Special Issue

Oxide Dispersion Strengthened High Entropy Alloy and Mechanical Alloying

Message from the Guest Editor

Materials fabricated using mechanical alloying (MA) contribute significantly to industrial applications. Mechanical alloying is considered the most appropriate processing method for producing oxide dispersion strengthened (ODS) alloys, which exhibit good creep resistance, thermal stability, wear resistance, and oxidation resistance, among other beneficial properties. In recent years, high-entropy alloys (HEAs) have arisen as a new class of metallic alloys in which the formation of a solid solution rather than intermetallic compounds is favored. Thus, ODS-HEAs are promising structural materials for applications requiring high temperature and radiation resistance due to the high configurational entropy and pinning effect of their dispersed oxide particles, which restrict dislocation motion and restrain grain growth. This Special Issue will consider all aspects of theory, methods, materials, and applications of mechanical alloying. Researchers in the field are encouraged to contribute in this Special 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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