



Next-Generation Desalination Membrane: Opportunities and Challenges

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Message from the Guest Editors

Membrane-based desalination technologies play a tremendous role in freshwater production and chemical separation. Over the years, the performance of current desalination membranes based on thin-film composites and polyamide chemistry has been optimised for higher water production rate, solute retention, fouling resistance, and stability. More recent breakthroughs in desalination performance have also been found based on emerging technologies, especially in material development and processing. This Special Issue welcomes submissions on original research and technological developments in membrane desalination including innovations in membrane design, material development and desalination process design. Related topics include, but are not limited to, carbon-based membranes, biomimetic membranes, two-dimensional membranes, ultra-high-pressure reverse osmosis, nanofiltration, electromembrane, ion-ion separation, resource recovery, energy recovery, renewable-energy-based desalination.

- Desalination
- Novel materials
- Membrane fabrication
- Reverse osmosis
- Electromembrane
- Two-dimensional membranes
- Biomimetic membranes
- Carbon-based membranes.





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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).

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