

Monday, 12 October

8:15am **Registration**
University of Novi Sad

9am **Welcome Word**
University of Novi Sad

9:15am **1.1.1. Invited Welcome Talks**
University of Novi Sad
Chaired by: Prof. Juras Banyas

9:15am **Ferroelectric and Piezoelectric Ceramics: A Historical Perspective and Recent Developments**
» [Dr. Dragan Damjanovic](#)

9:45am **Electro-Nanoceramics: From Over 45,000 Implanted in Humans to Exploratory Applications**
» [Dr. Thomas Webster](#)

10:15am **Coffee Break**
University of Novi Sad

10:45am **1.1.2. Applications of electroceramic materials and structures: Ceramic sensors and actuators**
University of Novi Sad
Chaired by: Vincenzo Buscaglia

10:45am **Processing of Smart Porous Electro-Ceramic Transducers (ProSPECT)**
» [Prof. Chris Bowen](#)

11:15am **Solid-state synthesis of medium entropy rare earth oxide with engineered oxygen vacancies for formaldehyde gas sensing application**
» [Mr. SUBHAJEET SEN](#), Dr. Srinivasan Nedunchezian, Mr. Vishal Nagar, Dr. Ashok Bera

11:30am **Air-Oxygenation-Driven n/p-Type Conversion and Heterojunction-Boosted Gas Sensing in Metal Chalcogenides**
» [Prof. Yun-Hyuk Choi](#)

10:45am **1.2.1. Applications of electroceramic materials and structures Electroceramics for high frequency applications**
Chaired by: Prof. Stanislav Kamba

10:45am **Low Temperatures Cofired Ceramics for Electronics Applications**
» [Prof. Hong Wang](#)

11:15am **Effective dielectric properties adjustment through additive manufacturing of single component ceramics for application in microwave dielectric resonator antennas**
» [Dr. Ratiba Benzerga](#), Dr. Claire Le Paven, Mr. Thomas Lavie, Mr. Romain Ammar, Dr. Matthew Julian, Dr. François Cheviré, Dr. Laurent Le Gendre, Prof. Ala Sharaiha

11:30am **Temperature-Stable Microwave Dielectric Ceramics in the BaLiF3-NaMgF3 System with Ultralow Sintering Temperature**
» [Prof. Jianjiang Bian](#)

11:45am **1.1.3. Plenary Session 1**
University of Novi Sad
Chaired by: Prof. Paula M. Vilarinho

11:45am **The role of chemical, polar and octahedral tilt disorder in high voltage/energy density ceramics**
» [Prof. Ian Reaney](#)

Continued from **Monday, 12 October**

12:30pm **Lunch**
University of Novi Sad

2pm **1.1.4. Applications of electroceramic materials and structures: Energy harvesting devices**
University of Novi Sad
Chaired by: Prof. Chris Bowen and Prof. Tadej Rojac

2pm **Non-Linear Dielectrics: Bridging Fundamental Physics and Sustainable Technologies**
» Prof. Paula M. Vilarinho

2:30pm **SPS levers for optimizing the microstructure and piezoelectric properties of screen-printed layers MEMS for energy harvesting**
» Ms. Nadia BENCHAREF, Dr. U-Chan Chung, Ms. Sonia Buffiere, Mr. Philippe Legros, Mr. Bernard Plano, Dr. Mario Maglione, Ms. Hélène Debeda, Dr. Elissalde Catherine

2:45pm **High piezoelectric response in sol-gel processed epitaxial BiFeO₃ films through post engineering**
» Mr. Xin Zhang, Prof. Jing-Feng Li

3pm **Tailoring Barium Titanate-based ceramics with low Sn addition for piezoelectric energy harvesting applications**
» Dr. Nadejda Horchidan, Mr. Cosmin-Petre Lazăr, Dr. Leontin Padurariu, Dr. Vlad Alexandru Lukacs, Dr. Felicia Gheorghiu, Dr. Cristina Elena Ciomaga, Dr. Florin-Mihai Tufescu, Prof. Liliana Mitoseriu

3:15pm **BaTiO₃-rich BaTiO₃-Na_{0.5}Bi_{0.5}TiO₃ relaxor ferroelectrics with double hysteresis loops and high energy density**
» Mr. Oğuz Akkaşoğlu, Dr. Merve Karakaya, Prof. Umut Adem

3:30pm **Investigating Sr_{3-x}RxFe_{2-y}NiyO_{7-δ} Ruddlesden-Popper Materials as Air Electrodes for Proton-Conducting Electrochemical Devices**
» Mr. Álvaro Vázquez Naval Moral, Dr. Glenn C. Mather, Dr. Adam Halemayehu, Dr. Peter Vang Hendriksen, Dr. Domingo Pérez-Coll

3:45pm **NaNbO₃-Based Freestanding Piezoelectric Oxide Membranes for Flexible Electronic Skin Applications**
» Dr. hangren Li, Prof. Jing-Feng Li

2pm **1.2.2. Structure-properties relationship: Basic structural phenomena**
Chaired by: Prof. Xiangming Chen and Dr. Marco Peiteado

2pm **Structural Modulation and Phase Transition in Tetragonal Tungsten Bronze Ferroelectrics**
» Dr. Xiaoli Zhu

2:30pm **Cryogenic Magnetocaloric Effects in Hexagonal Multiferroic Oxide Ceramics**
» Mr. Manuel Zahn, Ms. Katharina Wolk, Mr. Ruben Dragland, Mr. Tim Treu, Mr. Karel Prokes, Mr. Yosuke Hamasaki, Dr. Catalina Salazar Mejía, Dr. Elvia Chavez Panduro, Dr. Tino Gottschall, Dr. Yoshitaka Ehara, Prof. Philipp Gegenwart, Prof. Dennis Meier, Dr. Jan Schultheiss

2:45pm **Processing-structure-property relationship in BMT-doped BiFeO₃-BaTiO₃ ceramics**
» Mrs. Iannatul Robaiat Mou, Dr. David Hall

3pm **Consistent transition model for Bi_{0.5}Na_{0.5}TiO₃ from temperature-dependent structural and electrical properties**
» Dr. Thomas Fourgassie, Dr. Cosme Milesi-Brault, Mr. Omar Ibder, Prof. Pascal Andreazza, Mr. Eric Bourhis, Dr. Anna Ott, Prof. Pierre-Eymeric Janolin, Prof. Cecile autret lambert

