

Special Issue

Recent Developments of Zirconium Alloys in the Nuclear Industry

Message from the Guest Editor

With the development of the nuclear power industry, the number of nuclear power plants has had a rapid increase globally, especially in China. Zirconium alloy, as one of the best cladding materials, is receiving more and more attention. Research on the new alloy development and mechanical behavior, hydrogen pick-up and hydrides, in-reactor behavior and irradiation effects, corrosion, accident tolerance design, etc., of zirconium alloys has achieved significant progress. In order to better understand the current issues and predict the future development of zirconium alloys, it is necessary to summarize research for discussion. This Special Issue aims at this purpose and wishes to play a positive role in promoting the development of zirconium alloys in nuclear power.

Guest Editor

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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.

Editor-in-Chief

Prof. Dr. Yong Zhang

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