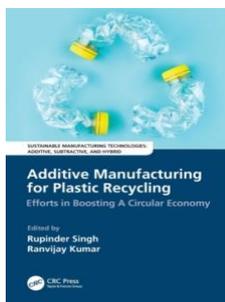


## Additive Manufacturing for Plastic Recycling: Efforts in Boosting Circular Economy



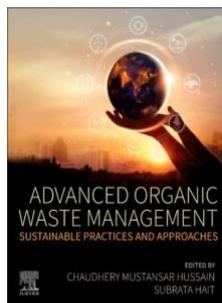
v pevné vazbě, 172 stran  
vyd. Taylor & Francis Ltd, V/2022  
ISBN 9781032026091

katalog.cena 3.160 Kč vč.DPH  
v této nabídce **2.370 Kč** vč.DPH

This book provides a comprehensive and up-to-date discussion of breakthroughs on additive manufacturing for plastic material recycling to boost a circular economy. It offers new ideas of combining/hybridizing processing methods that work as a source of information for manufacturers in making new and strategic product development plans. Additive Manufacturing for Plastic Recycling: Efforts in Boosting a Circular Economy provides a critical, comprehensive, methodological, and strong state-of-the-art work on the processing of thermoplastic and thermosetting along with new directions and applications.

It describes the common and hybrid approaches of recycling processes and includes theoretical and practical ideas of combining/hybridizing processing methods with the use of fused deposition modelling, which is one of the low-cost additive manufacturing techniques. The book also discusses mechanical twin-screw extrusion followed by case studies for developing hybrid composite structures for biomedical and structural applications. Recent innovations in melt processing for recycling and the fundamentals, process parameters investigations, and applications for new product development are also presented.

## Advanced Organic Waste Management: Sustainable Practices and Approaches



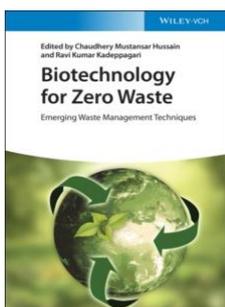
v měkké vazbě, 520 stran  
vyd. Elsevier, I/2022  
ISBN 9780323857925

katalog.cena 3.900 Kč vč.DPH  
v této nabídce **2.925 Kč** vč.DPH

Advanced Organic Waste Management: Sustainable Practices and Approaches provides an integrated holistic approach to the challenges associated with organic waste management, particularly related to sustainability, lifecycle assessment, emerging regulations, and novel approaches for resource and energy recovery. In addition to traditional techniques, such as anaerobic digestion, composting, innovative and emerging techniques of waste recycling like hydrothermal carbonization and vermicomposting are included. The book combines the fundamentals and practices of sustainable organic waste management with successful case studies from developed and developing countries, highlighting practical applications and challenges.

Sections cover global organic waste generation, encompassing sources and types, composition and characteristics, focus on technical aspects related to various resource recovery techniques like composting and vermicomposting, cover various waste-to-energy technologies, illustrate various environmental management tools for organic waste, present innovative organic waste management practices and strategies complemented by detailed case studies, introduce the circular bioeconomy approach, and more.

## Biotechnology for Zero Waste – Emerging Waste Management Techniques



v pevné vazbě, 624 stran  
vyd. Wiley, II/2022  
ISBN 9783527348985

katalog.cena 5.000 Kč vč.DPH  
v této nabídce **3.750 Kč** vč.DPH

Biotechnology for Zero Waste The use of biotechnology to minimize waste and maximize resource valorization In Biotechnology for Zero Waste: Emerging Waste Management Techniques, accomplished environmental researchers Drs. Chaudhery Mustansar Hussain and Ravi Kumar Kadeppagari deliver a robust exploration of the role of biotechnology in reducing waste and creating a zero-waste environment. The editors provide resources covering perspectives in waste management like anaerobic co-digestion, integrated biosystems, immobilized enzymes, zero waste biorefineries, microbial fuel cell technology, membrane bioreactors, nano biomaterials, and more.

