Special Issue

Structural and Magnetic Properties of Amorphous Alloys

Message from the Guest Editor

Materials with an amorphous and nanocrystalline structure are one of the newer groups of functional materials with significantly better properties than the corresponding crystalline materials of the same composition. Particularly interesting for functional reasons are amorphous ferromagnetic alloys showing the so-called soft magnetic properties. These materials, compared to the commercially used FeSi transformer sheets, show significantly lower losses during re-magnetization, reducing this undesirable effect by as much as 80%. Therefore, in-depth knowledge of the methodology of their production and a detailed analysis of magnetic properties with the simultaneous study of their structure may contribute to significant technological progress.

This Special Issue covers all the aspects of the synthesis, characterization, and application of amorphous and nanocrystalline materials. I am inviting you to publish the results of your research related to the subject of this issue.

Guest Editor

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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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