Special Issue

Microbial Metabolism and Application in Biodegradation

Message from the Guest Editor

Microbial metabolism is fundamental to biodegradation, the process by which microorganisms break down complex organic compounds into simpler forms. This metabolic activity holds immense importance across various domains, particularly in environmental remediation. By harnessing microbial metabolic capabilities, biodegradation offers a sustainable and cost-effective solution for mitigating pollution and restoring ecosystems. Microbes play a crucial role in cleaning up pollutants, such as oil spills, industrial waste, and agricultural runoff, transforming them into less harmful substances. This process aids in environmental cleanup efforts, safeguarding ecosystems and human health. Microbial metabolism is integral to biodegradation processes with diverse applications spanning environmental remediation, waste management, bioenergy production, pharmaceuticals, biotechnology, and agriculture. Understanding and harnessing microbial metabolic pathways offer innovative solutions for addressing environmental challenges and advancing sustainable development goals.

Guest Editor

Dr. Ronnie Lubbers

Molecular Microbiology and Biotechnology, Institute of Biology, Leiden University, Leiden, The Netherlands

Deadline for manuscript submissions

31 August 2025



Microorganisms

an Open Access Journal by MDPI

Impact Factor 4.2 CiteScore 7.7 Indexed in PubMed



mdpi.com/si/202395

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

mdpi.com/journal/microorganisms





Microorganisms

an Open Access Journal by MDPI

Impact Factor 4.2 CiteScore 7.7 Indexed in PubMed



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).

