

## Special Issue

# Carbon-Neutral Wastewater Treatment and Resource Recovery

### Message from the Guest Editors

In this Special Issue, original research articles, reviews, and short communications are welcome. Research areas may include, but are not limited to, the following:

- Carbon-neutral and low-energy wastewater treatment processes
- Low-carbon process optimization and GHG mitigation strategies
- Electrochemical and bioelectrochemical systems (BES/EBR/MFC/MEC)
- Electron-transfer mechanisms, CO<sub>2</sub> conversion, energy recovery
- Resource recovery and circular bioeconomy applications
- Recovery of nutrients (N, P), biogas, VFAs, biopolymers, biominerals -Water reuse, carbon capture, and valorization of waste streams
- Omics-driven insights and microbial ecology
- Metagenomics, metatranscriptomics, metabolomics, and isotopic tracing - Microbial community dynamics in carbon-efficient treatment systems
- Carbon footprint assessment and environmental modeling
- LCA of wastewater processes
- Innovative hybrid or modular systems
- Membrane-aerated systems, dynamic membrane bioreactors, photobioreactors - Combined physical-biological carbon-neutral treatment systems

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### Guest Editors

Prof. Dr. Jaecheul Yu

Department of Industrial safety and Environment, Korea Polytechnic VII University, Changwon 51518, Republic of Korea

Prof. Dr. Kyung-Yup Hwang

Department of Industrial Safety and Environment, Korea Polytechnic VII University, Changwon 51518, Republic of Korea

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### Deadline for manuscript submissions

20 July 2026



## Applied Sciences

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*Applied Sciences*  
Editorial Office  
MDPI, Grosspeteranlage 5  
4052 Basel, Switzerland  
Tel: +41 61 683 77 34  
[applsci@mdpi.com](mailto:applsci@mdpi.com)

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## About the Journal

### Message from the Editor-in-Chief

As the world of science becomes ever more specialized, researchers may lose themselves in the deep forest of the ever increasing number of subfields being created. This open access journal *Applied Sciences* has been started to link these subfields, so researchers can cut through the forest and see the surrounding, or quite distant fields and subfields to help develop his/her own research even further with the aid of this multi-dimensional network.

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### Editor-in-Chief

Prof. Dr. Giulio Nicola Cerullo  
Dipartimento di Fisica, Politecnico di Milano, Piazza L. da Vinci 32,  
20133 Milano, Italy

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