Special Issue

Biological Wastewater Treatment: Current Advances and Challenges

Message from the Guest Editor

Conventional wastewater treatment processes are electricity-intensive and resource-inefficient. The removal performance of certain pollutants, such as heavy metal, antibiotics, microplastics, etc. is weak. The emissions of greenhouse gases (e.g., CO2, CH4, and N2O) during wastewater treatment might dramatically increase the carbon footprint. Hence, these new challenges are now translating into an urgent call for efficient and sustainable removal, recovery, and production technology. Manuscripts in this Special Issue are expected to focus on but not limited to the following topics: microbial-based technology for C, N, and P recovery from wastewater; quantification, understanding, and mitigation of greenhouse gas emissions (N2O, CH4, CO2) during wastewater treatment; novel applications of nitrogen removal with reduced carbon emission and energy consumption; microbial remediation of heavy metal contamination; biodegradation of emerging pollutants (such as antibiotics, microplastics); and mathematical modeling of pollutant biotransformation processes in wastewater.
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Guest Editor

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Deadline for manuscript submissions

closed (20 April 2022)

Water

an Open Access Journal by MDPI

Impact Factor 3.0
CiteScore 6.0

mdpi.com/si/91518

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Message from the Editor-in-Chief

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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