Special Issue

Superconductors: Materials, Properties and Applications

Message from the Guest Editor

Since the discovery of the phenomenon of superconductivity, superconductors have increasingly attracted the attention of researchers. Superconductors are materials with virtually zero electric resistivity. Superconducting materials themselves are subdivided into a few categories and material groups (e.g., high-temperature superconductors (HTS) and low-temperature superconductors (LTS)). These materials provide a very large group of possible applications. Among the applications currently utilizing superconducting materials are stable LTS magnets producing large-volume, stable, and high-intensity magnetic fields required for MRI and NMR, HTS thin-layer tapes used in transformers, special magnets, power storage, motors and generators or HTS bulks used in levitation applications. The potential of mainly HTS materials is huge but depends on further improvement of these materials, especially in affordable fabrication, technological reliability or increased performance. This creates a significant challenge for material scientists and engineers specialized in this and related fields, including processing of thin layer substrates or cryogenic technology.

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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