Special Issue

Sustainable Biofuels for Carbon Neutrality: Progress, Challenges, and Prospects

Message from the Guest Editor

Sustainable biofuels play a major role in climate mitigation since they can lower net emissions across sectors that struggle to electrify. This Special Issue invites studies that show how advanced biofuels contribute to carbon neutrality through measurable gains in conversion efficiency, improved feedstock use, and realistic deployment pathways. Submissions may rely on laboratory experiments, pilot-scale trials, modelling, or comparative assessments. Review papers with a clear research question are encouraged. The goal is to identify gaps that limit the wide deployment of sustainable fuels. Topics of interest for publication include, but are not limited to, the following:

- Sustainable biofuels for carbon neutrality;
- Advanced conversion pathways in biofuel production;
- Low-carbon supply chains for biomass;
- Waste- and residue-based feedstocks;
- Algal and microbial fuel systems;
- Thermochemical routes for renewable fuels;
- Integration of biofuels in the aviation and maritime sectors;
- Techno-economic evaluation of biofuel processes;
- Environmental and social impacts of biofuel expansion;
- Policy frameworks that support sustainable fuel markets.

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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