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Lead-free Ferro-/Piezoelectric Ceramics and Thin Films

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closed (28 February 2023)

Message from the Guest Editors

With increasing concerns about the environmental and health problems in traditional lead-based ferro-/piezoelectric materials (such as lead zirconate titanate, PZT), it is imperative to develop environmentally friendly “lead-free ferro-/piezoelectric” alternatives with a similar performance. However, there are still obstacles to overcome in order to realize this objective. Therefore, this Special Issue aims to encourage efforts towards this research direction, including the latest progress in the fabrication process, the high performance, the fundamental mechanisms, the novel structural strategies, and the relationship between the structures and macroscopic properties of lead-free ferro-/piezoelectric ceramics and thin films. Research on state-of-the-art piezo-/ferroelectrics devices, namely, nanogenerators, memorizers, sensors, and transducers, is also encouraged. These materials include both inorganic (e.g., perovskite and bismuth layer-structured ferro-/piezoelectric ceramics and ZnO nanostructures) and organic (e.g., polyvinylidene difluoride (PVDF) and its copolymers and their composites, and biopolymers) lead-free ferro-/piezoelectric materials.



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Special Issue



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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.

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