

Special Issue

Sustainable Biofuels: Opportunities and Challenges

Message from the Guest Editor

The global push to decarbonize energy systems spotlights sustainable biofuels—renewable, biomass - derived carriers critical for reducing fossil dependence in hard - to - electrify sectors (aviation, shipping). This Special Issue “*Sustainable Biofuels: Opportunities and Challenges*” highlights cutting - edge advances and challenges in sustainable production, upgrading, and deployment, emphasizing circularity, carbon neutrality, and tech integration.

Guided by two pillars:

- **Conversion/upgrading** ☒ Thermochemical (pyrolysis, gasification) & biochemical (fermentation) pathways, plus catalytic strategies (hydrotreatment, renewable H₂).
- **System - level assessments** ☒ LCA, TEA, and policy evaluation to ensure sustainability, scalability, and infrastructure fit.

Aiming to bridge materials science, engineering, and policy, the Issue links research to real - world impact. We invite original articles, reviews from researchers, experts, and policymakers to drive biofuel innovation for climate/energy goals.

Guest Editor

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Message from the Editor-in-Chief

I encourage you to contribute a research or comprehensive review article for consideration for publication in *Sustainability*, an international Open Access journal which provides an advanced forum for research findings in areas related to sustainability and sustainable development. *Sustainability* publishes original research articles, review articles and communications. I am confident you will find the journal contributes to enhancing understanding of sustainability and fostering initiatives and applications of sustainability-based measures and activities.

Editor-in-Chief

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