

Special Issue

Recent Advances on Microbial Interactions with Materials and Their Applications

Message from the Guest Editors

Microorganisms are widespread in both natural environments and artificial ecosystems. They coexist and interact with various materials, ultimately affecting the migration rate, circulation process and distribution state of those compounds. Microorganisms can migrate and bio-transform metals by means of extracellular electron transfer and secretion of metabolites; they also promote biomineralization, microbiologically influenced corrosion (MIC), biofouling and bioleaching, among other processes. The interaction between microorganisms and materials also promotes the cycle of carbon, nitrogen, iron, sulfur and other elements. The corrosive microorganisms likely contribute to the cycling of carbon, iron and sulfur worldwide. Although there have been many achievements in this area in the past few decades, the interaction between metallic elements and microorganisms awaits further investigation. In this Special Issue, we aim to present the latest findings on MIC, fouling, biomineralization, bioleaching, element cycling, etc. Submissions of high-quality original research, reviews, mini reviews, and perspective articles pertaining to this multi-disciplinary area are welcome.

Guest Editors

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Deadline for manuscript submissions

closed (30 November 2025)



Microorganisms

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Impact Factor 4.2
CiteScore 7.7
Indexed in PubMed



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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

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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).