Special Issue

Advances in Microbiologically Influenced Corrosion: Mechanisms, Microbial Communities, Early Detection and Control Strategies

Message from the Guest Editors

Microbiologically influenced corrosion, a complex phenomenon involving the interaction between microorganisms and metal surfaces, poses significant challenges to the infrastructure and equipment in the oil and gas industries, mining, marine engineering, civil engineering, and medical devices. This Special Issue invites original research articles, reviews, and contributions that span a range of topics, including (but not limited to) the following:

- Microbial corrosion mechanisms: Investigations into the diverse mechanisms by which microorganisms induce and accelerate corrosion, considering factors such as biofilm formation, metabolic byproducts, and electrochemical interactions;
- Microbial communities in corrosive environments: Studies exploring the composition and dynamics of microbial communities and biofilms in environments prone to corrosion, highlighting the role of specific microorganisms in corrosive processes;
- Biocorrosion control strategies: The development of novel strategies for mitigating microbiologically influenced corrosion, encompassing biocides, protective coatings, and materials engineering.

Guest Editors

Dr. Yingchao Li

Beijing Key Laboratory of Failure, Corrosion and Protection of Oil/Gas Facility Materials, College of New Energy and Materials, China University of Petroleum-Beijing, 18 Fuxue Road, Beijing 102249, China

Dr. Laura L. Machuca

TECHT, Technology Park, 2/11 Brodie Hall Drive, Bentley, WA 6102, Australia

Deadline for manuscript submissions

closed (30 April 2026)

Microorganisms

an Open Access Journal by MDPI

Impact Factor 4.2
CiteScore 7.7
Indexed in PubMed

mdpi.com/si/206586

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

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 20 days after submission; acceptance to publication is undertaken in 2.9 days (median values for papers published in this journal in the second half of 2025).

MDPI