Special Issue

Alloys and Composites: Structural and Functional Applications, Third Edition

Message from the Guest Editor

According to the constituent phases in alloys and composites, materials can exhibit various performance characteristics, emphasizing their great potential in different applications, such as aeronautics and astronautics, the automobile industry, and the electronic and electrical industries.

The aim of this SI is to understand the basic principles of property design and tailoring in alloys and composites so they can be used as structural or functional materials. 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 for structural or functional materials, such as macroscopic stiffness and strength, the phase constituent, volume fraction, and average size of each phase should be adequately investigated at interface bonding. A thorough understanding of how the composition and processing parameters influence macroscopic properties will help develop new breakthroughs in the field of alloys and composites and enable 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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