3:15pm **A New Ferrielectric Phase in Tetragonal Tungsten Bronzes with Competing Polar and Antipolar Modes**
» Mr. Yibang Ou

Continued from **Monday, 12 October**

3:30pm **Defect engineering in amorphous silica to develop sustainable and cost-effective catalysts for CO₂ methanation**

» Dr. Rishabh Shukla, Dr. Fabio La Mattina, Dr. Andreas Borgschulte, Dr. Mattia Turchi, Dr. Ivan Lunati, Dr. Michael Stuer

3:45pm **Influence of isovalent doping in BaTiO₃ based PTCR materials for high voltage heaters**

» Mr. Florian Hortmann, Dr. Christian Molin, Dr. Sylvia Gebhardt

4pm **Coffee Break**
University of Novi Sad

4:30pm **1.1.5. Advanced characterisation: Advanced functional characterisation methods**

University of Novi Sad

Chaired by: Prof. Jacob L. Jones and Prof. Klara Castkova

4:30pm **Environmental Effects in Ferroelectrics Probed by SPM**

» Prof. Brian Rodriguez

5pm **Nonlinear Dielectric Responses and Relaxation Dynamics in Molecular Ferroelectric [HDabco]ClO₄**

» Mr. Shuaib Bolaji Issa, Prof. Mari-Ann Einarsrud, Prof. Julian Walker

5:15pm **Composition-dependent electromechanical response of DC-bias field hardened ferroelectric ceramics**

» Dr. Kriti Batra, Mr. Anton J. Heitzmann, Prof. Jurij Koruza

5:30pm **Shear Electrostrain Response in Ferroelectrics**

» Dr. Yizhe Li, Dr. David Hall

5:45pm **Analysis of the Charge Transition Level in perovskite-type oxide materials by X-ray photoelectron spectroscopy**

» Dr. Savita Chaoudhary, Ms. Anna M Paulik, Mr. Niklas Bertelmann, Mr. Denis Sudarikov, Dr. Pengcheng Hu, Prof. Jurij Koruza, Prof. Andreas Klein

6pm **Complete characterization of the dielectric, piezoelectric and elastic properties of a ceramic with a single parallelepiped-shaped sample**

» Dr. Julien VASSEUR, Dr. Rémi Rouffaud, Dr. Loïck Bonnet, Prof. Isabelle Monot-Laffez, Prof. Franck Levassort

6:15pm **Additive manufacturing of Cordierite electroceramics with reactive silicone-based binders**

» Ms. Annalaura Zilio, Prof. Enrico Bernardo

4:30pm **1.2.3. Structure-properties relationship: Composite ceramic systems**
Chaired by: Prof. Andreas Klein and Prof. Antonio Feteira

4:30pm **Percolation, giant permittivity and metacomposite properties in Ag-BaTiO₃ ceramic-metal structures with variable microstructural characteristics**

» Prof. Liliana Mitoseriu, Dr. Vlad Alexandru Lukacs, Dr. Ina Turcan, Dr. Leontin Padurariu, Dr. Radu Stefan Stirbu, Dr. Cristina Elena Ciomaga, Dr. Fereshteh Falah Chamasemani, Dr. Roland Brunner, Dr. Donatella Giuranno

5pm **Development of a Tactile Sensing Device to Evaluate Self-Powered Piezoelectric TPE Composites**

» Ms. Sofiia Butenko, Mr. Wojciech Kajfosz, Dr. Arun Ichangi, Prof. Bogdan Sapinski, Dr. Frank Clemens

5:15pm **Ag-BaTiO₃ cermet composites with sharp-edged metallic inclusions**

» Dr. Vlad Alexandru Lukacs, Dr. Ina Turcan, Dr. Cristina Elena Ciomaga, Dr. Felicia Gheorghiu, Dr. George Stoian, Dr. Ioan Dumitru, Prof. Liliana Mitoseriu

Continued from **Monday, 12 October**

- 5:30pm **Development of a LTCC material with a TEC tailored to Silicon and fabrication of compound materials for hybrid microsystems**
» Mr. Clemens Motzkus
- 5:45pm **High permittivity and low dielectric loss MgO-BaTiO₃ ceramic composites**
» Mr. Muhammad Wasim, Dr. James Killeen, Dr. Iasmi Sterianou, Dr. Evangelos Kordatos, Dr. Julian Dean, Prof. Derek Sinclair, Prof. Antonio Feteira
- 6pm **Anisotropic Response in Ag-BaTiO₃ Composites Textured by Electric Field Assisted Sintering**
» Ms. Anda Maria Oajdea, Dr. Vlad Alexandru Lukacs, Dr. George Stoian, Dr. Felicia Gheorghiu, Prof. Liliana Mitoseriu
- 6:15pm **Impact of Sb and Ti B-site doping on the stability and electrochemical performance of SrFeO_{3-δ} based air electrodes for solid oxide cells**
» Mr. PEDRO LOPEZ-TELLO, Dr. Daniel Muñoz-Gil, Dr. Domingo Pérez-Coll
- 8pm **YCN Evening**
University of Novi Sad

Tuesday, 13 October

- 8:30am **2.1.1. Novel synthesis and processing methods: Novel processing methods for electroceramics and composites**
University of Novi Sad
Chaired by: Dr. Peter tatarko and Prof. Klaus Reichmann

- 8:30am **Solution based metal – metal oxide composites for solar fueled CO₂ conversion**
» Prof. Marlies K. Van Bael, Dr. Ken Elen, Dr. Bjorn Joos, Prof. Pascal Buskens, Prof. An Hardy
- 9am **Room-temperature densified Al₂O₃-H₃BO₃ ceramics with excellent microwave dielectric properties and thermal conductivity for chip packaging**
» Mr. Zeng Zhan, Dr. Jin Cheng, Dr. Xinwei Xu, Dr. Hongye Wang, Ms. Yani Lu, Dr. Liang Sun, Dr. Naichao Chen, Mr. Xiaoyu Li, Mr. Boshen Zhang, Prof. Hong Wang
- 9:15am **Optimization of printing parameters for DLP 3D-printed potassium sodium niobate (KNN)-based lead-free gyroid scaffolds**
» Dr. Ertugrul Varlik, Dr. Fatih Kurtuldu, Mr. Dominik Brouczek, Dr. Martin Schwentenwein, Dr. Martin Michálek
- 9:30am **Design of electromechanical transducers based on the nonclassical electrostrictor (Zr_{0.1}Ce_{0.9})O₂**
» Dr. Petr Yudin, Prof. Igor Lubomirsky
- 9:45am **Na-induced modification of epitaxial LaMnO₃ thin films: Structural and magnetic insights**
» Dr. Jelena Bobić, Dr. Aleksandar Radojkovic, Dr. Mirjana Vijatovic Petrovic, Dr. Jelena Vukmirovic, Dr. Adis Dzunuzovic, Dr. Nikola Ilic, Dr. Marko Boskovic, Prof. Vladimir V Srdić
- 10am **Potential of a novel proton-conducting material designed by encapsulation of water vapor into positively charged cages of 12CaO·7Al₂O₃**
» Prof. Naonori Sakamoto, Mr. Ryota Maruyama, Prof. Takahiko Kawaguchi, Prof. Naoki Wakiya
- 8:30am **2.2.1. Applications of electroceramic materials and structures Electroceramics for energy applications (batteries)**
Chaired by: Prof. Hong Wang and Prof. Andreja Benčan Golob
- 8:30am **Design of Protective Coatings for Lithium-Ion Battery Cathodes via Wet-Chemical Processing**
» Prof. Tomoya Ohno, Dr. Padarti Jeevan Kumar, Prof. Shigeto Hirai

