IEEE ISAF 2023

IEEE International Symposium on Applications of Ferroelectrics (ISAF)
International Symposium on Integrated Functionalities (ISIF)
& Piezoresponse Force Microscopy Workshop (PFM)

Cleveland, Ohio, USA | July 23 - 27, 2023

CALL FOR PAPERS

IMPORTANT DATES

January 6, 2023
Abstract Submission Deadline

February 24, 2023
Acceptance Notification Deadline

March 31, 2023
Author Registration Deadline:

July 22, 2023
Proceedings Deadline

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Welcome to the 2023 ISAF-ISIF-PFM Joint Symposium. The symposium will be held in Cleveland, Ohio from July 23-27, 2023.

This international symposium aims to bring together leaders from academia, national laboratories and industrial research and development sectors. The symposium will cover the most recent advancements in the science and technology of ferroelectrics, electroceramics, thin films, dielectric materials and their applications.

ISAF TOPICS

- Fundamentals of ferroelectrics and multiferroic materials (theory, modeling and experiments)
- Processing of piezoelectric crystals, ceramics, thick and thin films, composite, polymers, glass-ceramics and MLCCs.
- Emergent Ferroelectrics, Dielectrics, and Piezoelectrics (Fluorite Ferroelectrics, Wurzites, Lead-free, Hybrid materials)
- Structure characterization and properties of ferroelectric materials (dielectric, piezoelectric, ferroelectric, pyroelectric, electrocaloric, flexoelectric, photovoltaics and photocatalytics, etc.)
- Applications of ferroelectrics (sensing, transducing, thermal imaging, energy harvesting and storage, etc.)

ISIF TOPICS

- Materials for non-volatile memory and neuromorphic computing (including ferroelectrics, phase change, RRAM, magnetic)
- Integrated dielectrics (energy storage, 5G, high K, gate dielectrics)
- Piezoelectric MEMS and NEMS (resonators, energy harvesters, sensors, actuators, and transducers)
- Wearable and implantable devices (biosensing, neural stimulation, prosthetics, hard coatings)
- Processing routes for heterogeneous materials integration (oxides, chalcogenides, metals, and carbons)
- Hybrid perovskites (photovoltaics, nonlinear optics, semiconductors)

PFM TOPICS

- Instrumental aspects of PFM, ESM, SS-PFM and related techniques
- Nanoelectromechanics of materials and PFM/ESM theory
- Ferroelectric tunnelling and memristor effect via PFM/ESM
- Multiferroic phenomena on the nanoscale
- Disordered ferroelectrics and mesoscopic effects by PFM
- Ferroelectric data storage and polarization lithography
- Ionic conductors, battery materials and fuel cells on the nanoscale
- Ferroelectric photovoltaics and tip-enhanced phenomena
- Ferroelectric semiconductors and surface phenomena
- Interface engineering via PFM
- Biocompatible & organic polar materials on the nanoscale
- 1D and 2D nanostructured materials via PFM