Special Issue

Challenges and Opportunities of Superconducting Materials for Future Applications

Message from the Guest Editors

This Special Issue will present the latest results on the improvement of superconductors in their different forms (i.e., thin films, single crystals, and bulks), as well as recent findings which help to understand the physics of superconducting materials in order to improve their performance in view of applications. We encourage the community active in both experimental and theoretical research on superconductors to share this knowledge. This Special Issue will be focused on all different kinds of superconductors (low temperature, high temperature, iron-based, etc.) which are suitable for applications and will include, but not be limited to, the following topics:

- Electrical transport properties' improvement;
- Thermal transport and quench;
- Novel materials fabrication and structural characterization;
- Magnetic and superconducting heterostructures;
- Nanostructured superconductors;
- Wires' and tapes' technology development;
- Superconducting films for sensors, electronic devices, and spintronics;
- Non-equilibrium vortex dynamics: models and findings;
- Imaging of vortex matter and material defects;
- Material properties for practical superconductors.

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About the Journal

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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