Special Issue

Polymers for Lithium/Sodium Batteries

Message from the Guest Editor

Polymers play essential roles in lithium/sodium batteries as polymer electrolytes and electrode materials.

Conductive polymers, such as polyaniline (PANI) or PEDOT, are explored as electrode materials due to their unique electronic and redox properties, which can store and release ions during battery cycling. Polymer-derived carbon, especially plant-derived carbon is also expected to be promising conductive electrode materials for its high theoretical capacities. Binders are crucial in electrode fabrication for good adhesion to conductive polymers and the current collector. Some commonly used binder polymers include PVDF and Carboxymethyl cellulose (CMC). Lignin-based materials are also promising candidates.

Despite their advantages, challenges remain, including achieving high conductivity, maintaining stability during cycling, and ensuring good interfacial compatibility. Ongoing research focuses on optimizing polymer structures, exploring new materials, and developing advanced composite electrolytes/electrodes.

Guest Editor

Dr. Hao Zhang

Laboratory of Natural Materials Technology, Faculty of Science and Engineering, Åbo Akademi University, Turku, Finland

Deadline for manuscript submissions

closed (31 January 2024)

Polymers

an Open Access Journal by MDPI

Impact Factor 4.9
CiteScore 9.7
Indexed in PubMed

mdpi.com/si/178993

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

mdpi.com/journal/polymers

Polymers

an Open Access Journal by MDPI

Impact Factor 4.9
CiteScore 9.7
Indexed in PubMed

mdpi.com/journal/polymers

About the Journal

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 4.9.

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.

Editor-in-Chief

Prof. Dr. Alexander Böker
Lehrstuhl für Polymermaterialien und Polymertechnologie, University of Potsdam, 14476 Potsdam-Golm, Germany

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, FSTA, CAPlus / SciFinder, Inspec, and other databases.

Journal Rank:

JCR - Q1 (Polymer Science) / CiteScore - Q1 (General Chemistry)

MDPI