



IEEE
ISAF 2022
ISAF-PFM-ECAPD
June 27–July 1, 2022 | Tours, France



CALL FOR ABSTRACTS

IMPORTANT DATES

December 17, 2021

Abstract Submission Deadline

January 14, 2022

Acceptance Notification

January 28, 2022

Author Registration Deadline

June 27, 2022

Final Paper Submission Deadline

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Welcome to the 2022 ISAF-PFM-ECAPD Joint Conference. The conference will be held in Tours, France from June 27–July 1, 2022.

This international conference aims to bring together leaders from academia, national laboratories and industrial research and development sectors. The conference 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.
- » Lead free dielectric and piezoelectric materials
- » Structure characterization and properties of ferroelectric materials (dielectric, piezoelectric, ferroelectric, pyroelectric, electrocaloric, flexoelectric, photovoltaics and photocatalytic, etc.)
- » Applications of ferroelectrics (sensing, transducing, thermal imaging, energy harvesting and storage, etc.)

ECAPD TOPICS

- » Ultra-thin films and low dimensional nanostructures (including fundamentals, synthesis and characterisation)
- » Domains and domain walls (including fundamentals, advanced characterisation, domain wall dynamics and engineering)
- » Multiferroics and magnetoelectrics (including fundamentals, processing, and properties)
Piezoelectricity (including high-performance piezoelectric single crystals and thin films, lead-free piezoelectrics, piezoelectric polymers, MEMS & other integrated piezo-devices)
- » Materials for energy generation, conversion and storage (including high-energy density and high-power capacitors, electrocalorics, thermoelectrics, pyroelectrics, piezoelectrics, photovoltaics etc. and their applications)
- » Ferroelectric memory materials & devices (including novel materials, ultra-thin film synthesis and characterisation, CMOS-compatible processes, device integration, non-volatile memory and neuromorphic computing applications)
- » Advanced characterisation and simulation methods for polar dielectrics (including atomic scale microscopy techniques, UV/VIS/IR/Raman/NMR etc. spectroscopy, dielectric and microwave spectroscopy, XRD and neutron diffraction techniques, ab initio simulations, molecular dynamics, artificial intelligence, accelerated material discovery, phase field method, etc.)

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