eco-friendly and sustainable. This book discusses the different enzymes used for degrading biomass into its monomeric components. It covers important topics like biorefineries, hydrolysis of algal mass, kinetic modeling for hydrolysis, inhibitory effects, etc.

*For full contents and more information, visit: [www.routledge.com/9781032370972](www.routledge.com/9781032370972)*

Biosecurity
A Systems Perspective

*Edited by Susan M Hester, Lucie M Bland, Edith Arndt, Susan M Hester, Lucie M Bland, Edith Arndt, Nathaniel J Bloomfield, James S Camac, Raphael Trouve, Andrew P Robinson*

Biosecurity: A Systems Perspective provides an overview of biosecurity as a system of related components, actors and risks. This book — directed to the biosecurity practitioner, generalist scientist and student — introduces overall features of the biosecurity system while walking the reader through the most up-to-date research on each step of the continuum (i.e. pre-border, border and post-border activities). This book, which explicitly incorporates economic and social dimensions as well as varied decision-making contexts, paves the way for a more systemic approach to biosecurity risk management.

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Biosecurity in the Making
The Threats, the Aspects and the Challenge of Readiness

*Edited by Manousos E. Kambouris*

The explosive growth of bioeconomy and bioscience, coupled with an interconnected planet increases the potential impact of large-scale bio-events. Either causing public health threats or in epidemics or posing food security issues, from mass poisonings to large-scale starvation, such eventualities are direct threats and indirect destabilizers in a planetary context.

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Biotech Animals in Research
Ethical and Regulatory Aspects

*Edited by Mickey Gjerris, Anna Kornum, Helena Rücklinsberg, Dorte Bratbo Sørensen*

This book explores central aspects of genetic modification of animals for scientific purposes in the context technological possibilities, regulatory issues in different regions, animal welfare implications and wider ethical issues, exemplified through current theories and frameworks. This discussion becomes increasingly pressing as CRISPR-Cas9 technology advances rapidly, challenging legal and ethical frameworks. In this book, expert authors explore a range of topics, from the science behind biotech research animals and the regulation of their use, to utilitarian, animal rights, virtue ethics, and ethic of care perspectives on the use of these technologies.

*For full contents and more information, visit: [www.routledge.com/9781138369191](www.routledge.com/9781138369191)*

California’s Amazing Geology

*Donald R. Prothero*

This book discusses not only the important geologic features of each region in California, but also the complex geologic four-dimensional puzzle of how California was assembled, beginning over 2 billion years ago. In this second edition, the book has an entirely new final section, “California’s Environmental Hazards and Challenges”, with new chapters on California’s landslides, air and water pollution, renewable energy, and the future of climate change in California.

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Carbon Allotropes
Advanced Materials for Anticorrosive Coatings

*Edited by Jeenat Aslam, Chandrabhan Verma, Chaudhery Mustansar Hussain, Ruby Aslam*

Covers current trends and advancement in applications related to metal corrosion management — usage of nanostructure materials to produce high-performance corrosion-resistant coatings. Offers with synthesis, characterization, inhibition mechanism and applications of nanostructure materials as corrosion-resistant coating material in industry.

*For full contents and more information, visit: [www.routledge.com/9781032348162](www.routledge.com/9781032348162)*
Case Studies in Small Animal Point of Care Ultrasound
A Color Handbook

Edited by Erin Binagia, Soren Boysen, Tereza Stastny
Series: Veterinary Color Handbook Series

This illustrated practical guide covers the many facets of small animal point of care ultrasound (POCUS) using clinical cases commonly seen in practice. It details specific point of care ultrasound techniques, views, interpretations, pitfalls, and knowledge gaps, highlighting the utility initial and serial point of care ultrasound for both diagnostic and patient management purposes. Focusing on commonly asked questions and applications, the authors take a binary question approach to veterinary POCUS, shown to decrease errors in human POCUS. This is the ideal reference for small animal and mixed practitioners and students.

CRC Press
January 2024:340
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Pb: 978-0-367-54725-7: £84.99
* For full contents and more information, visit: www.routledge.com/9780367547257

2ND EDITION

Cell Signaling, 2nd edition
Principles and Mechanisms

Wendell Lim, Bruce J. Mayer

Extensively updated, this 2nd edition of Cell Signaling provides undergrads and graduates with the conceptual tools needed to make sense of the array of pathways that cells use to detect, process, and respond to signals from the environment. By emphasizing the common design principles and molecular processes that underlie all signaling mechanisms, the book develops a broad conceptual framework through which students can understand the diverse signaling pathways. It first examines the common currencies of cellular information processing and the core components of the signaling machinery and then shows how these components link together into networks.

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Pb: 978-0-367-54725-7: £84.99
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Climate Change and Insect Biodiversity
Challenges and Implications

Edited by Habib Ali, Youming Hou, Muhammad Bilal Tahir

This up-to-date reference book discusses the effects of climate change on the biodiversity of insect pests. The changing climate and agricultural intensification practices impact negatively on insect biodiversity. The book explains the significance of insect pests for evaluating climatic impacts on a wide range of ecological systems. It covers the effect of climate change on pollinators, and household and agricultural insect pests. It explains how climate-smart agriculture can enhance productivity and food security. This book is meant for scientists, researchers, and students working in the fields of agriculture, entomology, ecology, plant science, environmental biology, and biotechnology.

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Commercial Insects

Edited by Professor Omkar

Despite being the biggest group of organisms inhabiting earth both in diversity and sheer numbers, insects are barely commercialized. Most of the standard textbooks of applied entomology talk about insect pest management and when it comes to commercial aspects of insects, only apiculture, sericulture and lac culture are talked about. This book will help bring other commercial uses of insects and their economic potential.

CRC Press
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CRISPR and Plant Functional Genomics

Edited by Jen-Tsung Chen

CRISPR and Plant Functional Genomics explores how to release the potential of plant functional genomics, one of the prevailing topics in plant biology and the critical technology for speed and precision crop breeding.

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Computational and Experimental Studies in Alzheimer’s Disease

Edited by Kunal Bhattacharya, Atanu Bhattacharjee

This reference book compiles the recent advances in computational and experimental modeling to screen and manage Alzheimer’s disease. It covers basic etiopathology and various in-vitro and in-vivo strategies of disease intervention. The book discusses how computer-aided drug design approaches reduce costs and increase biological test efficiency. It reviews the screening for anti-Alzheimer drugs and biomarker analysis of disease inhibitors. The book also explores mechanistic aspects of neurodegeneration and the use of natural products as therapeutics for Alzheimer’s disease.

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Current Topics in Nonclinical Drug Development
Volume 2
Edited by Philip Bentley, Pritam S. Sahota, Zbigniew Wojcinski
Series: Current Topics in Nonclinical Drug Development Series
This second volume explores the critical issues and current topics in nonclinical drug development. It covers individual topics and strategies in drug development from compound characterization to drug registration. Written by a variety of experts in the field, recent and rapid advances in technologies and associated changes in regulatory guidance are discussed. This will aid toxicologists, toxicologic pathologists, consultants, regulators, Study Directors, and nonclinical scientists dealing with day-to-day issues encountered in drug development and assist in formulating strategies for resolution of these issues.

Decentralized Sanitation and Water Treatment
Concept and Technologies
Edited by Rajeshwar D Tyagi, Ashok Pandey, Patrick Drogui, Bhoomika Yadav, Sridhar Pilli, Jonathan W. C. Wong
Series: Sustainable Industrial and Environmental Bioprocesses
This book provides up-to-date knowledge about the concepts and technologies in decentralized sanitation for wastewater treatment and management. It addresses the knowledge gap that exists between the understanding of centralized and decentralized wastewater treatment approaches. The book covers the sustainability principles, technologies involved, and common decentralized treatment and disposal methods.

Decentralized Sanitation and Water Treatment
Treatment in Cold Environments and Techno-Economic Aspects
Edited by Rajeshwar D Tyagi, Ashok Pandey, Patrick Drogui, Bhoomika Yadav, Sridhar Pilli, Jonathan W. C. Wong
Series: Sustainable Industrial and Environmental Bioprocesses
This book discusses decentralized sanitation for wastewater treatment and management in cold environments. It addresses the knowledge gap that exists between the understanding of centralized and decentralized wastewater treatment approaches. The book covers the sustainability principles, various technologies involved, decentralized treatment in cold countries, and the economic and social feasibility of decentralized sanitation. It provides solutions for the conservation of water sources, and target-oriented sanitation approaches for wastewater treatment and recycling.

Diagnosis of Pathogenic Microorganisms Causing Infectious Diseases
Edited by Irshad M. Sulaiman
Infectious diseases are caused by the pathogenic microbial organisms. These microbes can multiply and cause an infection, once enter the body. Infectious diseases are transmissible, and may be cause mild to life-threatening illnesses. It can be airborne, waterborne, foodborne, and soilborne. This book titled “Diagnosis of Pathogenic Microorganisms Causing Infectious Diseases” will help the scientific community to understand the transmission dynamics of some infectious disease of public health importance.

Diseases of Commercial Crops and Their Integrated Management
Edited by Amar Bahadur, Pranab Dutta
This volume compiles information on different aspects of diseases of commercial crops and their management. It contains 17 chapters based on different crops contributed by various authors. The book will be helpful for the students pursuing their degree in Agricultural Sciences, growers, teachers, extension personnel, and fellow researchers in their respective fields. Print edition not for sale in India.

Diseases of Oil Crops and Their Integrated Management
Edited by Amar Bahadur, Pranab Dutta
This volume compiles information on different aspects of diseases of oil crops and their management. It contains 11 chapters based on different crops contributed by various authors. The book will be helpful for the students pursuing their degree in Agricultural Sciences, growers, teachers, extension personnel, and fellow researchers in their respective fields. Print edition not for sale in India.
## Ecology of Macrofungi

**An Overview**

*Edited by Kandikere R. Sridhar, Sunil Kumar Deshmukh*

Series: Progress in Mycological Research

Macrofungi are an important component of the ecosystem and provide ecosystem services for the sustenance of the environment. The wide ecological spread of macrofungi gives them vast scope to interact with substrates and symbiotic partners. They are the major source of bioactive compounds and metabolites of ecological, agricultural, and industrial significance. They have the capacity to associate symbiotically with specific tree species (ectomycorrhizae and endophytes) and animals (termites and insects). This book provides various facets of macrofungal ecology and their significance in human, animal, plant, and environmental welfare.

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## Ecology of Wild Bird Diseases

*Edited by Sasan Fereidouni*

This volume focuses on the ecology of the most important infectious diseases of wild avian hosts, especially those with high morbidity and mortality rates. It applies a different approach to understand complex and multiscale interactions among various ecological factors for the most important infectious diseases of wild birds. The book provides valuable information to students and everyone who deals with avian species including biologists, researchers, conservationists, and policymakers.

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Environmental risk factors – noise, air pollution, chemical agents, and ultraviolet radiation – impact human health by contributing to the onset and progression of non-communicable diseases. Accordingly, there is need for preclinical and clinical studies and comprehensible summary of major findings. This book is a state-of-the-art summary of these myriad severe life stress. The chapters on the different pollutants focus on disease mechanisms (cardiovascular, neurological and metabolic disorders) and on oxidative stress and inflammation.

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## Exploring Medical Biotechnology- in vivo, in vitro, in silico

Biotechnology from Labs to Clinics and Basic to Advanced

*Edited by Pratik Talukder, Ritesh Tandon, Uttam Paul*

Series: Confluence of Research in Biotechnology for Human Welfare

This book gives overview on “Medical Biotechnology” along with various aspects like industrial or R&D setting to synthesize chemicals to use in medical applications such as pharmaceuticals, Biomaterials and genetic engineering. The book offers a coverage on network pharmacology, drug discovery and a number of such subjects. The book adopts an interdisciplinary approach by incorporating elements from different subject matters, thus, enabling readers to see the interconnectedness of other scientific disciplines.

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## Flipons

The Discovery of Z-DNA and Soft-Wired Genomes

*Edited by Alan Herbert*

Alan Herbert has played a leading part in discovering the biological roles for a high-energy form of DNA twist to the left rather than to the right. Both Z-DNA and the Z-RNA sensing proteins are critical for protecting hosts against both viruses and cancers. The proteins also play critical roles in the programmed cell death of aging cells. Other types of flipon exist and alter the readout of transcripts from the genome, encoding genetic information by their shape rather than by their sequence. Many of these flipons are within repeat elements that were previously considered to be just genomic junk.

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May 2024:264
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Life Science

Fundamentals of Plant Pathology
S. Parthasarathy
This book introduces the nature, causes and impact of plant diseases, describes briefly the history of plant pathology as a scientific discipline, and introduces the disease cycle as the key tool for understanding disease development and devising appropriate management strategies. The book describes the diverse organisms and agents that cause diseases—plant pathogens. Print edition not for sale in India.

CRC Press
February 2024:428
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eBook: 978-1-032-71188-1
* For full contents and more information, visit: www.routledge.com/9781032711843

Handbook of Molecular Biotechnology
Edited by Dongyou Liu
With a history that dates back to the dawn of human civilization more than 10,000 years ago, and a record that includes the domestication and selective breeding of plants and animals, the harnessing of fermentation process for bread, cheese and brewage production, and the development of vaccines against infectious diseases, biotechnology has acquired a molecular focus during the 20th century, and transformed our practices in disease diagnosis, treatment and prevention, pharmaceutical and industrial manufacturing, animal and plant industry, and food processing.

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Ganoderma
Cultivation, Chemistry and Medicinal Applications, Volume 1
Edited by Krishnendu Acharya, Somanjana Khatua
Ganoderma holds significant traditional importance in various ethnic cultures around the world, particularly in China, Japan, and Korea. Many indigenous traditions have incorporated Ganoderma into medicinal practices being considered a symbol of longevity, vitality, and good health. It may serve as a definite resource for students, researchers, healthcare professionals, traditional medicine practitioners, and enthusiasts. The book encompasses relevant illustrations, diagrams, and images to enhance the understanding of concepts associated with Ganoderma.

