



Design and Processing of Piezoelectric/Ferroelectric Ceramics

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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





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Message from the Editor-in-Chief

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