Special Issue

Research on Microbial Biodegradation of Crude Oil in Marine Environment

Message from the Guest Editors

It is estimated that about 1.0x1010 kg of oil enters the marine environment each year worldwide. It is essential to understand how microorganisms degrade hydrocarbons in marine ecosystems, as the biodegradation of oil pollution has great potential for the remediation of marine environments. The microbial degradation of marine petroleum pollutants is a complex process, which is constrained by many factors such as petroleum composition and physical and chemical properties, environmental conditions, and microbial community composition. The ecology, physiology, biochemistry, and genetics of oil-degrading microorganisms have been increasingly explored in recent decades. This Special Issue will collect recent works that address a wide range of research topics listed below: (1) microbial diversity and functionality of crude-oil-degrading microorganisms in marine environments; (2) metabolic pathways involved in the biodegradation (aerobic/anaerobic) of petroleum hydrocarbons in marine environments; (3) recent advances of bioremediation approaches for crude oil contamination in marine environments.

Guest Editors

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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.

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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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