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Healing Plants of South Asia
A Handbook of the Medicinal Flora of the Indian Subcontinent
John A. Parrotta
Healing Plants of South Asia provides an overview of its floristic biodiversity and the traditional plant-based healing practices associated with the region’s rich cultural diversity. It will focus on an estimated 2,500 species of higher plants used in traditional medicine within the countries in the subcontinent. Entries for each species will include: a botanical description, vernacular names in the major languages within the species range, information on the species’ ecology and conservation status, as well as traditional therapeutic uses in Ayurveda, Unani, Siddha, Tibetan medicine, and more localized folk medical systems.

CRC Press
May 2024:1360
Hb: 978-1-138-03605-5: £600
* For full contents and more information, visit: www.routledge.com/9781138036055

General and Comparative Endocrinology
An Integrative Approach
A.M. Schreiber
Integrative & Comparative Endocrinology takes a holistic approach to endocrinology, introducing students to the diverse facets of this interdisciplinary science ranging from the medical to comparative domains, while also exploring evolutionary, environmental, and conservation specializations within the field. This textbook represents the modern field of endocrinology in its totality by addressing topics and recent advances not currently discussed in other introductory endocrinology textbooks.

CRC Press
November 2023:677
Hb: 978-1-032-41686-1: £210
Pb: 978-1-032-41684-7: £110
eBook: 978-1-003-35924-1
* For full contents and more information, visit: www.routledge.com/9781032416847

Hi-Tech Farming for Enhancing Horticulture Productivity
P. Parvatha Reddy
This book discusses horticulture technology interventions like varietal improvement including genetically modified crops; good agricultural practices like optimum planting density, micro-irrigation, fertigation, integrated nutrient management, plant bioregulators, precision horticulture, protected cultivation, nanotechnology, and integrated farming systems; integrated management of insects, mites, disease pathogens, nematodes, and weeds; and post-harvest management practices like handling, storage and processing to reduce crop losses. Print edition not for sale in India.

CRC Press
February 2024:588
Hb: 978-1-032-69051-3: £180
* For full contents and more information, visit: www.routledge.com/9781032690513
Hi-Tech Horticulture

K.V. Malam, V. R. Malam, D. R. Kanzaria

This book demonstrates applications of the basic principles of horticulture and illustrates how they can be used systematically to define—and eventually control—existing phenomena. It comprises various practices for evaluating the technologies used in horticulture. It will meet the growing need of students, teachers, and researchers alike in the field of horticulture and those working in agricultural universities and other related private firms. Print edition not for sale in India.

CRC Press
February 2024:274
Hb: 978-1-032-58469-0: £94.99
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Honey Bees, Beekeeping and Bee Products

Edited by Aijaz Ahmad Wachkoo, Gulzar Ahmad Nayik, Jalal Uddin, Mohammad Javed Ansari

This book has been designed as a useful tool for the many diverse professionals who characterize and market honeybee products including beekeepers, non-beekeepers, small entrepreneurs, extension officers and those involved in small business development. This edited book will be the first of its kind which will contain the comprehensive information on both bee and bee products.

CRC Press
March 2024:240
Hb: 978-1-032-40650-3: £110
* For full contents and more information, visit: www.routledge.com/9781032406503

How to Be a Scientist

Critical Thinking in the Life Sciences

Roslyn A. Kemp, Deborah M. Brown

Many undergraduate students choose a science degree but are not aware of how science and research works in the real world. We explain the processes of collecting, sharing and, most importantly, critical analysis of, scientific research, with a focus on the life sciences. This book explains how scientific research is conceived, carried out, and analysed. It outlines how research findings are constantly evolving and why that is exciting and important. Active individual and class exercises provide opportunities for students to think about difficult concepts in science and research and to include their own perspectives.

Garland Science
October 2024:234
Pb: 978-0-815-34609-8: £36.99
* For full contents and more information, visit: www.routledge.com/9780815346098

How we Get Mendel Wrong, and Why it Matters

Challenging the narrative of Mendelian genetics

Kostas Kampourakis

This book illustrates that the stereotypical representations of Gregor Mendel and his work misrepresent his findings and their historical context. The author sets the historical record straight and provides scientists with a reference guide to the respective scholarship in the early history of genetics. The overarching argument is twofold. On the one hand, that we had better avoid naïve hero-worshipping and understand each historical figure, and Mendel in particular, by placing them in the actual sociocultural context in which they lived and worked.

CRC Press
February 2024:264
Hb: 978-1-032-40902-3: £115
* For full contents and more information, visit: www.routledge.com/9781032409023

2ND EDITION

Land Carbon Cycle Modeling

Matrix Approach, Data Assimilation, & Ecological Forecasting

Edited by Yiqi Luo, Benjamin Smith

This book addresses the crucial question of how to assess the potential impact of the additional carbon to the land carbon cycle. The contributors describe a set of new approaches to land carbon cycle modeling for better exploring ecological questions regarding changes in carbon cycling; employing data assimilation techniques for model improvement; doing real- or near-time ecological forecasting for decision support; combining newly available machine learning techniques with process-based models to improve prediction of land carbon cycle under climate change.

CRC Press
April 2024:248
Hb: 978-1-032-69849-6: £180
* For full contents and more information, visit: www.routledge.com/9781032698496

Lung Biology and Pathophysiology

Edited by Yutong Zhao

Series: Methods in Signal Transduction Series

The lungs are the organ for gas exchange between the body and the external environment. Dysfunction of upper airway epithelium and smooth muscle cells leads to pathogenesis of asthma, chronic obstructive pulmonary disease, and cystic fibrosis, etc., resulting in airway inflammation and narrowing. Injury to alveolar epithelium and endothelium causes influx of neutrophil and protein-rich fluid from circulation, resulting in edema and disruption of gas exchange. This book contributes to the understanding homeostasis of lung cells in the physiological and pathological conditions critical to the development of novel therapeutics.

CRC Press
February 2024:292
Hb: 978-1-032-40902-3: £120
* For full contents and more information, visit: www.routledge.com/9781032409023
Managing Soil Drought
Edited by Rattan Lal
Series: Advances in Soil Science
Managing Soil Drought addresses basic processes and provides specific case studies throughout covering protection, restoration, and sustainable management goals of global drylands under changing and harsh climatic conditions, including fragile and vulnerable ecosystems. The book is written by numerous researchers, academicians, practitioners, advocates, land managers, and policy makers involved in bringing about transformation in these regions important to human and nature.

CRC Press
March 2024:432
Hb: 978-1-032-35240-4: £170
* For full contents and more information, visit: www.routledge.com/9781032352404

Medicinal Spice and Condiment Crops
Edited by Azamal Husen
Series: Exploring Medicinal Plants
Medicinal Spice and Condiment Crops presents information on distribution, conservation, ethnobotany, chemistry, harvesting and storage, ecology, and genetic improvement of spices and condiments-producing plant species. It focuses on bioactive compounds obtained from spices and condiments plants used in various herbal drug formulations and uses as antimicrobials, anti-inflammatories, antiallergics, and other health-related efforts.

CRC Press
April 2024:368
Hb: 978-1-032-46947-8: £130
* For full contents and more information, visit: www.routledge.com/9781032469478

Marine Greens
Environmental, Agricultural, Industrial and Biomedical Applications
Edited by Sesan Abiodun Aransiola, Oluwafemi Adebayo Oyewole, Naga Raju Maddela, Udeme Joshua Josiah Ijah, Bangepparagi Manjunatha
This book provides an in-depth overview of marine greens and their environmental and biotechnological applications. It addresses concepts such as the niche adaptation strategies of marine greens in their natural habitats, as well as their global distribution, and factors affecting their distribution and proliferation. In addition, the book explains the remediation of xenobiotics, wastewater, microplastics, marine debris and marine green contamination. Expert authors from around the world explore the industrial and agricultural applications of marine greens.

CRC Press
April 2024:288
Hb: 978-1-032-43885-6: £120
* For full contents and more information, visit: www.routledge.com/9781032438856

Medicinal Roots and Tubers for Pharmaceutical and Commercial Applications
Edited by Rakesh Kumar Bachetti, Archana Bachetti
Series: Exploring Medicinal Plants
Various bioactive compounds found in plant roots and tubers can be used in drug formulation and provide numerous health benefits. A volume in the Exploring Medicinal Plants series, this book will provide information on the medicinal properties of roots and tubers and different phytochemicals derived from them.

CRC Press
November 2023:220
Hb: 978-1-032-28038-7: £150
* For full contents and more information, visit: www.routledge.com/9781032280387

Molecular and Cellular Biology of Viruses
Phoebe Lostroh
This fully revised second edition of Molecular and Cellular Biology of Viruses leads students on an exploration of viruses by supporting interactive learning. All the major classes of viruses are covered, with separate chapters for their replication and expression strategies. Examples come from the most-studied and medically important viruses such as SARS-CoV-2, HIV, and influenza. New to this second edition, a supplementary chapter, freely available for download, looks at how virology intersects with public health, and uses the COVID-19 pandemic as a notable example.

CRC Press
March 2024:542
Hb: 978-1-032-73210-7: £160
Pb: 978-1-032-73212-1: £64.99
* For full contents and more information, visit: www.routledge.com/9781032732121

Natural Products
Alternate Therapeutic as Quorum Sensing (QS) Inhibitors
Edited by Moupriya Nag, Dibyajit Lahiri, Jaideep Banerjee, Taniya Roy Chowdhury
Series: Confluence of Research in Biotechnology for Human Welfare
The book titled “Natural Products: Alternative therapeutics as Quorum Sensing (QS) inhibitors” provides a detailed and systematic review of mechanism of quorum sensing in both Gram positive and Gram-negative bacteria and alternative pharmacological developments as a potent solution to the rise of antimicrobial resistance during biofilm formation.

CRC Press
December 2023:242
Hb: 978-1-032-29238-0: £110
ebook: 978-1-003-30055-7
* For full contents and more information, visit: www.routledge.com/9781032292380
Naturally Selective
Evolution, Orgasm, and Female Choice

Robert King

Researchers of human behaviour have identified an ‘orgasm gap’. Men usually orgasm during intercourse, whereas women often do not. The two leading explanations are either that women are "psychologically broken" - Freud’s theory – or badly designed – the "by-product theory". However, evolutionary biology, anatomy, physiology, and direct sex research suggest women have evolved under their own selection pressures and orgasm is a fitness increasing consequence such selective factors. This is revealed in their patterns of orgasmic response, which is not random, nor inexcusable.

CRC Press
March 2024:240
Hb: 978-1-032-06515-1: £135
Pb: 978-1-032-34069-2: £44.99
* For full contents and more information, visit: www.routledge.com/9781032065151

Novel Approaches in Metronomic Chemotherapy for Breast Cancer Treatment

Edited by Manzoor Ahmad Mir

This book provides latest research and developments in the field of metronomic chemotherapy for breast cancer. It presents the principles and mechanisms of metronomic chemotherapy, preclinical and clinical studies, and the latest developments in drug delivery systems and nano formulations. The clinical pharmacology of metronomic chemotherapy including pharmacokinetics, pharmacogenetics, pharmacoeconomics, and adverse drug reactions are also examined.

CRC Press
May 2024:208
Hb: 978-1-032-62045-9: £130
Pb: 978-1-032-42545-3: £110
* For full contents and more information, visit: www.routledge.com/9781032620459

NeuroPhytomedicine

Edited by Mithun Singh Rajput, Tewarit Sarachana, Purnima Dey Sarkar, Manan Raval

Neurological disorders categorized as neurodegenerative, neuropyschiatric and neurotraumatic impose a substantial health burden and cause a frail impact on the life attributes. The use of synthetic drugs can have undesirable side effects, making neurotherapeutics challenging. Research on neuroprotection aiming utilization of safer natural compounds; phytochemicals specifically, is a cutting-edge approach.

CRC Press
January 2024:206
Hb: 978-1-032-48593-5: £110
* For full contents and more information, visit: www.routledge.com/9781032485935

Non-Coding RNAs
Molecular Tools for Crop Improvement

Edited by Penna Suprasanna, Vinay Kumar, Ashish Kumar Srivastava

This reference book compiles updated research on non-coding RNAs and their role in producing high-yielding plants with higher productivity under changing climates. Plant non-coding RNAs are emerging as the key regulators of plant responses to climate change and environmental stresses. The book covers the sequencing, identification, prediction, identification, characterization, and targets of non-coding RNAs to engineer high-yielding crops. The book provides a mix of basic and advanced information for postgraduate students, researchers, and scientists in the fields of plant molecular biology, biotechnology, food security, and agriculture.

CRC Press
December 2023:234
Hb: 978-1-032-48593-5: £140
* For full contents and more information, visit: www.routledge.com/9781032485935

2ND EDITION
Oceanographic Processes of Coral Reefs
Physical and Biological Links in the Great Barrier Reef

Edited by Eric Wolanski, Michael J. Kingsford

In the last two decades since publication of the first edition, substantial advancements have been made in the science, the need for transdisciplinary approaches to coral reef protection greater than ever before. The new edition, now in full color throughout, goes beyond identifying foundational information and current problems to pinpoint science-based solutions for managers, stakeholders and policy makers. The chapters provide a much-needed review of the biophysics of reefs with an emphasis on the Great Barrier Reef as an ecosystem. The focus is on interactions between currents, waves, sediment and the dynamics of coastal and reef-based ecosystems.

