

## 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

### Guest Editors

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### Deadline for manuscript submissions

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### Editor-in-Chief

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