Special Issue

Functional Fe-Based Alloys with Magneto-Mechanical Coupling

Message from the Guest Editor

The Special Issue will cover (but not be restricted to) the following topics for Fe-based materials:

- Magnetically soft and hard functional steels and alloys
- Alloys with special magnetic properties and structures
- Alloys with enhanced and giant magnetostriction for sensors and actuators
- High- and low-damping alloys

Magnetic materials, both magnetically soft and matnetically hard, play an important role in electrical energy generation, transmission, and conversion, and they are used as permanent magnets, high- and low-damping alloys, sensors, actuators, etc. Soft magnetic materials are also used in the production of high magnetostrictive and high damping materials with a magneto-mechanical source of damping of unwanted forced or free-decay vibrations. A relatively unexplored and promising research area is the development of new hard magnetic films with perpendicular anisotropy, and their applications in spin electronics and magnetic recording. Hard magnetic alloys can also be produced by crystallization of the glassy phase.

Guest Editor

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Deadline for manuscript submissions

closed (31 August 2021)

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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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