Special Issue

Structure and Properties of Amorphous Metallic Alloys

Message from the Guest Editor

Amorphous alloys have stimulated widespread research enthusiasm for a long time because of their technological promise for structural and functional applications and scientific importance in understanding glass formation, relaxation and crystallization. These alloys represent a novel class of metallic materials with extraordinary mechanical, physical and chemical properties. While more and more amorphous alloys have been developed and investigated in recent years, the local structure of amorphous alloys has been a long-standing mystery, due to the complex topological and chemical short-to-medium range order and the heterogeneous nature. How atomic packing changes with composition, temperature, and pressure, and more significantly, how the short-to-medium range order determines the properties of amorphous alloys, are unresolved questions, which become a major impediment for their wider industrialized applications.

This Special Issue aims to present the latest research related to the short-to-medium range order of amorphous alloys, and its correlation with mechanical, physical and mechanical properties.

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.

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