Special Issue

Energy Materials, Electrolytes and Interfaces

Message from the Guest Editors

Dear Colleague, The development of safe and energy-efficient storage technologies is a crucial step towards achieving global carbon neutralization and net-zero emissions. Among various techniques, solid-state batteries are attracting particular interest due to their intrinsic safety and theoretically high volumetric energy density. As one of the most important components within the construction of solid-state batteries, solid-state electrolytes determine and challenge the operational capabilities of whole systems. Existing electrolytes suffer from low ionic conductivity, narrow electrochemical windows, chemical instability and limited membrane processability. This Special Issue focuses on the research advances in the interdisciplinary fields of material chemistry, electrochemistry, battery engineering and science. Key topics are summarized below:

- Advanced electrolyte chemistries with designs at a molecular level.
- Strategies to achieve advanced electrolytes.
- Fundamental studies.
- Aging mechanism and thermal managements of solid-state batteries integrated with advanced electrolytes.
- Reviews and perspectives on the future design of advanced electrolytes.

Guest Editors

Dr. Rui Tan

Dr. Bingkai Zhang

Dr. Mengran Wang

Dr. Kai Yang

Deadline for manuscript submissions

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

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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.

Editor-in-Chief

Prof. Dr. Karim Zaghib
Department of Chemical and Materials Engineering, Concordia University, Montréal, QC H3G 1M8, Canada

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