CRC Press
January 2024:206
Hb: 978-1-032-44476-5: £89.99
Pb: 978-1-032-44475-8: £115
* For full contents and more information, visit: www.routledge.com/978103244475-8

Odontodes
The Developmental and Evolutionary Building Blocks of Dentitions

Edited by Donglei Chen
Series: Evolutionary Cell Biology

The odontode system, which generates teeth and other structures, is ancient. Among the oldest fossils dating back 500 million years, they play an important role in the anatomy and function of living jawed vertebrates. There is a long history of research on odontodes. Fossils preserve odontode tissues with remarkable nanoscale fidelity. Any synthetic understanding of the evolution and diversification of the odontode system must encompass both ‘classic’ odontodes (teeth and placoid scales), and less familiar derivatives (ganoine of non-teleost actinopterygians and dentine of chondrichthyan fin spines). This synthetic volume is an overview of odontode research.

CRC Press
December 2023:236
Hb: 978-1-032-62045-9: £130
* For full contents and more information, visit: www.routledge.com/9781032620459

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Plant Tissue Culture
Jayarama Reddy
This book is a comprehensive text on plant tissue culture, with its past, present, and future prospects and techniques discussed in detail. It will be useful for all the students, researchers, teachers, and industrialists interested in plant tissue culture. Print edition not for sale in India.
CRC Press
February 2024: 252
Hb: 978-1-032-71259-8: £99.99
* For full contents and more information, visit: www.routledge.com/9781032712598

Promising Antiviral Herbal and Medicinal Plants
Edited by Nadeem Akhtar, Azamal Husen, Vagish Dwibedi, Santosh Kumar Rath
Series: Exploring Medicinal Plants
Throughout history, viral infections have caused devastating pandemics, leading to widespread illness and mortality. To address this ongoing threat, exploring the potential of herbal and medicinal plants as a source of antiviral compounds is crucial. Promising Antiviral Herbal and Medicinal Plants provides a comprehensive overview of the latest research in the field of antiviral properties of herbal and medicinal plants.
CRC Press
February 2024: 354
Hb: 978-1-032-35880-2: £170
* For full contents and more information, visit: www.routledge.com/9781032358802

Pollination Biology of Cultivated Oil Seeds and Pulse Crops
DP Abrol
The book provides in detail information on pollination biology of oilseed and pulse crops. The book presents information on improving productivity of oilseed crops and pulses through planned pollination and safety of pollinators from pesticides. Covering the latest information on various major world oil crops and pulses, this book brings the latest advances together in a single volume for researchers and advanced level students.
CRC Press
March 2024: 344
Hb: 978-1-032-65670-0: £110
* For full contents and more information, visit: www.routledge.com/9781032656700

Quality Control and Regulatory Aspects for Biologicals
Regulations and Best Practices
Edited by Gauri Misra
This book serves as a comprehensive guide on quality control and regulatory aspects for biological products. It covers a wide range of topics, including regulatory requirements, quality control strategies, analytical methods, and risk management. It delves into the advantages and limitations of in vivo tests and discusses alternative methods that can be employed. The book explores the use of animal-based testing methods in quality control and examines viable alternatives.
CRC Press
April 2024: 208
Hb: 978-1-032-69740-6: £89
* For full contents and more information, visit: www.routledge.com/9781032697406

Primates in History, Myth, Art, and Science
Edited by Cecilia Veracini, Bernard Wood
Primates play a special role in human societies, especially in regions where modern humans and non-human primates co-exist. Non-human primates feature in myths and legends and in traditional indigenous knowledge. Explorers observed them in the wild, and brought them, at great cost, to Europe. There they were valued as pets and for display, and where they were literally teased apart by scientists. The book will be of interest to undergraduate and graduate students as well scholars in disciplines ranging from anthropology to art history.
CRC Press
October 2025: 344
Hb: 978-1-032-71087-7: £130
Pb: 978-1-138-19839-5: £44.99
* For full contents and more information, visit: www.routledge.com/9781138198395

Regenerative Agriculture
Translating Science to Action
Edited by Amitava Rakshit, Manoj Parihar, Vijay Singh Meena, Purushothaman Abhilash, Prakash Kumar Jha, Deepranjan Sarkar
Regenerative farming promotes health of degraded soils by restoring their organic carbon by sequestering atmospheric carbon dioxide, reversing industrial agriculture contributions to climate change. It reduces soil erosion and water pollution and reverses climate change by rebuilding soil organic matter and restoring degraded soil biodiversity. This book aims to focus on the current state of knowledge and scientific advances about the innovations in agriculture that will equip farmers to cope with the competing challenges of addressing food and nutrition security, improving livelihoods, combating climate change and sustainably managing natural resources.
CRC Press
May 2024: 320
Hb: 978-1-032-31405-1: £89.99
* For full contents and more information, visit: www.routledge.com/9781032314051
Remote Patient Monitoring: A Computational Perspective in Healthcare

Rishabha Malviya, Priyanshi Goyal
Series: River Publishers Rapids Series in Biotechnology and Medical Research
This book provides a multidisciplinary overview of the design and implementation of systems for remote patient monitoring and healthcare. Readers are guided through the components of such a system and shown how they could be integrated into a coherent framework for deployment in practice.

Stem Cell-based Biosystems

Edited by Yi-Chen Ethan Li, I-Chi Lee
Stem cell science has emerged as a novel discipline in biomedical research over the past decade. With advancements in this field, stem cells have demonstrated versatile applications ranging from basic research to clinical case studies. Recognizing the demand for knowledge in stem cell applications, this book aims to provide comprehensive information on stem cell technology and its application in biosystems.

Seeking Sustainable Development on a Level Playing Field

A PVC Case Study

Mark Everard
PVC (polyvinyl chloride) is a plastic with adaptable, durable and other properties used in diverse construction, medical, information technology. Yet, unlike organochlorine pesticides, PVC plastic is inert and recyclable after providing long service life. This book is not 'pro-PVC', but draws on lessons learned from how the PVC value chain, has engaged with problems and made further progress under voluntary commitments to sustainable development. The book advocates a ‘level playing field’ of common sustainability principles for assessment of the benefits and risks of the use of all materials in the context of whole product life cycles.

Soil and Drought

Basic Processes

Edited by Rattan Lal
Series: Advances in Soil Science
This book vividly explains the processes, factors, and causes of drought in soils of agroecosystems. It explains the effects of the climate change on intensity and frequency of agronomic and pedological drought.

Stepwise Culture of Human Adult Stem Cells

Edited by Pranela Rameshwar
This volume on stepwise techniques to culture adult human stem cells begins with the basic methods to culture adult stem cells followed by related methods to supplement stem cell culture. This and future volumes of techniques will allow laboratories across scientific entities – academic and commercial – to adapt the described methods for similar methods with cells from other species.

Sustainable Summer Fodder

Production, Challenges, and Prospects

Edited by Imran ul Haq, Siddra Ijaz, Hayssam Ali
This book provides comprehensive insight into the agronomy, biology, ecology, nutritional profiling, and production and protection strategies for sustainable cultivation of a variety of summer fodder crops.
Textbook of Diagnostic and Therapeutic Procedures in Allergy
Edited by Pudupakkam K. Vedanthan, Harold S. Nelson, Hugo Van Bever, Mandakolathur R Murali
The uniqueness of this textbook lies in the fact that, it is the FIRST book in the field of allergy addressing in detail the various diagnostic and therapeutic procedures. The rationale behind presenting this book is to apprise the reader regarding the underlying principles of such procedures and to identify the limitations as well as usefulness in clinical practice.

CRC Press
April 2024:388
Hb: 978-1-032-21653-9: £130
* For full contents and more information, visit: www.routledge.com/9781032216539

The Dynamic Nature of Mitochondria from Ultrastructure to Health and Disease
Edited by Andreas S. Reichert
Mitochondrial research has exploded over the last 150 years. It becomes clear that mitochondria are extremely dynamic in nature controlling life at multiple levels. Mitochondria rule energy conversion, adapt cells well to changing stress and nutrient conditions, and regulate many cellular processes including immunity. The dynamic nature of mitochondria occurs at an intramitochondrial level but also includes its ability to interact with other organelles and to modulate multiple signalling pathways.

CRC Press
April 2024:224
Hb: 978-1-032-11713-3: £120
* For full contents and more information, visit: www.routledge.com/9781032117133

The Aquarium Fish Medicine Handbook
Roy P.E. Yanong, Gregory A. Lewbart
Practicing veterinarians, veterinary technicians, professional aquarists, fish researchers, and tropical fish hobbyists will find this thorough yet concise handbook a complete how-to guide for keeping fish under human care healthy and thriving. The book covers ways to manage aquatic life support systems for fish, history taking, natural history, anatomy, physiology, diagnostic techniques, anesthesia, analgesia, and surgery. Virtually all of the most important ornamental fish pathogens, including viruses, bacteria, fungi, and parasites, are described and richly illustrated.

CRC Press
April 2024:224
Hb: 978-1-032-71120-1: £84.99
Pb: 978-0-367-52291-9: £34.99
* For full contents and more information, visit: www.routledge.com/9780367522919

The Chagos Archipelago
A Biological Biography
Charles Sheppard
The Chagos Archipelago follows research in a narrative form and anticipates the now substantial Government, UN and legal interest in the Archipelago since the UK was told to ‘decolonise’, it. With beautiful photography of the Chagos Archipelago coral reefs and islands, as well as graphs indicating their findings, this book offers professionals, researchers, academics and students in Conservation and Biodiversity an insight into one of the worlds most diverse ecosystems. This is also accessible for non-academic readers with an interest in climate change, biodiversity and the importance of conservation.

CRC Press
May 2024:176
Hb: 978-1-032-71338-0: £110
* For full contents and more information, visit: www.routledge.com/9781032713380

The Geochemical Origin of Microbes
William F. Martin, Karl Kleinermanns
This textbook covers the transition from energy releasing reactions on the early Earth to energy releasing reactions that fueled growth in the first microbial cells, and is intended for teachers and college students with an interest in microbiology, biochemistry, or evolution. The scope of the book is a quantum departure from existing “origin of life” books in that it starts with basic chemistry and links energy-releasing geochemical processes to the reactions of microbial metabolism.

CRC Press
March 2024:272
Hb: 978-1-032-45767-3: £150
Pb: 978-1-032-45767-3: £69.99
* For full contents and more information, visit: www.routledge.com/9781032457673
Life Science

The Human Brain during the Third Trimester 225– to 235–mm Crown-Rump Lengths
Atlas of Central Nervous System Development, Volume 11
Shirley A. Bayer, Joseph Altman
This eleventh of 15 short atlases reimagines the classic 5 volume Atlas of Human Central Nervous System Development. A handy paperback edition focuses on the third trimester of human brain development. Serial sections from specimens between 225mm and 235mm are illustrated and annotated in great detail, together with 3D reconstructions. An introduction and glossary summarize these earliest stages of human CNS development.
CRC Press
December 2023:127
Hb: 978-1-032-22874-7: £115
Pb: 978-1-032-22004-8: £44.99
* For full contents and more information, visit: www.routledge.com/9781032220048

The Human Brain during the Third Trimester 260– to 270–mm Crown-Rump Lengths
Atlas of Central Nervous System Development, Volume 12
Shirley A. Bayer, Joseph Altman
This twelfth of 15 short atlases reimagines the classic 5 volume Atlas of Human Central Nervous System Development. A handy paperback edition focuses on the second trimester of human brain development. Serial sections from specimens between 260mm and 270mm are illustrated and annotated in great detail, together with 3D reconstructions. An introduction and glossary summarize these earliest stages of human CNS development.
CRC Press
January 2024:201
Hb: 978-1-032-22878-5: £115
Pb: 978-1-032-22876-1: £44.99
* For full contents and more information, visit: www.routledge.com/9781032228761

The Human Brain during the Third Trimester 310– to 350–mm Crown-Rump Lengths
Atlas of Central Nervous System Development, Volume 13
Shirley A. Bayer, Joseph Altman
This thirteenth of 15 short atlases reimagines the classic 5 volume Atlas of Human Central Nervous System Development. A handy paperback edition focuses on the third trimester of human brain development. Serial sections from specimens between 310mm and 350mm are illustrated and annotated in great detail, together with 3D reconstructions. An introduction and glossary summarize these earliest stages of human CNS development.
CRC Press
January 2024:200
Hb: 978-1-032-22885-3: £115
Pb: 978-1-032-22880-8: £44.99
* For full contents and more information, visit: www.routledge.com/9781032228808

The Nanotechnology Driven Agriculture
The Future Ahead
Edited by Swarnendu Roy, Akbar Hossain
The book focuses on the application of nanotechnology for enhancing crop production through the application of nanofertilizers or nanocomposites. Several avenues of nanotechnology are beneficial in improving crop productivity in a sustainable manner, which has been presented in a comprehensive way.
CRC Press
March 2024:392
Hb: 978-1-032-45321-7: £110
* For full contents and more information, visit: www.routledge.com/9781032453217

The Peach Potato Aphid (Myzus persicae)
Ecology and Management
Jamin Ali
The peach potato aphid, Myzus persicae, is one of most severe model aphid pests that successfully colonizes hundreds of plant species from 40 different families. This book covers ecological aspects including life cycle, challenges with management approaches, damage, suppression of plant defenses, evolution, and mechanism of resistance against major class of insecticides, potential of biological control which make aphids a pest of economically importance. As the peach potato aphid is a model aphid pest, studying it helps develop control strategies against the entire group of aphids.
CRC Press
November 2023:132
Hb: 978-1-032-50929-7: £89.99
eBook: 978-1-003-40097-4
* For full contents and more information, visit: www.routledge.com/9781032509297

Therapeutic Nutrition in Ayurveda
Edited by Pankaj Wanjarkhedkar, Yashwant V. Pathak
This book emerges as a pilot project to discuss the clinical experiences directly and the concept of Nutra-vigilance, by the experienced authors of respective specialties like hepatology, neurology, dermatology, ophthalmology, oncology, cardiology, gynecology and so on. It broadly discusses Diet & Nutrition based on 12 different groups of diet in Ayurveda. Nutrition has been widely discussed for every disease dynamically in Ayurveda, with details of exclusion and inclusion of foods over a stipulated period or entire duration of treatment.
CRC Press
December 2023:272
Hb: 978-1-032-38543-3: £170
eBook: 978-1-003-40097-4
* For full contents and more information, visit: www.routledge.com/9781032385396
Toxicity of Aquatic System and Remediation

The Contemporary Issues

Edited by Susmita Mukherjee, Sanket J. Joshi, Sonali Paul, Rita Kundu

Series: Confluence of Research in Biotechnology for Human Welfare

CRC Press

March 2024:344

* For full contents and more information, visit: www.routledge.com/9781032258621

Toxicologic Pathology

A Primer

Edited by Pritam S. Sahota, Robert H. Spaet, Zbigniew W. Wojcinski

Toxicologic Pathology: A Primer is a practical, easy-to-use reference designed to contain core information provided by board-certified veterinary pathologists, all experts in the field. The Primer contains the basic, underlying principles of toxicologic pathology at the introductory level so would not only be valuable to the veterinary pathology student who may be considering a career in the field but could also be a companion to the seasoned toxicologic pathologist who wants a succinct refresher.

