Special Issue

Microstructure Evolution and Mechanical Properties of Magnesium Alloys—3rd Edition

Message from the Guest Editor

Magnesium alloys possess desirable properties, such as high specific strength, high specific stiffness, and recyclability. Because of these characteristics, magnesium alloys are increasingly used in automotive, aviation, aerospace, electronics, and other consumer products. This also places a great demand on the mechanical properties of magnesium alloys. The mechanical properties of magnesium alloys are closely related to their microstructure, including grain size, texture, precipitates, and alloying elements, among others. In order to obtain the expected performance, a large number of scholars have devoted themselves to the development of new alloys and new processing technologies (including casting technology, plastic processing technology, powder metallurgy, 3D printing, etc.) to tailor these microstructures. The aim of this Special Issue is to provide an open platform to share the latest research results in the development of high-performance magnesium alloys. This Special Issue covers original research and review articles on recent advances in alloy design, microstructure modification, processing technology, deformation mechanism, and computer simulation.

Guest Editor

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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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