Ideal for sustainability professionals, this book comprehensively sums up the state-of-the-art biotechnologies powering the latest advances in zero-waste strategies. The renowned contributors address topics like bioconversion and biotransformation and detail the concept of the circular economy. Biotechnology for Zero Waste effectively guides readers on the path to creating sustainable products from waste.

## Emerging Trends to Approaching Zero Waste



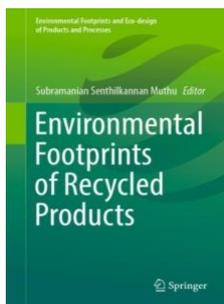
v měkké vazbě, 414 stran  
vyd. Elsevier, XII/2021  
ISBN 9780323854030

katalog.cena 3.640 Kč vč.DPH  
v této nabídce **2.730 Kč** vč.DPH

Emerging Trends to Approaching Zero Waste: Environmental and Social Perspectives thoroughly examines the impact of various technological innovations, current guidelines and social awareness on the reduction of waste, with the ultimate aim of achieving the zero-waste target. Insights in the book will help users adopt the best possible methodologies at grass-root levels and show how modern societal procedures are becoming sustainable, with a goal of zero waste. It comprehensively discusses the scientific contributions of the environmental and social sector, along with the tools and technologies available for achieving the zero-waste targets.

This book is the first step toward understanding state-of-the-art practices in making the zero-waste goal a reality. It will be especially beneficial to researchers, academics, upper-level students, waste managers, engineers and managers of industries researching or hoping to implement zero-waste techniques.

## Environmental Footprints of Recycled Products



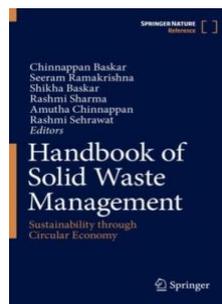
v pevné vazbě, 160 stran  
vyd. Springer, II/2022  
ISBN 9789811684258

katalog.cena 2.720 Kč vč.DPH  
v této nabídce **2.040 Kč** vč.DPH

Recycling is the need of the hour and it is an inevitable destination at the end of the life of any product. Today, recycling can happen at postindustrial and post-consumer states and the importance of recycled products in the market has gained significant importance. Recycled products dominate the array of sustainable products in today's context.

Even though there are commercial implications for recycling, one of the very important and obvious reasons to go for recycling and to have recycled products is to have the benefits on environmental sustainability. It is highly important to assess the environmental footprints of recycled products and further improve the environmental benefits of such recycled products. This book presents five interesting chapters pertaining to the environmental footprints of various recycled products.

## Handbook of Solid Waste Management: Sustainability through Circular Economy



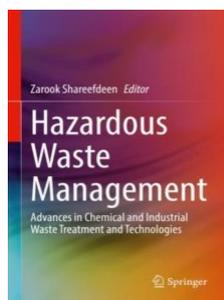
v pevné vazbě, 2.336 stran  
vyd. Springer, II/2022  
ISBN 9789811642296

katalog.cena 26.000 Kč vč.DPH  
v této nabídce **19.500 Kč** vč.DPH

The issue and finding the green solution of Solid Waste Management are important challenges throughout the world. This book explores cutting edge developments in Circular Economy and Sustainability on Solid Waste Management, current research perspectives, existing problems on solid waste management system, industrial development and the latest green methodology for in Solid Waste conversion and regenerate products and materials, environmental solutions, social awareness and development on solid waste management and the future perspectives of Circular Economy for industrial revolution 4.0 with the mission of green chemistry and engineering on solid waste management. It focuses on chapters from different researchers, faculty members, scientists and engineers, industrialist and experts from different countries working on the Circular Economy on Solid Waste Management.

It also features the importance of integration of multi-disciplinary research fields on Circular Economy for Sustainable Development. It provides latest development in and current research perspectives, technology development, and critical thinking and societal requirements and development on Circular Economy of Solid Waste Management to researchers, scientists, engineers, environmental managers, policy makers, and Experts of Energy Division of Government and Private Organization and Industries.

