Special Issue

Advancing Green Chemistry in Bio-Circular Economies: Sustainable Solutions for Waste Valorization and Resource Efficiency

Message from the Guest Editors

The Special Issue focuses on advancing green chemistry principles within the framework of bio-circular economies to address pressing global challenges such as environmental degradation, resource depletion, and climate change. It emphasizes the development of sustainable, resilient, and closed-loop systems that convert biological and waste materials into valuable bioproducts, thereby reducing reliance on finite resources and minimizing environmental pollution. The scope of the Special Issue encompasses a wide range of topics, including but not limited to, the following:

- Green chemistry approaches for waste valorization and resource efficiency.
- Conversion of agricultural, industrial, and food waste into high-value bioproducts
- Development of biodegradable plastics and functional biomaterials from renewable resources.
- Carbon capture, utilization, and storage (CCUS) technologies within bio-circular systems.
- Lignocellulosic biomass conversion to biofuels and biochemicals.
- Biocatalysis and green solvents for sustainable chemical manufacturing.
- Sustainable conversion of CO2 into biofuels and other value-added products.

Guest Editors

Dr. Ashish Kumar Nayak

Environmental Engineering Section, Department of Civil Engineering, Prasad V. Potluri Siddhartha Institute of Technology, Vijayawada 520007, Andhra Pradesh, India

Prof. Dr. Charu Arora

Department of Chemistry, Guru Ghasidas Vishwavidyalaya (A Central University), Bilaspur 495009, Chhattisgarh, India

Deadline for manuscript submissions

15 February 2026

Sustainability

an Open Access Journal by MDPI

Impact Factor 3.3
CiteScore 7.7

mdpi.com/si/230582

Sustainability
Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland
Tel: +41 61 683 77 34
sustainability@mdpi.com

mdpi.com/journal/sustainability

Sustainability

an Open Access Journal by MDPI

Impact Factor 3.3
CiteScore 7.7

mdpi.com/journal/sustainability

MDPI

About the Journal

Message from the Editor-in-Chief

I encourage you to contribute a research or comprehensive review article for consideration for publication in *Sustainability*, an international Open Access journal which provides an advanced forum for research findings in areas related to sustainability and sustainable development. *Sustainability* publishes original research articles, review articles and communications. I am confident you will find the journal contributes to enhancing understanding of sustainability and fostering initiatives and applications of sustainability-based measures and activities.

Editor-in-Chief

Prof. Dr. Marc A. Rosen
Faculty of Engineering and Applied Science, University of Ontario Institute of Technology, Oshawa, ON L1G 0C5, Canada

Author Benefits

Open Access:

free for readers, with article processing charges (APC) paid by authors or their institutions.

High Visibility:

indexed within Scopus, SCIE and SSCI (Web of Science), GEOBASE, GeoRef, Inspec, RePEc, CAPlus / SciFinder, and other databases.

Journal Rank:

JCR - Q2 (Environmental Studies) / CiteScore - Q1 (Geography, Planning and Development)