



Hydrogen Storage Alloys

Guest Editor:

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Message from the Guest Editor

Dear Colleagues,

Hydrogen storage alloy is very important for applications in both solid-state hydrogen storage and nickel-metal hydride batteries. It also makes up the essential components in energy conversion (alkaline fuel cells), chemical processing (reducing agents, strong bases, strong reductants, and catalysts), physical separation processing (desiccants, isotope separation, gas separation, and hydrogen purification), nuclear engineering (neutron moderators, reflectors, and shields), and thermal applications (heat pumps). Recently, nickel-metal hydride batteries, with a new family of superlattice A_2B_7 metal hydride alloys, were applied successfully in railways, ferries, telecommunication emergency power sources, and new hybrid-electric vehicles with conventional rare-earth-based AB_5 , in China. For this Special Issue in *Metals*, we welcome reviews and articles in the areas of principle, theoretical calculation, material preparation and characterization, and applications of hydrogen storage alloys.





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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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