Special Issue

Advanced Electrode and Electrolyte Materials for All-Solid-State Batteries

Message from the Guest Editor

All-solid-state batteries are considered to be a next-generation energy storage technology with the possibility of outperforming today's state-of-the-art Li-ion batteries based on liquid organic electrolytes in terms of energy and power density. To achieve this goal, the development of specific cathode active materials as well as highly conducting and electrochemically stable solid electrolytes is required. Moreover, a thorough understanding of interfacial degradation processes occurring at the electrode/electrolyte interfaces is of prime importance, to guide a targeted development of cell constituents. Contrary to rechargeable Li (and Na) - ion batteries containing liquid electrolytes, no combination of materials has prevailed over others in the case of solid-state batteries. This calls for further exploration of new materials and the development of modification strategies to further improve their performance. In this Special Issue, we are looking for contributions of:

- Novel solid electrolyte materials for Li- and Na-batteries, etc;
- Hybrid electrolyte material concepts;
- Surface modification strategies for cathode active materials;
- .....

Guest Editor

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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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