



XX

NOVI SAD
12-15 OCTOBER 2026
electroceramicsXX.org

Program at a glance

Organisers:



Endorsment:



Monday, 12th October

Session 1 – University Building - Amphitheatre

08:15	Registration
09:00	Welcome Word
	1.1.1. Invited Welcome Talks - Chairs: Biljana Stojanovic and Juras Banys
09:15	Ferroelectric and Piezoelectric Ceramics: A Historical Perspective and Recent Developments - Dragan Damjanovic
09:45	Electro-Nanoceramics: From Over 45,000 Implanted in Humans to Exploratory Applications - Thomas Webster

10:15 Coffee Break

	1.1.2. Applications of electroceramic materials and structures: Ceramic sensors and actuators - Chair: Vincenzo Buscaglia
10:45	Processing of Smart Porous Electro-Ceramic Transducers (ProSPECT) Chris Bowen
11:15	Solid-state synthesis of medium entropy rare earth oxide with engineered oxygen vacancies for formaldehyde gas sensing application - Subhajeet Sen
11:30	Air-Oxygenation-Driven n/p-Type Conversion and Heterojunction-Boosted Gas Sensing in Metal Chalcogenides - Yun-Hyuk Choi
	1.1.3. Plenary Session 1 - Chair: Paula M. Vilarinho
11:45	The role of chemical, polar and octahedral tilt disorder in high voltage/energy density ceramics Ian Reaney

12:30 Lunch

	1.1.4. Applications of electroceramic materials and structures: Energy harvesting devices - Chairs: Chris Bowen and Tadej Rojac
14:00	Non-Linear Dielectrics: Bridging Fundamental Physics and Sustainable Technologies - Paula M. Vilarinho

Session 2 – UNS Room-1

	1.2.1. Applications of electroceramic materials and structures Electroceramics for high frequency applications - Chair: Stanislav Kamba
	Low Temperatures Cofired Ceramics for Electronics Applications Hong Wang
	Effective dielectric properties adjustment through additive manufacturing of single component ceramics for application in microwave dielectric resonator antennas - Ratiba Benzerga
	Temperature-Stable Microwave Dielectric Ceramics in the BaLiF3-NaMgF3 System with Ultralow Sintering Temperature - Jianjiang Bian

	1.2.2. Structure-properties relationship: Basic structural phenomena Chairs: Xiangming Chen and Marco Peiteado
	Structural Modulation and Phase Transition in Tetragonal Tungsten Bronze Ferroelectrics - Xiaoli Zhu

14:30	SPS levers for optimizing the microstructure and piezoelectric properties of screen-printed layers MEfor energy harvesting - Nadia Bencharef	Cryogenic Magnetocaloric Effects in Hexagonal Multiferroic Oxide Ceramics - Jan Schultheiss
14:45	High piezoelectric response in sol-gel processed epitaxial BiFeO3 filthrough post engineering - Xin Zhang	Processing-structure-property relationship in BMT-doped BiFeO3-BaTiO3 ceramics - Jannatul Robaiat Mou
15:00	Tailoring Barium Titanate-based ceramics with low Sn addition for piezoelectric energy harvesting applications - Nadejda Horchidan	Consistent transition model for Bi0.5Na0.5TiO3 from temperature-dependent structural and electrical properties - Thomas Fourgassie
15:15	BaTiO3-rich BaTiO3-Na0.5Bi0.5TiO3 relaxor ferroelectrics with double hysteresis loops and high energy density - Oğuz Akkaşoğlu - CANCELLED	A New Ferrielectric Phase in Tetragonal Tungsten Bronzes with Competing Polar and Antipolar Modes - Yibang Ou
15:30	NaNbO3-Based Freestanding Piezoelectric Oxide Membranes for Flexible Electronic Skin Applications - Hangren Li	Defect engineering in amorphous silica to develop sustainable and cost-effective catalysts for CO2 methanation - Rishabh Shukla
15:45	Investigating Sr3-xRxFE2-yNiyO7-δ Ruddlesden-Popper Materials as Air Electrodes for Proton-Conducting Electrochemical Devices - Álvaro Vázquez Naval Moral	Influence of isovalent doping in BaTiO3 based PTCR materials for high voltage heaters - Florian Hortmann
16:00	Coffee Break	
	1.1.5. Advanced characterisation: Advanced functional characterisation methods - Chairs: Jacob L. Jones and Sanja Kojic	1.2.3. Structure-properties relationship: Composite ceramic systems - Chairs: Andreas Klein and Antonio Feteira
16:30	Environmental Effects in Ferroelectrics Probed by SPM - Brian Rodriguez	Percolation, giant permittivity and metacomposite properties in Ag-BaTiO3 ceramic-metal structures with variable microstructural characteristics - Liliana Mitoseriu
17:00	Nonlinear Dielectric Responses and Relaxation Dynamics in Molecular Ferroelectric [HDabco]ClO4 - Shuaib Bolaji Issa	Development of a Tactile Sensing Device to Evaluate Self-Powered Piezoelectric TPE Composites - Frank Clemens
17:15	Composition-dependent electromechanical response of DC-bias field hardened ferroelectric ceramics - Kriti Batra	Ag-BaTiO3 cermet composites with sharp-edged metallic inclusions - Vlad Alexandru Lukacs
17:30	Shear Electrostrain Response in Ferroelectrics - Yizhe Li	Development of a LTCC material with a TEC tailored to Silicon and fabrication of compound materials for hybrid microsystems - Clemens Motzkus
17:45	Analysis of the Charge Transition Level in perovskite-type oxide materials by X-ray photoelectron spectroscopy - Savita Chaoudhary	High permittivity and low dielectric loss MgO–BaTiO3 ceramic composites - Antonio Feteira
18:00	Complete characterization of the dielectric, piezoelectric and elastic properties of a ceramic with a single parallelepiped-shaped sample - Julien Vasseur	Anisotropic Response in Ag-BaTiO3 Composites Textured by Electric Field Assisted Sintering - Anda Maria Oajdea
18:15	Additive manufacturing of Cordierite electroceramics with reactive silicone-based binders - Annalaura Zilio	Impact of Sb and Ti B-site doping on the stability and electrochemical performance of SrFeO3-δ based air electrodes for solid oxide cells - Pedro Lopez-Tello

