

Special Issue

Advances in Casting, Thermomechanical and Heat Treatments of Aluminum Alloy

Message from the Guest Editor

Aluminum and its alloys are widely used in automobiles, aircraft, shipbuilding and other industries due to a good combination of technological characteristics, such as light weight, good mechanical properties, corrosion resistance and technological properties under casting and deformation. Products from aluminum alloys are obtained by casting and thermomechanical treatment. The microstructure, phase composition that forms during casting, heat treatment, and thermomechanical treatment define the final properties and applications of the materials. The optimization of the structure and phase composition of alloys and the search for promising alloying systems and elements for the development of new materials with enhanced operational and technological properties is an urgent task, including for expanding the use of aluminum alloys and improving the level of technology.

Research articles focusing on the development of prospective Al alloys, optimization of casting and deformation technology, and investigation of the evaluation of the structure and phase composition under casting and heat and thermomechanical treatment are encouraged.

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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