Special Issue

Advanced Lightweight Alloys: Architecture, Crystal Defects and Applications

Message from the Guest Editor

This Special Issue, entitled “Advanced Lightweight Alloys: Architecture, Crystal Defects and Applications”, aims to present recent advancements in various aspects related to materials design (especially microstructural design, including atomic-scale structural design and defect design), processes, and applications:

- The design of high-performance light metals and their alloys using empirical, theoretical, and computational methods, including atomic-scale structural design and defect design, DFT, Deep Learning, and so on.
- The development of advanced light metal and its alloys with high strength, high temperature resistance, corrosion resistance, and other excellent properties.
- The development of new process methods and heat treatment methods of light metal and alloys, including friction stir processing (FSP), additive manufacturing (AM), and related topics.
- The microstructural evolution and related mechanism exploration of light metal and alloys subjected to deformation, corrosion, creep, and other processes.

We are pleased to invite you to submit full research papers, communications, and review papers to this Special Issue.

Guest Editor

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Message from the Editor-in-Chief

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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