CRC Press

February 2024:448

* For full contents and more information, visit: www.routledge.com/9780367364670

2ND EDITION

Toxicology of Fishes

Edited by Kristine L. Willett, Neelakanteswar Aluru

This up-to-date, comprehensive handbook is devoted to the effects of chemical pollution on humans, animals and the marine environment, covering biochemical and molecular aspects. The new edition is written by recognized experts with increased focus on genomics, delving into the impacts of microplastics, pharmaceuticals and oil spills in dedicated final chapters. With nearly 300 illustrations and tables, this in-depth reference work presents detailed information on the bioavailability of chemical pollutants, their distribution, metabolism, and excretion in the host fish and mechanisms and sites of toxic responses.

CRC Press

January 2024:528

* For full contents and more information, visit: www.routledge.com/9780367749972

Using Microbes to Improve Crop Yields

Edited by Tariq Shah, Fazal Munsif, Muhammad Arif, Roberto D’Amato

This book will address all the major mechanisms by which microorganisms are thought to impact plant growth and health. A unique aspect of this publication is that it is multidisciplinary, covering plant microbiology, plant physiology, fungal and bacterial endophytes, plant biochemistry, and genomics. Just as research on the mammalian microbiome has demonstrated its importance for overall health of the host, the plant microbiota is essential for plant health in natural environments.

CRC Press

April 2024:264

* For full contents and more information, visit: www.routledge.com/9781032286662

Waste Management in Climate Change and Sustainability Perspectives

Organic and Medical Waste

Edited by Sunita Varjani, Izharul Haq, Ashok Pandey, Vijai Kumar Gupta, Xuan-Thanh Bui

Series: Sustainable Industrial and Environmental Bioprocesses

This handbook discusses the relationships and effects of climate change on waste treatment and its sustainable management. The waste management sector is in a unique position to transition from a minor source of global greenhouse gas (GHG) emissions to a major contributor to reducing GHG emissions. This book compiles the potential impacts and benefits of various waste management systems in terms of climate impact.

CRC Press

April 2024:192

* For full contents and more information, visit: www.routledge.com/9781032439075

Wiring the Nervous System: Mechanisms of Axonal and Dendritic Remodelling in Health and Disease

Edited by Tracy S. Tran, Avraham Yaron

Series: River Publishers Series in Biotechnology and Medical Research

This book examines recent key findings on the mechanisms of axonal and dendritic remodeling in different model organisms. Each chapter is contributed by a panel of experts in their respective subfields of neurosciences, to provide and discuss the latest discoveries ranging from neuronal morphogenesis during development, experience-dependent structural plasticity, to neuronal degeneration, regeneration, and pathologies in neurological disorders.

River Publishers

January 2024:132

* For full contents and more information, visit: www.routledge.com/9788770228527
**Biomanufacture of Functional Carbohydrates**

*Edited by Jing Wu, Lingqia Su*

This book provides the systemic introduction of biomanufacture of 10 functional carbohydrates. Each chapter introduces the function and application of a functional carbohydrate, then focuses on the recent advancements of the enzymes and catalytic pathways associated with its biosynthesis. It provides the detailed information of the structure and function, molecular modification, and preparation of the relative enzymes, the strategies of preparation of the functional carbohydrates catalyzed by single or complex enzymes and discusses the characteristics of different strategies.

CRC Press
May 2024:392
Hb: 978-1-032-43815-3: £150
* For full contents and more information, visit: [www.routledge.com/9781032438153](http://www.routledge.com/9781032438153)

**Flavoromics**

*Edited by Leo Nollet, Matteo Bordiga*

This book describes the tools to do high throughput, trace analyses that represent both taste and olfaction stimuli. It explains how today’s single sample research will generate thousands of data points, which are loaded into sophisticated statistical analysis algorithms to establish what stimuli are responsible for flavor. This cutting-edge equipment will enable us to create flavorings and perfumes that are more realistic and superior.

CRC Press
December 2023:366
Hb: 978-1-032-21062-9: £170
* For full contents and more information, visit: [www.routledge.com/9781032210629](http://www.routledge.com/9781032210629)

**Chickpea and Cowpea**

*Nutritional Profile, Processing, Health Prospects and Commercial Uses*

*Edited by Sukhvinder Singh Purewal, Pinderpal Kaur, Raj Kumar Salaria*

This book explores the status of chickpea and cowpea in terms of its production, nutritional composition, processing mediated changes, and methods to remove antinutrients, bioactive peptides & their related health benefits. This book also demonstrates the key features of chickpea and cowpea which will make them an ideal substrate to be processed at a commercial scale. It covers all the aspects of latest research based on chickpea and cowpea.

CRC Press
December 2023:354
Hb: 978-1-032-45575-4: £150
* For full contents and more information, visit: [www.routledge.com/9781032455754](http://www.routledge.com/9781032455754)

**Food Rheology**

*A Practical Guide*

*Pedro E. D. Augusto, Meliza L. Rojas, Alberto C. Miano*

Rheology is the study of material flow and deformation, defining different aspects of food processing and product design. Food rheology affects several unit operations during food processing, the behavior during shelf life, the consumer perception during consumption and the interaction of food products with the human body (from chewing and swallowing to digestion). This book presents the main aspects of food rheology as a practical guide, demonstrating that applying food rheology does not need to be a complex task. It can help students, professionals and professors to understand the basic concepts to design, perform and interpret experiments related to food processing and properties.

CRC Press
November 2023:150
Hb: 978-0-367-70968-6: £190
Pb: 978-0-367-68569-0: £74.99
ebook: 978-1-003-14872-2
* For full contents and more information, visit: [www.routledge.com/9780367685690](http://www.routledge.com/9780367685690)

**Emerging Techniques for Food Processing and Preservation**

*Edited by Swati Kapoor, Gurkirat Kaur, B. N. Dar, Savita Sharma*

This book explores cutting-edge technologies that can enhance the quality and safety of food products while also improving their shelf life. With contributions from leading experts in the field, this book covers a wide range of topics, including Electrolysis, Refractance Window Technology, cold plasma, Bio speckle laser Technique, Nanofluids, and many others. Each chapter includes detailed explanations of the principles behind these emerging techniques, as well as case studies that demonstrate their practical applications.

CRC Press
December 2023:294
Hb: 978-1-032-06847-3: £170
* For full contents and more information, visit: [www.routledge.com/9781032068473](http://www.routledge.com/9781032068473)

**Food Safety**

*Contaminants and Risk Assessment*

*Edited by Mohammed Kuddus, Syed Amir Ashraf, Pattanathu Rahman*

Food Safety: Contaminants and Risk Assessment is a state-of-art reference on food safety, which is the biggest challenge in the food supply chains worldwide. Despite advancements in hygiene, food treatment, and food processing, food-borne pathogens or food contaminants still represent a significant threat to human health. This book presents comprehensive information about the major food contaminants across food types.

CRC Press
May 2024:264
Hb: 978-1-032-36809-2: £140
* For full contents and more information, visit: [www.routledge.com/9781032368092](http://www.routledge.com/9781032368092)
problems regarding food contamination and safety, and their impact on human health.

Global Malnutrition: Pathology and Complications

Jahangir Moini, Oyindamola Akinso, Raheleh Ahangari

Global Malnutrition: Pathology and Complications addresses various types of malnutrition including deficiencies (undernutrition), excesses (overnutrition), and imbalances in a person’s intake of nutrients.

CRC Press
November 2023:470
Hb: 978-1-032-31675-8: £170
* For full contents and more information, visit: www.routledge.com/9781032316758

Food Safety: Quality Control and Management

Edited by Mohammed Kuddus, Syed Amir Ashraf, Pattanathu Rahman

Food Safety: Quality Control and Management is an updated book on food safety best practices. This book discusses analytical approaches to measuring food contaminants, quality control and risk assessment of food storage, food irradiation. The chapters discuss how quality control and management help to establish sustainable and secure food systems globally. The book covers topics like techniques to measure food contaminants, toxins, heavy metals, and pesticide content in food. This book is an essential resource to help students, researchers, and industry professionals understand day-to-day

CRC Press
April 2024:288
Hb: 978-1-032-29534-3: £145
* For full contents and more information, visit: www.routledge.com/9781032295343

Handbook of Seafood and Seafood Products Analysis

Edited by Fidel Tolrà, Leo Nollet

This 2nd edition of the Handbook of Seafood and Seafood Products Analysis brings together the work of 109 experts who focus on the most recent research and development trends in analytical techniques and methodologies for the analysis of captured fresh and preserved seafood, either cultivated or wild, as well as for derived products. After providing a general introduction, this handbook provides 48 chapters distributed in 6 sections.

CRC Press
February 2024:928
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* For full contents and more information, visit: www.routledge.com/9781032266787

Functional Foods: Technological Challenges and Advancement in Health Promotion

Edited by Sajad Ahmad Wani, Mohamed S. Elshikh, Mona S. Al-Wahaibi, Haroon Rashid Naik

It is reported Functional foods are highly nutritious and associated with a number of powerful health benefits. They may protect against disease, prevent nutrient deficiencies, and promote proper growth and development. Functional Foods: Technological Challenges and Advancement in Health Promotion presents information related to bioactive compounds present in the functional foods, derived from fruits and vegetables, cereals and pulses, dairy and meat, herbs and spices and other foods. It describes novel techniques and methodologies used in the extraction, isolation, encapsulation, identification and characterization of bioactive compounds.

CRC Press
November 2023:357
Hb: 978-1-032-36999-0: £130
* For full contents and more information, visit: www.routledge.com/9781032369990

Microbial Pigments: Applications in Food and Beverage Industry

Edited by Mohammed Kuddus, Poonam Singh, Sindhu Raveendran, Rachana Singh

This book offers a comprehensive and updated review of the impact of microbial pigments as value-added products in the food industry. Microbes produce a range of valuable pigments such as carotenoids, flavins, melanins, quinines, and violacinc. The book explores the use of microbial pigments as additives, antioxidants, color intensifiers, and functional food ingredients. It discusses pigment isolation and processing technologies. It covers a range of applications across food, beverages, and food microbiology.

CRC Press
March 2024:282
Hb: 978-1-032-31675-8: £170
* For full contents and more information, visit: www.routledge.com/9781032316758

Millets: Cultivation, Processing, and Utilization

Ashwani Kumar, Vidisha Tomer, Mukul Kumar, Prince Chawla

Millets: Cultivation, Processing, and Utilization covers information on taxonomy, morphology, germplasm accessions, cultivation practices, harvesting methods, threshing, cleaning, storage, milling, structural and engineering properties, nutritional and anti-nutritional values, health benefits, food applications, by-products, non-food applications, quality standards, and prospects in millet processing. This book will be useful for students, researchers, farmers, and entrepreneurs in understanding millets and their applications. It has been compiled by experts in the field and can serve as a guidance document for the stakeholders.

CRC Press
March 2024:316
Hb: 978-0-367-70900-6: £190
* For full contents and more information, visit: www.routledge.com/9780367709006
Nutrition and Diet in Health
Principles and Applications

Edited by Adenike Temidayo Oladiji, Johnson Olaleye Oladele, Ebenezer I. O. Ajayi

Nutrition and diet play a crucial role in sustaining good health throughout human lives. Food provides us with essential nutrients involved in many physiological activities and biological processes in the body including growth and development, metabolism, immune function, and overall well-being. Nutrition and Diet in Health: Principles and Applications reviews and discusses the issues related to the roles of nutrition and diets in human health and diseases.

CRC Press
April 2024:296
Hb: 978-1-032-42171-1: £150
* For full contents and more information, visit: www.routledge.com/9781032421711

Nutrition and Obsessive-Compulsive Disorder
The Interplay

Edited by Senthilkumar Rajagopal, M. Mohamed Essa, Saravanan Ramachandran, Geethalakshmi Sundaramaran, Hanan Fahad Alharbi

This reference book discusses the role of nutrition in obsessive-compulsive disorders. It covers the investigational therapeutics in OCD, the use of animal models, and biomarkers for better diagnosis, monitoring, and possible therapeutic options with nutrients for OCD patients. The book highlights the role of probiotics, amino acids, vitamins, micro-nutrients, and salts in the management of OCD. It includes topics like the applications of nutritional modeling and nano-biotechnology in OCD, the effects of environmental pollutants, and the regulation of anti-depressants in OCD. The book is meant for researchers and professionals in the field of nutritional neuroscience and psychology.

CRC Press
December 2023:281
Hb: 978-1-032-47089-4: £150
ebook: 978-1-003-38789-3
* For full contents and more information, visit: www.routledge.com/9781032470894

Postharvest Nanotechnology for Fresh Horticultural Produce
Innovations and Applications

Edited by Radhakrishnan E.K., Ashitha Jose, Sunil Pareek

Series: Innovations in Postharvest Technology Series

This book has been edited to advance understanding of material development, intelligent selection of nanomaterials to ensure the nontoxic nature, and future perspectives of nanotechnology on postharvest produce. This includes various types of nanoparticles exploited for the postharvest management, their mechanism of action, varied applications and material engineering, along with natural products including essential oils and plant bioactives, modelling of various tailor-made materials to meet the required properties of the packed food, advancements in the nanotechnological applications for the minimally processed food, and the toxicity concerns.

