

## Special Issue

# Second Life and Recycling: Perspectives for High-Performance Batteries

### Message from the Guest Editors

Second-life batteries are either used again or as a combination of their modules or cells. Due to their characteristic dispersion, the elements must be selected and sorted. Performance evolution and battery behavior during their second life must be observed, wherein specific energy management may be needed. This Special Issue invites researchers to contribute original research/review/perspective articles on the development of advanced technologies and alternative solutions for high-performance-battery recycling and second-life applications. Topics of interest include, but are not limited to, the following:

- The upcycling and recycling of different components of waste lithium-ion batteries (cathodes, anodes, electrolytes, and current collectors);
- Aging characterization during first and second lives;
- Aging, thermal, and electric modeling from first to second life and beyond;
- The optimal design of second-life energy storage systems with respect to their lifetime;
- Electrical and thermal safety issues;
- The application of second-life batteries;
- Life cycle and techno-economic assessment;
- Direct recycling.

### Guest Editors

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### Deadline for manuscript submissions

15 June 2026



## Batteries

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## 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.

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