

## Special Issue

# Advancements in Biomass-to-Biofuel Conversion Technologies: Process Optimization, Efficiency and Sustainability

### Message from the Guest Editors

This Special Issue seeks to highlight the latest advancements and emerging technologies in the conversion of biomass into biofuels, with an emphasis on improving process efficiency, optimization and sustainability. Globally, there is a growing demand for greener alternatives to fossil energy; in this context, biofuels present a promising solution. This Special Issue includes bioenergy topics such as advances in thermochemical and biochemical conversion methods, sustainable novel catalysts, process optimization and the integration of sustainable practices in biomass utilization. Research exploring interdisciplinary approaches combining engineering, environmental science, and policy development is particularly encouraged. This Special Issue serves as a dedicated communication platform to enable authors to reach a global audience of scholars and practitioners. Authors are encouraged to contribute to the wider conversation on sustainable energy solutions. We invite you to submit your research work and help shape the future of bioenergy research, driving progress toward a more sustainable and energy-efficient world. We look forward to your valuable contributions!

### Guest Editors

Dr. Ernesto Hernandez

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### Deadline for manuscript submissions

20 October 2025



## Applied Sciences

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## About the Journal

### Message from the Editor-in-Chief

As the world of science becomes ever more specialized, researchers may lose themselves in the deep forest of the ever increasing number of subfields being created. This open access journal Applied Sciences has been started to link these subfields, so researchers can cut through the forest and see the surrounding, or quite distant fields and subfields to help develop his/her own research even further with the aid of this multi-dimensional network.

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### Editor-in-Chief

Prof. Dr. Giulio Nicola Cerullo  
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