Continued from **Tuesday, 13 October**

- 9am **Maximizing Mass Transport in Lithium-ion Batteries: The Impact of Geometry and Infill Patterns of 3D Printed NMC-Based Electrodes**
» Mr. José Ignacio García Jiménez, Mrs. Sabrina Tair, Dr. Juan Ramón Marín Rueda, Dr. Miguel Castro García, Dr. Juan Carlos Pérez Flores, Dr. Jose Fernando Valera Jiménez, Prof. Jesús Canales Vázquez
- 9:15am **Towards 3D-Printed All-Solid-State Batteries: From Die-Pressing to DLP-Based Ceramic Architectures**
» Dr. Jérôme Bodart, Mr. Renaud Hastir, Dr. Frederic Boschini, Prof. Rudi Cloots, Dr. Abdelfattah Mahmoud
- 9:30am **Energy storage density in PMN-33PT dielectric thin film capacitors through synergistic effects**
» Prof. Matjaž Spreitzer, Dr. Jamal Belhadi, Dr. Zouhair Hanani, Prof. Nina Daneu
- 9:45am **Nano-Engineered thin-film composites for application in oxygen-charged storage energy system**
» Mr. Andrea Turino, Mr. Dominic Maria Borgialli, Dr. Francesco Chiabrera, Dr. Federico Baiutti, Prof. Albert Tarancón
- 10am **Engineering MIEC Oxide Thin Films for Low-Temperature Proton-Coupled Charge Storage**
» Mr. CHIRAG Chotai, Dr. Francesco Chiabrera, Dr. Alex Morata, Dr. Federico Baiutti, Prof. Albert Tarancón
- 8:30am **2.3.1. Theory and modelling Emerging phenomena in electroceramics**
Chaired by: Prof. Yuri Genenko and Prof. Stevan Armaković
- 8:30am **The Evolution of Atomistic Modeling: From Physics-Driven to Data-Driven Materials Research**
» Prof. Stevan Armaković

- 9am **Phase Superposition as a Pathway for Enhancing Functional Properties in Barium Titanate-Based Ceramics**
» Dr. Leontin Padurariu, Dr. Nadejda Horchidan, Dr. Cristina Elena Ciomaga, Dr. Vlad Alexandru Lukacs, Dr. Felicia Gheorghiu, Dr. Radu Sefan Stirbu, Prof. Liliana Mitoseriu
- 9:15am **Enhanced Prediction of Microwave Dielectric Properties in ABO₃ Perovskite Ceramics via M3GNet-Integrated Machine Learning**
» Mr. Liangyu Mo, Mr. Jincheng Qin, Prof. Mingsheng Ma, Prof. Yongxiang Li, Prof. Zhifu Liu
- 9:30am **Reactive flash processing of carbonates for the low temperature densification of lanthanum cerate**
» Mr. Anant Kumar Gupta, Dr. Devinder Yadav, Dr. Srinivasan Nedunchezian
- 9:45am **Moderate-temperature defect chemistry of barium titanate**
» Mr. Denis Sudarikov, Mr. Niklas Bertelmann, Prof. Andreas Klein
- 10am **Phase-field simulation of domain wall dynamics and charge compensation in uniaxial ferroelectrics**
» Dr. Olga Yu Mazur, Dr. Yuri Genenko, Dr. Pavel Marton
- 10:15am **Coffee Break**
University of Novi Sad
- 10:45am **2.1.2. Applications of electroceramic materials and structures: Semiconducting devices**
University of Novi Sad
Chaired by: Prof. Jurij Koruza
- 10:45am **How Semiconducting are ferroelectrics**
» Dr. Pengcheng Hu, Dr. Nicole Bein, Mr. CHINMAY CHANDAN PARHI, Prof. Tadej Rojac, Prof. Barbara Malič, Dr. Mohammad Ammirabasi, Prof. Karsten Albe, Prof. Jurij Koruza, Prof. Andreas Klein

Continued from **Tuesday, 13 October**

11:15am **3D printing of fine-pitch through-ceramic vias (TCVs) for advanced ceramic chip packaging**

» Mr. Boshen Zhang, Dr. Xinwei Xu, Dr. Hongye Wang, Mr. Denghao Ma, Ms. Yani Lu, Mr. Zeng Zhan, Prof. Hong Wang

11:30am **Polarization-driven enhancement of photocatalytic activity in porous BCZT ceramics**

» Ms. Laura San-Miguel, Ms. Ana Castellanos-Aliaga, Ms. Romana Boubenicek, Dr. Thomas Konegger, Dr. David G. Calatayud, Dr. Teresa Jardiel, Prof. Jurij Koruza, Dr. Marco Peiteado

10:45am **2.2.2. Novel synthesis and processing methods: Novel processing methods for electroceramics and composites**

Chaired by: Prof. Matjaž Spreitzer

10:45am **Effects of CuO-TiO₂-Nb₂O₅ composite oxide sintering aids on the sintering behavior and performance of electroceramics**

» Prof. Zhifu Liu

11:15am **Unlocking the Potential of LLZO Solid-State Batteries via 3D Printing.**

» Mrs. Sabrina Tair, Mr. José Ignacio García Jiménez, Dr. Jose Fernando Valera Jiménez, Dr. Juan Ramón Marín Rueda, Dr. Miguel Castro García, Dr. Juan Carlos Pérez Flores, Prof. Jesús Canales Vázquez

