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Membrane Surface Modification and Functionalization

Guest Editors:

Dr. Mohammad K. Hassan

Center for Advanced Materials,
Qatar University, Doha, Qatar

Prof. Dr. Majeda Khraisheh

Department of Chemical
Engineering, College of
Engineering, Qatar University,
Doha 2713, Qatar

Dr. Vivek Vasagar

Sr. Chemist, The Sherwin-
Williams Company, 2001 Tracy
Street, Pittsburgh, PA-15233, USA

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Message from the Guest Editors

Surface functionalization is one of the efficient techniques that can confer the membranes with novel properties and transform them into valuable finished products. It has been widely applied to polymeric membranes in many fields and has progressed rapidly in recent years. The modified membranes have been widely used in many separation processes that include liquid and gaseous mixtures (gas separation, reverse osmosis, pervaporation, nanofiltration, ultrafiltration, microfiltration). This issue will cover and highlight the various approaches utilized in surface modification and functionalization of polymeric membranes. We welcome articles and reviews that address the aspects of antifouling, reverse osmosis, gas separation, forward osmosis, direct contact membrane distillation, adsorption, environmental stimuli-responsive gating, pervaporation, and energy conversion applications.

Keywords

- Surface grafting
- Polyzwitterion
- Oxidative stability of membrane surface
- layer-by-layer assembly
- Hydrophilic/hydrophobic surface modifiers
- Membrane fouling
- Plasma and UV treatment



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Editor-in-Chief

Prof. Dr. Spas D. Kolev

School of Chemistry, The
University of Melbourne,
Melbourne, VIC 3010, Australia

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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Membranes Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland

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