Special Issue

Ferroelectric Materials and Devices

Message from the Guest Editor

Ferroelectricity was discovered about a century ago. As an electric cousin of the widely known ferromagnetics, ferroelectric materials have in no way shown fewer applications, from memory to sensors, actuators and transducers, and from military use cases to industrial and medical sectors. This Special Issue will cover topics of both aspects but not limited to: 1) fundamental studies, first principle calculations based on density functional theory have been widely used to explore the relationship between ferroelectricity and band structures. 2) ferromagnetic models, adapted to ferroelectrics to forecast material property changes with external boundary conditions. 3) application-oriented studies, advanced ferroelectric ceramics and composites having band gap engineered compositions and porous microstructures, respectively, have been pioneered for emerging multi-sensing and energy harvesting applications. Some of the recent intensively researched halide perovskites for photovoltaic applications have also been proven to exhibit ferroelectric properties.

Guest Editor

Dr. Yang Bai

Microelectronics Research Unit, Faculty of Information Technology and Electrical Engineering, University of Oulu, FI-90014 Oulu, Finland

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Micromachines
Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland
Tel: +41 61 683 77 34
micromachines@mdpi.com

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