11:30am **Operando Impedance Spectroscopy: a tool to reveal the influence of Cold Sintering Process parameters grain boundary evolution during sintering**

» Mr. Emeric SANCHEZ, Dr. Claude Estournès, Dr. Thomas Herisson de Beauvoir

10:45am **2.3.2. Structure-properties relationship: Advanced functional phenomena**

Chaired by: Prof. José Antônio Eiras

10:45am **New Generation BiFeO₃-BaTiO₃ Piezoceramics Activated by Bulk Ferroelectric Heterostructures**

» Dr. David Hall, Dr. Yizhe Li

11:15am **Engineering Dynamics through Field-Induced Transformations in Lead-Free NBT Piezoelectric Ceramics**

» Ms. Hareem Zubairi, Dr. Ge Wang

11:30am **Enhancing antiferroelectricity in NaNbO₃-based ceramics**

» Mr. Anirudh K R, Dr. Lucía Imhoff, Dr. Martin Kempa, Dr. Tetyana Ostapchuck, Dr. Maxim Savinov, Dr. Dmitry Nuzhnyy, Mr. Aadil Abass Shah, Dr. Mojca Otoničar, Dr. Elena Buixaderas

11:45am **2.1.3. Plenary Session 2**

University of Novi Sad

Chaired by: Prof. Barbara Malič

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

» Prof. Satoshi WADA

12:30pm **Lunch**

University of Novi Sad

2pm **2.1.4. Novel synthesis and processing methods: Powder synthesis and ceramic processing methods**

University of Novi Sad

Chaired by: Prof. Ian Reaney and Prof. Marlies K. Van Bael

2pm **Re-engineering Solid-State Synthesis of Perovskites: Precursor Design as a Tool for Chemical Homogeneity and Phase Purity**

» Prof. Jacob L. Jones

Continued from **Tuesday, 13 October**

- 2:30pm **Phase formation reactions and doping of the (Ba,Ca)(Zr,Ti)O₃ piezoceramic**
» [Prof. Jurij Koruza](#), Ms. Anna M Paulik, Prof. Andreas Klein, Dr. Marc Widenmeyer, Prof. Oliver Clemens
- 3pm **Transformation to sustainable processing in electroceramics industry**
» [Prof. Klaus Reichmann](#)
- 3:15pm **Effect of Particle Size Control on the Densification and Functional Properties of SPS-Sintered Lead-Free KNN Ceramics**
» [Mr. Bouabid Misski](#), Prof. Mohamed Mouyane, Prof. Jacques Noudem, Prof. Sylvain Marinel, Prof. Amine ALOUI-BELGHITI, Prof. Mohamed Rguiti, Prof. Fouad BLEHORA, Prof. Jerome Bernard, Prof. David Houivet
- 3:30pm **Tuning the Properties of Magnetoelectric Nanoparticles to Enable Controlled Neural Stimulation**
» [Ms. Aleksandra Milojkovic](#), Prof. Kristen Kozielski, Ms. Prachi Kumari
- 3:45pm **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})TiO₃ perovskites**
» [Dr. Vasile-Adrian Surdu](#), Ms. Mariana-Andreea Marinică, Dr. Roxana-Elena Patru, Prof. Ovidiu-Cristian Oprea, Dr. Adrian Ionuț Nicoară, Dr. Bogdan Vasile, Ms. Roxana Trușcă, Prof. Adelina-Carmen Ianculescu
- 2pm **2.2.3. Applications of electroceramic materials and structures: Spintronics and memory devices (COST)**
Chaired by: Dr. Martina Basini and Dr. Lucian Pintilie
- 2pm **Ultrafast phononic manipulation of ferroic order**
» [Prof. Andrei Kirilyuk](#)
- 2:30pm **The origin of the exceptional microwave dielectric properties of SrTiO₃-based films and ceramics with a Ruddlesden-Popper structure**
» [Prof. Stanislav Kamba](#)

- 3pm **Multiferrons: lattice excitations carrying both polarization and magnetization**
» [Dr. Carl P. Romao](#), Dr. Mike Pols, Prof. Dominik Juraschek
- 3:15pm **Colossal magnetoresistance effect and spin-dependent variable-range hopping in overdoped La_{1-x}CaxMnO₃ manganites**
» [Prof. Emil Tafra](#), Dr. Nikolina Novosel, Prof. Željko Skoko, Dr. Tomislav Ivek, Prof. Mario Basletić, Mr. Branimir Mihaljević, Prof. Zvonko Jagličić, Dr. David Rivas Gongora, Prof. Silvia Tomić, Prof. Amir Hamzić, Dr. Vladimir Roddatis, Dr. Florian Fischgrabe, Prof. Vasily Moshnyaga, Dr. Bojana Hamzić, Dr. Matija Čulo
- 3:30pm **Anharmonic Phonon Coupling Enabled by Local Inversion Symmetry Breaking at Domain Walls in Ferroelastics**
» [Dr. Vivek Unikandanunni](#), Dr. Martina Basini, Dr. Seyyed Jabbar Mousavi, Dr. Niccolò Sellati, Dr. Paolo Barone, Prof. Steven L. Johnson, Dr. Andrew Shalit, Prof. Peter Hamm, Dr. Mattia Udina, Prof. Thomas Feurer
- 3:45pm **Unlocking the potential of solution deposition techniques for production of the epitaxial perovskite thin films**
» [Dr. Jelena Vukmirovic](#), Ms. Danica Piper, Ms. Iva Tokovic, Dr. Xuyun Guo, Dr. Bojan Miljević, Dr. Marija Milanovic, Prof. Vladimir V Srdić
- 4pm **Coffee Break**
University of Novi Sad
- 4:30pm **2.1.5. Novel synthesis and processing methods: Advanced film deposition techniques**
University of Novi Sad
Chaired by: Dr. Elissalde Catherine and Prof. M. Lourdes Calzada
- 4:30pm **Barium Titanate-Based Thin Films: Tailoring the Properties by Solution Chemistry, Substrate Choice and Heating Regime**
» Dr. Konsago Sabi William, [Prof. Barbara Malič](#), Dr. Katarina Žiberna, Ms. Maja Koblar, Ms. Brigita Kmet, Dr. Aleksander Matavž, Dr. Barnik Mandal, Dr. Sebastjan Glinšek, Prof. Andreja Benčan Golob

