Special Issue

Microstructure, Mechanical Properties, and Deformation Characteristics of Metals and Alloys

Message from the Guest Editor

As the largest group of engineering materials, metals and alloys have always played an important role in the development of the world economy. Ready availability, ease of fabrication, and desirable mechanical properties are the principal attributes of metals and alloys. Metallic materials may be divided into two large groups, ferrous and nonferrous, depending on whether iron or another element is the principal constituent. Ferrous materials can be further grouped into wrought irons, cast irons, carbon steels, and alloy steels. Common nonferrous materials include alloys of copper, aluminum, magnesium, nickel, lead, tin, and zinc. The relationship between microstructure, mechanical properties, and deformation characteristics is critical in the research of metals and alloys. This Special Issue welcomes the submission of high-quality research on various aspects of metals and alloys, including microstructure evolution, materials design, numerical modeling, processing technology, and failure mechanisms. In particular, we encourage papers on the relationship between advanced manufacturing processing and the microstructures properties of metals and alloys.

Guest Editor

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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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