Special Issue

Recent Advances in Biomass Energy Utilization and Conversion

Message from the Guest Editor

Only through the valorization of renewable carbon sources will it be possible to achieve a high-impact transition from a fossil-based system to a renewable-based one. In particular, biomass is the only renewable source containing carbon atoms capable of replacing fuels, chemicals, and materials. In recent years, scientific research has focused less on biomass valorization for energy production (thermal or electrical). This shift occurred due to the lower economic appeal of biomass as an energy source compared to other renewable sources (e.g., solar, wind, geothermal, etc.). Conversely, attention has shifted towards biomass valorization for the production of high-added-value compounds and drop-in fuels, often through the integration of bioresources and green hydrogen from variable renewable energy sources. Thermochemical, biochemical/biological, and chemical catalyzed conversion processes have to be deepened in terms of integration opportunities, carbon conversion increasing, and from both economic and environmental performance points of view. This Special Issue brings together leading publications that highlight this scientific transition process.

Guest Editor

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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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