

Special Issue

Development and Characterization of Lithium Battery Materials

Message from the Guest Editors

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.

Guest Editors

Prof. Dr. Karim Zaghib

Center of Excellence in Transportation Electrification and Energy Storage, Hydro-Québec, 1806 boulevard Lionel-Boulet, Varennes, QC J3X 1S1, Canada

Dr. Yuesheng Wang

Center of Excellence in Transportation Electrification and Energy Storage, Hydro-Québec, 1806 boulevard Lionel-Boulet, Varennes, QC J3X 1S1, Canada

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Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland
Tel: +41 61 683 77 34
batteries@mdpi.com

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Editor-in-Chief

Prof. Dr. Karim Zaghib

Department of Chemical and Materials Engineering, Concordia
University, Montréal, QC H3G 1M8, Canada

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