



## Emerging Materials and Technologies for Post-Lithium-Ion Batteries —2nd Edition

Guest Editor:

**Dr. Hao Liu**

Centre for Clean Energy  
Technology, School of  
Mathematical and Physical  
Sciences, Faculty of Science,  
University of Technology Sydney,  
P.O. Box 123, Broadway, Sydney,  
NSW 2007, Australia

Deadline for manuscript  
submissions:

**15 May 2024**

### Message from the Guest Editor

Dear Colleagues,

Currently, the rechargeable lithium-ion battery is generally considered to be the best battery for EVs, as a compromise between the advantages and drawbacks among various traditional battery candidates (e.g., fuel cells, solar cells, lead-acid, Ni-Cd and Ni-MH batteries). However, the application of lithium-ion battery is limited owing to some practical challenges such as high cost (e.g., lithium and cobalt raw resources), low energy/power density for high rate application, and intrinsic safety risk using organic electrolyte. Therefore, it is crucial to develop novel materials and technologies beyond the lithium-ion batteries with low price, high energy/power density, and reliable safety.

In this Special Issue, potential topics include, but are not limited to:

- Sodium ion batteries;
- Lithium sulfur batteries;
- Metal air batteries;
- Solid state batteries;
- Supercapacitors;
- Fuel cells.

Dr. Hao Liu  
*Guest Editor*



[mdpi.com/si/189978](https://mdpi.com/si/189978)

# Special Issue



an Open Access Journal by MDPI

## Editor-in-Chief

### Prof. Dr. Andreas Jossen

Institute for Electrical Energy  
Storage Technology (EES),  
Technical University München  
(TUM), Arcisstrasse 21, 80333  
Munich, Germany

## 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.

## 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 - Q2 (*Electrochemistry*)

## Contact Us

---

Batteries Editorial Office  
MDPI, St. Alban-Anlage 66  
4052 Basel, Switzerland

Tel: +41 61 683 77 34  
[www.mdpi.com](http://www.mdpi.com)

[mdpi.com/journal/batteries](http://mdpi.com/journal/batteries)  
[batteries@mdpi.com](mailto:batteries@mdpi.com)  
[X@batteriesmdpi](#)