## Hazardous Waste Management

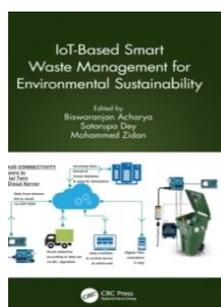


v pevné vazbě, 337 stran  
vyd. Springer, IV/2022  
ISBN 9783030952617

katalog.cena 3.560 Kč vč.DPH  
v této nabídce **2.670 Kč** vč.DPH

This book provides readers with the most current knowledge on hazardous waste management practices. It addresses the rapidly changing advances in waste stream characterization and the discovery of new chemicals - which have led to new hazardous wastes, technological innovation, stringent environmental regulations, changes in transport and dispersion modelling of hazardous pollutants, and new waste management techniques. Hazardous Waste Management: Advances in Chemical and Industrial Waste Treatment and Technologies is an invaluable reference for waste management and treatment professionals, chemical engineers and technicians, medical professionals, and environmental regulators, as well as students taking courses on hazardous waste management, environmental engineering, and environmental science.

## IoT-Based Smart Waste Management for Environmental Sustainability

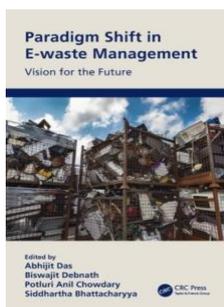


v pevné vazbě, 184 stran  
vyd. Taylor & Francis Ltd, VI/2022  
ISBN 9781032013916

katalog.cena 2.700 Kč vč.DPH  
v této nabídce **2.025 Kč** vč.DPH

This book consolidates and summarizes smart technologies like IoT, edge computing, and AI used in different aspects of waste material management, mitigation, and recycling for a sustainable environment. One of the cases explains how IoT-based systems and wireless sensors can be used to continuously detect common pollutants such as volatile organic compounds (VOCs), carbon monoxide, and particulate matter (PM) and how the data collected are used to assess the overall air quality and determine actions for improvements. A collection of practical case studies, this book provides a comprehensive knowledge in smart waste management to readers in universities, research centers, and industries.

## Paradigm Shift in E-Waste Management

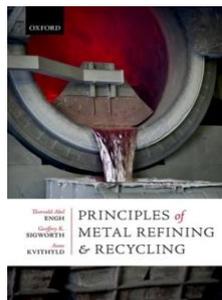


v pevné vazbě, 254 stran  
vyd. Taylor & Francis Ltd, IV/2022  
ISBN 9780367559854

katalog.cena 3.480 Kč vč.DPH  
v této nabídce **2.610 Kč** vč.DPH

Covers intricacies of e-waste management with an outlook towards checkpoint of sustainable development goals (SDGs) in 2025 Describes the global status of e-waste recycling and management with country-specific contributions Includes focus on policy tools such as EPR, ARF, policy gaps, and the informal sector activities Offers detailed information about advanced green and smart technologies for e-waste valorisation and management Explores urban mining, sustainability, and circular economic approaches

## Principles of Metal Refining and Recycling



v pevné vazbě, 784 stran  
vyd. Oxford University Press, V/2022  
ISBN 9780198811923

katalog.cena 2.680 Kč vč.DPH  
v této nabídce **2.010 Kč** vč.DPH

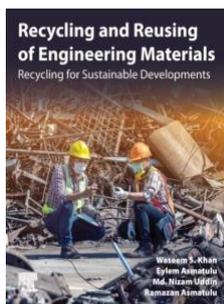
Principles of Metal Refining and Recycling provides a self-contained introduction to the field of purification and recycling of metals. The scientific principles in the treatment of the various metals are the same. The importance of using a clean and properly alloyed metal is described in detail.

