Special Issue

Novel Dielectric Materials: Innovations and Applications

Message from the Guest Editor

Human society is becoming more and more dependent on electricity. Thus, based on the capability of controlling/storing charge and electrical energy, dielectric materials have attracted great attention. Examples of these materials, all of which require tailored dielectric properties, include high-permittivity (k) materials for capacitors, low-k materials for 5G and transformers, dielectric elastomers for electroactive generators/actuators, thermally conductive materials for high-voltage packing, and flexible/biological materials for intelligent devices.

Therefore, a comprehensive understanding of the chemistry and physics, the surfaces and interfaces, and the composition and microstructure of dielectric materials will be extremely important. Research on polarization mechanisms, technologies of material preparation, and even novel detection methods is needed to develop the means of adjusting and controlling dielectric materials. The aim of this Special Issue of Materials is to attract articles covering any aspects of new dielectric materials, including material development, microstructural optimization, and novel implant designs.

Guest Editor

Prof. Dr. Junwei Zha

State Key Laboratory of Alternate Electrical Power System with Renewable Energy Sources, School of Electrical and Electronic Engineering, North China Electric Power University, Beijing 102206, China

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Materials
Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland
Tel: +41 61 683 77 34
materials@mdpi.com

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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.

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

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