Special Issue

Rechargeable Zinc–Air Battery

Message from the Guest Editor

A rechargeable zinc–air battery (RZAB) that utilizes oxygen as a cathode and zinc metal as an anode is considered to be a competitive electrochemical energy storage technology. The current development of RZAB is, however, hindered by challenges from parasitic reactions at the Zn anode and insufficient oxygen redox kinetics, which results in a deteriorated capacity and short cycling life. The progress made with the Zn anode, electrolyte, and oxygen catalysis are key for optimising the RZAB performance. This Special Issue aims to providing insight, advanced methods, and knowledge for future developments of RZABs. Topics include, but are not limited to:

- Active and durable air electrocatalysts (bifunctional, precious metal and nonprecious metal based, etc.);
- Zinc utilisation, dendrites, or passivation;
- Aqueous electrolytes (alkaline, acidic and neutral electrolyte);
- Non-aqueous electrolytes (solid polymer electrolyte, gel polymer electrolyte, deep eutectic solvent and ionic liquids);
- Hydrogen evolution from the aqueous electrolyte;
- Modelling study on catalyst, anode and electrolyte materials;
- Practical testing protocols and management.

Guest Editor

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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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