Special Issue

Investigation of Hydrogen Storage Metallic Materials

Message from the Guest Editors

Hydrogen has gained significant attention as a potential sustainable energy carrier due to its ability to produce energy through fuel cells, combustion engines, and other processes without generating harmful emissions. However, the widespread use of hydrogen as an energy carrier is currently limited by the lack of efficient and cost-effective storage methods. Metallic materials have been proposed as one of the most promising hydrogen storage materials due to their high gravimetric and volumetric hydrogen storage capacities. The scope of this Special Issue includes, but is not limited to, the recent advances in the science and technology of (i) metallic compounds (i.e., metal hydrides), (ii) complex metallic hydrides (i.e., borohydrides, amines and imides) and (iii) metallic catalysts for liquid organic hydrogen carriers (LOHC). This Special Issue provides a platform for researchers to share their latest findings and insights on metallic materials for hydrogen storage. We invite researchers in the field to submit their work to this Special Issue and we look forward to a fruitful exchange of knowledge and ideas.

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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.

Editors-in-Chief

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