

Special Issue

Biomass Transformation and Sustainability

Message from the Guest Editors

The global energy and chemical vectors are undergoing rapid alteration to meet the incremental competition, social challenges, and the growing efforts for a safe, green, and sustainable future. The transition to new technologies, based on sustainable and renewable energy and chemical resources, represents a viable backbone of the future economic cycle. Compared to fossil-based resources, biomass has been a significant resource of energy, fuel and chemicals due to possessing a much shorter forming duration and reducing greenhouse gas emissions. Therefore, this Special Issue plans to give an overview of and provide selected contributions on advances in the sustainable approaches for biomass valorization and obtained product applications. Articles should cover, but are not limited to, the following topics related to biomass transformation:

- Biomass pretreatments
- Thermochemical conversion of biomass
- Biochemical conversion of biomass
- Chemical conversion of biomass
- Bio-based model components transformations
- Biochar and hydrochar modifications and applications
- Biomass derived carbon dots

Guest Editors

Prof. Dr. Michela Signoretto

Department of Molecular Sciences and Nano Systems, Università Ca' Foscari Venezia, and INSTM Consortium, Via Torino 155, 30172 Mestre Venezia, Italy

Dr. Somayeh Taghavi

1. Applied Chemistry, Faculty of Chemistry, University of Mazandaran, 47416-95447 Babolsar, Iran

2. Department of Molecular Sciences and Nano Systems, Ca' Foscari University of Venice, Via Torino 155, 30172 Mestre Venezia, Italy

Deadline for manuscript submissions

closed (15 December 2025)



Sustainability

an Open Access Journal
by MDPI

Impact Factor 3.3
CiteScore 7.7



mdpi.com/si/161228

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

[mdpi.com/journal/
sustainability](https://mdpi.com/journal/sustainability)





Sustainability

an Open Access Journal
by MDPI

Impact Factor 3.3
CiteScore 7.7



[mdpi.com/journal/
sustainability](https://mdpi.com/journal/sustainability)



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. The journal publishes original research articles, reviews, conference proceedings (peer reviewed full 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. Steve W. Lyon

School of Environment and Natural Resources, Ohio State University,
Columbus, OH 43210, USA

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)