Special Issue

Reactive Species and Chemical Transformation in Water Treatment Systems

Message from the Guest Editors

Advanced oxidation processes (AOPs) are the core technology for degrading refractory pollutants in wastewater, and their mechanism relies on the generation, migration, and transformation of reactive species and their reaction processes with pollutants in wastewater. However, several challenges, including the difficulty in precisely regulating reactive species transformation, unclear reaction mechanisms, inefficient catalyst screening, and ambiguous pollutant degradation pathways, have limited the development of AOPs. Artificial intelligence (AI) and machine learning (ML), with their capabilities in data mining, nonlinear fitting, intelligent prediction, and parameter optimization, provide a new approach to solving these problems. This Special Issue focuses on the theoretical innovation and empirical analysis of AI and ML in the field of AOPs for wastewater treatment.

Guest Editors

Dr. Junyuan Guo
College of Electronic Engineering, Chengdu University of Information Technology, Chengdu 610225, China
Dr. Jie Yang
Faculty of Environmental Science and Engineering, Kunming University of Science and Technology, Kunming 650500, China

Deadline for manuscript submissions

10 October 2026

Water

an Open Access Journal by MDPI

Impact Factor 3.5
CiteScore 6.7

mdpi.com/si/277077

Water
Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland
Tel: +41 61 683 77 34
water@mdpi.com

mdpi.com/journal/water

Water

an Open Access Journal by MDPI

Impact Factor 3.5
CiteScore 6.7

mdpi.com/journal/water

About the Journal

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
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

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)

MDPI