20:00



YCN Evening at Fontana Restaurant - only for registered participants!

Tuesday, 13th October

Session 1 – University Building - Amphitheatre

2.1.1. Novel synthesis and processing methods: Novel processing methods for electroceramics and composites

Chairs: Peter Tatarko and Klaus Reichmann

Solution based metal – metal oxide composites for solar fueled CO₂ conversion - Marlies K. Van Bael

Room-temperature densified Al₂O₃-H₃BO₃ ceramics with excellent microwave dielectric properties and thermal conductivity for chip packaging - Zeng Zhan

Optimization of printing parameters for DLP 3D-printed potassium sodium niobate (KNN)-based lead-free gyroid scaffolds - Ertugrul Varlik

Design of electromechanical transducers based on the nonclassical electrostrictor (Zr_{0.1}Ce_{0.9})O₂ - Petr Yudin

Na-induced modification of epitaxial LaMnO₃ thin films: Structural and magnetic insights - Jelena Bobić

Potential of a novel proton-conducting material designed by encapsulation of water vapor into positively charged cages of 12CaO·7Al₂O₃ - Naonori Sakamoto

Coffee Break

2.1.2. Applications of electroceramic materials and structures: Semiconducting devices - Chair: Jurij Koruza

How Semiconducting are ferroelectrics
Andreas Klein

3D printing of fine-pitch through-ceramic vias (TCVs) for advanced ceramic chip packaging - Boshen Zhang

Polarization-driven enhancement of photocatalytic activity in porous BCZT ceramics - Laura San-Miguel

Session 2 – UNS Room-1

2.2.1. Applications of electroceramic materials and structures Electroceramics for energy applications (batteries)

Chairs: Hong Wang and Andreja Benčan Golob

Design of Protective Coatings for Lithium-Ion Battery Cathodes via Wet-Chemical Processing - Tomoya Ohno

Maximizing Mass Transport in Lithium-ion Batteries: The Impact of Geometry and Infill Patterns of 3D Printed NMC-Based Electrodes - José Ignacio García Jiménez

Towards 3D-Printed All-Solid-State Batteries: From Die-Pressing to DLP-Based Ceramic Architectures - Jérôme Bodart

Energy storage density in PMN-33PT dielectric thin film capacitors through synergistic effects - Matjaž Spreitzer

Nano-Engineered thin-film composites for application in oxygen-charged storage energy system - Andrea Turino

Engineering MIEC Oxide Thin Film for Low-Temperature Proton-Coupled Charge Storage - Chirag Chotai

2.2.2. Novel synthesis and processing methods: Novel processing methods for electroceramics and composites - Chair: Matjaž Spreitzer

Effects of CuO–TiO₂–Nb₂O₅ composite oxide sintering aids on the sintering behavior and performance of electroceramics - Zhifu Liu

Unlocking the Potential of LLZO Solid-State Batteries via 3D Printing - Sabrina Tair

Operando Impedance Spectroscopy: a tool to reveal the influence of Cold Sintering Process parameters grain boundary evolution during sintering - Emeric Sanchez

