Special Issue

Prospects for Biomass Pyrolysis and Gasification Technologies into Bioenergy

Message from the Guest Editor

The effective use of biomass for energy purposes is part of the extensive scientific research aimed at minimizing the carbon footprint. Promising technologies for the thermal processing of biomass that are still being developed include pyrolysis and gasification processes. The thermal processing of waste biomass not only reduces its storage but also, above all, enables the use of the energy potential contained in it. Improving the gasification and pyrolysis processes requires conducting experimental and numerical research. One of the most important research priorities is to increase the efficiency of gasification as well as pyrolysis processes and to improve the quality of the obtained products. It is therefore necessary to conduct gasification and pyrolysis investigations, including on the following:

- Various types of biomass (also contaminated) and their fragmentation.
- Influence of temperature, pressure, atmosphere, and residence time of vapors as well as reagents in the reactor.
- New ways of using products for energy.
- Use of various types of catalysts.
- Kinetic and thermodynamic analyses of processes.
- Issues with emission reductions through CO2 capture, and many others.

Guest Editor

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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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