Continued from **Tuesday, 13 October**

- 5pm **Recent results on Aerosol Deposition (AD) of lead-free ferroelectric - piezoelectric thick films on metallic substrates for flexible devices**
» Prof. Pascal Marchet, Dr. Anass Chrir, Dr. Oscar Rojas, Ms. Laurence Boyer, Dr. Olivier Durand, Prof. Fabrice Rossignol
- 5:15pm **Aerosol deposition of BiFeO₃-PbTiO₃ ferroelectric thick films for multifunctional flexible devices**
» Mrs. Adriana Barreto, Mr. Victor Regis, Dr. Matteo Dangelo, Mrs. Ivana Goričan, Dr. Harvey Amorín, Dr. Ricardo Jiménez, Prof. Barbara Malič, Prof. M. Lourdes Calzada, Prof. Hana Uršič, Dr. Miguel Alguero
- 5:30pm **Self-Assembling Monolayers as a Tool for Selective Chemical Solution Deposition**
» Ms. Karola Neeleman, Mr. Hung Nguyen, Prof. Daniel Rettenwander, Prof. Julia Glaum, Prof. Mari-Ann Einarsrud
- 5:45pm **Ferroelectric solution deposited oxide layers for flexible electronic systems**
» Dr. Íñigo Bretos, Dr. Ricardo Jiménez, Dr. Jesús Ricote, Dr. Miguel Alguero, Mrs. Adriana Barreto, Prof. M. Lourdes Calzada
- 6pm **Coordination-dependent Mn Charge-Transition Levels for Manganese-Based Spinel**
» Mr. Gero Pickel, Mr. Jakob Laux, Mr. Jomins Thomas, Prof. Klaus Reichmann, Prof. Andreas Klein

- 4:30pm **2.2.4. Applications of electroceramic materials and structures: Spintronics and memory devices (COST)**
Chaired by: Prof. Brian Rodriguez and Prof. Yun-Hyuk Choi

- 4:30pm **Direct and inverse magnetoelectric effects from DC to RF in thin -film heterostructures**
» Prof. Florin Ciubotaru, Prof. Van Meirvenne Emma, Prof. Federica Luciano, Prof. Christoph Adelman

- 5pm **From Short-Range Distortions to Domain Structures: Probing d⁰ Perovskites Across Length Scales with TEM and X-ray Diffraction**
» Dr. Catriona Crawford, Dr. Robin Sjökvist, Prof. Richard Beanland

- 5:15pm **Sm_{1-x}(Ce_{0.75}La_{0.25})xCo₄FeB system as a permanent magnet candidate**
» Dr. Maria Giannouri, Dr. Margeriti Gjokas, Dr. Eamonn Devlin, Dr. Marian Grigoras, Dr. Vassilis Panagopoulos

- 5:30pm **Laser-Induced Rashba Spin-Orbit Torques in the Multiferroic Semiconductor (Ge,Mn)Te**
» Dr. Zeynab Sadeghi, Dr. Tomas Ostatnický, Dr. Eva Schmoranzarová, Dr. Jozef Kimák, Dr. Dominik Kriegner, Dr. Lukáš Nádvorník, Dr. Helena Reichlová, Prof. Gunther Springholz, Prof. Hugo Dil, Prof. Krempasky Juraj, Prof. Petr Nemec

- 5:45pm **Ferroelectric Field-Effect Transistors Based on Complex Oxides Epitaxial Heterostructures**
» Ms. Iva Tokovic, Dr. Jelena Vukmirovic, Ms. Sara Joksović, Dr. Ivan Stijepovic, Prof. Srđan Rakić, Prof. Vladimir V Srdić

- 6pm **Toward 3D-Printable Electroceramic Battery Anodes: Li₄T₁₅O₁₂/Polymer Nanocomposites with Multiscale Carbon Conductive Networks**
» Dr. Muhammad Saqlain Iqbal

Wednesday, 14 October

- 8:30am **3.1.1. Round Table**
University of Novi Sad

- 8:30am **3.2.1. Structure-properties relationship: Advanced functional phenomena**
Chaired by: Prof. Mari-Ann Einarsrud and Dr. Šarūnas Svirskas

Continued from **Wednesday, 14 October**

- 8:30am **Ferroelectric high Curie temperature perovskite BiMeO₃ (Me: Sc or Fe) based systems at phase instabilities with stable piezoelectric response after ceramic submicrostructuring**
» [Dr. Miguel Algueró](#), Mr. Asier Medel, Dr. Cristina Pascual-González, Prof. Alicia Castro, Dr. Valentina Sessini, Prof. Marta Mosquera, Dr. Harvey Amorín
- 9am **Sintering Driven Structural, Electrical, and Optical Tailoring of lead-free KNN-Based Ceramics**
» [Mr. Muhammad Wasim](#), Dr. Evangelos Kordatos, Prof. Antonio Feteira, Dr. Iasmi Sterianou
- 9:15am **Ultrafast sintering of barium calcium zirconate titanate ceramics: piezoelectric and ferroelectric behaviour of fine-grained ceramics**
» [Mr. Joao L. Miranda](#), Dr. Alexander Tkach, Prof. Paula M. Vilarinho
- 9:30am **Unveiling multiscale origins of enhanced electrostrain in lead-free BiFeO₃-based ceramics**
» [Dr. Ge Wang](#)
- 9:45am **Hybrid improper ferroelectricity and complex phase evolution in La₂SrSc₂O₇-based ceramics**
» [Prof. Xiaoqiang Liu](#), Mr. Zhe Guo, Mr. Cang Huan Ye, Prof. Xiangming Chen
- 10am **Quasi-Spherical Engineering of Ferroelectric Mesophase Transitions in Molecular Plastic Crystals and Their Structure-Property Relationships**
» [Mr. Shuaib Bolaji Issa](#), Prof. Mari-Ann Einarsrud, Prof. Julian Walker
- 10:15am **Coffee Break**
University of Novi Sad