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Plant Food Phytochemicals and Bioactive Compounds in Nutrition and Health

Edited by John Oloche Onuh, Yashwant V. Pathak

Series: Nutraceuticals

Food Plant Phytochemicals and Bioactive Compounds in Nutrition and Health provides a comprehensive review of the current state of knowledge in the field of bioactive plant phytochemical compounds, their food sources, bioactivities, bioavailability, extraction, production, and applications. Experts in the field discuss various bioactivities of the notable and promising plant phytochemicals of significance in nutrition and health, e.g., lowering of CVD, hypertension, cholesterol, diabetes, obesity, inflammation, cancer, oxidative stress, neurodegenerative diseases and a host of other chronic disease conditions.

CRC Press
January 2024:676
Hb: 978-1-032-37420-8: £190
* For full contents and more information, visit: www.routledge.com/9781032374208

Novel Approaches in Biopreservation for Food and Clinical Purposes

Edited by Enriqueeta Garcia-Gutierrez, Natalia Gomez-Torres, Sara Arbulu

The aim of “Novel Approaches in Biopreservation for Food and Clinical Purposes” is to provide cutting-edge information on biopreservation methods for both food and medical applications. The book has one chapter dedicated to each major food category (milk and dairy, vegetables, meat, fish, bread, flours and beverages) and brief chapters covering preservation approaches for pharmaceuticals, embryos, gametes, cells and tissues.

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February 2024:296
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Novel Plant Protein Processing
Developing the Foods of the Future

Edited by Zakir Showkat Khan, Sajad Ahmad Wani, Shemilah Fayaz

The processing and utilization of plant proteins have gained worldwide attention and as such numerous scientific studies are focusing on enhancing the utilization of plant proteins in food and pharmaceutical products through various processing and modification techniques to improve their techno-functional properties, bioactivity, bioavailability, and digestibility. This book presents a roadmap for plant protein science, and technology which will focus on plant protein ingredient development, plant protein modification, and the creation of plant protein-based novel foods.

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* For full contents and more information, visit: www.routledge.com/9781032438160

Food & Nutrition
Postharvest Physiology and Handling of Horticultural Crops

Edited by Ibrahim Kahramanoglu

Postharvest Physiology and Handling of Horticultural Crops discusses postharvest physiology and environmental friendly innovative techniques used to handle fruit and vegetables during storage and through supply chains.

CRC Press
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Hb: 978-1-032-58945-9: £170
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Smart Farming Technologies to Attain Food and Nutrition Security

P. Parvatha Reddy

This book will be of immense value to the scientific community involved in teaching, research and extension activities related to strategies for achieving Rainbow Revolution for enhancing farmers’ income, food, and nutrition security. The book can also serve as a very useful reference for policymakers and practicing farmers. Print edition not for sale in India.

CRC Press
February 2024:376
Hb: 978-1-032-69086-5: £99.99
eBook: 978-1-032-69103-9
* For full contents and more information, visit: www.routledge.com/9781032690865

Postharvest Technology of Horticultural Crops

Priya Awasthi, Subhash Chandra Singh, Rohit Kumar

This book is an informative introduction to the post-harvest technology of horticultural crops, and their conservation and management. The different post-harvest handling operations including storage aspects are also covered. Innovative processing technologies like high-pressure processing, irradiation, cold plasma technique and ohmic heating are also discussed in the book. Print edition not for sale in India.

CRC Press
December 2023:280
Hb: 978-1-032-62762-5: £77.99
eBook: 978-1-032-62765-6
* For full contents and more information, visit: www.routledge.com/9781032627625

Smart Food Industry: The Blockchain for Sustainable Engineering

Volume II - Current Status, Future Foods, and Global Issues

Edited by Eduardo Jacob Lopes, Leila Queiroz Zepka, Mariany Costa Deprá

Smart Food Industry: The Blockchain for Sustainable Engineering, Volume II - Current Status, Future Foods, and Global Issues reviews the literature and scientific frameworks to present a kind of sustainability compass. Disruptive approaches around potential sustainable foods are also widely investigated in order to be an alternative route for the industrial future.

CRC Press
February 2024:404
Hb: 978-1-032-13865-7: £145
eBook: 978-1-032-13865-7: £145
* For full contents and more information, visit: www.routledge.com/9781032138657

Pseudocereals

Production, Processing, and Nutrition

Edited by Sanju Bala Dhull, Aarti Bains, Prince Chawla, Sawinder Kaur

Pseudocereals: Production, Processing, and Nutrition provides an overview of the chemistry, processing, and technology of pseudocereals which have become super grains. The cultivation of pseudocereals has spread to over 70 different countries due to its attractive nutritional properties and for food security. This book discusses necessary information on different pseudocereals as well as practical information on cultivation procedures, equipment, food processing using pseudocereals and use of by-products for bioactive compound extraction. It addresses concerns regarding globalization, food security, climate change and the needs of underdeveloped or developing countries.

CRC Press
March 2024:368
Hb: 978-1-032-35096-7: £150
* For full contents and more information, visit: www.routledge.com/9781032350967

Smart Food Industry: The Blockchain for Sustainable Engineering

Fundamentals, Technologies, and Management, Volume 1

Edited by Eduardo Jacob Lopes, Leila Queiroz Zepka, Mariany Costa Deprá

Smart Food Industry: The Blockchain for Sustainable Engineering, Volume I - Fundamentals, Technologies, and Management is a comprehensive overview of the current state of knowledge about food engineering and processing, under sustainable engineering perspective. This book includes disruptive approaches that will potentially enable the food industry for the transition to sustainable production.

CRC Press
December 2023:336
Hb: 978-1-032-13840-4: £140
eBook: 978-1-003-23105-9
* For full contents and more information, visit: www.routledge.com/9781032138404
The Art and Science of Dome-Shaped Wood-Fired Ovens

Nesimi Ertuğrul

Wood fired ovens are extensively used in restaurants and are constructed in backyards all around the world. However, their technical designs and performance using modern analysis tools have been poorly studied. In a scientifically rigorous fashion, this book covers the history, design and construction of wood burning ovens. Burning behavior of wood is explained and a section is dedicated to the types of heat transfers using simplified analogies, to avoid misconceptions that these ovens are only for bread products. In addition, the book presents selected Turkish recipes and fusion cooking techniques.

Think Like a Dietitian

A Nutrition Counseling Starter Kit

J. Barretto Patterson

While courses in nutrition counseling teach providers to listen to their patients, this book gives nutritionists a heads up on what to listen for, with materials that address the everyday challenges many people face.

Wealth out of Food Processing Waste

Ingredient Recovery and Valorization

Edited by M. Selvamuthukumaran

This book identifies and describes the proper protocols to recover valuable ingredients from waste, thereby creating wealth in society. The effective utilization of waste can generate income for the entrepreneur, lead to more employment for society, enhance fertility of soil, reduce environmental pollution, conserve resources, and help to augment national economy to the greater extent. This book provides food industry personnel, scientists, food engineers, biotechnologists, research scholars, and students with strategies for effective utilization of waste from various food processing industries.
An Introduction to Forensic Genetics for Non-geneticists

Antonio Amorim, Nádia Pinto

This book aims to enable non-experts in Genetics to understand the contribution of this science to resolve civil or criminal litigations, analysing evidence of human and non-human origins. The main difficulties in the comprehension and misuse of the results of Forensic Genetics reside in the lack of effective communication between geneticists and the users of the produced information (as lawyers and judges) and do not arise primarily from the lack of knowledge of genetics.

CRC Press
January 2024:272
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* For full contents and more information, visit: www.routledge.com/9781032387567

Artificial Intelligence in Forensic Science

An Emerging Technology in Criminal Investigation Systems

Edited by Kavita Saini, Swaroop S. Sonone, Mahipal Singh Sankhla

This book addresses the current and emerging opportunities being utilized to apply modern Artificial Intelligence (AI) technologies to current forensic and investigation practices. The book also showcases the increasing benefits of AI where and when it can be applied to various techniques and forensic disciplines. In the last decade, the use of AI is common in many fields and now is an ideal time to look at the various ways AI can be integrated into judicial, forensic, and criminal cases to better collect and analyze evidence, thereby improving outcomes.

CRC Press
May 2024:212
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Critical Infrastructure

Homeland Security and Emergency Preparedness

Robert Radvanovsky, Allan Mcdougall

The new edition critically examines the evolving importance of our critical infrastructure to our society - recognizing the underpinning value of cyber technology and how physical infrastructures and delivery models impact and affect people and society. The emphasis is on criticality, resiliency, and security awareness for practitioners, industry stakeholders, owners, and operators in various government and private CI sectors.

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Ethics and the Practice of Forensic Science

3RD EDITION

Robin T. Bowen

Series: International Forensic Science and Investigation

The book addresses common stressors that can induce, or lead professionals—working in forensic laboratories, law enforcement, the judicial system, and at crime scenes—to commit misconduct. Coverage outlines police and investigative culture through the lens of professional challenges, incorporating important information about the history of wrongful convictions and recently overturned case examples. Throughout are examples of bias, ethical violations, and tampering with evidence, presenting the dangers of compromising one’s ethical standards, and offering alternative courses of action.

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Forensic Law Casebook

Judicial Reasoning and the Application of Forensic Science in Criminal Cases

Charles P. Nemeth

Forensic Law Casebook provides the reader with an array of legal cases and decisions that lay out the parameters of forensic law and its evidentiary value. In the end, what emerges from this are the bedrock principles that guide current forensic evidence and the admissibility of various practices common to the field applications of forensic science. Practitioners, law students, undergraduate and graduate students in compatible majors — as well as law and universities libraries - will benefit from this this essential reference and adjunct to anyone studying forensic science, criminalistics, and the law.

CRC Press
March 2024:288
Hb: 978-1-032-21174-9: £68.99
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* For full contents and more information, visit: www.routledge.com/9781032211732

Forensic Science Laboratory Benchmarking

The FORESIGHT Manual

Max M. Houck, Paul J. Speaker

Forensic Laboratory Benchmarking and Improvement: The FORESIGHT Project is a business benchmarking process for forensic service providers created in 2008 with over 140 participating laboratories worldwide. The book serves as an operational guidebook, providing concrete steps to improve operations and the quality of service labs provide to the their communities.

CRC Press
March 2024:288
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Handbook of Global Terrorist and Insurgent Groups
Tactics, Strategies, and Organization
Edited by Scott N. Romaniuk, Animesh Roul, Pamela Fabe, János Besenyő
This volume examines the most current and significant terrorist and insurgent groups around the world. It brings together the collective expertise and knowledge of more than 50 academics, intelligence and security officials, and professionals together, all of whom are considered subject experts in their respective areas of research and practice. The volume is based on both desk-based and fieldwork conducted by experts in these areas, incorporating analyses of secondary literature but also the use of primary data including first-hand interviews on the various groups' region of operation, their tactics, and how their ideologies motivate their actions.
CRC Press
June 2024:464
Hb: 978-0-367-86025-7
Pb: 978-1-032-71499-5
£74.99
For full contents and more information, visit: www.routledge.com/9781032714995

3RD EDITION
Intelligent Network Video
Understanding Modern Video Surveillance Systems
Fredrik Nilsson, Communications Axis
The revised edition of Intelligent Network Video is more comprehensive in every area than the first and second editions, printed in over 25,000 copies. There is also a new chapter on cybersecurity, as well as thoroughly revised chapters on cloud and analytics. The book takes the reader on a tour through the building blocks of intelligent network video—from imaging to network cameras and video encoders, through the IT technologies of network storage and into video management, analytics, and system design.
CRC Press
December 2023:424
Hb: 978-1-032-53471-8
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eBook: 978-1-003-41220-5
£56.99
For full contents and more information, visit: www.routledge.com/9781032534718

2ND EDITION
Introduction to Transportation Security
Frances L. Edwards, Daniel C. Goodrich
The book covers all transportation critical infrastructure—their modes and their interconnectivity—including highway, air cargo, freight and passenger rail, transit, and maritime. Chapters provide learning objectives, key words, and discussion questions pedagogical elements as well as several case studies to facilitate a practical understanding of the concepts presented. New to this edition is a chapter dedicated to gas and oil pipelines as well as an increased focus throughout of recent cyberattacks, to emphasize the need for physical and cybersecurity integration.
CRC Press
January 2024:405
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Medical Illustration in the Courtroom
Proving Injury, Causation, and Damages
Lindsay E. Coulter
Medical Illustration in the Courtroom: Proving Injury, Causation, and Damages educates the readers on how to communicate science visually in criminal and forensic case, using art and utilizing visualization technologies. This book presents medical illustration, animation, and interactive applications that will help anyone educating an audience about biomedical science: this includes attorneys, physicians, nurses, medical device, and pharmaceutical companies.
CRC Press
May 2024:168
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2ND EDITION
No-Body Homicide Cases
A Practical Guide to Investigating, Prosecuting, and Winning Cases When the Victim Is Missing
Thomas A.(Tad) DiBiase
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eBook: 978-1-032-61809-8
£59.99
For full contents and more information, visit: www.routledge.com/978103261808-1

2ND EDITION
Personal Identification
Modern Development and Security Implications
David J. Haas
Personal Identification: Modern Development and Security Implications, Second Edition explains how Personal Identification—and Real ID—became part of the American fabric along with their past century’s historical ID development. The development of the “trusted and secure” personal identification documents began with passports and has continued as social changes made IDs more essential. This book describes the convergence of technologies and hundreds of patents that produced our “trusted and secure” documents and IDs from our past right up through to today.
CRC Press
March 2024:192
Hb: 978-1-032-53474-2
Pb: 978-1-032-53474-2
£148.99
For full contents and more information, visit: www.routledge.com/9781032534742
This book presents international emergency mechanisms relative to disaster risk reduction (DRR). The goal is to share knowledge about existing frameworks, and utilize established DRR policies and programs, as another means to reinforce and strengthen national security in countries around the world. It takes a "big-picture," holistic view of DRR and national security to offer innovative ideas and solutions to professionals and officials working in disaster management, disaster risk reduction, emergency management, crisis management, civil protection, public security management, national security, criminal justice, international studies, and homeland security.
Advanced Research Methods in Food Processing Technologies
Technology for Sustainable Food Production

Edited by Junaid Ahmad Malik, Megh R. Goyal, Preeti Birwal, Ritesh B. Watharkar
Series: Innovations in Agricultural & Biological Engineering

This book presents new research on advanced technologies for food processing and preservation to maintain and improve food quality, extend shelf-life, and provide new solutions to food processing challenges. It covers cold plasma and ultrasound processing, thermosonication, microwave processing of foods, high-pressure processing, electrospinning technology in foods, encapsulation techniques, freezing and thawing processes on textural properties of food products, 3D printing of foods, enzyme-linked immunosorbent assay (ELISA) in food authentication, and state-of-the-art applications of nanotechnology in food processing.

