Special Issue

Preparation and Properties of Novel Energy Storage Materials

Message from the Guest Editors

Ferroelectric and dielectric capacitors, as compared with batteries and other devices for electrical energy storage, excel in terms of specific power, compactness, cost-effectiveness, charge-discharge speed and temperature stability. These features have led to their use in a broad spectrum of applications in microelectronics and electric power systems. A capacitor with a high recoverable energy density and energy storage efficiency requires a dielectric material that possesses a high permittivity, low hysteresis loss, low conductivity, and high breakdown field. However, attaining all these properties in a single dielectric material is challenging. The aim of this Special Issue is to report new findings in dielectric ceramics related to synthesis, microstructure, properties, device performance and technological applications, including linear dielectrics, paraelectrics, ferroelectrics, relaxor ferroelectrics, superparaelectrics and anti-ferroelectrics.

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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.

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