

Special Issue

Resource Utilization of Microorganisms: Fermentation and Biosynthesis

Message from the Guest Editor

Microorganisms serve as pivotal biocatalysts in sustainable biomanufacturing, driving innovations in resource efficiency and economic viability. This Special Issue explores cutting-edge advances in microbial resource utilization, fermentation optimization, synthetic biology, and sustainability utilization to enhance biosynthesis pathways for high-value products. This Special Issue focuses on maximizing the resource potential of industrial microorganisms through integrated approaches in fermentation and biosynthesis. Studies on fermentation process engineering, covering nutrient formulation, bioreactor operations, and environmental control will be featured. Additionally, we seek papers exploring advances in strain improvement using synthetic biology tools for producing enzymes, therapeutics, and natural compounds, including metabolic engineering, chassis cell design, heterologous expression systems, and cell-free biosynthesis. Research on circular bioeconomy strategies, such as microbial waste recycling and clean production technologies, is also welcomed.

Guest Editor

Prof. Dr. Shoushuai Feng

The Key Laboratory of Industrial Biotechnology, Ministry of Education,
School of Biotechnology, Jiangnan University, Wuxi 214000, China

Deadline for manuscript submissions

31 December 2025



Microorganisms

an Open Access Journal
by MDPI

Impact Factor 4.2

CiteScore 7.7

Indexed in PubMed



mdpi.com/si/244695

Microorganisms

Editorial Office

MDPI, Grosspeteranlage 5

4052 Basel, Switzerland

Tel: +41 61 683 77 34

microorganisms@mdpi.com

mdpi.com/journal/

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





Microorganisms

an Open Access Journal
by MDPI

Impact Factor 4.2
CiteScore 7.7
Indexed in PubMed



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



About the Journal

Message from the Editor-in-Chief

"Microorganism" merges the idea of the very small with the idea of the evolving reproducing organism is a unifying principle for the discipline of microbiology. Our journal recognizes the broadly diverse yet connected nature of microorganisms and provides an advanced publishing forum for original articles from scientists involved in high-quality basic and applied research on any prokaryotic or eukaryotic microorganism, and for research on the ecology, genomics and evolution of microbial communities as well as that exploring cultured microorganisms in the laboratory.

Editor-in-Chief

Dr. Nico Jehmlich

Department of Molecular Toxicology, UFZ-Helmholtz Centre for
Environmental Research, 04318 Leipzig, Germany

Author Benefits

High Visibility:

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

Journal Rank:

JCR - Q2 (Microbiology) / CiteScore - Q1 (Microbiology (medical))

Rapid Publication:

manuscripts are peer-reviewed and a first decision is provided to authors approximately 15.2 days after submission; acceptance to publication is undertaken in 2.9 days (median values for papers published in this journal in the first half of 2025).