



*water*



an Open Access Journal by MDPI

## Opportunities and Challenges in Biological Water Treatment

Guest Editors:

**Dr. Zedong Lu**

Faculty of Architectural Engineering, Beijing University of Technology, Beijing 100124, China

**Prof. Dr. Shenbin Cao**

Faculty of Architecture, Civil and Transportation Engineering, Beijing University of Technology, Beijing, China

**Prof. Dr. Xiaoyan Fan**

Faculty of Architecture, Civil and Transportation Engineering, Beijing University of Technology, Beijing, China

Deadline for manuscript submissions:

**closed (20 August 2025)**

### Message from the Guest Editors

We invite authors to submit original research articles, reviews, or perspectives addressing various aspects of opportunities and challenges in biological water treatment, such as drinking water treatment, urban sewage treatment, reclaimed water treatment, and rural wastewater treatment. Topics of interest include:

Relationships between operational parameters, microorganisms, and system performance

Identification of keystone taxa in water treatment systems

Spatial and temporal distribution patterns of microbial communities

Regulation of functional taxa for effective water treatment

Applications of multi-omics technologies in water treatment

Engineering and ecological value of microbiomes in water treatment and resource recovery.....



[mdpi.com/si/202299](https://mdpi.com/si/202299)

**Special** issue



*water*



an Open Access Journal by MDPI

## Editor-in-Chief

### Dr. Jean-Luc PROBST

Centre de Recherche sur la Biodiversité l'Environnement (CRBE) UMR CNRS/UPS/INPT/IRD, Centre National de la Recherche Scientifique (CNRS), University of Toulouse, Campus ENSAT, Auzeville Tolosane, Toulouse, France

## 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.

## Author Benefits

**Open Access:** free for readers, with article processing charges (APC) paid by authors or their institutions.

**High Visibility:** indexed within Scopus, SCIE (Web of Science), Ei Compendex, GEOBASE, GeoRef, PubAg, AGRIS, CAPlus / SciFinder, Inspec, and other databases.

**Journal Rank:** JCR - Q2 (Water Resources) / CiteScore - Q1 (Aquatic Science)

## Contact Us

---

Water Editorial Office  
MDPI, Grosspeteranlage 5  
4052 Basel, Switzerland

Tel: +41 61 683 77 34  
[www.mdpi.com](http://www.mdpi.com)

[mdpi.com/journal/water](http://mdpi.com/journal/water)  
[water@mdpi.com](mailto:water@mdpi.com)  
[X@Water\\_MDPI](https://twitter.com/Water_MDPI)