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

Guest Editor:

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Deadline for manuscript submissions:
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Message from the Guest Editor

Dear Colleagues,

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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Message from the Editor-in-Chief

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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