

Special Issue

Design and Optimization of Critical Materials for Lithium or Sodium Batteries

Message from the Guest Editors

This Special Issue focuses on the rational design and optimization of critical materials—including cathodes, anodes, and electrolytes—for next-generation lithium/sodium batteries. We seek contributions addressing novel material discovery, innovative structure design (e.g., nanostructuring, coatings, composites), and advanced performance optimization strategies for both lithium and sodium batteries, with emphasis on understanding and engineering the interplay between material structure, properties, and electrochemical performance and the goal of fostering breakthroughs that enhance energy density, longevity, rate capability, and safety, accelerating the development of next-generation high-performance and sustainable battery systems.

Guest Editors

Dr. Lin Fu
Dr. Xiancheng Wang
Dr. Guocheng Li

Deadline for manuscript submissions

8 October 2026



Batteries

an Open Access Journal
by MDPI

Impact Factor 4.8
CiteScore 6.6



mdpi.com/si/250498

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

[mdpi.com/journal/
batteries](https://mdpi.com/journal/batteries)





Batteries

an Open Access Journal
by MDPI

Impact Factor 4.8
CiteScore 6.6



[mdpi.com/journal/
batteries](https://mdpi.com/journal/batteries)



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)