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

Deadline for manuscript submissions

closed (30 November 2022)

Batteries

an Open Access Journal by MDPI

Impact Factor 4.8
CiteScore 6.6

mdpi.com/si/46764

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

mdpi.com/journal/batteries

Batteries

an Open Access Journal by MDPI

Impact Factor 4.8
CiteScore 6.6

mdpi.com/journal/batteries

MDPI

About the Journal

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

Prof. Dr. Karim Zaghib
Department of Chemical and Materials Engineering, Concordia University, Montréal, QC H3G 1M8, Canada

Author Benefits

Open Access:

free for readers, with article processing charges (APC) paid by authors or their institutions.

High Visibility:

indexed within Scopus, SCIE (Web of Science), Inspec, Ei Compendex, CAPlus / SciFinder, and other databases.

Journal Rank:

JCR - Q2 (Electrochemistry) / CiteScore - Q1 (Electrical and Electronic Engineering)