Special Issue

Microbial-Based Strategies for the Mitigation of Fluorinated Environmental Pollutants

Message from the Guest Editors

The microbial degradation of fluoro-organic molecules, including heavily fluorinated cohorts such as PFAS, has shown to be possible when catalyzed by talented microorganisms acting individually or as a consortium. These microorganisms and their enzymes may be the key for the development of biotechnologies capable of mitigating the impacts associated with the widespread dissemination of fluoro-organic compounds in ecosystems. This Special Issue aims to gather highquality contributions in the form of original articles or literature reviews, expanding current knowledge on the microbial degradation of fluoro-organic molecules and enhancing our understanding of the interaction between microorganisms and these xenobiotic substrates, and how they can be functionalized into effective bioremediation solutions. Manuscripts detailing the strategies and pathways associated with the aerobic and anaerobic biodegradation of fluorinated pollutants are welcome, particularly those employing multiomics surveys, reporting disruptive nature-based solutions or resorting to synthetic biology and/or metabolic engineering approaches for the fine-tuning of effective biocatalysts.

Guest Editors

Dr. Maria De Fátima Carvalho

Interdisciplinary Centre of Marine and Environmental Research (CIIMAR), Terminal de Cruzeiros de Leixões, AV. General Norton de Matos, s/n, 4450-208 Matosinhos, Portugal

Dr. Diogo Alexandrino

Interdisciplinary Centre of Marine and Environmental Research (CIIMAR), Terminal de Cruzeiros de Leixões, AV. General Norton de Matos, s/n, 4450-208 Matosinhos, Portugal

Deadline for manuscript submissions

closed (30 June 2023)



Microorganisms

an Open Access Journal by MDPI

Impact Factor 4.2
CiteScore 7.7
Indexed in PubMed



mdpi.com/si/121592

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).

