

Special Issue

Modeling, Degradation Study, Failures Diagnosis and Faulty Operating Management of Electrolyzers

Message from the Guest Editors

One of the most attractive technologies to generate hydrogen is water electrolysis which relies on a proton exchange membrane (PEM) based electrolyzer (EL) to split water. However, a couple of factors lead to membrane degradation and the presence of several types of failures makes the reliable operation of ELs even more challenging. Accordingly, modeling, degradation study, failures diagnosis, and faulty operation management must be studied. This Special Issue welcomes original high-quality papers and review articles focused on hydrogen technologies with emphasis on the modeling, degradation, failure diagnosis, and faulty operation management. Prospective authors may submit contributions dealing with (but are not limited to): Membrane electrode assembly modeling of electrolyzers; Impacts of dynamic operating conditions on the materials and components degradation of electrolyzers; Influence of the operating conditions (temperature, pressure, current density) and power electronics on the degradation of electrolyzers; Failure mechanisms in the electrolyzer; Development of failure diagnosis methods; Development of faulty operation management to enhance the performance of the system.

Guest Editors

Prof. Dr. Damien Guilbert

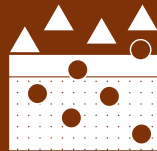
Groupe de Recherche en Electrotechnique et Automatique du Havre (GREAH), Université Le Havre Normandie, 76600 Le Havre, France

Dr. Georgios Papakonstantinou

Max Planck Institute for Dynamics of Complex Technical Systems, Process Systems Engineering, Sandtorstr.1, D-39106 Magdeburg, Germany

Deadline for manuscript submissions

closed (1 December 2021)



Membranes

an Open Access Journal
by MDPI

Impact Factor 3.6
CiteScore 7.9
Indexed in PubMed



mdpi.com/si/65043

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

[mdpi.com/journal/
membranes](https://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](https://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 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.

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))