

Special Issue

Bioremediation and Resource Recovery from Wastes and Wastewater: Advanced Materials and Hybrid Treatment Technologies

Message from the Guest Editor

In wastewater and waste management, treatment technologies face major challenges in affordability, efficiency, and sustainability due to complex pollutants, high costs, and limited resources. Conventional methods often fall short of long-term solutions. Recent research focuses on eco-efficient bioremediation and resource recovery using bio-based materials like biochar, biopolymers, and nanocomposites. These are cost-effective, adaptable, and environmentally friendly. Hence, we invite the submission of original research articles, review papers, case studies, short communications, and novel methodologies on topics including, but not limited to, the following:

- Bio-based and advanced materials for waste and wastewater remediation;
- Bioremediation strategies for emerging and legacy pollutants;
- Hybrid biological and physicochemical treatment systems;
- Removal and recovery of nutrients, heavy metals, dyes, and emerging contaminants;
- Performance evaluation, toxicity assessment, and environmental risk analysis;
- Emerging trends and innovative techniques in bioremediation;
- Life cycle assessment and life cycle costing of remediation and recovery systems.

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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