Special Issue

Structure, Magnetic Properties, and Magnetization Reversal Processes of Alloys

Message from the Guest Editor

The most well-known magnetic material is pure Fe; however, through many years of research, a lot of other groups have also been discovered. Today, commercially used permanent magnets are based on the RE2Fe14B phase, which is cheaper compared to SmCo□5 magnets, even though the latter are of much better quality. However, some difficulties in the market of rare earth elements have forced researchers to search for magnetic material based on mixes of transition metals or transition metals–metalloids, and promising results have been achieved for MnBi and MnAl alloys. These different kinds of alloys are produced using mainly arc-melting, induction melting, melt-spinning, suction-casting or high-energy ball milling methods. Through these methods, it is possible to produce crystalline, nanocrystalline or amorphous material, which has a strong influence on the structure, microstructure, magnetic properties, and magnetization reversal processes.

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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