

Special Issue

Sustainable Dielectric, Piezoelectric and Ferroelectric Materials: Synthesis, Characterization and Modelling

Message from the Guest Editors

Lead (Pb)-free polar oxides, as environmentally sustainable alternatives to their Pb-based counterparts, have reached a certain level of maturity, since research in this area started about a decade and a half ago. Here, the broader term 'polar oxide' is meant to include materials with different polarization behavior in response to applied electric fields, such as ferroelectrics, antiferroelectrics and relaxors. They are indispensable in different technological fields including high-power capacitors for power conversion, sensors and actuators for smart applications, energy harvesting from waste heat or ambient vibrations, healthcare devices and space exploration. This Special Issue aims to convene recent scientific breakthroughs to address these issues using approaches including, but not limited to, new materials synthesis and processing methods, electron/x-ray/neutron based structural characterization tools, and modelling techniques including first-principle computations or data-driven modelling.

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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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