Session 3 – UNS Room-2

2.3.1. Theory and modelling Emerging phenomena in electroceramics

Chairs: Yuri Genenko and Stevan Armaković

- 08:30 The Evolution of Atomistic Modeling: From Physics-Driven to Data-Driven Materials Research - Stevan Armaković
- 09:00 Phase Superposition as a Pathway for Enhancing Functional Properties in Barium Titanate-Based Ceramics - Leontin Padurariu
- 09:15 Enhanced Prediction of Microwave Dielectric Properties in ABO₃ Perovskite Ceramics via M3GNet-Integrated Machine Learning - Liangyu Mo
- 09:30 Reactive flash processing of carbonates for the low temperature densification of lanthanum cerate - Anant Kumar Gupta
- 09:45 Moderate-temperature defect chemistry of barium titanate - Denis Sudarikov
- 10:00 Phase-field simulation of domain wall dynamics and charge compensation in uniaxial ferroelectrics - Olga Yu Mazur

Coffee Break

2.3.2. Structure-properties relationship: Advanced functional phenomena

Chair: José Antônio Eiras

- 10:45 New Generation BiFeO₃-BaTiO₃ Piezoceramics Activated by Bulk Ferroelectric Heterostructures - David Hall
- 11:15 Engineering Dynamics through Field-Induced Transformations in Lead-Free NBT Piezoelectric Ceramics - Hareem Zubairi
- 11:30 Enhancing antiferroelectricity in NaNbO₃-based ceramics - Elena Buixaderas

Session 1 – University Building - Amphitheatre

2.1.3. Plenary Session 2 - Chair: Barbara Malič

- 11:45 **Interface Engineering in Perovskite-based Nano-complex Ceramics for High Dielectric & Piezoelectric Performances**
Satoshi Wada

Lunch

Special thanks to our Sponsors:

JECs
Trust

ai><ACCT
systems

Kurt J. Lesker®
Company

 AMERICAN
ELEMENTS
THE MATERIALS SCIENCE MANUFACTURER®

Session 1 – University Building - Amphitheatre

2.1.4. Novel synthesis and processing methods: Powder synthesis and ceramic processing methods - Chair: Ian Reaney

14:00	Re-engineering Solid-State Synthesis of Perovskites: Precursor Design as a Tool for Chemical Homogeneity and Phase Purity - Jacob L. Jones
14:30	Phase formation reactions and doping of the (Ba,Ca)(Zr,Ti)O ₃ piezoceramic Jurij Koruza
15:00	Transformation to sustainable processing in electroceramics industry - Klaus Reichmann
15:15	Effect of Particle Size Control on the Densification and Functional Properties of SPS-Sintered Lead-Free KNN Ceramics - Bouabid Misski
15:30	Tuning the Properties of Magnetoelectric Nanoparticles to Enable Controlled Neural Stimulation - Aleksandra Milojkovic
15:45	Synthesis, structural evolution, sintering behavior and electrical properties of complex (Bi _{0.2} K _{0.2} Ba _{0.2} Sr _{0.2} Ca _{0.2})TiO ₃ perovskites - Vasile-Adrian Surdu

Coffee Break

Session 2 – UNS Room-1

2.2.3. Applications of electroceramic materials and structures: Spintronics and memory devices (COST) - Chairs: Martina Basini and Lucian Pintilie

Ultrafast phononic manipulation of ferroic order Andrei Kirilyuk
The origin of the exceptional microwave dielectric properties of SrTiO ₃ -based films and ceramics with a Ruddlesden-Popper structure Stanislav Kamba
Multiferrons: lattice excitations carrying both polarization and magnetization - Carl Romao
Colossal magnetoresistance effect and spin-dependent variable-range hopping in overdoped La _{1-x} CaxMnO ₃ manganites - Emil Tafr
Anharmonic Phonon Coupling Enabled by Local Inversion Symmetry Breaking at Domain Walls in Ferroelastics - Vivek Unikandanunni
Unlocking the potential of solution deposition techniques for production of the epitaxial perovskite thin films - Jelena Vukmirovic

2.1.5. Novel synthesis and processing methods: Advanced film deposition techniques - Chairs: Elissalde Catherine and Ivan Stijepovic

16:30	Barium Titanate-Based Thin Films: Tailoring the Properties by Solution Chemistry, Substrate Choice and Heating Regime - Barbara Malič
17:00	Recent results on Aerosol Deposition (AD) of lead-free ferroelectric - piezoelectric thick film on metallic substrates for flexible devices - Pascal Marchet
17:15	Aerosol deposition of BiFeO ₃ -PbTiO ₃ ferroelectric thick film for multifunctional flexible devices - Adriana Barreto
17:30	Self-Assembling Monolayers as a Tool for Selective Chemical Solution Deposition - Karola Neeleman
17:45	Coordination-dependent Mn Charge-Transition Levels for Manganese-Based Spinels - Gero Pickel

