



an Open Access Journal by MDPI

Dielectrics and Nanodielectrics

Guest Editors:

Dr. Lulu Ren

Department of Physics and
Astronomy, University of
California, Irvine, CA, USA

Dr. He Li

Lawrence Berkeley National
Laboratory, Berkeley, CA, USA

Deadline for manuscript
submissions:

closed (20 June 2024)

Message from the Guest Editors

Dielectrics are universal materials with various piezoelectric, ferroelectric, electrostrictive, electrocaloric, and electrostatic functions, among others. Since the concept of nanodielectric interfaces was proposed, there has been a broad interest in exploring nanodielectrics as a potential new generation of electrically insulating materials with outstanding properties, especially for electronic and energy-related applications. The rational combination of matrix and nanofillers of nanodielectrics plays a crucial role in performance enhancement, such as suppressing partial discharge and space charge, improving dielectric constant and breakdown strength, as well as increasing energy storage and conversion capability.

This Special Issue aims to present the state-of-the-art research progress in the fields of dielectrics and nanodielectrics. The scope of this Special Issue includes, but is not limited to, polymer-based, ceramic-based, fluid-based insulating nanocomposites, with their properties focused on electrical insulation strength, energy storage and conversion capacities, and operational stability, etc.

Dr. Lulu Ren

Dr. He Li

Guest Editors



mdpi.com/si/153436

Special Issue



an Open Access Journal by MDPI

Editor-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

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.

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 - Q1 (Metallurgy and Metallurgical Engineering) / CiteScore - Q2 (*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)