Analytical Methods for Milk and Milk Products
3-volume set

Edited by Megh R. Goyal, N. Veena, Santosh K. Mishra

This book presents analytical techniques for assessing the physical, chemical, and microbiological properties of milk and milk products to ensure quality and safety. It covers topics such as sampling methods, chemical and compositional analysis, highlighting procedures and the physicochemical and compositional aspects. It also discusses state-of-the-art applications of analytical techniques in food processing.

Analytical Methods for Milk and Milk Products
Volume 1: Sampling Methods and Chemical and Compositional Analysis

Edited by Megh R. Goyal, N. Veena, Santosh Kumar Mishra

This volume comprehensively illustrates analytical techniques and methodologies for assessing the physical, chemical, and microbiological properties of milk and milk products to ensure quality and safety. It covers sampling methods and chemical analysis, highlighting standard methods used for glassware, sampling procedures, and the physicochemical and compositional aspects.

Analytical Methods for Milk and Milk Products
Volume 2: Physicochemical Analysis of Concentrated, Coagulated, and Fermented Products

Edited by Megh R. Goyal, N. Veena, Santosh K. Mishra

This volume presents state-of-the-art analytical techniques and methodologies for assessing the physical, chemical, and microbiological properties of milk and milk products to ensure quality and safety. It covers the physicochemical and compositional analysis of concentrated, coagulated, and fermented dairy products in detail.

Analytical Methods for Milk and Milk Products
Volume 3: Microbiological Analysis, Isolation, Identification, and Characterization

Edited by Megh R. Goyal, N. Veena, Santosh K. Mishra

This volume provides state-of-the-art analytical techniques and methodologies for assessing the quality and safety of milk and milk products. It covers microbiological analysis, isolation, identification, and characterization, highlighting procedures and how they aid in the management of chronic pathological illnesses.

Advances in Sustainable Food Packaging Technology

Edited by Megh R. Goyal, Preeti Birwal, Anand Kumar Pandey, Ritesh Balaso Watharkar
Series: Innovations in Agricultural & Biological Engineering

This book investigates recent innovations in active, intelligent, and smart packaging systems that embrace packaging potential to not only provide protection to food but also improve nutritive value, reduce contamination by releasing antimicrobials, and provide real-time status of food quality. It presents the leading features of food packaging and addresses emerging and advanced approaches in packaging of foods, including nanotechnology-based improvements in food packaging, biodegradation and bio-based approaches for management of plastic waste, and more.

Advances in Flavonoids for Human Health and Prevention of Diseases

Edited by Nisha Sharma, Deepika Saini, Rajesh K. Kesarwani, Prakash Chandra Gupta, Raj K. Keservani
Series: AAP Advances in Nutraceuticals

This book provides an overview of advances in flavonoids, exploring the applications and characteristics of polyphenol derivatives for the management and prevention of diseases. It examines the nutritional and pharmacological properties of polyphenols and flavonoids, including their ability to prevent the start and development of diseases and how they aid in the management of chronic pathological illnesses. Topics also include the benefits of natural food dyes as nutraceuticals and dietary supplements, how flavonoid-rich diets are good for better health and help to prevent chronic noncommunicable diseases, the neuroprotective effects of flavonoids, and much more.

Analytical Methods for Milk and Milk Products
Volume 2: Physicochemical Analysis of Concentrated, Coagulated, and Fermented Products

Edited by Megh R. Goyal, N. Veena, Santosh K. Mishra

This volume presents state-of-the-art analytical techniques and methodologies for assessing the physical, chemical, and microbiological properties of milk and milk products to ensure quality and safety. It covers the physicochemical and compositional analysis of concentrated, coagulated, and fermented dairy products in detail.
Applications of Functional Foods in Disease Prevention

Edited by Raj K. Keservani, Eknath D. Ahire
Series: AAP Advances in Nutraceuticals

Explores the role of functional food applications in prevention and management of various diseases, including diabetes, obesity, microbial infections, ulcers, mental disorders, cardiac health, bone health, and more. Provides an introduction, overview, and an explanation of the classifications of functional foods. It discusses using bioactive compounds in the prevention, management, or treatment of a number of diseases, with illustrative case studies. It also looks at how food products help to reduce the risk of heart disease by lowering blood lipid levels, improving arterial compliance, lowering low-density lipid oxidation, and inhibiting platelet aggregation.

Artificial Intelligence for Future Intelligent Transportation

Smarter and Greener Infrastructure Design

Edited by Rajesh Kumar Dhanaraj, Nilayam Kumar Kamila, Sankhla

Emphasizing a sustainable and green approach, this new book presents an overview of state-of-the-art AI strategies for solving transportation challenges around the world, with a focus on traffic management, traffic safety, public transportation, urban mobility, and pollution mitigation. The book examines modern AI technologies such as IoT, cloud computing, machine learning, and neural networking in the context of fully automated transportation that meets current requirements. The book provides an informative review of the difficulties and recent developments in smart mobility and transportation, encompassing technical, algorithmic, and social elements.

Biocomposites

Environmental and Biomedical Applications

Edited by Omar Mukbaniani, Tamara Tatrishvili, Neha Kanwar Rawat, A. K. Haghi

Presents the most recent studies on the different aspects of new green materials and related biocomposites. The chapters focus on the overall characteristics of biocomposites, including chemical composition along with engineering and technical properties of the most in-demand green materials employed for fabricating biocomposites. It also reports on the modern techniques along with new developments engaged to produce biocomposites. After considering applications and trends of biocomposites, the major characterization techniques along with the important environmental effects are discussed in depth.

Arsenic in Rice

A Global Menace

Edited by Garima Awasthi, Sudhakar Srivastava, Mahipal Singh Sankhla

Addresses the arsenic-rice problem, covering arsenic in water and in soil and specifically arsenic in rice, offering effective mitigation strategies. It discusses the rhizospheric physiology of rice in paddy fields and how arsenic is transported inside the plant and how arsenic causes toxicity to rice plants. It reviews long-distance translocation of arsenic in rice, arsenic-induced phytotoxicity, economic measures to reduce arsenic load, and techniques that are agronomically safe. The biotechnological and nanotechnological methods to mitigate arsenic stress in rice are considered as are the microbial-mediated techniques that can be applied to regulate arsenic in rice.
demands for timber and agricultural land are globally threatened.

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Bioremediation and Phytoremediation  
Technologies for Toxic Pollution  
Ashwini A. Wao  
Provides an informative overview of the emerging issues related to bioremediation and phytoremediation. It discusses alternative technologies for the removal of pollutants from the environment, restoring contaminated sites, and preventing further pollution using bioremediation. The multitude of bioremediation and phytoremediation technologies and methods covered include biochar for remediation, cyanobacteria, biosensors and bioindicators, rhizoremediation, and plant tissue culture studies such as dyes and plastics, mine waste, contaminated soil, heavy metals, wastewater, etc.

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Biodiversity Hotspot of the Western Ghats and Sri Lanka  
Edited by T. Pullaiah  
Series: Biodiversity Hotspots of the World  
Focuses on the most interesting and important properties of biodiversity hotspot of Western Ghats and Sri Lanka, covering physiography and climatology, vegetation and forest types, amphibian and reptile biodiversity, genetic diversity of crops and plants, fishes, butterflies, insects etc. This hotspot, construed as forming a community of species because of their shared biogeographical history, is extraordinarily rich in species, especially plants, found nowhere else. However, its forests face tremendous population pressure and have been dramatically impacted by demands for timber and agricultural land are globally threatened.

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Carbon Nanotubes for Biomedical Applications and Healthcare  
Edited by Chin Hua Chia, Swati Gokul Talele, Ann Rose Abraham, A. K. Haghi  
Discusses the synthesis, properties, modification of CNT, and progress of carbon nanotubes and their applications for biosensing, cancer treatment, antibacterial therapy, tissue engineering, targeted drug delivery, and toxicity. It relays the potential and promise of carbon-based nanomaterials for host of applications while also looking at the challenges in synthesis, characterization, and applications of nanomaterials and how to overcome them. It examines the applications of carbon nanotubes in biomedical science and human health.

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Bioresources and Bioprocess in Biotechnology for a Sustainable Future  
Edited by Leonardo Sepúlveda Torre, Juan Carlos Contreras-Esquível, Ann Rose Abraham, A. K. Haghi  
Reports on the latest achievements in the field of biotechnology and focuses on the different aspects of bioresources and bioprocesses in biotechnology for sustainable development and a sustainable future. It covers the various fields of agricultural biotechnology and focuses on selected commercial crops, discussing key parameters in evaluation of biodegradation in bio-based materials in soil for the better management of natural resources. Case studies on bioremediation and biodegradation are presented for improvement in the conditions of polluted soil and water bodies.

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Cervical Cancer  
Signaling Pathways, Molecular Mechanisms, Natural Products, and Therapeutic Approaches  
Edited by Pratibha Pandey, Fahad Khan, Saher Islam, Devarajan Thangadurai  
Focuses on new approaches to one of the major cancers of the female reproductive system—cervical cancer. Cervical cancer is the fourth most frequent cancer in women worldwide and, especially, a foremost cause of morbidity in women in developing countries, including India. Several research findings have suggested that modulation in various signaling pathways is responsible for cervical cancer pathogenesis, and inhibition of these crucial pathways could be a better therapeutic approach for cervical cancer management.

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Coldwater Fisheries and Aquaculture Management  
Technology for Sustainable Food Production  
Edited by Mohd Ashraf Rather, Faisal Rashid Sofi, Adnan Amin, Kawkabul Saba  
Presents key aspects of reproductive biology and endocrinology of coldwater fishes, such as gonadal development and maturation, vitellogenesis, steroidogenesis, whole genome information of fishes, transcriptomics, proteomics, and more. It also looks at genetic modification of coldwater fishes, phytobiotic-based feed to attain profitability in aquaculture, and the nutritional requirements of coldwater fishes. It addresses fish bacterial diseases and the effect of climate change on fish and water pollution and offers strategies on the sustainable management of fish that include mitigation of pollution, biotechnological interventions, and more.

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Focuses on the most interesting and important properties of biodiversity hotspot of Western Ghats and Sri Lanka, covering physiography and climatology, vegetation and forest types, amphibian and reptile biodiversity, genetic diversity of crops and plants, fishes, butterflies, insects etc. This hotspot, construed as forming a community of species because of their shared biogeographical history, is extraordinarily rich in species, especially plants, found nowhere else. However, its forests face tremendous population pressure and have been dramatically impacted by...
Computational Science and Its Applications

Edited by Anupama Chadha, Sachin Sharma, Vasudha Arora

Explores the overlapping behavior of some aspects of the computational intelligence, focusing on real-life applications of these new tools and technologies. It discusses how computational science can interact with artificial intelligence, machine learning, data science, quantum computing, image processing, evolutionary algorithms (ESA), process simulation, deep learning, for big data analysis, and computational intelligent algorithms.

Decision-Making Models and Applications in Manufacturing Environments

Edited by Pushpdant Jain, Kumar Abhishek, Prasenjit Chatterjee

Series: AAP Research Notes on Optimization and Decision Making Theories

This new volume applies the multi-criteria decision-making (MCDM) theory to solving problems and challenges in manufacturing environments. It details the decision-making process in relation to many manufacturing aspects. The chapter authors demonstrate the application of myriad MCDM techniques in decision-making, including MADM (multiple attribute decision-making), DEA (data envelopment analysis), fuzzy TOPSIS (technique for order preference by similarities to ideal solution) and others.

Digitalization of Higher Education

Opportunities and Threats

Edited by Tanusree Chakraborty, Ashok Natarajan, Nandita Mishra, Madhurima Ganguly

The book examines the policies of governments, higher education institutions, leadership styles to aid digitalization, the use of online teaching tools, changes in educational pedagogy, the impact of educational technology on the attitudes of students and educators to learning. It covers the opportunities in higher education that were made available by a digitalization process, digital management leadership of the HEIs, governmental initiatives introduced in conjunction with new education policy, how digitalization makes the process of learning more efficient, students’ and teachers’ acceptance of digitalization and psychological constructs of model cognitive.

Dynamics of the Tourism Industry

Post-Pandemic and Post-Disaster Perspectives and Strategies

Edited by Gül Erkol Bayram, Anukrati Sharma

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Presents a broad look of the tourism issues related to pandemics and natural disasters. It looks at the history of pandemics and disasters; tourist motivation and safety during and after pandemics and disasters; recovery of the tourism industry; redesign, reconstruction, and creation of tourism activities; crisis management and planning; the role of governments in the management of the tourism industry; competitive marketing strategies; reflections of climate change on tourism; and much more. The book includes cases and practical studies that deal with the current situation, addressing challenges, solutions, and future strategies after pandemics and natural disasters.

