

## Special Issue

# Computational Modeling and Digitalisation in Membranes Process: Simulation, Design and Application

### Message from the Guest Editor

Computational modelling is an important tool for both fundamental and applied research. At the fundamental level, it provides insights into the mechanisms of transport phenomena in membrane separation processes. It is also critical to the transformation of innovations from laboratories to industry applications and has been widely used for design, scale-up, optimisation and process integration. This Special Issue follows recent advancements in using computational modelling techniques on membrane technologies in water and wastewater treatment, gas separations and bioseparations. Topics will range from mathematic models to study local transport phenomena to process design, simulation and optimisation.

#### Keywords

- Computational Fluid Dynamics
- Mass transfer
- System design
- Optimization
- Digital twin
- Model validation

---

### Guest Editor

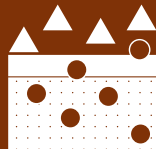
Dr. Yuan Wang

1. School of Civil & Environmental Engineering, University of New South Wales, Sydney, NSW 2052, Australia
2. UNSW Centre for Transformational Environmental Technologies, Yixing, China

---

### Deadline for manuscript submissions

closed (5 April 2022)



## Membranes

---

an Open Access Journal  
by MDPI

---

Impact Factor 3.3  
CiteScore 6.1  
Indexed in PubMed



[mdpi.com/si/83100](https://mdpi.com/si/83100)

*Membranes*

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 3.3  
CiteScore 6.1  
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 (Chemistry, Physical) / CiteScore - Q2 (Chemical Engineering (miscellaneous))