Special Issue

Silicon for High-Energy Lithium Ion Batteries

Message from the Guest Editor

Since its introduction into the market by Sony in 1991, Lithium-ion battery technology has made rapid progress with respect to energy density. Therefore, high capacity materials like Silicon for anodes have received renewed attention during the last years. Moreover, Silicon has recently materialized in commercial Lithium ion battery cells for a boost of energy, though the absolute amount of Silicon is rather low in such cells due to Silicon specific degradation issues. Therefore there is a significant need for an improved understanding of the behavior of Silicon in Lithium ion battery cells and for innovative Silicon materials leading to improved lifetime and high energy density. The Special Issue will summarize the most recent developments and scientific contributions which will cover both, fundamental and applied aspects of Silicon materials in the context of Lithium ion batteries:

- Li batteries
- Silicon alloys
- High capacity anodes
- Electrolyte additives for Si-based anodes
- Binders for Si-based anodes
- Production of Si-based anodes
- Degradation of Silicon based electrodes
- Commercial aspect of Silicon-modified batteries

Guest Editor

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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

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