- 10:45am **3.1.2. Novel synthesis and processing methods: Novel processing methods for electroceramics and composites**
University of Novi Sad
Chaired by: Dr. David Hall
- 10:45am **Powders synthesis and particle morphology control: a route to explore advanced dielectric and ferroelectric ceramics**
» [Prof. Vincenzo Buscaglia](#)
- 11:15am **Piezoelectric Response of Lead-Free BiFeO₃-BaTiO₃ Relaxor Ferroelectric Ceramics: Composition, Temperature, Frequency and Electric-Field Dependence**
» Dr. Antonio Iacomini, Dr. Mojca Otoničar, Prof. Hana Uršič, Mr. Alberto Giribaldi, [Prof. Tadej Rojac](#)
- 11:30am **Architected Pb(Zr,Ti)O₃ ceramics by LCM Additive Manufacturing: design-induced anisotropy in piezoelectric and energy harvesting response**
» [Dr. Cristina Elena Ciomaga](#), Dr. Nadejda Horchidan, Dr. Felicia Gheorghiu, Dr. Mihai Ciolan, Dr. Radu Stefan Stirbu, Mr. Altan Alpaly Altun, Dr. Serkan Nohut, Dr. Martin Schwentenwein, Prof. Liliana Mitoseriu
- 10:45am **3.2.2. Applications of electroceramic materials and structures: Electroceramics for energy applications (thermoelectrics)**
Chaired by: Prof. Liliana Mitoseriu
- 10:45am **Aqueous chemical deposition of thin piezoelectric oxide films**
» Dr. Viviann Hole Pedersen, [Prof. Mari-Ann Einarsrud](#)
- 11:15am **Microstructure engineering in high-entropy perovskite oxides to improve thermoelectric performance**
» [Dr. Rishabh Shukla](#), Dr. Michael Stuer
- 11:30am **Structure -Property Engineering of High-Entropy Perovskite Oxides for High-Temperature Thermoelectric Applications**
» [Mr. Asif Ali](#), Dr. Monika Tatarkova, Dr. Hakan Ünsal, Dr. Ondrej Hanzel, Dr. Shima sousani, Dr. Nikola Kanas, Prof. Vladimir V Srdić, Dr. Peter tatarko

Continued from **Wednesday, 14 October**

- 10:45am **3.3.1. Applications of electroceramic materials and structures: Ceramic conductors**
Chaired by: Prof. Zhifu Liu
- 10:45am **Insights into Defects and Polarization in Lead-Free Ferroelectrics by Electron Microscopy, DFT, and Machine Learning**
» Prof. Andreja Benčan Golob, Mrs. Janina Roknić, Dr. Katarina Žiberna, Dr. Matic Poberznik, Prof. Anton Kokalj, Dr. Matej Martinc, Prof. Sašo Džeroski, Prof. Goran Dražić
- 11:15am **Suppressing Leakage Current in AgNbO₃ Thin Films via Defects and Microstructural Engineering**
» Dr. Antonio Iacomini, Mr. Blaž Jaklič, Prof. Nina Daneu, Prof. Matjaž Spreitzer
- 11:30am **Influence of Mg doping on the ionic conductivity of Pr₂Zr₂O₇ and Sm₂Zr₂O₇ pyrochlores prepared by SPS**
» Ms. Silvia Blasco-Zarzoso, Dr. Emerson Luiz dos Santos-Veiga, Dr. U-Chan Chung, Dr. Sebastian Fourcade, Dr. Elissalde Catherine, Prof. Fabrice Mauvy, Prof. Eloisa Cordoncillo, Prof. Hector Beltran-Mir
- 11:45am **3.1.3. Plenary Session 3**
University of Novi Sad
Chaired by: Prof. Andrei Kirilyuk
- 11:45am **Dynamical multiferroic states in perovskites**
» Dr. Martina Basini
- 12:30pm **Lunch**
University of Novi Sad

- 2pm **3.1.4. Structure-properties relationship: Composite ceramic systems**
University of Novi Sad
Chaired by: Prof. Satoshi WADA and Prof. Krystian Roleder
- 2pm **Defect Engineering Strategies for the Development of Ferroelectric and Multiferroic Multifunctional Ceramics**
» Prof. José Antônio Eiras, Dr. Mahmoud Alkathy, Dr. Manuel Henrique Lente, Dr. Laís Caminata, Dr. Rodrigo Carvalho, Dr. Ivair Santos
- 2:30pm **Twenty years of SPS-driven microstructural design of ferro-and piezoelectric materials**
» Dr. Elissalde Catherine, Dr. U-Chan Chung, Dr. Gilles Philippot, Dr. Dominique Bernard, Dr. Stéphane Mornet, Prof. Fabrice Mauvy, Dr. Thomas Herisson de Beauvoir, Prof. Hélène Debéda, Dr. Claude Estournès, Dr. Mario Maglione
- 3pm **Antiferroelectrics: An unexpected materials platform for piezocatalysis**
» Dr. Wafa Amdouni, Mr. Cedric Bamberg, Mr. Aadil Abass Shah, Dr. Sangeeta Mahala, Dr. Emre Erdem, Dr. Stephane Fusil, Dr. Vincent Garcia, Dr. Mojca Otoničar, Dr. Sebastjan Glinsek, Prof. Brahim Dkhil
- 3:15pm **Electrospun PVDF-BaTiO₃ composites for wearable sensing applications**
» Dr. Alessandro Talone, Dr. Giovanna Canu, Dr. Giovanni Carraro, Dr. Chiara Gambardella, Dr. Veronica Piazza, Mr. Francesco Maccaroni, Prof. Roberto Spotorno, Prof. Dario Cavallo, Prof. Maria Fiorella Pantano, Dr. VIVEK MANISH, Dr. Emanuele Alberto Slejko, Dr. Marco Smerieri
- 3:30pm **Dielectric and Contact-Separation Electrical Response of Corona-Poled PDMS/KNN/Graphite Composite**
» Ms. Noelle C. Zanini, Dr. Alexander Tkach, Prof. Lars R. Jensen, Prof. Paula M. Vilarinho
- 3:45pm **Lead-Free Multifunctional Polymer Composites with Piezoelectric-Magnetostrictive Interactions**
» Dr. Mirjana Vijatović Petrović, Dr. Elisa Mercadelli, Dr. Francesco Cordero, Dr. Zeljko Despotovic, Dr. Jelena Bobić, Dr. Adis Dzunuzovic, Dr. Nikola Ilic, Dr. Paola Stagnaro, Dr. Giovanna Canu, Dr. Maria Teresa Buscaglia, Dr. Pietro Galizia, Dr. Floriana Craciun

