Special Issue

Advances in Metallic Glass and Metallic Glass Composite: Preparation, Structures, Properties and Applications

Message from the Guest Editors

Metallic glasses (or amorphous alloys) are currently attracting increased interest due to their unique physical-mechanical properties such as high hardness, large elastic deformation, high fatigue strength, as well as increased wear resistance and corrosion resistance. Numerous studies show that metal glassy alloys have significantly higher mechanical properties than their crystalline analogs. However, due to the peculiarities of their atomic structure, this class of materials is prone to brittle fracture and has extremely low ductility. In this regard, creating composite materials based on metallic glasses could help to avoid most of the disadvantages. For this Special Issue, we aspire to publish a range of articles covering (i) the preparation of the metal glassy alloys and their composites (amorphous/crystalline composites, metal/polymer composites, etc.), (ii) structural investigation (in solid/liquid state), (iii) properties investigation (mechanical, physical, chemical, biological, etc.), and (iv) applications of the final products, based on metal glassy alloys and their composites (including ribbon, bulk, powder, coatings, thin-films, etc.).

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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.

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