

## Special Issue

# Ion Conducting Membranes and Energy Storage

### Message from the Guest Editor

Ion-conducting membranes are essential for energy-storage technologies. Understanding ion transport and creating artificial ion-selective channels are current topics of interest in scientific research. In application, membranes with both high ion conductivity and selectivity have been pursued for a long time. Ion transport in membranes not only influences the polarisation of batteries but has also been found to influence the electrochemical processes of electrodes. For example, the influence of the membrane's charge on the morphology of metal deposition in metal-based batteries, like alkaline zinc–iron flow batteries and reversible lithium metal batteries, is significant. In this Special Issue, authors are invited to submit original articles and reviews on battery membrane structure design. Contributions may concern (i) novel membrane-structure design methods, (ii) insights into the relationship between ion transport and membrane structure, (iii) and insights into the relationship between the electrochemical process of batteries and membrane structure.

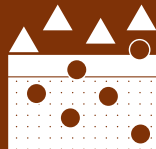
### Guest Editor

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### Deadline for manuscript submissions

30 April 2025



## Membranes

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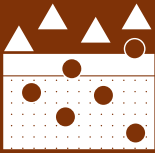


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## About the Journal

### 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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