Special Issue

Microbiomics in Wastewater Remediation and Biomedical Applications

Message from the Guest Editors

Microbiomics is revolutionizing both the environmental and biomedical fields. In wastewater treatment, it enables the development of advanced microbial consortia for efficient degradation of pollutants and recovery of bioenergy. Simultaneously, in biomedical applications, microbiome research is uncovering the critical roles of microbial communities in human health and disease, particularly in oncology—where the cancer microbiome emerges as a promising source of therapeutic targets. Multi-omics approaches help decode complex microbial interactions and functions in these diverse ecosystems. This integrated perspective highlights the potential of microbiome-based technologies for sustainable wastewater remediation and innovative medical treatments. This Special Issue welcomes the following themes: 1. Water treatment based on microbiome technology. 2. Genomics, transcriptomics and proteomics of contaminant degradation in wastewater remediation and biomedical applications. We invite investigators to contribute original research articles as well as review articles that will stimulate the continuing efforts to utilize microbiomics in wastewater remediation and biomedical applications.

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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

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