Special Issue

Emerging Applications of Ferroelectrics in Nanoelectronics and Renewable Energy

Message from the Guest Editors

Ferroelectric materials, characterized by electrically switchable polarization, have found broad and mature applications in modern society. Recently, novel ferroelectric materials, made available by advanced synthesis techniques such as freestanding epitaxial thin films, nanometer/sub-nanometer nanoparticles/nanowires, organic ferroelectrics, have found applications in low-energy electronics and renewable energy. For example, based on the atomic thicknesses and complementary metal-oxide-semiconductor (CMOS) compatibility of 2D vdW ferroelectrics, ferroelectric materials can be used for post-Moore's law nanoelectronics. Based on the polymer-like flexibility of ferroelectric nanowires, nanoferroic materials have found new applications in piezocatalysis for water splitting.

This Special Issue aims to showcase the latest advancements in ferroelectric materials and their diverse applications in various fields. We welcome contributions related to the synthesis and characterization of novel ferroelectrics, theoretical studies exploring new physics and functionalities, and nanoelectronic device developments involving vdW ferroelectrics.

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Message from the Editor-in-Chief

Welcome to *Crystals*, the journal dedicated to the fascinating world of crystallographic research! Crystals are more than mere decorative elements; they hold the key to understanding the fundamental structure of matter. Our mission is to explore the crucial significance of this research across various fields. From medicine to technology, chemistry to geology, crystals play a vital role. Their structure provides insights into new advanced materials, innovative drugs, and groundbreaking technologies. Through *Crystals*, we delve into the microscopic world to discover solutions that will shape the future. Join us on a journey through the *Crystals*, where science merges with beauty and innovation.

Editor-in-Chief

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