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Alloys and Composites: Structural and Functional Applications (Volume II)

Guest Editor:

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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

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Message from the Editor-in-Chief

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