

## Special Issue

# Membrane Fouling Control: Mechanism, Properties, and Applications

### Message from the Guest Editors

This Special Issue aims to advance our understanding of membrane fouling mechanisms and explore innovative strategies for effective fouling control. Topics of interest include the development of antifouling and self-cleaning membrane materials, advanced pretreatment techniques, and hybrid processes that enhance filtration performance. Particular emphasis is placed on contributions that illuminate the physicochemical and biological mechanisms of membrane fouling through the use of advanced diagnostic tools, modeling techniques, and machine learning approaches. Additionally, this Special Issue highlights practical and scalable solutions tailored to industrial applications. By integrating diverse disciplinary perspectives, this Special Issue aims to deepen our understanding of membrane fouling mechanisms and promote innovative strategies for fouling control. It seeks to provide researchers, engineers, and industry professionals with a comprehensive overview of cutting-edge advancements and practical insights, driving progress and innovation in membrane filtration technologies.

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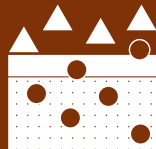
### Guest Editors

Prof. Dr. Rui Miao  
Dr. Pei Wang  
Dr. Miaolu He

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### Deadline for manuscript submissions

closed (20 November 2025)



## Membranes

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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 access journal 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.

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### Editor-in-Chief

Prof. Dr. Spas D. Kolev  
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