

Special Issue

Zinc-Ion Batteries: Recent Progress and Prospects

Message from the Guest Editors

Zinc-ion batteries (ZIBs) are emerging as a compelling alternative in energy storage applications due to their inherent safety, environmental compatibility, and affordability and the natural abundance of zinc. This field has seen significant progress in recent years, including novel cathode materials and optimized electrolytes, as well as deeper insights into electrochemical processes.

This Special Issue is dedicated to offering comprehensive and insightful coverage of ongoing research efforts, current advancements, and future directions within this promising field. We warmly welcome original research articles, reviews, and perspectives covering topics including, but not limited to, the following

- Design and synthesis of advanced cathode materials for ZIBs;

- Development and optimization of aqueous and non-aqueous electrolytes for ZIBs;

- Zinc metal interface engineering and dendrite suppression strategies;

- In situ and operando characterization techniques for ZIBs;

- Theoretical and computational studies of zinc-ion storage mechanisms;

- Durability, safety, and recyclability of ZIB systems.

Guest Editors

Dr. Shichen Sun

Department of Mechanical Engineering, University of South Carolina, Columbia, SC 29201, USA

Dr. Buke Wu

Department of Mechanical Engineering, University of South Carolina, Columbia, SC 29201, USA

Deadline for manuscript submissions

30 November 2026



Batteries

an Open Access Journal
by MDPI

Impact Factor 4.8
CiteScore 6.6



mdpi.com/si/246382

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)