Electro-Micromachining and Microfabrication

Principles and Research Advances

Edited by Sandip Kunar, Golam Kibria, Prasenjit Chatterjee

Series: Frontiers of Mechanical and Industrial Engineering

Provides an overview of micromachining technologies, with an emphasis on nontraditional approaches and advances. It discusses the ultrasonic micromachining processes for producing a variety of micro-shapes, such as micro-holes, micro-slots, and micro-walls, as well as assisted hybrid micromachining with ultrasonic vibration of the tool or workpiece, all which help to improve precision and to advance research. Computer-aided design, and computer-aided manufacturing, dental micromachining technologies are discussed. Micro-electrical discharge machining, laser micro-grooving, and laser micromachining are among the advanced micro-manufacturing processes addressed.

Emerging Business Trends and Management Practices

Lessons from the Pandemic

Edited by Himanshu Rai, Mubashir Majid Baba, Mansi Babbar

Explores the dramatic changes in the business environment from the phenomenal impact of the COVID-19 pandemic. It presents emerging trends, strategies, management practices, opportunities, and challenges faced by business leaders, managers, and administrators. It highlights the nuances of business growth and sustainability and different management functions where change results in new management trends and business models followed by innovative ways for competition. It includes a variety of perspectives, practical experiences, knowledge, and insights to aid in formulating and implementing strategies.
Emerging Technologies for the Food Industry
Volume 1: Fundamentals of Food Processing Technology

Edited by C. Anandharamakrishnan, Jeyan Arthur Moses

Presents the basics of food preservation, covering hurdle technology, aspects of minimal processing, ohmic heating of foods, edible coatings, and electromagnetics and allied applications in food processing. It also introduces various unit operations in the food industry. This volume also discusses novel methods of food quality evaluation and covers the fundamentals of and increasing applications of nanotechnology in the food sector.

Emerging Technologies for the Food Industry
Volume 2: Advances in Nonthermal Processing Technologies

Edited by C. Anandharamakrishnan, Jeyan Arthur Moses

Focuses on nonthermal processing and its applications in the food industry. This includes high-pressure processing, ultrasound processing, high intensity pulsed light technology, pulsed electric field processing, cold plasma, ozone processing, as well as the use of sub- and supercritical processing. It also discusses emerging electrohydrodynamic technologies: electrospinning and electrospraying. This volume provides rich content on fundamental concepts, applications, and challenges in nonthermal processing, throwing light on the scope of developing technologies for the food industry.

Emerging Technologies for the Food Industry
Volume 3: ICT Applications and Future Trends in Food Processing

Edited by C. Anandharamakrishnan, Jeyan Arthur Moses

Here is an exploration of the future of food processing, highlighting emerging and disruptive technologies and their gaining influence in the food sector. The first five chapters focus on computer and information technology-linked applications such as CFD modeling, robotics, automation, artificial intelligence, big data, the Internet of Things, cloud computing, and blockchain management for the food industry. The book then details selected concepts that have made phenomenal advancements in recent years.

Environmental Contaminants
Impact, Assessment, and Remediation

Edited by Pritam Ganguly, Jajati Mandal, Mariappan Paramisivam, Sandip Patra

Looks at the impact, assessment, and remediation of various environmental contaminants. It discusses the environmental changes that can occur due to arsenic, heavy metals, herbicides, fluorides, microplastics, chemical fertilizers contaminants; the remedial measures of these environmental contaminants; and how to analyze trace-level concentrations of contaminants. The book discusses methods of trace analysis for persistent pollutants, explores phytoremediation and green approaches for the removal of contaminants, looks at the role of nanotechnology on remediation of environmental contaminants, and considers agronomic intervention for mitigation of environmental pollutants.

Flavonoids as Nutraceuticals

Edited by Rajesh K. Kesharwani, Deepika Saini, Raj K. Keservani, Anil Kumar Sharma

Series: AAP Advances in Nutraceuticals

This new volume examines the growing use of flavonoids for prevention and treatment of diseases and discusses their beneficial mechanisms. Chapters in the volume address diverse themes, including their various uses, including as anti-aging tools, as anti-inflammatory agents, for treating pregnancy-induced disorders, as a promising tool to combat infection of Covid-19, etc. The book explores their specific therapeutic antiviral potentials, the gene expression by flavonoids, and the role of flavonoids in agriculture.
Food Byproducts Management and Their Utilization

Edited by Ricardo Gómez-García, Ana A. Vilas-Boas, Débora A. Campos, Maria Manuela Pintado, Cristóbal Noé Aguilar

Discusses how food byproducts can be value-added renewable sources with the application of novel biotechnologies that avoid hazardous chemicals. It explores the implications of valorizing food wastes and illustrates their value-added properties for industry. It explains the progress in bioresources processing for compound extraction and production, as well as the increasing interest of food ingredients development. Also looks at waste byproducts of various crops and their uses in the generation of health-benefiting bioactive compounds and discusses various biotechnological strategies to extract, produce, and recover bioactive compounds.

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Food Supplements and Dietary Fiber in Health and Disease

Edited by Bhushan R. Rane, Raj K. Keservani, Durgesh Singh, Nayan A. Gujarathi, Ashish S. Jain

Series: AAP Advances in Nutraceuticals

This new book provides informative introductions to dietary fibers and food supplements and their benefits in the prevention and treatment of health issues and diseases like diabetes, obesity, and after surgery. It also discusses the many current statutes and regulations addressing dietary ingredients, manufacturing standards, safety, labelling, and claims, to promote the safe use of dietary supplements and help to preserve continued consumer access. Chapters also study how some supplements may interact with medications used before.

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Foundation and Growth of Macromolecular Science

Advances in Research for Sustainable Development

Edited by Meegle S. Mathew, Józef T. Haponiuk, Sabu Thomas


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This new 3-volume set provides informative reviews on the physiology of sponges, cnidarians, round and flat worms, annelids, echinoderms, and crustaceans. Volume 1 looks at non-bilaterians (sponges, cnidarians, placozoans). The section on cnidarians covers biomineralization, the nervous system, and development. The biology of placozoans is described in depth including the role of neuropeptides in feeding. Volume 2 focuses on crustacea, and Volume 3 covers echinoderms and annelids.

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This new 3-volume set provides informative reviews on the physiology of sponges, cnidarians, round and flat worms, annelids, echinoderms, and crustaceans. Volumes 1 and 2 cover diverse physiological topics ranging from moulting, respiration, water balance, biomineralization, bioreceptors, and temperature regulation to the land adaptation of terrestrial crustaceans. The chapters are comprehensive and add new knowledge to crustacean biology. Volume 1 looks at non-bilaterians (sponges, cnidarians, placozoans). Echinoderms and annelids are covered in Volume 3.

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Frontiers in Invertebrate Physiology: A Collection of Reviews

Volume 3: Annelida and Echinodermata

Edited by Saber Saleuddin, Sally P. Leys, Robert D. Roer, Iain C. Wilkie

This new 3-volume set provides informative reviews on the physiology of sponges, cnidarians, round and flat worms, annelids, echinoderms, and crustaceans. Echinoderm and annelid physiology is discussed (neurobiology of locomotion in leeches, regeneration, reproduction) as is neuro-endocrine-immune response.

Handbook of Research on Artificial Intelligence and Soft Computing Techniques in Personalized Healthcare Services

Edited by Uma N. Dulhare, A. V. Senthil Kumar, Amit Dutta, Seddik Bri, Ibrahim M. M. El Emary

Series: AAP Advances in Artificial Intelligence and Robotics

Presents new applications in AI and soft computing for intelligent personalized healthcare. It looks at AI and soft computing techniques, applications, and algorithms, such as deep learning, robotics, machine learning, blockchain, emerging cloud, edge computing, Practical Byzantine Fault Tolerance Consensus, CNN architecture, Splunk, genetic algorithms, Diffusion, and more. It shows the uses of AI and computer techniques in healthcare for enhanced data sharing, remote health monitoring, tele-rehabilitation, connecting rural populations with healthcare services, identifying diseases and health issues, automated medical diagnosis, optimizing expenditures, etc.

Fungal Diseases of Rice and Their Management

Edited by Deepthi Srivastava, Md. Shamim, Malik Moeen Ahmad, R. S. Upadhyay

Examines the bacterial and fungal pathogens that can cause rice diseases and explores how to manage these diseases. It covers the environmental and economic impact of rice fungal diseases on global food security and delves into diagnostic methods for rice fungal pathogens, discussing both traditional and molecular techniques for detection, including biotechnology, bioinformatics tools, and biological methods for the effective management of rice fungal diseases.

Hematopoiesis

Biochemical, Cellular, Molecular, and Genomic Perspectives

Edited by Ravi Kumar Gutti

Series: Modern Trends in Molecular Biology

Discusses the widespread concerns of hematopoietic challenges in different and emerging ways, offering a comprehensive overview of the regulation of blood cell development, epigenetic mechanisms, and regulatory non-coding RNAs. It presents concepts related to regulation of hematopoietic stem cell development, as well as survival, proliferation, and differentiation. It also discusses the microenvironmental niche where stem cells exist and develop into distinct blood cell types. A model system used to study non-coding RNA functions and along with transformation of normal cells into cancer cell is elaborated on as well.

Green Nanomaterials in Energy Conversion and Storage Applications

Edited by Ishani Chakrabarty, Khalid Rehman Hakeem

Addresses the energy challenge by discussing the various aspects of design, exploitation, and applications of green nanomaterials in energy devices—for energy efficiency, energy conversion, energy storage, and energy saving. The book also addresses the limitations that currently exist and how green nanomaterials can be utilized as a future prospect towards a sustainable economy. The book emphasizes the importance and different modes of synthesis of nanomaterials, with detailed emphasis on green nanomaterials. Energy efficiency and environmental impact of the utilization of green nanomaterials as energy conversion devices are a major focus of the book.

Immune-Boosting Nutraceuticals for Better Human Health

Novel Applications

Edited by Urmila Jarouliya, Raj K. Keservani, Rajesh K. Kesharwani, Virendra K. Patel, Adi D. Bharti

Series: AAP Advances in Nutraceuticals

Discusses the contribution of immune-boosting properties of nutraceuticals and functional foods toward human health, exploring dietary antioxidants, vitamins, minerals, edible microalgae, herbs, phytonutrients, omega-3-fatty acids, and probiotics. It addresses the immune-boosting properties of herbs and vegetables and the pharmacological and therapeutic importance of commonly used medicinal herbs and carotenoids-containing vegetables and their immunological and biological actions for treating disease and maintaining health.
Incorporating AI Technology in the Service Sector
Innovations in Creating Knowledge, Improving Efficiency, and Elevating Quality of Life

Edited by Maria Jose Sousa, Subhendu Pani, Francesca dal Mas, Sérgio Sousa
Series: AAP Advances in Artificial Intelligence and Robotics

Examine in depth how AI innovation is creating knowledge, improving efficiency, and elevating quality of life for millions of people and how it applies to the service industry. It addresses advances, issues, and challenges of diverse service areas, including healthcare, mental health, finance, management, learning, and education, and others. The authors demonstrate how service practices can incorporate the subareas of AI, such as machine learning, deep learning, blockchain, big data, neural networks, etc.

Internet of Medical Things in Smart Healthcare
Post-COVID-19 Pandemic Scenario

Edited by Saravanan Krishnan, Aboobucker Ilmudeen

A comprehensive overview of modern technologies used for the improvement of healthcare, such as IoT, artificial intelligence, robotics, big data, and wearable devices used in healthcare applications, with a focus on the detection and treatment of COVID-19 and related viruses. It presents the principles, state-of-the-art developments, architectures, real-world applications, actual case studies, results of IoMT experiments and sensor-based systems, and more. It looks at AI in IoMT-based teledermatology, health monitoring, early COVID detection, chest x-ray images, data collection for decision-making, security of health information, and more.

Modern Magnetic Materials
Properties and Applications

Edited by Juliana Stoica, Ann Rose Abraham, A. K. Haghi

Discusses advanced topics in physics and magnetic materials science, covering basic physical concepts, experimental methods, and applications. Focusing on state-of-the-art magnetic materials, it discusses advanced treatment of materials that can hold a magnetic field and describes recent research developments in magnetic materials, including new developments in fabrication, characterization, applications, and more. It includes several novel case studies that illustrate the large diversity of technical applications and that demonstrate the benefits of the different processing methods for the development of magnetic materials and their properties.

Medical, Dental, and Wellness Tourism
A Post-Pandemic Perspective

Mary Schreiber Swenson, Amit Bansal
Series: Advances in Hospitality and Tourism

Offers a thorough and informative guide to medical travel and tourism for treatment of health-related issues. The book first defines medical, dental, and wellness tourism and travel for treatment and then goes on to look at the myriad issues involved, such as benefits and challenges of travel for treatment, how the COVID-19 pandemic has affected the treatment sectors in tourism, selecting the right destination and facility, ending your life in another country, the growing world of birth tourism, dental tourism, medical travel for second opinions, privacy and health data security and more.

Micronutrients and Macronutrients as Nutraceuticals

Edited by Prakash Chandra Gupta, Sayan Bhattacharyya, Nisha Sharma, Rajesh K. Keshrwani, Raj K. Keservani
Series: AAP Advances in Nutraceuticals

Explores in detail the beneficial properties of micronutrients and macronutrient, such as their antioxidant activity and immunity-stimulating properties. It demonstrates the roles of microbes and microbial products as nutraceuticals and discusses how micronutrients, macronutrients, and nutraceuticals can be incorporated into the human diet for optimum health, growth of beneficial bacteria in gut, and inhibition of pathogens. The authors emphasize that efficient nutrient delivery of micronutrients and macronutrient is necessary for maximum benefit and explain how to achieve that.

