Special Issue

Microbial Ecology and Application of Microbial Technology in Wastewater Treatment

Message from the Guest Editor

Microbial ecology plays a crucial role in wastewater treatment by harnessing the capabilities of microorganisms to degrade pollutants and maintain essential nutrient cycles. Advances in omics technologies have deepened our understanding of microbial communities, elucidating their functional roles and metabolic pathways. Despite these advances, challenges remain, particularly in scaling up microbial systems, managing microbial resistance, and ensuring long-term sustainability. Overcoming these barriers will be critical for improving the efficiency, cost-effectiveness, and environmental sustainability of microbial-based wastewater treatment technologies. This Special Issue of *Water*, entitled "Microbial Ecology and Application of Microbial Technology in Wastewater Treatment", welcomes the submission of original research and review articles focused on biological wastewater treatment.

Guest Editor

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In the context of global changes, the sustainable management of water cycles, going from global and regional water cycles to urban, industrial and agricultural water cycles, plays a very important role on the water resources and on their relationships with food, energy, biodiversity, ecosystem functioning and human health. *Water* invites authors to provide innovative original full articles, critical reviews and timely short communications and to propose special issues devoted to new technological and scientific domains and to interdisciplinary approaches of the water cycles. We ensure a critical review process and a quick turnaround between submission and final decision.

Editor-in-Chief

Dr. Jean-Luc PROBST
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