batteries

an Open Access Journal by MDPI

IMPACT FACTOR 4.8

CITESCORE 6.6

Advances in Lithium-Ion Battery Safety and Fire

Guest Editors:

Dr. Zhi Wang
School of Safety Engineering, China University of Mining and Technology, Xuzhou 221000, China

Dr. Tong Liu
School of Safety Engineering, China University of Mining and Technology, Xuzhou 221000, China

Dr. Mingzhi Jiao
CUMT-IoT perception Mine Research Center, China University of Mining and Technology, Xuzhou 221000, China

Deadline for manuscript submissions:
closed (10 March 2025)

Message from the Guest Editors

This Special Issue focuses on advances in the fundamental science and key technologies for thermal safety and management with regard to the related fire and explosion of batteries, including mechanisms, modelling, characteristics, monitoring, control, standard, etc.

Potential topics include, but are not limited to, the following:

- Intrinsic design for battery safety (flame retardant electrolyte, self-closing separator, high stability electrode, etc.);
- Insights into thermal runaway/propagation mechanisms and numerical modelling analysis;
- Advanced thermal management strategies;
- Multi-scale battery fire tests (cell, module, vehicle, energy storage station, etc.);
- Process safety and emergency disposal of batteries during transportation;
- Ageing mechanisms, diagnostic method and regulation measures under different paths;
- Characteristics and evaluation of battery fire and explosion;
- Detection, monitoring and early warning of battery thermal runaway and fire;
- Explosion suppression and fire extinguishing involving battery fire;
- Safety standards for battery production, storage, transportation, and usage processes.

mdpi.com/si/193954

Special Issue

batteries

an Open Access Journal by MDPI

IMPACT FACTOR 4.8

CITESCORE 6.6

Editor-in-Chief

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

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 - Q1 (Electrical and Electronic Engineering)

Contact Us

Batteries Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland

Tel: +41 61 683 77 34
www.mdpi.com

mdpi.com/journal/batteries
batteries@mdpi.com
𝕏@batteriesmdpi