Mood Dysregulation
Beyond the Bipolar Spectrum

Deborah A. Deliyannides

Reflecting the author's vast clinical experience as a psychiatrist, it explains why so many people with treatment-resistant depression respond to medication used to treat individuals with bipolar disorder while helping to minimize the bipolar stigma by introducing the concept of "mood dysregulation." It aims to help mental health professionals and patients more accurately recognize negative mood symptoms, dysphoria in particular, and arrive at more appropriate interventions to improve treatment outcomes for depression.
Mycorrhizal Technology
Managing Plant Stress and Mitigating Climate Change Using Mycorrhizae

* Edited by Jayabal Sangeetha, Abdel Rahman Mohammad Al-Tawaha, Devarajan Thangadurai
* Delivers the remarkable theoretical and practical findings on the applications of mycorrhizal fungi in recovering plant health, in producing the mycorrhizal edible forest trees, and in conserving natural resources. It examines the recent research studies based on mycorrhizal technology that have explored the positive impact of root symbiosis on plant adaptation to climate-associated abiotic stressors, such as salinity, drought, flooding, and high temperatures. Also discusses the extensive commercial applications of mycorrhiza fungi in various industrial sectors including agriculture, horticulture, and biotechnology.

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January 2024: 304
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Nutraceuticals and Bone Health

* Edited by Deepak Sharma, Madan Mohan Gupta, Anil K. Sharma, Raj K. Keservani, Rajesh K. Kesharwani
* Series: AAP Advances in Nutraceuticals
* Presents scientific information on the importance of nutraceuticals and herbal remedies for bone health and the probable mechanisms of nutraceuticals in the prevention, treatment, and management of bone-related diseases as well as their curable effects on bone injuries. The volume explains the progression or development of bones, which is a multifaceted process that requires an endless and ample supply of nutrients, such as calcium, phosphorus, potassium, protein, vitamin D, magnesium, and fluoride.

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April 2024: 366
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Phytoremediation and Biofortification
Strategies for Sustainable Environmental and Health Management

* Edited by Nand K. Singh, Shadma Afzal, Tariq Aftab
* This volume offers a comprehensive overview of phytoremediation and biofortification as two strategies for sustainable environmental management. The book illustrates the emerging and innovative combination of these technologies, particularly highlighting phytoremediation and biofortification strategies that use nanotechnology; algae, fungi, and other plants; CRISPR/Cas9-mediated genome engineering; and more for decontamination of water and soil and for fortifying plants against climate change, toxic chemicals, and other challenges.

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Post-COVID Tourism and Hospitality Dynamics
Recovery, Revival, and Re-Start

* Edited by Umendra Narayan Shukla, Sharad Kumar Kulshreshtha
* Series: Advances in Hospitality and Tourism
* An in-depth look at the post-COVID tourism and hospitality scenario and how the industry is adapting to the new normal by sharing information and experiences on how diverse hospitality and tourism sectors are navigating the post-COVID era. The book offers post-COVID tourism sector recovery strategies and presents detailed analyses of post-COVID trends in the travel, tourism, and hospitality sector along with case studies from several countries of the world. Topics also cover post-COVID pandemic travel preferences, post-COVID safety protocols, sustainable tourism practices, post-COVID-19 public policies for tourism, specific tourism and hospitality sectors, and more.

Apple Academic Press
January 2024: 356
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Post-COVID Economy, Technology, and Innovation
Global Outlook and Context

* Edited by Samina Yaqoob, Arwa Abdulkreem Al-Huqail, Fakha Aziz
* Explores the impact of the pandemic on many aspects of life and work, including the global economy, entrepreneurship and innovation, intellectual property laws, agriculture, healthcare, teaching and education, marketing strategies, banking mechanisms, travel and tourism, and science and technology. The book looks at how the virus outbreak has highlighted and emphasized the role of technological innovation as an essential connector as international borders were shuttered and commercial activity was disturbed at an unprecedented scale.

Apple Academic Press
February 2024: 510
Hb: 978-1-774-91416-8
£139
ebook: 978-1-003-41407-0
* For full contents and more information, visit: www.routledge.com/9781774914168

Potent Anticancer Medicinal Plants
Secondary Metabolite Profiling, Active Ingredients, and Pharmacological Outcomes

* Edited by Deepu Pandita, Anu Pandita
* Provides a wealth of valuable information on the most vital plant genera and species that have potent anticancer activities, namely Garcinia indica, Centella asiatica Linn, Nigella sativa, Ocimum sanctum, Boswellia serrata Roxb, Catharanthus roseus, Withania somnifera, and Glycyrrhiza glabra. It provides knowledge of secondary metabolite profiling, active ingredients, modes of action, and pharmacological outcomes and discusses their potential of important anticancer plants at the global level.

Apple Academic Press
November 2023: 410
Hb: 978-1-774-91311-6
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ebook: 978-1-003-43119-0
* For full contents and more information, visit: www.routledge.com/9781774913116
The Internet of Energy
A Pragmatic Approach Towards Sustainable Development
Edited by Sheila Mahapatra, Mohan Krishna S., B. Chandra Sekhar, Saurav Raj
Discusses the automation of electricity infrastructures for energy producers, integrating the implementation of IoT technology for distributed energy systems to optimize energy efficiency and wastage. Provides efficient, clean, and safe solutions for interfacing internet technology with energy power grids for smart cities and smart transportation. Describes research on algorithms for the design and control of energy grids, investigations of thermal efficiency from solar, energy for smart buildings using IoT, deep learning for electrical load forecasting, hybrid ultracapacitors in solar microgrids, power loss reduction and voltage improvement.

The Rise and Fall of the Eagle
An Assessment of the Liberal World Order
Çagatay Özdemir
Tackles the foreign policy choices of the United States, which has dominated the international system and the "liberal world order" that it has sought to establish through its foreign policy. It addresses the hegemony debate in the international system on a realistic axis. It examines recent academic works of experts, primary resources including national security strategies of the US, national security policy documents, executive orders, archives of the White House, etc. It studies how and for what purpose the liberal world order was established, how it began, its connection with the US hegemony, and whether it has been successful so far.

The Role of Nutrition in Integral Health and Quality of Life
Interdisciplinary Perspectives and Recent Research
Edited by Jesús Alberto García-García, Julio Cufarán-López, Cristóbal Noé Aguilar
Explores important advances of the role played by nutrition in creating integral health. It focuses on the challenges arising due to sedentary lifestyle, diseases associated with food consumption, stress from pandemics, and social, economic, environmental, and cultural crises. The chapters present interdisciplinary research that offers outstanding and novel contributions in research studies of integral health and how health is affected by nutrition and its impact on the quality of life. Analysis of obesity and its dimensions, quality of life in adult patients with diabetes, the role of genetics and epigenetics in obesity, and its socioeconomic dimensions are discussed.
**Biomembranomics**

*Structure, Techniques, and Applications*

Edited by **Hongda Wang**

The membrane is a highly elaborate structure that undertakes many important biological activities, including material transport, signal transduction, energy transfer, and enzymatic reaction. This book introduces the concept of ‘omics’ into membranes and proposes the term ‘biomembranomics.’ It brings together the latest developments in structural analysis techniques of biomembranes, including single-molecule manipulation techniques, single-molecule fluorescence techniques, super-resolution fluorescence imaging, cryo-electron microscopy, mass spectrometry, molecular dynamics simulation, and hyphenated instrumental techniques.

Jenny Stanford Publishing

November 2023:132

* For full contents and more information, visit: www.routledge.com/9789814968973

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**Dengue Diagnostics**

*The Right Test at the Right Time for the Right Group*

Edited by **Shamala Devi Sekaran**

Diagnostics plays a vital role in identifying infectious diseases that have the potential to become an epidemic, such as dengue. Good diagnostics enables identifying the cause of an outbreak and assessing interventions for better impact. This book deals with most of the methods that have been used or developed for diagnosing dengue. It addresses the timeline for the evolution of the virus in the body, the body’s response from the onset of fever, and the role of diagnostics as time progresses. It covers most methods with some details given for selected protocols. The book attempts to compare the methods and assesses at which time point they are useful.

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February 2024:116

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**Blood Flow Restriction Training**

*Blood Flow Restriction Training*

Edited by **Manu Goyal, Aakansha Saraf, Kanu Goyal**

Strength training is a complex task calling for a comprehensive knowledge of the physiological basis of muscle contraction as well as the principles of strength training and the different methods used. This book overviews the physiology of muscular hypertrophy, preassessment while planning a rehabilitation regime, practical applications of blood flow restriction training (BFRT) in various clinical scenarios and their evidence, and future scope of BFRT in the health and fitness industry. The book discusses physiology of muscles and introduces BFRT along with its historical perspective as well as training methods and applications in various populations.

Jenny Stanford Publishing

January 2024:132

* For full contents and more information, visit: www.routledge.com/9789814968935

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**Electrophosphorescent Materials and Devices**

*Electrophosphorescent Materials and Devices*

Edited by **Mark Thompson**

Organic LEDs (OLEDs) in mobile displays have been in large-scale production for over a decade, and OLED-based televisions are rapidly gaining traction in the marketplace. OLEDs are on the verge of entering the solid-state lighting market in a big way. The OLED technology gives higher color purity and is more efficient than any of the competing technologies. When produced at scale, OLEDs are also economical. A key limitation in the development of OLEDs was the efficient conversion of all of the electrical energy put into the device into light.

Jenny Stanford Publishing

December 2023:112

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**Form vs. Work**

*A Major Antinomy of Music Theory and Analysis*

Edited by **Ildar D. Khannanov**

This book covers the events related to the binary opposition of form vs. work, that is, the interaction of formalists and integralists. It also presents the history and evolution of the Soviet music theory viewed from the standpoint of an insider. Russian and Soviet theorists approached the same urgent problems as their Western counterparts, including form vs. work. The Russian and Soviet traditions have always been very conservative. Quite paradoxically, reading the texts of the Russian music theory may allow us to restore, or at least to revisit, some valuable concepts and approaches that were abandoned during the revolutionary events in the Western music theory.

Jenny Stanford Publishing

February 2024:338

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**Lipid-Based Drug Delivery Systems**

*Principles and Applications*

Edited by **Bhupendra Prajapati, Jayvadan Patel**

This book appraises the role of lipid-based drug delivery systems (LBDDS) with respect to the bioavailability and controlled delivery of complex drug molecules for improving their clinical viability. It covers the latest developments and advancements in the field of drug delivery as well as explores and compiles information on the current situation of lipid-based formulations used as versatile excipients and all their possible routes to improve therapeutic benefits.

Jenny Stanford Publishing

December 2023:830

* For full contents and more information, visit: www.routledge.com/9789814968928
Nanotechnology and Drug Delivery
Principles and Applications

Edited by Rakesh K. Sindhu

This book presents an overview of the rapidly developing field of nanotechnology applications in drug delivery systems and covers a variety of technologies and materials that help in achieving vast variation in the particle size needed in technology and drug delivery-based research. The scope of the book extends from basic research in pharmaceutical sciences, chemistry, and biology, including computational work and simulations, through to the development of new targeted drug delivery system and technologies for applications in a wide range of sectors. It covers pharmaceutical-organic, inorganic, and hybrid materials and is an interdisciplinary book.

Natural Food Preservatives

Sourish Bhattacharya, Heba Hassan Abd-El Azim Salama

The book provides detailed information on the range of natural food preservatives with their applications in different product sectors. It provides knowledge about preservatives, such as bacteriocins and ε-polylysine, as well as their usage in achieving the right balance of safety, quality, and shelf-life for specific products. The book is a collection of the research and experiences of an international team of experts and is a valuable tool for all those who are related to the advancements and production of safe and healthy foods.

The Hip Joint
Modified Posterior Approach

K. Mohan Iyer

This book summarizes the lifetime work of Dr K. Mohan Iyer and is based on his research done at the University of Liverpool, UK, where he devised a "modified posterior approach to the hip joint" and has been following it from 1981 till today. The book discusses the anterior approach to the hip on a standard operating table, using a leg holder with a combined spinal anesthetic and general anesthetic. It studies total hip replacement as a day-case as an evolution in total hip replacement and presents the principles of anterior approach for total hip arthroplasty, including discussions on the choice of patients, superficial and deep dissection, and dedicated surgical instruments.
A Test of Morals

Climate Denial in American Politics

Climate Security

Coldwater Fisheries and Aquaculture

Management

Commercial Insects

Computational and Experimental Studies

in Alzheimer’s Disease

Computational Science and Its

Applications

Concepts in Smart Societies

Conservation Leadership

Cosmological Readings of Contemporary

Australian Literature

COVID-19 and Climate Change in BRICS

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Covid-19 and Global Inequalities

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Dynamics of the Tourism Industry

Eating in US National Parks

Ecology of Macrofungi

Ecology of Wild Bird Diseases

Electro-Micromachining and Microfabrication

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Emerging Technologies for the Food Industry

Emission Trajectories and Mitigation Schemes

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Energy, Environment and Geopolitics in

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Energy Conservation Guidebook

English Urban Commoners

Environmental Contaminants

Environmental Stressors and Inflammatory Tissues Responses

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Essential Oils

Ethics and the Practice of Forensic Science

Exploring Medical Biotechnology- in vivo, in vitro, in silico

Flavonoids as Nutraceuticals

Flavoromics

Filopods

Flood Risk and Community Resilience

Food Byproducts Management and Their Utilization

Food Justice in American Cities

Food Policy and Practice in Early Childhood

Education and Care

Food Rheology

Food Safety

Food Safety

Food Supplements and Dietary Fiber in

Health and Disease

Forensic Law Casebook

Forensic Science Laboratory Benchmarking

Form vs. Work

Foundation and Growth of Macromolecular Science

Frontiers in Invertebrate Physiology: A

Collection of Reviews

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Functional Foods

Fundamentals of Plant Pathology

Fungal Diseases of Rice and Their

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Future Autonomous Road Vehicles

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