The text covers thermodynamics, physical and transport properties, mixing, mass transfer and numerical models. It describes methods for removal of dissolved impurity elements, particles, and inclusions. It considers important aspects of the solidification process, remelting and adding of alloys.

Recycling, future challenges and specific processes for each metal are discussed in detail. The book is a greatly extended update of the 1992 book Principles of Metal Refining by T. Abel Engh.

It includes in particular the subjects of metal recycling, ferrous and non-ferrous metal refining, and metalloids like silicon.

## Recycling and Reusing of Engineering Materials



v měkké vazbě, 366 stran  
vyd. Elsevier Science Publishing,  
VI/2022  
ISBN 9780128224618

katalog.cena 5.540 Kč vč.DPH  
v této nabídce **4.155 Kč** vč.DPH

Recycling and Reusing of Engineering Materials: Recycling for Sustainable Developments covers the latest research and developments in recycling and reusing processes, including new fundamental concepts, techniques, methods and process flows. The book provides applications of these novel technologies to recycling processes and analyzes new and modern ways of recycling techniques. It provides a comprehensive literature review on fundamental aspects of recycling processes, recycling goals, characterization of waste streams, legislative policies and evaluation, electronic recycling, aircraft recycling, recycling processes, energy savings and issues, environmental issues, societal issues, recycled materials, market development for recycling, processing facilities, and awareness and importance of recycling safety.

The book is an indispensable reference for researchers in academia and industry. Scientists can use this book for literature reviews and experimental details, and the industry can use its comprehensive detail for literature reviews and to upgrade their processes and systems.

## Techno-Economics and Life Cycle Assessment of Bioreactors



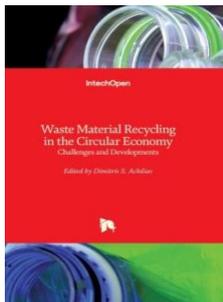
v měkké vazbě, 246 stran  
vyd. Elsevier, VI/2022  
ISBN 9780323898485

katalog.cena 4.920 Kč vč.DPH  
v této nabídce **3.690 Kč** vč.DPH

Techno-Economics and Life Cycle Assessment of Bioreactors: Post-Covid19 Waste Management Approach covers the emerging trends in bioreactor research, including techno-economics and life cycle assessment perspectives, both key considerations in making the anaerobic-digestion process technically feasible, economically viable and environmentally sustainable. The book is divided into three sections, with an introductory chapter on the impact of COVID-19 on existing practices of waste and resource management. Sections cover advances in bioreactor development for enhanced valorization of waste, the techno-economics of the different bioreactor systems, the life cycle assessment of bioreactors, their methodological challenges and future perspectives.

Providing a holistic overview of bioreactors and taking into account recent trends in their design, the chapters also highlight the advances needed to manage COVID-19 waste in a sustainable manner. With contributions from leading experts in bioreactor and life cycle assessment, this book will be an invaluable reference source for academics working on anaerobic digesters and energy sustainability, as well as for research and development professionals in the renewable energy industry, and scientists and engineers working on clean and efficient energy generation from wastes.

## Waste Material Recycling in Circular Economy

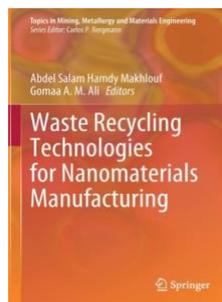


v pevné vazbě, 336 stran  
vyd. IntechOpen, II/2022  
ISBN 9781839696800

katalog.cena 4.400 Kč vč.DPH  
v této nabídce **3.300 Kč** vč.DPH

This book highlights current challenges and developments in waste material recycling in the framework of a circular economy. The increase in the standard of living has resulted in the large consumption of several materials, mainly polymers. Therefore the problem of waste recycling, specifically polymer recycling, in an environmentally friendly way is more urgent than ever. Nowadays, more specialized recycling methods are required to manage a wide variety of wastes. Over fourteen chapters in three sections, this book addresses such topics as chemical recycling techniques, recycling of polyethylene, denim production and recycling, valorization of waste materials, urban mining, the circular economy, and much more.

