

Special Issue

Advances in Bio-Energy: Biofuel and Other Value-Added Bioproducts, Production Technology, and Environmental Impact Systems Components

Message from the Guest Editors

Due to climate change, sustainable fuel alternatives must be found and developed in order to mitigate the adverse environmental impact of anthropogenic activities and preserve ecosystems. One promising alternative involves the production of bioproducts with a high market value via the use of renewable resources, such as the production of biofuels and chemical commodities. In this context, the valorization of residual biomasses plays a key role in transitioning from a fossil-based carbon economy to a green energy economy, leading to a simultaneous reduction in pollutants and greenhouse gas emissions. Nevertheless, several bottlenecks during the production, scale-up and commercialization of the targeted biofuels/bioproducts need to be addressed, as well as their environmental and social impact. This Special Issue aims to provide an overview of recent advancements in the production, commercialization, development and optimization of this technology, as well as the social, economic, environmental and technical challenges associated with biofuels, chemical commodities, and bioproducts, considering their industrial scale-up and the development of legislation.

Guest Editors

Dr. Carlos Saul Osorio-González

Soil and Agri-Food Engineering Department, Laval University, Quebec, QC G1V 0A6, Canada

Dr. Antonio Avalos Ramirez

Centre National en Électrochimie et Technologies Environnementales-CNETE, Shawinigan, QC G9N 6V8, Canada

Deadline for manuscript submissions

closed (25 February 2026)



Energies

an Open Access Journal
by MDPI

Impact Factor 3.9
CiteScore 8.3



mdpi.com/si/232129

Energies
Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland
Tel: +41 61 683 77 34
energies@mdpi.com

[mdpi.com/journal/
energies](https://mdpi.com/journal/energies)





Energies

an Open Access Journal
by MDPI

Impact Factor 3.9
CiteScore 8.3



[mdpi.com/journal/
energies](https://mdpi.com/journal/energies)



About the Journal

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.

Editor-in-Chief

Prof. Dr. Enrico Sciubba
Department of Mechanical and Industrial Engineering, University
Niccolò Cusano, 00166 Roma, Italy

Author Benefits

Open Access:

free for readers, with article processing charges (APC) paid by authors or their institutions.

High Visibility:

indexed within Scopus, SCIE (Web of Science), Ei Compendex, RePEc, Inspec, CAPlus / SciFinder, and other databases.

Journal Rank:

CiteScore - Q1 (Control and Optimization)