2.2.4. Applications of electroceramic materials and structures: Spintronics and memory devices (COST) - Chairs: Brian Rodriguez and Yun-Hyuk Choi

Direct and inverse magnetoelectric effects from DC to RF in thin-film heterostructures - Florin Ciubotaru
From Short-Range Distortions to Domain Structures: Probing d ⁰ Perovskites Across Length Scales with TEM and X-ray Diffraction - Catriona Crawford
Sm _{1-x} (Ce _{0.75} La _{0.25})xCo ₄ FeB system as a permanent magnet candidate - Maria Giannouri
Laser-Induced Rashba Spin–Orbit Torques in the Multiferroic Semiconductor (Ge,Mn)Te - Zeynab Sadeghi
Ferroelectric Field-Effect Transistors Based on Complex Oxides Epitaxial Heterostructures - Iva Tokovic
Highly Conductive Ti ₃ C ₂ T _x (MXene) Monolayer Field-Effect Transistors via a Modified-LB Route: Fabrication, Challenges, and Future Applications - Venkatadivakar Botcha

Session 1 – University Building - Amphitheatre

08:30
09:00
09:15
09:30
09:45
10:00
10:15

3.1.1. Round Table



Session 2 – UNS Room-1

3.2.1. Structure-properties relationship: Advanced functional phenomena - Chairs: Mari-Ann Einarsrud and Šarūnas Svirskas

Ferroelectric high Curie temperature perovskite BiMeO₃ (Me: Sc or Fe) based system phase instabilities with stable piezoelectric response after ceramic submicrostructuring - Miguel Alguero

Ultrafast sintering of barium calcium zirconate titanate ceramics: piezoelectric and ferroelectric behaviour of fine-grained ceramics - Joao L. Miranda

Unveiling multiscale origins of enhanced electrostrain in lead-free BiFeO₃-based ceramics - Ge Wang

Hybrid improper ferroelectricity and complex phase evolution in La₂SrSc₂O₇-based ceramics - Xiaoqiang Liu

Quasi-Spherical Engineering of Ferroelectric Mesophase Transitions in Molecular Plastic Crystals and Their Structure-Property Relationships - Shuaib Bolaji Issa

Epitaxial La_{1-x}Sr_xMnO₃/Ba_{1-x}Sr_xTiO₃ Ultra-Thin Oxide Heterostructures from the Liquid Phase - Danica Piper

Coffee Break

10:45
11:15
11:30

3.1.2. Novel synthesis and processing methods: Novel processing methods for electroceramics and composites - Chair: David Hall

Powders synthesis and particle morphology control: a route to explore advanced dielectric and ferroelectric ceramics - Vincenzo Buscaglia

Piezoelectric Response of Lead-Free BiFeO₃-BaTiO₃ Relaxor Ferroelectric Ceramics: Composition, Temperature, Frequency and Electric-Field Dependence - Tadej Rojac

Architected Pb(Zr,Ti)O₃ ceramics by LCM Additive Manufacturing: design-induced anisotropy in piezoelectric and energy harvesting response - Cristina Elena Ciomaga

3.2.2. Applications of electroceramic materials and structures: Electroceramics for energy applications (thermoelectrics) - Chair: Liliana Mitoseriu

Aqueous chemical deposition of thin piezoelectric oxide films - Mari-Ann Einarsrud

Microstructure engineering in high-entropy perovskite oxides to improve thermoelectric performance - Rishabh Shukla

Structure -Property Engineering of High-Entropy Perovskite Oxides for High-Temperature Thermoelectric Applications - Asif Ali

Session 3 – UNS Room-2

3.3.1. Applications of electroceramic materials and structures: Ceramic conductors - Chair: Zhifu Liu

10:45	Insights into Defects and Polarization in Lead-Free Ferroelectrics by Electron Microscopy, DFT, and Machine Learning - Andreja Benčan Golob
11:15	Suppressing Leakage Current in AgNbO ₃ Thin Film Defects and Microstructural Engineering - Antonio Iacomini
11:30	Influence of Mg doping on the ionic conductivity of Pr ₂ Zr ₂ O ₇ and Sm ₂ Zr ₂ O ₇ pyrochlores prepared by SPS - Hector Beltran-Mir

