Special Issue

Advanced Non-Equilibrium Metallic Materials

Message from the Guest Editor

The production of modern engineering structures, high technology instruments and machine parts is impossible without the further development of advanced structural and functional metallic materials, which still represent the main class of materials used in engineering. Depending on the application field, these alloys should satisfy various requirements. Many of them must exhibit high strength, good plasticity and more importantly high fracture toughness, either high electrical conductivity or high electrical resistance, either soft or hard ferromagnetic properties, good corrosion resistance, etc. These properties are determined by an internal alloy structure that is either crystalline/quasi-crystalline or amorphous/glassy. In turn, the structure of the alloy depends on the composition and the material processing route. As there are links between the chemical composition and the structure, between the material processing route and the structure, and finally between the material structure and properties, various aspects of the materials science of advanced non-equilibrium metallic materials will be considered in the present issue.

Guest Editor

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About the Journal

Message from the Editor-in-Chief

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

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