

## Special Issue

# Low Carbon Water Treatment and Energy Recovery

### Message from the Guest Editors

Climate change led by excess carbon dioxide emissions is a global challenge. For the water industry, the water treatment process is responsible for the amounts of different carbon emissions. The water industry makes global warming worse, so innovative wastewater treatment that exhausts less or no carbon dioxide is significant. Recently, carbon neutrality has become a hot topic for water treatment all over the world. To reduce carbon emissions from water treatment, technological and scientific advances will be required, such as biomass production to reduce CO<sub>2</sub> emissions, use of bubble-less gas mass transfer bioreactors, reduced aeration with greater microbial processes, high-efficiency pumps and blowers, low-pressure self-cleaning free membranes, and the use of solar power systems and bioelectrical systems in wastewater treatment. Our present technology for water and wastewater treatment offers enormous scope for improvement. Based on this background, this Special Issue aims to assemble the latest advancements in innovative technologies for low carbon water treatment and energy recovery. Both full-length research papers and review articles are welcome.

---

### Guest Editors

Dr. Xin Zhao

Dr. Lili Dong

Dr. Zhaoyang Wang

---

### Deadline for manuscript submissions

closed (30 December 2022)



## Applied Sciences

---

an Open Access Journal  
by MDPI

---

Impact Factor 2.5  
CiteScore 5.5



[mdpi.com/si/101594](https://mdpi.com/si/101594)

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

[mdpi.com/journal/](https://mdpi.com/journal/)

[applsci](https://mdpi.com/journal/applsci)





# Applied Sciences

---

an Open Access Journal  
by MDPI

---

Impact Factor 2.5  
CiteScore 5.5



[mdpi.com/journal/  
applsci](https://mdpi.com/journal/applsci)



## 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.

---

### Editor-in-Chief

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

---

### 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, Inspec, Embase, CAPIus / SciFinder, and other databases.

#### Journal Rank:

JCR - Q2 (Engineering, Multidisciplinary) / CiteScore - Q1 (General Engineering )