Special Issue

Membrane Fouling in Water/Wastewater Treatment: Mechanisms, Effects, and Control

Message from the Guest Editor

Membrane technology has revolutionized water and wastewater treatment, offering unparalleled efficiency in producing high-quality effluent, enabling water reuse, and recovering valuable resources. However, membrane fouling remains the most significant challenge hindering wider adoption and cost-effectiveness. Fouling manifests as decreased permeate flux, increased transmembrane pressure, higher energy consumption, more frequent chemical cleaning, shortened membrane lifespan, and ultimately, elevated operational costs. While current mitigation methods can effectively inhibit fouling, their ability to restore membrane performance is often limited. This Special Issue provides a focused platform for cutting-edge research on membrane fouling. We aim to deepen the understanding of fouling mechanisms, clarify their impact on membrane performance, and ultimately develop more effective anti-fouling strategies. We invite authors to submit original research articles and reviews addressing key aspects, including: the membrane fouling process, fundamental fouling mechanisms, novel strategies for mitigating membrane fouling, innovative cleaning solutions, etc.

Guest Editor

Prof. Dr. Liguo Shen
College of Geography and Environmental Sciences, Zhejiang Normal University, 688 Yingbin Road, 321004 Jinhua, China

Deadline for manuscript submissions

closed (31 January 2026)

Membranes

an Open Access Journal by MDPI

Impact Factor 3.6
CiteScore 9.4
Indexed in PubMed

mdpi.com/si/248484

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

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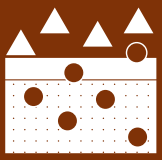

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About the Journal

Message from the Editor-in-Chief

You are cordially invited to contribute a research article or a comprehensive review for consideration and publication in *Membranes* (ISSN 2077-0375). *Membranes* is an international, peer-reviewed open accessjournal of membrane technology published monthly online by MDPI. The journal covers the broad aspects of the science and technology of both biological and non-biological membranes, including membrane dynamics and the preparation and characterization of membranes and their applications in water, environment, energy, and food industries. Articles contributing to better understanding of transport processes in all types of membranes are also welcome. The scientific community and the general public have unlimited and free access to the content as soon as it is published. We would be pleased to welcome you as one of our authors.

Editor-in-Chief

Prof. Dr. Spas D. Kolev
School of Chemistry, The University of Melbourne, Melbourne, VIC 3010, Australia

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