

Special Issue

Non-linear Dielectric Materials for Energy Storage Capacitors

Message from the Guest Editors

Dielectric capacitors offer high-power density and ultrafast discharging times, making them potential candidates for pulsed power technologies.

Non-linear dielectrics in the form of ferroelectrics, relaxor ferroelectrics and antiferroelectrics have spontaneous polarization and higher dielectric permittivities than linear dielectric capacitors, and they can work both as DC and AC devices. Interest in non-linear dielectrics, either in the bulk or thin film form, is continuously on the rise, both from a fundamental and application point of view.

Advanced non-linear dielectrics such as FE, RFE and AFE should satisfy multiple characteristics, such as low coercive field, high maximum polarization, low remnant polarization, large dielectric breakdown field and slim hysteresis, in order to obtain superior energy storage performance. In addition, they should display higher thermal and mechanical stability.

In this Special Issue, we aim to identify modern trends of non-linear dielectric materials for energy storage capacitors, including the processing fundamentals and optimization of final capacitor properties.

It is our pleasure to invite you to contribute for this Special Issue.

Guest Editors

Prof. Dr. Maria J. M. Gomes

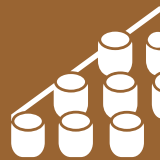
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Message from the Editor-in-Chief

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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