Special Issue

Aluminum Alloys: Structures, Properties and Applications

Message from the Guest Editor

Different light-weight aluminum alloys and their structure, mechanical properties, and applications will be discussed in this Special Issue. It will contain papers showing new light-weight aluminum alloys, metal-matrix composites, and corrosion-resistant materials. Aluminum has a low density of 2.7g/cm3, and is a recyclable material with excellent electrical conductivity and thermal properties. As a result, aluminum is the material of choice when light-weighting and corrosion resistance are of paramount importance. Despite the crucial combinations of properties exhibited by aluminum and its alloys, aluminum has become an economical and broadly used material in most demanding engineering applications. Heat-treated and non-heat-treated alloys provide varying mechanical properties. Alloys are produced through a range of processes, including casting (gravity, tilt, sand, investment), forging, drawing, rolling etc. This Special Issue presents original research and review papers concerning aluminum alloys.

Guest Editor

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Deadline for manuscript submissions

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Metallic materials play a vital role in the economic life of modern societies; contributions are sought on fresh developments that enhance our understanding of the fundamental aspects related to the relationships between processing, properties and microstructure – disciplines in the metallurgical field ranging from processing, mechanical behavior, phase transitions and microstructural evolution, nanostructures, as well as unique metallic properties – inspire general and scholarly interest among the scientific community.

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