

## Special Issue

# Advanced Fabrication Techniques and Applications for High-Performance Polymer Membranes

### Message from the Guest Editors

Recent advances in membrane fabrication, such as electrospinning, new versions of phase inversion, layer-by-layer assembly, 3D printing, and interfacial polymerization, have enabled precise control over membrane morphology, pore structure, and surface functionality. Innovations in nanocomposite integration (e.g., graphene oxide, metal-organic frameworks) and biomimetic design further enhance selectivity, permeability, and mechanical robustness. Additionally, sustainable approaches that incorporate green solvents and recyclable polymers and align with circular economy principles are increasing being used. Polymer membranes are utilized in a variety of applications, including the following: Water treatment, Energy systems, Gas separation, and Biomedical engineering. This Special Issue welcomes contributions that address these themes, fostering collaboration among chemists, engineers, and environmental scientists to push the boundaries of polymer membrane science.

### Guest Editors

Dr. Kaikai Chen

School of Textiles Science and Engineering, Tiangong University,  
Tianjin 300387, China

Dr. Shu Yang

School of Textiles and Fashion, Shanghai University of Engineering  
Science, Shanghai 201620, China

### Deadline for manuscript submissions

closed (30 April 2026)



## Membranes

an Open Access Journal  
by MDPI

Impact Factor 3.6  
CiteScore 7.9  
Indexed in PubMed



[mdpi.com/si/240669](https://mdpi.com/si/240669)

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

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





# Membranes

---

an Open Access Journal  
by MDPI

---

Impact Factor 3.6  
CiteScore 7.9  
Indexed in PubMed



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



## 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.

---

### Editor-in-Chief

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

---

### 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, PubMed, PMC, CAPlus / SciFinder, Inspec, and other databases.

#### Journal Rank:

JCR - Q2 (Polymer Science) / CiteScore - Q1 (Chemical Engineering (miscellaneous))