Session 1 – University Building - Amphitheatre

3.1.3. Plenary Session 3 - Chair: Andrei Kirilyuk

11:45	Dynamical multiferroic states in perovskites Martina Basini
-------	---

12:30 **Lunch**

3.1.4. Structure-properties relationship: Composite ceramic system Chairs: Satoshi Wada and Aleksandra Dapcević

14:00	Defect Engineering Strategies for the Development of Ferroelectric and Multiferroic Multifunctional Ceramics - José Antônio Eiras
14:30	Twenty years of SPS-driven microstructural design of ferro- and piezoelectric materials - Elissalde Catherine
15:00	Antiferroelectrics: An unexpected materials platform for piezocatalysis - Wafa Amdouni
15:15	Electrospun PVDF-BaTiO ₃ composites for wearable sensing applications - Giovanna Canu
15:30	Dielectric and Contact–Separation Electrical Response of Corona-Poled PDMS/KNN/Graphite Composite - Noelle C. Zanini
15:45	Lead-Free Multifunctional Polymer Composites with Piezoelectric–Magnetostrictive Interactions - Mirjana Vijatović Petrović



Information for Gala Dinner

The **Gala Dinner** will take place on
Wednesday 14th October at 20:00

Club Reset

Dr Ketrin Mekfeil 1
Sremska Kamenica

Only for registered participants!



Organized transport from the University of Novi Sad to the venue and back is provided!

Buses are scheduled from University of Novi Sad to depart to Club Reset between 19:15 and 19:30

The return trip is planned between 23:00 and 23:30 from Club Reset to University of Novi Sad

Session 2 – UNS Room-1

3.2.3. Applications of electroceramic materials and structures: Electroceramics for energy applications

Chairs: Miguel Algueró and Ratiba Benzerga

New paradigm electromagnetic and pyroelectric energy harvesting:
nanotechnology rediscovers hafnium and zirconium-based nanoscale
ferroelectrics - Martino Aldrigo

Scaling Up Oxygen-Ion Batteries by a Powder-Based Approach - Sophie
Stiefler

Designing Nanohybrid Architectures of NVPF@rGO-C or LMFP@rGO-C for
High-Power Batteries - Ernesto Claure-Ramirez

Developing future dielectric ceramic thick film for energy storage
applications via aerosol deposition - Xiangjie Song

Partial thermal depolarization driven by long-term annealing of lead-free
BF-BT piezoelectric ceramics - Yuge Yang

Synergistic Co-Substitution Engineering of A/B Sites for record-low
coercive field and stable Curie temperature in Bulk Hybrid Improper
Ferroelectrics - Zhe Guo

Defect-mediated Piezoelectric Hardening in 0.94(Na_{0.5}Bi_{0.5}TiO₃)-
0.06(BaTiO₃) lead-Free Ceramics: Correlation of Phase Evolution,
Transport, and Electromechanical Response - Chinmay Chandan Parhi

Session 3 – UNS Room-2

3.3.2. Novel synthesis and processing methods: Powder synthesis and ceramic processing methods

Chairs: Subramshu S. Bhattacharya and Adelina-Carmen Ianculescu

Microwave spectroscopy of ceramics relaxors – are they dipolar glasses?
Juras Banys

Spark Plasma Sintering of Na_{0.5}Bi_{0.5}TiO₃–BaTiO₃ Ceramics: Relationships
between microstructure and functional properties - Aurélie Lalagüe-
Dardant

Reactive decomposition processing of rare-earth based multi-component
oxides - Srinivasan Nedunchezian

Processing and texturation of lead-free KNN-Ta piezoelectric ceramics for
ultrasonic applications - Marco Bencini Bencini

Evaluation of composite CSCO/GDC oxygen electrode deposition via
different techniques for optimal solid oxide cell performance - Artem
Glukharev

Screening of Oxygen-Ion Battery Electrode Materials via Space-Charge
Potential Measurements - Claudia Steinbach

Structure–Morphology Relationships in Hydrothermally Synthesized
BaTiO₃ Particles for MechanoATRP - Klara Castkova

Coffee Break

Poster session

Check the list of posters on the last page

Conference Dinner - Ristorante Reset, Novi Sad

Only for registered participants - check information on the previous page

Thursday, 15th October

Session 1 – University Building - Amphitheatre

4.1.1. Advanced characterisation: Structural and local characterisation of electroceramics - Chairs: Florin Ciubotaru and Xiaoli Zhu