Continued from **Wednesday, 14 October**

- 2pm **3.2.3. Applications of electroceramic materials and structures: Electroceramics for energy applications**
Chaired by: Dr. Miguel Alguero and Prof. Ratiba Benzerga
- 2pm **New paradigms in electromagnetic and pyroelectric energy harvesting: nanotechnology rediscovers hafnium and zirconium-based nanoscale ferroelectrics**
» Dr. Martino Aldrigo
- 2:30pm **Scaling Up Oxygen-Ion Batteries by a Powder-Based Approach**
» Ms. Sophie Stiefler, Dr. Alexander Viernstein, Mr. Raphael Hauk, Prof. Alexander K. Opitz
- 2:45pm **Designing Nanohybrid Architectures of NVPF@rGO-C or LMFP@rGO-C for High-Power Batteries**
» Mr. Ernesto Claure-Ramirez, Dr. Martin Finsterbusch, Prof. Dina Fattakhova-Rohlfing
- 3pm **Developing future dielectric ceramic thick film for energy storage applications via aerosol deposition**
» Mr. Xiangjie Song, Dr. Ge Wang
- 3:15pm **Partial thermal depolarization driven by long-term annealing of lead-free BF-BT piezoelectric ceramics**
» Ms. Yuge Yang, Dr. Yizhe Li, Dr. David Hall
- 3:30pm **Synergistic Co-Substitution Engineering of A/B Sites for record-low coercive field and stable Curie temperature in Bulk Hybrid Improper Ferroelectrics**
» Mr. Zhe Guo, Prof. Xiaoqiang Liu, Prof. Xiangming Chen
- 3:45pm **Defect-mediated Piezoelectric Hardening in 0.94(Na0.5Bi0.5TiO3)-0.06(BaTiO3) lead-Free Ceramics: Correlation of Phase Evolution, Transport, and Electromechanical Response**
» Mr. CHINMAY CHANDAN PARHI, Dr. Pengcheng Hu, Dr. Shama Perween, Prof. Oliver Clemens, Prof. Andreas Klein, Prof. Jurij Koruza

- 2pm **3.3.2. Novel synthesis and processing methods: Powder synthesis and ceramic processing methods**
Chaired by: Prof. Subramshu S. Bhattacharya and Prof. Adelina-Carmen Ianculescu
- 2pm **Microwave spectroscopy of ceramics relaxors – are they dipolar glasses?**
» Prof. Iuras Banys, Dr. Saulius Rudys, Dr. Vidmantas Kalendra, Dr. Šarūnas Svirskas, Dr. Sergejus Balciunas, Prof. Robertas Grigalaitis, Dr. Saulius Lapinskas
- 2:30pm **Spark Plasma Sintering of Na0.5Bi0.5TiO3–BaTiO3 Ceramics: Relationships between microstructure and functional properties**
» Ms. Aurélie Lalagüe-Dardant, Mr. Erwan Jonin, Prof. Franck Levassort, Prof. cecile autret lambert, Dr. Thomas Fourgassie, Dr. Mojca Otoničar, Prof. Isabelle Monot-Laffez
- 2:45pm **Reactive decomposition processing of rare-earth based multi-component oxides**
» Mr. Anant Kumar Gupta, Dr. Srinivasan Nedunchezian
- 3pm **Processing and texturation of lead-free KNN-Ta piezoelectric ceramics for ultrasonic applications**
» Mr. Marco Bencini Bencini, Prof. Isabelle Monot-Laffez, Prof. Franck Levassort, Dr. Ana Borta-Boyon
- 3:15pm **Evaluation of composite CSCO/GDC oxygen electrode deposition via different techniques for optimal solid oxide cell performance**
» Dr. Artem Glukharev, Mr. Tristan Geurts, Dr. Ahmet Can Kirlioglu, Dr. Vesna Middelkoop, Dr. Zhiyuan Chen
- 3:30pm **Screening of Oxygen-Ion Battery Electrode Materials via Space-Charge Potential Measurements**
» Dr. Claudia Steinbach, Mrs. Barbara Wagner, Dr. Alexander Schmid, Prof. Jürgen Fleig, Prof. Alexander K. Opitz

Continued from **Wednesday, 14 October**

3:45pm **Structure-Morphology Relationships in Hydrothermally Synthesized BaTiO₃ Particles for MechanoATRP**

» [Prof. Klara Castkova](#), Dr. Premysl Stastny, Dr. Pavel Tofel, Prof. Dinara Sobola, Mr. Jan Pistak, Mr. Tadeas Havran, Dr. Martin Cvek, Dr. Miroslav Mrlik

4pm **Coffee Break**
University of Novi Sad

4:30pm **Poster session**
University of Novi Sad

Nanoscale Dielectric Breakdown in Ultrathin AlN Ceramic Films: Bridging Defect Physics and Insulation Reliability Across Borders

» [Mr. BABIKER KAMAL BABIKER OMER](#), Dr. Zakhar Kudrynskiy, Dr. Timothy Cooper, Dr. Long Jiang, Dr. Sombel Diahm

BaTiO₃-based Multilayer Ceramic Capacitors with Superior Stability in Energy-storage and Pulse Properties

» [Prof. Xiaohui Wang](#)

Study on property and structure optimization for high performance SrFe₉Al₃O₁₉ ferrite by machine learning

» [Prof. Jincang ZHANG](#)

Wide-Band Dielectric Resonator Antennas Based on Low Permittivity Mg₄Nb₂O₉ Ceramics

» [Mr. Cezar Dragos Geambasu](#), Dr. Lucian Trupina, Dr. Ovidiu-Gabriel Avădanei, Dr. Liviu Nedelcu

Spark Plasma Sintering of Corundum-Type Mg_{0.5}Nb_{0.5}O₃ Ceramics for Microwave Applications

» [Dr. Liviu Nedelcu](#), Dr. Mihai-Alexandru Grigoroscuta, Mr. Cezar Dragos Geambasu, Dr. Lucia Nicoleta Leonat, Dr. Petre Badica

Local structure of (K,Na)NbO₃ solid solutions

» [Mr. Jamil Eduardo Flores Gonzales](#), Mr. Zheyi An, Mr. Zeqi Wang, Dr. Nan Zhang, Dr. Marek Paściak

Controlled Assembly of Ti₃C₂T_x MXene Monolayers via Modified Langmuir-Blodgett Technique: Effect of Processing Parameters

» [Ms. Jovana Paskaš](#), Ms. Sara Joksović, Dr. Jovana Stanojev, Prof. Zdeněk Sofer, Dr. Branimir Bajac, Dr. Vasa Radonić, Dr. Venkatadivakar Botcha

What Enables High Energy Storage at Low Electric Fields? The Role of Hybrid Polarization in BNT-Based Relaxors

