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Electromechanical Effects in Ferroelectric Materials: Theory, Modeling, and Experiments

Guest Editors:

Dr. Bo Wang
Materials Science Division, Lawrence Livermore National Laboratory, Livermore, CA 94550, USA

Dr. Fangping Zhuo
Department of Materials and Earth Sciences, Technical University of Darmstadt, 64287 Darmstadt, Germany

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Message from the Guest Editors

Dear Colleagues,

Ferroelectric materials are featured by the presence of spontaneous electric dipoles that can be reversibly flipped by an applied electric field. Many ferroelectric materials also respond sensitively to the application or changes of external fields, giving rise to a variety of multifield coupling effects, which makes ferroelectric materials extraordinarily useful for multifunctional applications. Among these coupling effects, the electromechanical effects are of particular interest. These effects generally result from synergic contributions due to the change of intrinsic lattice structures, modification of microstructures, and the formation and motion of extended defects, bringing challenges to probe them systematically across different length and time scales. The goal for this Special Issue is to present the recent progresses in characterizing, understanding, and utilizing the electromechanical effects in ferroelectric and related materials, with advanced experimental techniques as well as theoretical modeling and simulation. Therefore, we sincerely invite you to submit manuscripts for this Special Issue.

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Editor-in-Chief

Prof. Dr. Maryam Tabrizian
1. Department of Biomedical Engineering, Faculty of Medicine and Health Sciences, McGill University, Montreal, QC H3A 2B6, Canada
2. Faculty of Dentistry and Oral Health Sciences, McGill University, 3640 Rue University, Montreal, QC H3A 0C7, Canada

Message from the Editor-in-Chief

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Contact Us

Materials Editorial Office
MDPI, St. Alban-Anlage 66
4052 Basel, Switzerland

Tel: +41 61 683 77 34
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