



an Open Access Journal by MDPI

Synthesis, Characterization, and Applications of Ferroelectric Films

Guest Editors:

Prof. Dr. Andrei Kholkin

CICECO–Materials Institute of Aveiro & Physics Department, University of Aveiro, Campus de Santiago, 3810-193 Aveiro, Portugal

Dr. Vladimir Shvartsman

Institute for Materials Science, Universitat Duisburg-Essen, Universitätsstraße 15, 45141 Essen, Germany

Deadline for manuscript submissions:

closed (20 April 2022)

Message from the Guest Editors

Dear Colleagues,

This year, we commemorate 100 years since the discovery of ferroelectric materials and observation of their unusual properties by J. Valasek in Rochelle salt. Ferroelectric have been discovered in a variety of materials, but they have become particularly useful in the form of thin and thick films. To celebrate the 100th anniversary of the discovery of ferroelectricity, this Special Issue will provide a deep overview and the most recent advances in various topics related to ferroelectric films and their many applications. We look for papers presenting the latest developments and most cutting-edge studies in this area. The following is a list of some of the topics proposed for this Special Issue:

- Fundamentals of ferroelectric films;
- Advanced processing of ferroelectric films;
- Nanoscale characterization of ferroelectrics;
- Energy harvesting applications;
- Sensors and actuators, MEMS;
- Domain and domain wall engineering;
- Solid-state refrigeration;
- Ferroelectric memories;
- Topological ferroelectricity;
- Multiferroics;
- Machine learning for ferroelectrics research.

Prof. Dr. Andrei Kholkin

Dr. Vladimir Shvartsman

Guest Editors



mdpi.com/si/70449

Special Issue



an Open Access Journal by MDPI

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

Materials (ISSN 1996-1944) was launched in 2008. The journal covers twenty-five comprehensive topics: biomaterials, energy materials, advanced composites, advanced materials characterization, porous materials, manufacturing processes and systems, advanced nanomaterials and nanotechnology, smart materials, thin films and interfaces, catalytic materials, carbon materials, materials chemistry, materials physics, optics and photonics, corrosion, construction and building materials, materials simulation and design, electronic materials, advanced and functional ceramics and glasses, metals and alloys, soft matter, polymeric materials, quantum materials, mechanics of materials, green materials, general. *Materials* provides a unique opportunity to contribute high quality articles and to take advantage of its large readership.

Author Benefits

Open Access: free for readers, with article processing charges (APC) paid by authors or their institutions.

High Visibility: indexed within Scopus, SCIE (Web of Science), PubMed, PMC, Ei Compendex, CaPlus / SciFinder, Inspec, Astrophysics Data System, and other databases.

Journal Rank: JCR - Q1 (Metallurgy and Metallurgical Engineering) / CiteScore - Q2 (*Condensed Matter Physics*)

Contact Us

Materials Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland

Tel: +41 61 683 77 34
www.mdpi.com

mdpi.com/journal/materials
materials@mdpi.com
[X@Materials_Mdpi](https://twitter.com/Materials_Mdpi)