



an Open Access Journal by MDPI

Characterization and Application of Superconducting Materials

Guest Editors:

Dr. Kévin Berger

GREEN, Université de Lorraine, F-54000 Nancy, France

Dr. Frederic Trillaud

Instituto de Ingeniería,
Universidad Nacional Autónoma
de México, Ciudad de Mexico
04350, Mexico

Deadline for manuscript
submissions:

closed (20 December 2024)

Message from the Guest Editors

Recent advances in the field of high-temperature superconductors (HTS) open up new prospects for meeting the challenges. However, there are still many key issues regarding their reliability in practical applications dealing with their transient electromagnetic, thermal, and mechanical behavior. The first key issue is related to the loss of the superconducting state. This loss of the superconducting state can lead to permanent damage as the superconductor can experience a thermal runaway or quench. The second key issue is a combination of the limited production length and the variability of the superconducting properties in the case of the second generation of superconductors (REBCO).

Therefore, accurate knowledge of the characteristics of the superconductor and its actual performance is of paramount importance in the design of the HTS device, balancing the technological benefits with the initial investment and the operating costs.

In view of the above, this Special Issue aims to provide quality papers presenting new perspectives on the advances in the understanding, characterization, and innovative applications of high-temperature superconductors.





an Open Access Journal by MDPI

Editors-in-Chief

Prof. Dr. Maryam Tabrizian

1. Department of Biomedical Engineering, Faculty of Medicine and Health Sciences, McGill University, Montreal, QC H3A 2B6, Canada

2. Faculty of Dentistry and Oral Health Sciences, McGill University, 3640 Rue University, Montreal, QC H3A 0C7, Canada

Prof. Dr. Yuguang Ma

State Key Laboratory of Luminescent Materials and Devices, South China University of Technology, Guangzhou 510640, China

Message from the Editorial Board

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.

Author Benefits

Open Access: free for readers, with article processing charges (APC) paid by authors or their institutions.

High Visibility: indexed within Scopus, SCIE (Web of Science), PubMed, PMC, Ei Compendex, CaPlus / SciFinder, Inspec, Astrophysics Data System, and other databases.

Journal Rank: JCR - Q2 (Metallurgy and Metallurgical Engineering) / CiteScore - Q1 (Condensed Matter Physics)

Contact Us

Materials Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland

Tel: +41 61 683 77 34
www.mdpi.com

mdpi.com/journal/materials
materials@mdpi.com
[X@Materials_Mdpi](https://twitter.com/Materials_Mdpi)