Special Issue

Recent Advances in Biomass Energy Torrefaction, Pyrolysis and Gasification Technologies

Message from the Guest Editor

Biomass as a feedstock has huge potential to replace fossil fuels and it should reduce greenhouse gas emissions. Recently, the world's main problem is that CO2 emissions are rising every year, and bioenergy has become the fourth largest primary energy source after oil, coal, and natural gas, and is proven to be very advantageous. Biomass torrefaction is a thermochemical process that treats biomass at 200–350 ^{0}C. It is carried out under atmospheric conditions and in the absence of oxygen. During the process, the water contained in the biomass as well as superfluous volatiles are removed, and the biopolymers partly decompose, releasing various types of volatiles. By using thermochemical conversion of biomass feedstocks, it is possible to upgrade biomass feedstocks through the use of different types of valorization techniques. This Special Issue will focus on different biomass torrefaction processes and their applications in low-carbon demand industries for the production of carbonized solid biofuels, biochar as an additive for organize fertilizers, biosorbents' production for chemical industry, and thermochemical process production.

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Deadline for manuscript submissions

24 April 2026

Energies

an Open Access Journal by MDPI

Impact Factor 3.2
CiteScore 7.3

mdpi.com/si/201836

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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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