

Special Issue

Membrane Bioreactors and Algae–Bacteria Consortia: Mechanisms, Innovations and Applications in Wastewater Treatment and Resource Recovery

Message from the Guest Editor

Modern wastewater treatment must meet higher standards of efficiency and sustainability, balancing effective treatment with reduced energy consumption and lower carbon emissions. In this context, both membrane bioreactor (MBR) technology and algae–bacteria consortia present unique solutions to these challenges, each offering distinct advantages for wastewater treatment and resource recovery. This Special Issue aims to showcase cutting-edge research on both membrane bioreactor technology and algae–bacteria consortia, focusing on their mechanisms, innovations, and applications in the context of wastewater treatment and resource recovery. We invite contributions on topics including, but not limited to, the following:

- Membrane bioreactor applications and innovations;
- Membrane fouling mechanisms and control strategies;
- Energy-efficient and low-carbon solutions for membrane bioreactor systems;
- Algae–bacteria consortia for nutrient removal, bioenergy production, and carbon reduction;
- Sustainable wastewater treatment technologies for improved resource recovery and energy savings.

We look forward to receiving your valuable contributions.

Guest Editor

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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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