Special Issue

High-Performance Alloys and Steels

Message from the Guest Editors

Advanced steels and special alloys, such as Al alloys, Mg alloys, Ti-based alloys, Cu alloys, and high-entropy alloys, are important cornerstones for the development of modern industries, agriculture, livelihoods, the military, and other fields.

To achieve the goals of weight reduction, cost reduction, extended service life, and improved service performance of both steel and alloy components, it is necessary, on the one hand, to develop high-performance steels with excellent properties, such as higher strength, higher plasticity, better toughness, lower density, more favorable corrosion resistance, etc. On the other hand, we need to develop high-performance alloys with better mechanical properties and outstanding physical and chemical properties, such as higher electric conductivity, higher thermal conductivity, better hydrogen storage and corrosion resistance, etc.

This Special Issue covers these topics and focuses on the composition process–structure–performance relationships of high-performance alloys and steels. Appropriate submissions to this Special Issue include regular research articles, short communications, and reviews.

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Message from the Editor-in-Chief

Materials (ISSN 1996-1944) was launched in 2008. The journal covers twenty-five comprehensive topics: biomaterials, energy materials, advanced composites, advanced materials characterization, porous materials, manufacturing processes and systems, advanced nanomaterials and nanotechnology, smart materials, thin films and interfaces, catalytic materials, carbon materials, materials chemistry, materials physics, optics and photonics, corrosion, construction and building materials, materials simulation and design, electronic materials, advanced and functional ceramics and glasses, metals and alloys, soft matter, polymeric materials, quantum materials, mechanics of materials, green materials, general. *Materials* provides a unique opportunity to contribute high quality articles and to take advantage of its large readership.

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