08:30	In Situ Impedance Spectroscopy: Tracking Solid-Liquid Interfaces and Grain Boundary Evolution During Cold Sintering - Thomas Herisson de Beauvoir
09:00	Inter-laboratory reproducibility of piezoelectric ceramic characterization: insights from a European Round Robin study - Erwan Jonin
09:15	Effect of Si poisoning on the electrochemical and microstructural properties of $\text{La}_{0.65}\text{Sr}_{0.30}\text{Cr}_{0.85}\text{Ni}_{0.15}\text{O}_{3-\delta}$ - $\text{Gd}_{0.1}\text{Ce}_{0.9}\text{O}_{2-\delta}$ electrode in electrolysis mode - Laur Kristjan Salvan
09:30	Impact of the porosity's distribution on electrochemical performances of NiO -3YSZ supported SOFC electrode - Clément Guillet
09:45	Electro-Optical Characterization of Carbon Nanotubes via Time-Resolved Orientational Dynamics - Sinny Trivedi
10:00	Energy decoupling in BST nanoceramics: tuning resistive states for neuromorphic synaptic devices - Roxana-Elena Patru

Session 2 – UNS Room-1

4.2.1. Applications of electroceramic materials and structures: Electroceramics for energy applications (fuel cells) - Chairs: Vanja Subotic and Jovana Stanojev

Advanced Electroceramics for Solid Oxide Cells Albert Tarancón
A pressing matter: cold sintering-assisted preparation of yttria-stabilized zirconia for solid oxide fuel cell applications - Žiga Bertalanč
Influence of Alkali Secondary Phase on the Interfacial Charge Transport and Sinterability of Ceria-Based Ceramics - Henrique Tidei
Multiscale Study of Ti-Doped Alkali Niobate Ceramics - Janina Roknić
Towards Circular Fuel Cell Technologies: Nickel Recovery from End-of-Life MCFCs and SOFCs - Diogo Sousa
Tuning Ferroelectric Properties of Bismuth Ferrite Solar Cells - Marcel Habrik

Coffee Break

Session 3 – UNS Room-2

4.3.1. Theory and modelling: Advanced modelling methods - Chairs: Leontin Padurariu and Branimir Bajac

08:30	Domain structure evolution in uniaxial ferroelectrics: the role of the depolarization field-driven correlations and of the fluctuations of nonpolar polarization components - Yuri Genenko
09:00	Power Budget Analysis of Piezoelectric Harvester Based on Coupled Bidirectional Transducer Model - Sumeyya Javaid
09:15	First-Principles Insights into Core–Shell Formation in $\text{Na}_{0.5}\text{Bi}_{0.5}\text{TiO}_3$ – SrTiO_3 - Marc Túnica
09:30	Modelling of the piezoelectric maxima that can be present at intermediate porosity levels and applied poling fields, in ferroelectric ceramic bulks - Radu Stefan Stirbu
09:45	Can V2CTx MXene Act as a Non-Plasmonic SERS Substrate? A Resonant Charge-Transfer Model - Zeljka Cvejic
10:00	Optimization of Ionic Transport in Bismuth-Based Electroceramics via Liquid-Phase Sintering for SOFC Applications - Şenel Çobaner

Coffee Break

	Session 1 – University Building - Amphitheatre 4.1.2. Applications of electroceramic materials and structures: Electroceramics for energy applications - Chair: Thomas Herisson de Beauvoir Synthesis and Characterization of High-Entropy Ceramics for Electrocatalytic and Energy Conversion Applications – Subramshu S. Bhattacharya La-Doped High-Entropy Perovskite Oxides: Design, Electronic Structure, and Thermoelectric Performance - Peter Tatarko Tailored Growth of ZnO 1D Nanostructures for Hydrogen-Selective CO₂ Electroreduction - Marco Peiteado 4.1.3. Plenary Session 4 - Chair: Pascal Marchet Key Issues and Recent Progresses in Microwave Dielectric Ceramics Xiangming Chen	Session 2 – UNS Room-1 4.2.2. Applications of electroceramic materials and structures: Electroceramics for energy applications (fuel cells) - Chair: Albert Tarancón Carbon-Based Glass Foam for High-Power Microwave Absorption – Ratiba Benzerga Phosphate Langbeinites as Promising Multifunctional Materials - Intissar Driouech Tactile Sensing and Ferroelectric Behavior of BaTiO₃-Elastomer Composites - Sofiia Butenko
10:45		
11:15		
11:30		
11:45		
12:30	Lunch	
	4.1.4. Novel synthesis and processing methods: Novel processing methods for electroceramics and composites Chairs: Frank Clemens and Jianjiang Bian Downscaling grain size toward the nanometre range – A key-factor for tuning the crystalline structure and functional properties in (Ba,Sr)TiO₃ ceramics - Adelina-Carmen Ianculescu From research to commercialization of thermoelectrics in Europe – Nikola Kanas Development of Ceria-Zirconia (CexZr1-XO₂) based-Structured Catalyst: Rheological Optimization, Mechanical Robustness, and Electrocatalytic performances for fuel production - Srinivasan Nedunchezian Development of BaTiO₃-based thermoplastic filaments for Fused Deposition Modelling: towards piezoelectric performance comparable to conventional pressing - Soufyane Satha Interface-Engineered MgO-Based Low-Temperature Co-Fired Ceramics with Significantly Enhanced High-Strength and Superior High-Thermal-Conductivity - Mingzhao Xu Additive manufacturing of lead-free piezoelectric ceramics using stereolithography (SLA) - Mohamed Rguiti	4.2.3. Applications of electroceramic materials and structures: Electroceramics for energy applications (fuel cells) Chairs: Dr. Martino Aldrigo and Prof. Marija Milanović Solid Oxide Cells: The Core Component of Power-to-X-to-Power Systems - Vanja Subotic Direct Electrochemical Synthesis of Ammonia in Protonic Ceramic Cells: Selecting Perovskite-Related Cathode Materials - Blanca I. Arias Serrano Exploring high-entropy oxide (La_{0.2}Pr_{0.2}Nd_{0.2}Sm_{0.2}Er_{0.2})₂CuO₄ as a novel air electrode for solid oxide cells - María José Escudero From hydration to microstructure: Multimodal Insights into Proton-Conducting Ceramic Electrolytes - Maximilian Weiss Thin film ceramic layers enabling lightweight solid oxide fuel cell for aviation application - Vignesh Ahilan V- and Mo-based perovskites for anodes of biogas-fueled SOFCs: Redox behavior and stability - Aleksey Yaremchenko
14:00		
14:30		
14:45		
15:00		
15:15		
15:30		
15:45		
16:00	Closing	

