Special Issue

Dielectric Ceramics: Structure, Characterization, and Application

Message from the Guest Editors

Dielectric ceramics have become indispensable components in numerous devices due to their multifunctional property and are, at the moment, basic building block of every electronic device. Their physical characteristics, which are dependent on structure, composition, shape, and morphology, allow modelling the dielectric, ferroelectric, piezoelectric, and optical properties. Different types of dielectric ceramics have been used for application in energy storage devices, also in the form of a capacitor as a passive element in analogue and digital electronic circuits. These materials have occupied a prominent place in a range of industries including the telecommunications sector, in particular in wireless, and are increasingly widespread and used due to particularities, such as relative low power consumption, high performance, and thermal stability.

The purpose of this Special Issue is to compile the physical principles of dielectric ceramics operation, the advanced preparation processes of these materials in the micro and manometric dimensions, the discussion and analysis of the electrical response as a function of their structural and morphological characteristics.

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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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