Special Issue

Development and Exploration of Alloys: Mechanical Properties and Microstructures

Message from the Guest Editors

Although humankind has been using and developing alloys for thousands of years, the search for the continuous improvement of their properties and new applications with more demanding requirements continues. Industrial and technological advances go hand-in-hand with developing new metallic materials with higher performance, durability, and a more sustainable cradle-to-tomb cycle. This Special Issue is intended to be a compilation of the latest advances in the development of alloys, the improvement of existing ones, and new fabrication routes. It will mainly emphasize their outstanding mechanical properties and microstructural features' evolution. The acceptance criteria do not restrict any alloy type, application, or characterization technique, although the articles must show significant advances in the field, accompanied by high-scientific-level discussion. **Keywords:**

- new alloys for advanced applications
- non-conventional mechanical characterization
- in-depth microstructure analysis
- cutting-edge manufacturing routes
- advances in metallurgy

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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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