List of posters

Topic 2. Novel synthesis and processing methods

- 79** Recycling Approach for Lead-Containing Piezoceramic Tapes - Victoria Löhr
- 84** Microstructural Evolution and Functional Properties of BCZT and BCST Lead-Free Piezoceramics Prepared by Ultrafast Sintering - Vladimir Prajzler
- 116** Synthesis of KNN Nanoparticles by a Low-Temperature Sol–Gel Route and Their Densification into Lead-Free Piezoceramics - Bouabid Misski
- 162** Comparison of SPS and conventional sintering of BaTiO₃ ceramics synthesized via a modified Pechini route - Magdalena Krupska-Klimczak
- 168** Lead-free ceramics K_{0.5}Bi_{0.5}TiO₃ - technology, properties and applications. - Piotr Czaja
- 179** Processing cellular ceria-based solid electrolyte ceramics for electrochemical removal of NO_x - Helena Gomes
- 42** Influence of chemical reactions on grain growth in aerosol deposited films of sodium niobate - Frank Heier
- 174** Overcoming grain-size effects in aerosol deposited BaTiO₃ films by using Polymer–Ceramic composite powders - Linh TA
- 255** Controlled Assembly of Ti₃C₂T_x MXene Monolayers via Modified Langmuir–Blodgett Technique: Effect of Processing Parameters - Jovana Paskaš
- 56** Dense LiF microwave dielectric ceramics with near-zero linear shrinkage during sintering - Shuya Wu
- 118** Exploring the mechanical properties of BaZr_{0.7}Ce_{0.2}Y_{0.1}O_{3-δ} (BZCY721) proton-conductors produced via cold sintering process - Syed Ali Afzal
- 175** Development of core/shell particles with magnetic core and dielectric-electric bilayered shell for water treatment - Milan Nikolić

Topic 3. Advanced characterisation

- 17** Optical Properties of Ti-doped ZnO Ceramics - Hasan Kutay Verim
- 180** Hybrid Poling Optimization of Lead-Free BT-based Piezoelectric Ceramics for Enhanced Electromechanical Properties - Erwan Jonin
- 246** Growth and characterization of 0.8NBT-20BT thin films - Šarūnas Svirskas
- 256** Local structure of (K,Na)NbO₃ solid solutions - Jamil Eduardo Flores Gonzales
- 287** Nanoscale Dielectric Breakdown in Ultrathin AlN Ceramic Films: Bridging Defect Physics and Insulation Reliability Across Borders - Babiker Kamal Babiker Omer
- 28** Impedance spectroscopic analysis of lead-free piezoceramics obtained by ultrafast high-temperature sintering - Joao L. Miranda
- 128** Complexity of phase transitions in Pb(Hf_{0.7}Sn_{0.3})O₃ single crystals - Irena Jankowska-Sumara
- 301** Laser-Induced Conductive Pathways on α-Fe₂O₃ Ceramics for Humidity and Water-Level Sensing - Henrique Gomes

