

Program of International Workshop on Piezoelectric Materials and Applications in Hannover, July 22nd 2024 until July 26th 2024

from	to	Mo	Tu	We	Th	Fr
08:00	08:30		Registration	Registration	Registration	Registration
08:30	08:48		C10 - Baek, Chang Min: Giant Electric Field Induced Strain in Fe-doped BaTiO <sub>3</sub> Single Crystal by Aging Effect	C16 - Yamada, Kyohei: Rayleigh wave excitation mechanism with an elliptical reflector	C05 - Yang, Tao: Modeling the frictional interface of ultrasonic motor based on the multi-asperity contact theory	C01 - Bach, Patrick: Self-heating process of epitaxial Pb(Zr,Ti)O <sub>3</sub> (PZT) thin-film under unipolar and bipolar voltage.
08:48	09:06		C13 - Kweon, Sang Hyo: Contribution of Domain Structure Change to Converse and Direct Piezoelectricity in Sol-gel Epitaxial Pb(Zr,Ti)O <sub>3</sub> Thin Film	C42 - Scheidemann, Claus: Characteristic behavior of lead-free and lead-containing piezo ring ceramics in ultrasonic transducers	C25 - Fujitani, Tsukiho: Design and Evaluation of Miniature Ultrasonic Motor Driven by Low-order Vibration Mode	C03 - Harada, Yuki: Light propagation in a refractive index gradient induced by high-intensity ultrasound in the 100-megahertz range
09:06	09:24		B2 - Doshida, Yutaka: Investigation of the crystal-oriented behavior of rare earth substituted Sr <sub>2</sub> Nb <sub>5</sub> O <sub>15</sub> lead-free piezoelectric materials under a high magnetic field	B5 - WADA, Yuji: Topology optimization of large ultrasonic tools for uniform vibration distribution	B3 - Izuhara, Shunsuke: Design, evaluation, and application of miniature ultrasonic motors	B8 - Lee, Soonil: Approaches for Enhanced Piezoelectric Properties and Defect Chemistry of ABO <sub>3</sub> with Volatile Elements: BiFeO <sub>3</sub> -BaTiO <sub>3</sub> -based Ceramics
09:24	09:42		C22 - Kanno, Isaku: Ferroelectric and piezoelectric properties of Ce-Mn substituted ZnO thin films	C15 - Ieiri, Shoki: MHz-range ultrasonic irradiation from a thin waveguide using the resonance principle with elliptical reflector	C28 - Sasamura, Tatsuki: Self-Sensing Load Conditions Using Driving Currents in Traveling Wave Ultrasonic Motors	C14 - Liu, Yi-Xuan: Multi-Length Engineering of (K, Na)NbO <sub>3</sub> Films for Lead-Free Piezoelectric Acoustic Sensors with High Sensitivity
10:18	10:36		C24 - Menşur, Ebru: Dielectric, Ferroelectric, and Electrocaloric Properties of Fe-doped 0.55PNN-0.45PZT Bulk Ceramics and 1-3 Piezocomposites	C46 - Ron, Willi: Design of Ultrasonic Systems Utilizing Interface-Impedance	C30 - Lu, Xiaolong: Multi-functional microrobots for enhancing the sensitivity of biosensors	C36 - Kim, Bumjoo: Self-rectifying and artificial synaptic characteristics of amorphous Ta <sub>2</sub> O <sub>5</sub> thin film bilayer memristor
10:36	10:54		C34 - Kwak, San: Good thermal stability in dielectric properties of (1-x)(K <sub>0.8</sub> Na <sub>0.2</sub> )NbO <sub>3</sub> -xSrTiO <sub>3</sub> ceramics for the application to X9R MLCC	C45 - Mažeika, Dalius: Ultrasonic transducer for generating a reversible acoustic rotational field of high intensity	C44 - Mažeika, Dalius: Analysis of Dynamic Characteristics of High Power Dual Rotor Piezoelectric Motor	C18 - Girardot, Mélanie: Relationship between structure and macroscopic properties of piezoelectric fluorinated copolymers
10:54	11:30		Pause and Opening Remarks	Pause	Pause	Pause
11:30	11:48		A1 - Reaney, Ian: Structure Property Relations in Piezoelectric and Electrostrictive Ceramics	A2 - Dapino, Marcelo: Piezoelectric-based additive manufacturing for functionalization and multi-material integration of lightweight vehicle structures	A3 - Nakamura, Kentaro: Application of polymer materials for high amplitude ultrasonic transducers	C50 - Zhu, Yongyong: Investigation of Polymer Flow in Ultrasonic Embossing Using High-speed Observation System
11:48	12:06					C09 - Jung, Ji Yun: Boosting Luminescence Efficiency in Self-Powered Magneto-Mechano-Luminescence Device
12:06	12:30					C52 - Bezerra, Vinicius: Resonant Frequency Adaptation of Ultrasonic Transducers via Change of Electrical Boundary Condition
12:30	13:30		Lunch	Lunch	Lunch	Closing Remarks and Lunch
13:30	13:42		B7 - Koruza, Jurij: Piezoceramics for high-power drive: characterization, materials, and mechanisms	Group-Picture	B06 - John, Philipp: Self-assembly of III-nitride nanowires for piezoelectric energy harvesting	
