

## Special Issue

# Advancements in Ion-Exchange Polymer Membranes: Microstructure Design, Performance Optimization, and Extreme Condition Applications

### Message from the Guest Editor

Ion-exchange polymer membranes are widely used in energy systems such as fuel cells, water electrolysis, and supercapacitors due to their excellent ionic conductivity, selectivity, and chemical stability. This Special Issue focuses on the microstructural characterization and performance optimization of novel ion-exchange polymer membranes. We welcome submissions on the following topics:

- (1) Microstructural Design and Optimization;
- (2) Composite Membrane Fabrication and Performance;
- (3) Performance Under Extreme Conditions;
- (4) Advanced Characterization Techniques;
- (5) Computational Simulations and Machine Learning.

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### Guest Editor

Dr. Cong Feng

College of Materials Science and Engineering, Tongji University,  
Shanghai, China

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### Deadline for manuscript submissions

31 December 2025



## Polymers

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**Impact Factor 4.9**  
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### Message from the Editor-in-Chief

Since its foundation in 2009, *Polymers* has developed into an internationally renowned, extremely successful open access journal. The editorial team and the editorial board dedicatedly combine open-access publishing and high-quality rigorous peer reviewing. The performance of the journal has proven this strategy to be well-suited and highly successful. This is reflected in the increasing impact factor of *Polymers*, the most recent one being 4.7.

I would like to invite you to contribute to the success of the journal by sending us your high quality research papers. We would be pleased to welcome you as one of our authors.

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### Editor-in-Chief

Prof. Dr. Alexander Böker

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