Special Issue

Design and Processing of Piezoelectric/Ferroelectric Ceramics

Message from the Guest Editor

Piezoelectric and ferroelectric ceramics have numerous applications such as ultrasonic motors, sensors and capacitors, while new applications such as energy harvesting and high-temperature capacitors are constantly being developed. The design and processing of these materials is critical to their function. Piezoelectric and ferroelectric ceramics can be designed on many overlapping levels: at the microstructural level (single crystals, polycrystalline ceramics, textured ceramics); at the ferroelectric domain level (domain engineering, slush polar structure, normal/relaxor ferroelectrics, incipient ferroelectric and electrostrictive materials); at the structural level (phase boundary engineering); and at the compositional level (dopant addition, solid solution formation). The processing of these materials includes conventional sintering, multilayer processing (multilayer capacitors and actuators), thick/thin film processing, pressure-assisted sintering (hot pressing, spark plasma sintering) and novel techniques such as flash sintering and cold sintering. The Special Issue will collate the latest research on these topics in both lead-based and lead-free materials

Guest Editor

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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.

Editor-in-Chief

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