Special Issue

Data-Driven Modeling, Degradation, Control, and Advanced Management Systems for Batteries

Message from the Guest Editors

We warmly welcome researchers and practitioners to submit original research articles, comprehensive review papers, and insightful case studies addressing, but not limited to, the following topics

- Physics-informed machine learning-based hybrid modeling of battery behavior.
- AI and machine learning-based algorithms for accurate battery state estimation.
- Predictive modeling of battery performance under diverse operational conditions.
- Data-driven degradation models, their impact on battery performance, and degradation mitigation strategies.
- Advanced battery control algorithms for optimal charging and discharging profiles.
- Robust control frameworks to minimize battery state-of-health deterioration and enhance lifespan.
- Battery management systems with AI- and learning-based diagnostics and fault detection.
- Predictive maintenance strategies for early fault detection in batteries and its prevention.
- Emerging battery technologies in power systems, transportation, and space applications and their modeling, management, and degradation.

Guest Editors

Dr. Diptish Saha

Prof. Dr. Juan C. Vasquez

Dr. Najmeh Bazmohammadi

Deadline for manuscript submissions

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

mdpi.com/journal/batteries

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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

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