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Development and Characterization of Lithium Battery Materials

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Message from the Guest Editors

Dear Colleagues,

Lithium-ion batteries (LIBs) are widely used in portable electronic devices and electric vehicles due to their high energy density, which is the highest among all commercialized secondary batteries. Despite their great commercial success, future lithium-ion batteries are anticipated with enhanced energy density, cycle life, and safety. Therefore, this Special Issue is focused on novel electrode materials' development and characterization. Potential topics include but are not limited to the following:

- Characterization of the side reaction about layered oxides like NMC622 and NCM811, in lithium ion batteries;
- Mechanism of cycle fading about layered oxides in lithium ion batteries;
- Advanced manufacturing methods to decrease the cost of electrode materials;
- Novel Co-free layered oxides;
- Characterization of interface between cathode and solid-state electrolytes;
- DFT simulation about electrode materials and electrolytes;
- Novel solid state electrolytes;
- New characterization tools to monitor electrodes or batteries.

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Message from the Editor-in-Chief

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