

Special Issue

The Role of Biomass Energy in Renewable and Sustainable Energy: Advanced Technologies, Challenges and Prospects

Message from the Guest Editors

The urgent global imperative for decarbonization and achieving net-zero emissions demands a rapid transition towards robust renewable and sustainable energy. The demand for sustainable energy in industries (e.g., industrial heating, energy supply), and transportation (e.g., urban transportation, shipping and aviation) has been gradually increasing in recent years. Within this critical landscape, biomass energy stands as a versatile and indispensable component, offering a unique pathway for carbon management, energy security, and fostering a circular bioeconomy. Potential research areas of this Special Issue include the following:

- Advanced thermochemical technologies for converting biomass into energy products
- Advanced biochemical technologies for converting biomass into energy products
- Integrated biorefining approaches of biomass
- Production of gaseous/solid biofuels for industrial and transportation
- Life cycle assessment of sustainable biomass conversion processes
- Simulation and prediction of sustainable biomass conversion processes

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Deadline for manuscript submissions

31 July 2026



Sustainability

an Open Access Journal
by MDPI

Impact Factor 3.3
CiteScore 8.9



mdpi.com/si/249233

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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

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