Special Issue

The Sustainability of Energy Production from Biomass and Biofuel Technologies

Message from the Guest Editor

As global challenges related to climate change and environmental sustainability intensify, the need for innovative biological solutions is more urgent than ever. Biological CO2 conversion, along with advances in microorganism cultivation and bioreactor technologies, offers promising pathways to reduce greenhouse gas emissions and produce valuable substances for various industrial applications. Breakthroughs in large-scale cultivation, photocatalysis, and bioprocess optimization present new opportunities for scaling sustainable production systems. This Special Issue will highlight the latest research on biological CO2 conversion, sustainable bioprocesses, and the production of highvalue substances through biotechnology. We invite contributions exploring novel approaches and techniques across applications, including environmental management, bio-based products, and bioreactor optimization. Topics of interest include CO2 conversion, microorganisms in biotechnology, photocatalysis, and bioreactor integration with renewable energy. This Special Issue will provide a platform to share innovative research and sustainable industrial solutions.

Guest Editor

Dr. Byung Sun Yu

Department of Microbiology, College of Bio-Convergence, Dankook University, Cheonan 31116, Republic of Korea

Deadline for manuscript submissions

25 March 2026



Energies

an Open Access Journal by MDPI

Impact Factor 3.2 CiteScore 7.3



mdpi.com/si/220372

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

mdpi.com/journal/ energies





Energies

an Open Access Journal by MDPI

Impact Factor 3.2 CiteScore 7.3



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)

