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Advanced Materials for Zinc-Based Battery: Development and Challenges

Guest Editors:

Dr. Meng-Fang Lin

Dr. Alice Lee-Sie Eh

Dr. Wenbin Kang

Dr. Lulu Xu

Deadline for manuscript submissions:
closed (10 April 2023)

Message from the Guest Editors

This Special Issue provides insights and new directions in the development of electrolytes (aqueous, non-aqueous, hybrid) for Zn batteries. In addition to sustainable electrolyte solutions, innovations in cell architectures for Zn batteries are welcome. Various challenges pertaining to the development of zinc-based batteries will be addressed and possible means of overcoming these challenges will be delineated.

In this Special Issue, we are looking for contributions to provide insights on advanced nanomaterials (cathode and anode), understanding the electrochemical mechanism to enhance the cycling stability of the Zn-based batteries, inhibiting Zn dendrite formation, the development of robust multivalent Zn electrolyte systems, and innovative design of battery architectures to prolong their lifespans.

Topics of interest include, but are not limited to:

- Advanced nanomaterials for Zn-based batteries;
- Recent advancements in the development of multivalent Zn electrolyte systems;
- Inhibition of Zn dendrite formation;
- Solid-state Zn batteries;
- The Holy Grail of Zn–air batteries.

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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

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Contact Us

Batteries Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland

Tel: +41 61 683 77 34
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