

## Special Issue

# Sustaining the Waste-Energy Nexus: Thermal and Biochemical Pathways for Bioenergy and Waste-to-Product Valorization in Municipal and Industrial Streams

### Message from the Guest Editors

This Special Issue focuses on advancing sustainable waste-to-energy conversion through thermal (e.g., gasification, pyrolysis) and biochemical (e.g., anaerobic digestion, fermentation) pathways for municipal and industrial waste streams. The scope encompasses:

- a) **Focus:** Innovative technologies for bioenergy production and waste valorization into marketable products (e.g., biofuels, chemicals, materials).
- b) **Scope:** Integration of circular economy principles in waste management, life cycle assessments, policy frameworks, and cross-sectoral applications (municipal/industrial).
- c) **Purpose:** To bridge knowledge gaps in scalable waste valorization systems that balance energy recovery, environmental impact, and economic viability.

The issue supplements existing literature by compiling cutting-edge research on integrated waste-energy nexus solutions, addressing scalability challenges often overlooked in fragmented studies. It provides a platform for interdisciplinary research that connects engineering innovations with sustainability metrics, thereby advancing the UN Sustainable Development Goals (SDGs 7, 11, 12).

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### Deadline for manuscript submissions

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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.

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### Editor-in-Chief

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