Special Issue

Emerging Technologies and Sustainability Assessment for Waste Biomass to Energy

Message from the Guest Editors

With the aim of mitigating climate change, converting waste biomass into energy is considered an essential part of the circular bioeconomy and the decarbonization of energy systems. Emerging technologies such as advanced thermochemical and biochemical processes, as well as hybrid and integrated systems, provide new methods for valorizing a variety of biogenic waste streams. However, their development and implementation require comprehensive sustainability assessments that encompass environmental, economic, and social impacts. This is a fundamental aspect needed to increase technical and social awareness and to foster the implementation beyond the research level. This Special Issue seeks original research and literature reviews on emerging technologies for converting waste biomass to energy, combined with thorough sustainability assessments, emphasizing prospective Life Cycle Assessment (LCA) and Social Life Cycle Assessment (S-LCA) studies. Contributions that merge technology development with the early-stage evaluation of potential life cycle impacts are particularly welcome.

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Message from the Editor-in-Chief

Energies is an international, open access journal in energy engineering and research. The journal publishes original papers, review articles, technical notes, and letters. Authors are encouraged to submit manuscripts which bridge the gaps between research, development and implementation. The journal provides a forum for information on research, innovation, and demonstration in the areas of energy conversion and conservation, the optimal use of energy resources, optimization of energy processes, mitigation of environmental pollutants, and sustainable energy systems.

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