



an Open Access Journal by MDPI

Recent Advances in Polymer Electrolytes for Batteries

Guest Editor:

Dr. Nicolas Goujon

POLYMAT, University of the Basque Country - UPV/EHU, 20018 Donostia-San Sebastián, Spain

Deadline for manuscript submissions: **10 September 2024**

Message from the Guest Editor

The lithium-ion battery has emerged as the state-of-the-art technology for applications, ranging from small handheld electronics to electric vehicles and stationary energy storage. However, lithium-ion battery has reached its practical limits in terms of energy density and has recently raised safety concerns due to the flammability of the traditional liquid-based electrolyte. Over the last decades, alternative high-energy density various batterv technologies have been proposed, such as lithium metal, alkali metal-air, sulphur and silicon batteries. The use of liquid-based electrolytes in conjunction with high-energy density active materials is challenging due to various factors, such as degradation of the electrolyte in contact with active material. unstable solid electrolyte interphase, dendrite growth and active material dissolution issues. Polymer electrolytes have emerged as a promising alternative to liquid-based electrolytes due to their proprieties, enabling the inherent use of the aforementioned high-energy density active materials. This Special Issue aims to highlight the recent advances in polymer electrolytes for application in high-energy-density battery technologies.



mdpi.com/si/168491







an Open Access Journal by MDPI

Editor-in-Chief

Prof. Dr. Andreas Jossen

Institute for Electrical Energy Storage Technology (EES), Technical University München (TUM), Arcisstrasse 21, 80333 Munich, Germany

Message from the Editor-in-Chief

Take the opportunity to publish your original scientific work or a review paper concerning battery materials, battery technology or battery application within this new open access journal. Along with material science, the journal also addresses engineering and multidisciplinary research topics, such as cell and system design or storage system integration. Publishing proffers visibility for the benefit of other experts and facilitates discussion of the research results within the field. You are invited to publish your work, read published papers and to participate in topical discussions.

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), Inspec, Ei Compendex, CAPlus / SciFinder, and other databases. **Journal Rank:** JCR - Q2 (*Electrochemistry*) / CiteScore - Q2 (*Electrochemistry*)

Contact Us

Batteries Editorial Office MDPI, St. Alban-Anlage 66 4052 Basel, Switzerland Tel: +41 61 683 77 34 www.mdpi.com mdpi.com/journal/batteries batteries@mdpi.com X@batteriesmdpi