

Special Issue

Innovative Bioreactor Design and Advanced Optimization Strategies for Biorefineries and Bioprocessing

Message from the Guest Editors

Bioreactors are increasingly essential for various industries such as pharmaceuticals, food and beverages, agriculture, environmental remediation, and bioenergy. In biorefineries, where multiple products are derived from biomass and wastes, integrated bioreactor systems are indispensable. Furthermore, the integration of downstream processing units enhances product purification and recovery. Beyond technical advancements in bioreactors, ensuring their economic and environmental sustainability is of paramount importance. In this context, the aim of this Special Issue is to attract high-quality original research contributions and review articles in the field of “Innovative Bioreactor Design and Advanced Optimization Strategies for Biorefineries and Bioprocessing”.

- bioreactor
- photobioreactor
- fermentation
- biorefinery
- bioprocessing
- microbial production
- monitoring and control
- mathematical modeling and simulation
- techno-economic assessment
- life cycle analysis

Guest Editors

Dr. Giannis Penloglou

Chemical Process and Energy Resources Institute—CPERI/LPRE,
Centre for Research and Technology Hellas—CERTH, Thessaloniki
57001, Greece

Dr. Alexandros Pavlou

Chemical Process and Energy Resources Institute—CPERI/LPRE,
Centre for Research and Technology Hellas—CERTH, Thessaloniki
57001, Greece

Deadline for manuscript submissions

30 November 2025



Processes

an Open Access Journal
by MDPI

Impact Factor 2.8
CiteScore 5.5



mdpi.com/si/200989

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

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





Processes

an Open Access Journal
by MDPI

Impact Factor 2.8
CiteScore 5.5



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



About the Journal

Message from the Editor-in-Chief

You are invited to contribute either a research article or a comprehensive review for consideration and publication in *Processes* (ISSN 2227-9717). *Processes* is published in open access format – research articles, reviews, and other content are released on the internet immediately after acceptance. The scientific community and the general public have unlimited, free access to the content. As an open access journal, *Processes* is supported by the authors and their institutes through the payment of article processing charges (APCs) for accepted papers. We would be pleased to welcome you as one of our authors.

Editor-in-Chief

Prof. Dr. Giancarlo Cravotto

Department of Drug Science and Technology, University of Turin, Via P. Giuria 9, 10125 Turin, 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, Inspec, AGRIS, and other databases.

Journal Rank:

CiteScore - Q2 (Chemical Engineering (miscellaneous))