

## Special Issue

# Design, Synthesis and Characterization of Metal Batteries—State-of-the-Art

### Message from the Guest Editor

With the strong momentum of electrochemical energy storage devices towards the efficient use of energy in mobile and stationary applications, metal batteries play a critical role in the era of electrification and are predicted to grow with the further penetration of renewable energy into the energy market.

The main prerequisite for the future success of metal batteries is further improvements of existing and the development of novel design philosophies. In addition, the synthesis and characterization of novel electrodes and electrolytes are key factors for the rapid development of metal batteries. Therefore, a state-of-the-art summary of the design, synthesis and characterization of metal batteries is very important.

The papers presented in this Special Issue should provide an account of the scientific and technological state-of-the-art of metal batteries. Research areas may include (but are not limited to) the following: the design, synthesis and characterization of electrodes and electrolytes for lithium ion batteries, sodium ion batteries, potassium ion batteries and aluminum batteries.

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### Guest Editor

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### Deadline for manuscript submissions

closed (31 July 2024)



## Metals

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## About the Journal

### Message from the Editorial Board

Metallic materials play a vital role in the economic life of modern societies; contributions are sought on fresh developments that enhance our understanding of the fundamental aspects related to the relationships between processing, properties and microstructure – disciplines in the metallurgical field ranging from processing, mechanical behavior, phase transitions and microstructural evolution, nanostructures, as well as unique metallic properties – inspire general and scholarly interest among the scientific community.

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### Editors-in-Chief

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manuscripts are peer-reviewed and a first decision is provided to authors approximately 18 days after submission; acceptance to publication is undertaken in 2.6 days (median values for papers published in this journal in the first half of 2025).