Special Issue

Zn-Ion and Zn–Air Batteries: Materials, Mechanisms and Applications

Message from the Guest Editors

Zn-based battery technologies that provide the possibility of reconciling the high cost and poor safety of state-of-art Li-ion batteries while retaining high energy and power densities have been long pursued. The first voltaic pile was invented in 1800 and the first Zn–air battery was commercialized as early as 1932. However, to develop practically rechargeable Zn batteries, there are still a lot of obstacles in the metallic Zn anode, cathodes and electrolytes.

The aim of the current Research Topic is to cover promising, recent and novel research trends in the designing reversible Zn anodes, ultra-stable electrolytes and high-performance cathodes for rechargeable Zn-ion and Zn–air batteries. Areas to be covered in this Research Topic may include, but are not limited to, the following:

New-type aqueous/non-aqueous/hybrid electrolytes;
Artificial/in situ protection strategies for Zn anodes;
High-voltage and high-capacity Zn2+-storage electrode materials;
Catalytic cathodes for zinc-air batteries;
Solid-state electrolytes for Zn batteries.

Guest Editors

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Deadline for manuscript submissions

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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.

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