Special Issue

Advancement of Deformation Mechanisms in High-Entropy Alloys

Message from the Guest Editor

High-entropy alloys (HEAs), also known as multiprincipal element alloys (MPEAs) or complex concentrated alloys (CCAs), are a new class of materials developed based on “chemical disorder”, which breaks the limitations of only one or two principal elements in traditional materials. HEAs are expected to act as competitive candidates of structural materials in industrial, aerospace, and biomedical applications. To promote their wide engineering applications, it is desirable to improve the strength of the alloys while retaining a good ductility. To date, as a structural material with excellent performance, HEAs have not been applied in large-scale industrialization yet. Therefore, HEAs must overcome the mentioned drawbacks and achieve an optimal combination of high strength and good plasticity. This Special Issue will cover new findings in the field of the strengthening and toughening of HEAs, including FCC HEAs, BCC HEAs, dual-phase HEAs and refractory HEAs. Manuscripts describing new experimental and theoretical studies on these fields are highly welcome in this issue.

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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