Topic 4. Structure-properties relationship 1/2

- 124** Alternative explanations for the maximum in the piezoelectric performances of the ferroelectric solid solution (1–x)BiFeO₃–xBaTiO₃ - Alberto Giribaldi
- 127** Pronounced and Stable Internal Bias Fields in La-Doped BiFeO₃–BaTiO₃ Ceramics - Jingwei Wei
- 160** Exploring porosity-induced phase superposition in BaTiO₃-based ferroelectric solid solutions - Cristina Elena Ciomaga
- 242** Thermally Driven Structural Transition and Single-Island Electrical Response of Sputtered VO₂ Nano-Islands on Al₂O₃ - Lucian Trupina
- 252** What Enables High Energy Storage at Low Electric Fields? The Role of Hybrid Polarization in BNT-Based Relaxors - Ankur Khokhar

Topic 4. Structure-properties relationship 2/2

- 62** The electronic structure and magnetoelectric properties of tetracalcium aluminoferrite Ca₂Fe₂-xAl_xO₅ synthesized by mechanochemical process - Bartłomiej Andrzejewski
- 81** Electrical properties and energy harvesting of x(0.75NaBiT-0.25SrT)- (1-x) PVDF flexible composites - Mirjana Vijatović Petrović
- 91** In-situ monitoring of Ag-BaTiO₃ CerMet sintering process for tuning the metacomposite properties - Donatella Giuranno
- 103** Functional properties in silver-CaTiO₃ composites - Felicia Gheorghiu

Topic 5. Applications of electroceramic materials and structures

- 145** Chemical modification of La_{0.65}Sr_{0.30}Cr_{0.85}Ni_{0.15}O_{3-δ} solid oxide cell hydrogen electrode surface to improve stability in electrolysis mode. - Elisabeth Kaldvee
- 37** Preparation, dielectric and electrical properties of Sodium Niobate based ceramics - Abdul Manan
- 114** Comparison of Triple-Conducting Electrodes in Proton-Conducting and Dual-Phase Ceramic Membrane Reactors - Sebastian Meixner
- 117** Pre-Intercalated Layered MnO₂ Cathodes for Zn-Metal Batteries: Charge Storage and Degradation Mechanisms - Elias Bodin
- 133** BSnT-polymer composites for mechanical energy recovery through the piezoelectric effect - Nadejda Horchidan
- 134** Effects of Zr-substitution on functional performance of BaTiO₃-based solid solutions - Felicia Gheorghiu
- 171** Investigation of Piezoelectric Properties of Sm-doped 70PMN-30PT Piezoceramics for Energy Harvesting Applications - Namik Kemal Gozuacik
- 176** Configurational Disorder in Perovskite Oxides for Advanced Thermoelectrics - Hakan Ünsal
- 191** REFORM-SOFC: Reforming Catalyst-Supported Solid Oxide Fuel Cells for Direct Utilisation of Renewable Fuels - Kiryl Zakharchuk
- 197** CaTiO₃-derived mixed conductors as anode components for direct-ammonia SOFCs - Aleksey Yaremchenko
- 244** Development of methane tolerant Sr₂Fe_{1.5}Mo_{0.5}O_{6-δ} electrodes for symmetric cells for CO electrolysis - Kimberly Toala Escobar
- 245** The ECO-H₂ Project: Electrochemical conversion of energy and hydrogen in reversible solid oxide cells using high-entropy oxides as electrodes - María José Escudero
- 77** Hierarchically Porous SnO₂ Nanofibers: A Comparative Study of Pristine, Au- and MXene-Modified Variants for H₂S Sensing - Milica Počuča-Nešić
- 86** Encapsulated PICMA Actuators and their Applications - Franziska Dolce
- 228** Ba_{0.75}Sr_{0.25}TiO₃ (BST25) Ceramics Obtained by Robocasting: Ferroelectric and Pyroelectric Properties with Solid-State Processing as Benchmark - Lucian Pintilie
- 239** Electrospun Multi-Chanel SnO₂ Nanofibers: From Synthesis Optimization to Gas-Sensing Applications - Katarina Vojisavljevic
- 152** Processing–Microstructure–Property Relationships in CaMgSi₂O₆ Diopside Ceramics: Role of Calcination Temperature and Heating Rate - Hadi Barzegarbafrrooei
- 265** Spark Plasma Sintering of Corundum-Type Mg₄Nb₂O₉ Ceramics for Microwave Applications - Liviu Nedelcu
- 266** Wide-Band Dielectric Resonator Antennas Based on Low Permittivity Mg₄Nb₂O₉ Ceramics - Cezar Dragos Geambasu
- 226** Highly efficient chitosan-modified Bi₂O₃ adsorbent for Reactive Orange 16 dye removal - Natalija Milojković
- 237** Advanced Polymer-Derived Ceramic Insulation Systems for High-Temperature Electrical Applications - Annalaura Zilio