13:42	14:06		C02 - Claes, Leander: Machine learning in inverse measurement problems: An application to piezoelectric material characterisation	A4 - Pertsch, Patrick: Review on Piezotechnology for Microfluidics	C06 - Hur, Sunghoon: Enhanced Performance of a Thermoelectric Generator by Cantilever Vibration and Piezoelectricity	Transfer
14:06	14:24		C12 - Lee, Ji Won: Dielectric and Ferroelectric property changes of BaTiO <sub>3</sub> ceramics under in-plane stress application		C19 - Forges, Grégoire: Lead-free strongly coupled piezoelectric vibration energy harvester	
14:24	14:42		C37 - Nahm, Sahn: Fabrication of Na(Nb <sub>1-x</sub> Sbx)O <sub>3</sub> templates for the [001]-texturing of KNN-based ceramics with excellent mechanical and piezoelectric properties	C29 - Hirooka, Daisuke: Micro flow control valve using Particle-Excitation by simple vibration mode	C21 - Kushwaha, Vikash: Organic ferroelectric amino phosphate used for Piezoelectric energy harvesting, ideal for sensor applications	
14:42	15:00		C47 - Barbato, Paola Sabrina: Impact of the DMSO/acetone ratio on the morphology of ferroelectric, piezoelectric PVDF polymer grown on platinum coated silicon wafer	C35 - Peng, Hanmin: Composite smart material actuators for consecutive directional motion	C27 - Deka, Nilotpal: Piezoelectric Energy Harvesting of a 2D Hybrid A2BX <sub>4</sub> type Ferroelectric Perovskite Stabilized by Ammonium Cations	
15:00	15:18		C41 - Ryan, Tara: Piezoelectric Polycrystalline Biomolecular Assemblies	C04 - MIKI, Haruto: Focusing characteristics of ultrasound liquid lens using a viscoelastic gel film and acoustic radiation force	C33 - Lallart, Mickaël: Effect of crystal anisotropy in extreme condition energy harvesting	
15:18	15:36		Pause	Pause	Pause	
15:36	15:54		B4 - Jeong, DaeYong: Relaxor Behavior of PZT Thick Film with Nano-size Grain by Aerosol Deposition	C48 - Nowroth, Christian: Vibration shape tuning using passive piezo elements for the ultrasonic-assisted laser beam welding	B1 - Song, Hyun-Cheol : Piezoelectric DC Generator through Sequential In-phase Polarization Variation	CMG Visit
15:54	16:12			C40 - Liu, Xiaoxiao: Investigation of a Piezoelectric-Driven Ultrasound Scanner Capable of Three-Dimensional Imaging with a Singular Transducer Element		
16:12	16:30		C23 - Schudak, Svenja: Glass-based piezoelectric MEMS for sensors and actuators using thin film aluminum nitride	C07 - Wei, Ying: Miniaturized Piezoelectric Manipulator based on Acoustic Resonant Microbubbles	C38 - Usaid, Muhammad: Piezoelectric Energy Harvesting towards Eco-Friendly Energy Generation	
16:30	16:48		C26 - Dogheche, Karim: Ba <sub>0.85</sub> Ca <sub>0.15</sub> Ti <sub>0.9</sub> Zr <sub>0.1</sub> O <sub>3</sub> Thin Films grown by Sputtering: Structural and Electrical properties	C17 - Tsuchida, Masatoshi: Non-contact mechanical Q-factor measurement system	C43 - Liu, Yung-Tien: Experimental study of a 3-axis piezoelectric stage with diamond-type displacement amplification mechanism	
16:48	17:06		Pause	Pause	Pause	
17:06	17:24		C53 - Hu, Chengyan: Acceleration of Silver Particle Sintering in Die Bonding of Silver Metallized DBC Substrate and Diodes by Ultrasonic Assistance	C54 - Peter Borrmann: Model based and experimental analysis of heat generation in torsional ultrasound power converters	C08 - Kim, Seung-Wook: Enhanced Energy Storage in Dielectric Polymer Nanocomposites via Quantum-Confinement of Nano Metal Particles	
17:24	17:42		C31 - Liang, YuFei: Macro-Micro Modeling and Performance Analysis of Traveling Wave Ultrasonic Motors	C11 - Dezaio, Kota: High-frequency ultrasound measurement by surface plasmon resonance (SPR)-type ultrasonic sensors		
17:42	18:00		C32 - Wang, LeA Pump-jet Piezoelectric Swimmer with Acoustic Radiation Actuation	C39 - Chen, Jianzhong: Wearable and comfortable breast ultrasound patch: multi-angle and large curvature imaging for mass assessment		
18:00	18:18		C51 - Chen, Zijian: Geometry optimization of a double-acting ultrasonic transducer for ultrasonic levitation	C20 - Kitajima, Shouta: Ultrasonically induced electrical potentials in Poly-L-lactic acid osteosynthesis material	Exhibition	
18:18	18:36	Registration & Welcome Reception				
18:36	19:30					
19:30	22:00			Banquette		