Special Issue

Strategies for Microbial Bioprocess Optimization

Message from the Guest Editor

This Special Issue particularly welcomes reviews and original research papers that explore the use of metabolic engineering for the bioproduction of valueadded compounds, biofuels, or bio-energy using renewable feedstocks and waste streams. Themes to be addressed may include but are not limited to the following areas: -Strain engineering for efficient utilization of diverse feedstocks, including C1 substrates, agro-industrial feedstocks, and waste streams. -Adaptive laboratory evolution. - Application of metabolic modeling approaches, such as kinetic modeling or genome-scale metabolic modeling, to optimize substrate utilization. -Machine-learning based methods to enhance carbon utilization and bioprocess optimization. -Synthetic and natural microbial communities. -Life cycle assessment and technoeconomic analysis to evaluate the environmental and economic sustainability of engineered microbial systems.

Guest Editor

Dr. Razieh Rafieenia Department of Bioenegnieering, Imperial College London, London SW7 2AZ, UK

Deadline for manuscript submissions

30 September 2025



Bioengineering

an Open Access Journal by MDPI

Impact Factor 3.7 CiteScore 5.3 Indexed in PubMed



mdpi.com/si/238704

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

mdpi.com/journal/ bioengineering





Bioengineering

an Open Access Journal by MDPI

Impact Factor 3.7 CiteScore 5.3 Indexed in PubMed





About the Journal

Message from the Editor-in-Chief

You are invited to contribute a research article or a comprehensive review for consideration and publication in *Bioengineering* (ISSN 2306-5354). *Bioengineering* is published in open access format – research articles, reviews and other contents are released on the Internet immediately after acceptance. The scientific community and the general public have unlimited and free access to the content as soon as it is published. *Bioengineering* provides an advanced forum for the science and technology of bioengineering. We would be pleased to welcome you as one of our authors.

Editor-in-Chief

Prof. Dr. Anthony Guiseppi-Elie Department of Biomedical Engineering, Texas A&M University, College Station, TX 77843, USA

Author Benefits

High Visibility:

indexed within Scopus, SCIE (Web of Science), PubMed, PMC, CAPlus / SciFinder, Inspec, and other databases.

Journal Rank:

JCR - Q2 (Engineering, Biomedical) Rapid Publication: manuscripts are peer-reviewed and a first decision is provided to authors approximately 19.2 days after submission; acceptance to publication is undertaken in 3.3 days (median values for papers published in this journal in the first half of 2025).

Recognition of Reviewers:

reviewers who provide timely, thorough peer-review reports receive vouchers entitling them to a discount on the APC of their next publication in any MDPI journal, in appreciation of the work done.