Special Issue

Advances in Microbial Synthetic Biology

Message from the Guest Editor

This Special Issue aims to highlight recent breakthroughs and innovative approaches in microbial synthetic biology. We welcome original research, reviews, and perspectives on:

- Genetic design and engineering: Novel genetic designs for precise gene expression control;
- Metabolic pathway engineering: Optimizing microbial pathways for producing biofuels, pharmaceuticals, and valuable chemicals;
- Synthetic genomics: Advances in creating engineered microorganisms with targeted functions;
- Microbial consortia: Engineering consortia for bioremediation, nutrient cycling, and industrial processes;
- Tools and technologies: New tools like CRISPR-based genome editing and high-throughput screening;
- Biosensors and diagnostics: Developing microbial biosensors for environmental monitoring and disease diagnosis;
- Medical applications: Engineering microorganisms for drug delivery, microbiome modulation, and biopharmaceuticals;
- Environmental and agricultural applications: Addressing pollution and waste management, enhancing agricultural productivity and sustainability.

Guest Editor

Prof. Dr. Hailong Wang

State Key Laboratory of Microbial Technology, Institute of Microbial Technology, Shandong University, Qingdao 266000, China

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

mdpi.com/journal/microorganisms

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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

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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).

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