## Waste Recycling Technologies for Nanomaterials Manufacturing



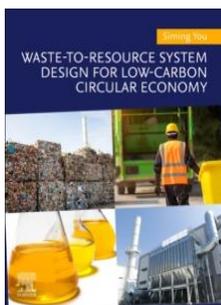
v měkké vazbě, 870 stran  
vyd. Springer, VI/2022  
ISBN 9783030680336

katalog.cena 4.100 Kč vč.DPH  
v této nabídce **3.075 Kč** vč.DPH

This book discusses the recent advances in the wastes recycling technologies to provide low-cost and alternative ways for nanomaterials production. It shows how carbon nanomaterials can be synthesized from different waste sources such as banana fibers, argan (*Argania spinosa*) seed shells, corn grains, camellia oleifera shell, sugar cane bagasse, oil palm (empty fruit bunches and leaves) and palm kernel shells. Several nanostructured metal oxides ( $MnO_2$ ,  $Co_3O_4$ , ...) can be synthesized via recycling of spent batteries.

The recovered nanomaterials can be applied in many applications including: Energy (supercapacitors, solar cells, etc.) water treatments (heavy metal ions and dyes removal) and other applications. Spent battery and agriculture waste are rich precursors for metals and carbon, respectively. The book also explores the various recycling techniques, agriculture waste recycling, batteries recycling, and different applications of the recycled materials.

## Waste-to-Resource System Design for Low-Carbon Circular Economy



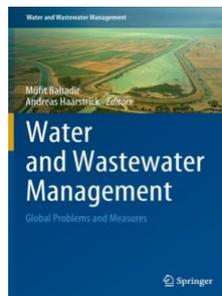
v měkké vazbě, 244 stran  
vyd. Elsevier, VII/2022  
ISBN 9780128226810

katalog.cena 5.220 Kč vč.DPH  
v této nabídce **3.915 Kč** vč.DPH

Waste-to-Resource System Design for Low-Carbon Circular Economy equips the user with the necessary knowledge to carry out the preliminary design and optimization of economically viable and environmentally friendly waste-to-resource systems. This book covers the state-of-the-art development of technologies and processes in terms of six types of bioresources (i.e. energy, biohydrogen, biomethane, bioethanol, biodiesel, and biochar) that are recoverable from waste.

The focused technologies and processes, such as anaerobic digestion, fermentation, pyrolysis, gasification, and transesterification are being widely applied-or have the potential to be used-towards sustainable waste management. It also covers the methods needed for the design and optimization of waste-to-resource systems, i.e., multiobjective optimization, cost-benefit analysis, and life cycle assessment, as well as systematic and representative databases on the parameters of the processes, costs, and the advantages and disadvantages of technologies. Finally, the book adopts a problem-based method to facilitate audiences to quickly gain the knowledge and skill of designing and optimizing waste-to-resource systems.

## Water and Wastewater Management



v pevné vazbě, 281 stran  
vyd. Springer, III/2022  
ISBN 9783030952877

katalog.cena 3.840 Kč vč.DPH  
v této nabídce **2.880 Kč** vč.DPH

This volume addresses the situation of water and wastewater management from a global angle, underpinned by selected case studies. Without doubt, water and wastewater management are among the greatest challenges of our century, and there is also no doubt that the challenges posed by climate change will become even greater. However, most efforts, especially in developing countries but also in the so-called developed countries, have been less than optimal or not optimal at all.

In particular, there are still too many people who have to live without clean water and decent sanitation. Today, 2.2 billion people lack access to safely managed drinking water and wastewater, and 4.2 billion people lack safely managed sanitation services. The question, why this is so and why in many cases in developing countries, is discussed in this book among other urgent water and wastewater management issues.

The publication of this book is the start of a book series that in more detail critically reviews, discusses, and analyzes the water and wastewater situation and management in different regions and countries worldwide.