

## Special Issue

# Applications and Assessment for Membrane Distillation

### Message from the Guest Editors

This Special Issue, “Applications and Assessment for Membrane Distillation”, explores the transformative potential of membrane distillation (MD) in water treatment, desalination, and process intensification. MD is a thermally driven separation process that utilizes temperature-induced phase changes to achieve effective separation, enabling operation at lower pressures while handling high-salinity and challenging feed streams. Despite its numerous advantages, the widespread industrial adoption of MD is hindered by several critical challenges, including process scalability, membrane fouling, and the need for optimized heat and mass transfer mechanisms.

Topics of interest for this Special Issue include, but are not limited to, the following: Novel membrane materials and configurations for advanced membrane distillation; New methodologies to assess technical hurdles in membrane distillation; Strategies to mitigate membrane fouling and temperature polarization; Computational modeling of membrane distillation processes; Case studies for emerging applications of membrane distillation; Environmental and economic aspects of membrane distillation technology.

### Guest Editors

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### Deadline for manuscript submissions

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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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