

## Special Issue

# Biomass-Based Nanofiltration Membranes for Sustainable Chemical Separation

### Message from the Guest Editors

Nanofiltration (NF) has garnered significant attention for its potential in liquid chemical separation. Widely studied and applied in water purification, ion separation, and solvent recovery, the community is now shifting towards sustainable biomass-based NF membranes due to the prevalent reliance on petroleum resources. Biomass molecules with natural functional groups offer inherent advantages for membrane design, preparation, and application, showing early potential for enhancing permselectivity, antifouling, and many other properties of NF membranes. However, biomass-based NF membranes are still in the nascent research stage, necessitating further exploration in material design, structural characterization, mass transfer mechanisms, and practical applications. For this Special Issue of *Membranes*, full research papers, communications, and review articles are invited on the following topics:

- Advanced biomass-based materials for NF membranes;
- Synthesis and modification of biomass-based NF membranes;
- Characterization of biomass-based NF membranes;
- Mass transport in biomass-based NF membranes;
- New separation processes with biomass-based NF membranes.

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### Guest Editors

Dr. Xinda You

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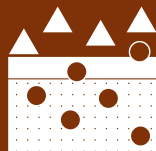
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### Deadline for manuscript submissions

10 December 2025



## Membranes

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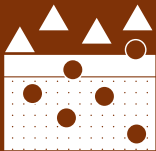


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## About the Journal

### 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 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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