

Special Issue

Rechargeable Aqueous Zn-Ion Batteries

Message from the Guest Editors

Aqueous zinc-ion batteries (AZIBs) are highly desirable as promising energy storage devices due to their high theoretical capacity, inherent safety, and environmental friendliness. However, their widespread deployment is critically impeded by inherent thermodynamic and electrochemical instabilities, which seriously affect their operational lifespan and safety. This Special Issue aims to collate and showcase cutting-edge research, insightful reviews, and forward-looking perspectives that offer fundamental insights and propose innovative strategies for the holistic advancement of high-performance AZIBs. Potential topics include but are not limited to:

- Advanced Electrolytes;
- Low-Temperature AZIBs;
- High-Performance Cathodes;
- Highly Reversible Zinc Metal Anode;
- Innovative Cell Configurations;
- Advanced Flexible AZIBs Design;
- AI/Machine Learning-Driven Design and Optimization of AZIBs;
- AZIBs in Smart Systems;
- Novel Applications and System-Level Integration of High-Performance AZIBs

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