Special Issue

High-Performance Alloys and Steels: Design, Processing, and Applications

Message from the Guest Editors

The development and performance optimization of high-performance alloys and steel have been a research focus for the past few decades, aiming to manufacture excellent industrial products. Numerous works and efforts have been made to elevate the performance of alloys and steel, including tuning design strategies, processing routes, and their application in the environment. However, the performance of the alloys and steel still does not meet the requirements of application fields, including extremely high/low-temperature conditions. Further improvement to the performance of alloys and steel is essential to elevate the service quality of industrial products. Therefore, this Special Issue aims to provide a broad platform to share the latest results in the development and performance optimization of high-performance alloys and steel. This includes fundamental questions regarding microstructure–property relationships, phase transformations, strain hardening, and fracture mechanisms. Submissions on topics related to the design, processing, testing, characterization, and applications of high-performance alloys and steel are welcome.

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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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