Special Issue

Preparation, Modeling and Characterization of Anion Exchange Membranes for Fuel Cells

Message from the Guest Editors

Anion exchange membrane fuel cells (AEMFCs) are a new kind of fuel cell which have solid electrolytes and work under an alkaline environment. AEMFCs avoid the shortcomings caused by liquid electrolytes in the traditional alkaline fuel cell (AFC), and have faster oxygen reduction kinetics than that of proton exchange membrane fuel cells (PEMFCs). Therefore, it is hoped that AEMFCs can become independent of noble metals and reduce the cost of fuel cells significantly. As the core component, the anion exchange membrane (AEM) has always been the main focus and difficulty in the development of anion exchange membrane fuel cells (AEMFCs), which demonstrates two severe challenges: 1) low hydroxide conductivity and poor chemical stability; and 2) the conflict between ionic exchange capacity (IEC) and mechanical properties. Developing high-performance AEMs is of crucial importance for promoting the development and application of AEMFCs. Therefore, this Special Issue aims to gather viewpoints from different fields of industry and academia, hoping to make a modest contribution to the future development of high-performance AEMs.

Guest Editors

Dr. Jinkai Hao

Dalian Institute of Chemical Physics Chinese Academy of Sciences, Dalian, China

Dr. Shuchun Yu

School of Environment and Municipal Engineering, North China University of Water Resources and Electric Power, Zhengzhou, China

Deadline for manuscript submissions

closed (23 October 2023)

Membranes

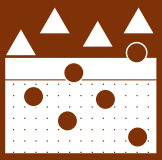
an Open Access Journal by MDPI

Impact Factor 3.6
CiteScore 7.9
Indexed in PubMed

mdpi.com/si/173807

Membranes
Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland
Tel: +41 61 683 77 34
membranes@mdpi.com

mdpi.com/journal/membranes



Membranes

an Open Access Journal by MDPI

Impact Factor 3.6
CiteScore 7.9
Indexed in PubMed

mdpi.com/journal/membranes

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 accessjournal 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.

Editor-in-Chief

Prof. Dr. Spas D. Kolev
School of Chemistry, The University of Melbourne, Melbourne, VIC 3010, Australia

Author Benefits

Open Access:

free for readers, with article processing charges (APC) paid by authors or their institutions.

High Visibility:

indexed within Scopus, SCIE (Web of Science), Ei Compendex, PubMed, PMC, CAPlus / SciFinder, Inspec, and other databases.

Journal Rank:

JCR - Q2 (Polymer Science) / CiteScore - Q1 (Chemical Engineering (miscellaneous))