

## Special Issue

# Electrochemical, Thermal and Safety Properties of Lithium and Post-Li Materials and Cells

### Message from the Guest Editor

New cheaper, safer, and more sustainable battery materials and technology concepts are urgently required for the decarbonization of the energy system and an extensive market penetration of electric vehicles and stationary storage systems. So-called post-Lithium batteries based on, e.g., Na or Mg ions which no longer rely on Li are promising alternatives that offer a huge potential. Therefore, characterization of electrochemical, thermal, and safety properties of the cells and their individual active and passive materials is required to obtain quantitative and reliable data, which are necessary to improve the current understanding in order to design and develop better materials and cells. This Special Issue addresses all techniques which are necessary for a holistic assessment from materials to cell level. I warmly invite you to publish your original research paper or a review paper in this Special Issue. Share your results to get a deeper understanding of the electrochemical and thermal processes under both normal use and abuse conditions. This will be an important milestone to increase their safety and to exploit their full potential....

---

### Guest Editor

Dr. Carlos Ziebert

Group Leader Batteries—Calorimetry and Safety, Institute for Applied Materials-Applied Materials Physics (IAM-AWP), Karlsruhe Institute of Technology (KIT), Hermann-von-Helmholtz-Platz 1, 76344 Eggenstein-Leopoldshafen, Germany

---

### Deadline for manuscript submissions

closed (31 December 2020)



## Batteries

---

an Open Access Journal  
by MDPI

---

Impact Factor 4.8  
CiteScore 6.6



[mdpi.com/si/31765](https://mdpi.com/si/31765)

*Batteries*  
Editorial Office  
MDPI, Grosspeteranlage 5  
4052 Basel, Switzerland  
Tel: +41 61 683 77 34  
[batteries@mdpi.com](mailto: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)