Special Issue

Ferroelectric Materials: Synthesis, Characterization and Applications

Message from the Guest Editors

Ferroelectrics, a class of dielectric materials, have attracted interest from the scientific community for decades. The physicochemical parameters of ferroelectric materials are extremely sensitive to external electromagnetic fields, pressure, and temperature; thus, they are widely used in various electronic devices. Recent progress in elucidating the structure and properties of these compounds, whose chemical composition is similar to morphotropic-phase boundaries, has fostered further fundamental investigations into ferroelectrics. This Special Issue of Applied Sciences aims to summarize recent advances in the "structure–properties" relationship of ferroelectrics with an emphasis on relevant phenomena observed at the local scale. Contributions may include, but are not limited to, the following topics: synthesis; processing; theoretical and experimental methods of studying the structure and functional properties of ferroelectric and piezoelectric materials; domain wall phenomena; evolution of crystal structure and physicochemical parameters under external stimuli, polarization switching; applications of electric materials; etc.

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As the world of science becomes ever more specialized, researchers may lose themselves in the deep forest of the ever increasing number of subfields being created. This open access journal Applied Sciences has been started to link these subfields, so researchers can cut through the forest and see the surrounding, or quite distant fields and subfields to help develop his/her own research even further with the aid of this multi-dimensional network.

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