Special Issue

Alloys and Composites: Structural and Functional Applications, Second Edition

Message from the Guest Editor

Alloys and composites with high stiffness, high strength, and good ductility can be used as load-bearing components, those with high hardness and ductility can be used as cutting tools, and those with high corrosion resistance can be used as components in seawater or in a chemical atmosphere environment.

The aim of this SI is to understand the basic principles of property design and tailoring in alloys and composites, to be used as structural or functional materials. The materials of interest include amorphous alloys, high-entropy alloys, lightweight alloys, metal–matrix composites, ceramic–matrix composites, and polymer–matrix composites. To design and tailor macroscopic properties as structural or functional materials, such as macroscopic stiffness and strength, the phase constituent, volume fraction, and average size of each phase, interface bonding should be well investigated. A thorough understanding of how the composition and processing parameters influence the macroscopic properties will definitely help toward new breakthroughs in the field of alloys and composites and their use in different cases

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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