Special Issue

Industrialization of Second-Life Batteries

Message from the Guest Editors

As modern transportation continues to shift towards full electrification, there is an increasing demand for second-life batteries that deliver enhanced energy density, safety, and cycle life. Researchers have made significant strides in improving the energy density of second-life batteries by incorporating ternary-positive electrode materials and lithium-metal-negative electrode materials. However, ternary-positive electrode materials are susceptible to decomposition, which generates oxygen that can react violently with the flammable organic electrolyte, releasing substantial heat and creating safety hazards. Additionally, the highly reactive lithium metal suffers from poor chemical stability. This Special Issue aims to present a comprehensive overview of the technologies, supply chains, business models, and policies related to second-life batteries, particularly lithium-ion batteries, for secondary applications across various industries.

- Modelling of aged battery cells and battery packs;
- Battery management systems for second-life batteries;
- AI technologies for second-life batteries;
- Supply chains of second-life batteries;
- Policies for second-life batteries;
- .....

Guest Editors

Dr. Yun Yang

Dr. Thoo Ai Chin

Prof. Dr. Ka Wai Eric Cheng

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

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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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