Special Issue

Materials and Interface Designs for Batteries

Message from the Guest Editors

This Special Issue is focused on “Materials and Interface Designs for Batteries”. Electrode materials and their interface with electrolytes significantly determine the performance of batteries. The electrode material design of batteries is not only about the size and morphology of the materials, but also about the chemical bond strength, atomic migration, structural change, and volume expansion. Interface design mainly includes the regulation of electronic properties (band structure, state density) and ionic properties (ion migration). In general, understanding the structure and interface evolution of electrodes at the molecular level, rational design and regulation of the structure, and interface of electrochemical energy materials are the basis for significantly improving the performance of batteries. Potential topics include but are not limited to:

- Li/Na/K/Zn-ion batteries;
- Li/Na/K/Zn metal batteries;
- Li/Na/K/Zn-Air batteries;
- Li/Na/K-S batteries;
- Cathode, anode, and electrolytes;
- All-solid-state battery and quasi-solid-state battery;
- Novel battery systems;
- Electrochemical test method.

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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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