Special Issue

Advanced Electrolytes for Enhancing Performance in Lithium/Sodium-Ion Batteries

Message from the Guest Editors

An electrolyte is an indispensable component in every electrochemical device, including lithium-ion batteries and sodium-ion batteries. It physically segregates two electrodes from direct electron transfer while allowing working ions to transport both charges and masses to ensure that cell reactions proceed sustainably. The electrolyte is also the most unique component in batteries because it physically interfaces with every other component. Therefore, electrolytes play a crucial role in determining the energy density, power density, calendar and cycle life, and safety performance of batteries. For this Special Issue, we warmly welcome the submission of original research articles and reviews on topics related to advances in liquid-, gel- and solid-state electrolytes. Topics of interest include, but are not limited to, the following:

- Electrolyte development for Li/Na-based batteries;
- Solid-state electrolytes; Nonaqueous electrolytes;
- Electrolyte/electrode interface;
- Design and/or synthesis of novel salt, solvent or additive;
- Solvating structures;
- Theoretical and computational studies on electrolytes;
- Machine learning.

Guest Editors

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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.

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