» [Mr. Ankur Khokhar](#), Mr. Amardeep Narwal, Prof. Kanhaiya Lal Yadav

Growth and characterization of 0.8NBT-20BT thin films

» [Dr. Šarūnas Svirskas](#), Ms. Eglė Martinaitytė, Dr. Vadzim Haronin, Prof. Juras Banys, Dr. Vladimir Shvartsman

The ECO-H2 Project: Electrochemical conversion of energy and hydrogen in reversible solid oxide cells using high-entropy oxides as electrodes

» Ms. José Luis Serrano, Dr. Elena Millan Ordoñez, Dr. Vanessa Cascos, Dr. Judit Medina, Prof. Paloma Adeva, Ms. Cesar Maffiotte, Dr. Esperanza Ruíz, [Dr. María José Escudero](#)

Development of methane tolerant Sr₂Fe_{1.5}Mo_{0.5}O_{6-δ} electrodes for symmetric cells for CO electrolysis

» [Mrs. Kimberly Toala Escobar](#), Dr. Vladislav Kolotygin, Dr. Marc Torrell, Dr. Albert Taracon

Thermally Driven Structural Transition and Single-Island Electrical Response of Sputtered VO₂ Nano-Islands on Al₂O₃

» [Dr. Lucian Trupina](#), Dr. Claudiu Locovei, Dr. Liviu Nedelcu, Dr. Gabriel Banciu, Mr. Cezar Dragos Geambasu

Synthesis and characterization of the 0.8(Na_{1/2}Bi_{1/2})TiO₃-0.2BaTiO₃:xSm solid solution.

» [Dr. Artyom Plyushch](#), Dr. Šarūnas Svirskas, Mr. Žygimantas Logminas, Mr. Ugnius Dominykas Sviackevičius, Dr. Rokas Dobužinskas, Prof. Juras Banys

Continued from **Wednesday, 14 October**

Electrospun Multi-Chanel SnO₂ Nanofibers: From Synthesis Optimization to Gas-Sensing Applications

» Dr. Katarina Vojisljević, Dr. Milica Počuča-Nešić, Dr. Slavica Savić Ružić, Dr. Zorica Marinković Stanojević, Dr. Aleksandar Malešević, Dr. Jelena Mitrović, Mrs. Olivera Zemljak, Dr. Sanja Perać, Dr. Jelena Jovanović, Dr. Matejka Podlogar, Dr. Nan Ma, Dr. Tian Tian, Mr. Aleksa Luković, Dr. Goran Brankovic, Dr. Zorica Brankovic

Advanced Polymer-Derived Ceramic Insulation Systems for High-Temperature Electrical Applications

» Ms. Annalaura Zilio, Prof. Enrico Bernardo

Ba_{0.75}Sr_{0.25}TiO₃ (BST25) Ceramics Obtained by Robocasting: Ferroelectric and Pyroelectric Properties with Solid-State Processing as Benchmark

» Dr. Lucian Pintilie, Dr. George Stan, Dr. Liviu Nedelcu, Dr. Mihaela Botea, Dr. Marius Cioangher, Mr. Cezar Dragos Geambasu, Dr. Roxana-Elena Patru, Dr. Viorica Stancu, Dr. Andrei Tomulescu, Dr. Zaineb Mighri, Dr. Lucia Nicoleta Leonat

Comparative study of charge transition level in hexagonal and tetragonal Barium Titanate by X-ray Photoelectron Spectroscopy

» Mr. Niklas Bertelmann, Dr. Savita Chaoudhary, Mr. Denis Sudarikov, Dr. Pengcheng Hu, Prof. Till Frömling, Prof. Andreas Klein

Highly efficient chitosan-modified Bi₂O₃ adsorbent for Reactive Orange 16 dye removal

» Mrs. Natalija Milojković, Dr. Bojana Simović, Dr. Lidija Radovanović, Dr. Goran Branković, Dr. Jelena Gulicovski, Dr. Slavica Lazarević, Prof. Aleksandra Dapčević

CaTiO₃-derived mixed conductors as anode components for direct-ammonia SOFCs

» Dr. Aleksey Yaremchenko, Mrs. Maliheh Nazari, Dr. Aleksandr Bamburov

REFORM-SOFC: Reforming Catalyst-Supported Solid Oxide Fuel Cells for Direct Utilisation of Renewable Fuels

» Dr. Kiryl Zakharchuk, Dr. Aleksandr Bamburov, Dr. Aleksey Yaremchenko, Dr. Blanca I. Arias Serrano

Hybrid Poling Optimization of Lead-Free BT-based Piezoelectric Ceramics for Enhanced Electromechanical Properties

» Mr. Erwan Jonin, Dr. Rémi Rouffaud, Prof. Isabelle Monot-Laffez, Dr. Loïck Bonnet, Prof. Franck Levassort

Processing cellular ceria-based solid electrolyte ceramics for electrochemical removal of NO_x

» Dr. Helena Gomes, Mr. Miguel Vieira, Dr. Aleksandr Bamburov, Dr. Aleksey Yaremchenko

Configurational Disorder in Perovskite Oxides for Advanced Thermoelectrics

» Dr. Hakan Ünsal, Dr. Imrongnaro Longkumer, Dr. Alexandra Kovalčíková, Dr. Ondrej Hanzel, Dr. Monika Tatarkova, Dr. Subrahmanyam Bandaru, Dr. Peter tatarko

Development of core/shell particles with magnetic core and dielectric-electric bilayered shell for water treatment

» Prof. Milan Nikolić, Dr. Slobodanka Stanojević-Nikolić, Prof. Vladimir V Srdić

Overcoming grain-size effects in aerosol deposited BaTiO₃ films by using Polymer–Ceramic composite powders

» Ms. Linh TA, Dr. Anass Chrir, Dr. Oscar Rojas, Ms. Laurence Boyer, Dr. Olivier Durand, Prof. Fabrice Rossignol, Prof. Pascal Marchet

Investigation of Piezoelectric Properties of Sm-doped 70PMN-30PT Piezoceramics for Energy Harvesting Applications

» Dr. Namik Kemal Gozuacik, Ms. Beyza Nur Kaya, Mr. Ömer Coşkun, Prof. Sedat Alkoy

Continued from **Wednesday, 14 October**

Lead-free ceramics K0.5Bi0.5TiO3 - technology, properties and applications.

» Dr. Piotr Czaja, Prof. Elżbieta Szostak, Prof. Małgorzata Karolus, Prof. Dariusz Bochenek, Dr. Katarzyna Osińska, Dr. Jarosław Jędryka, Dr. Piotr Rakus, Prof. Bouchta Sahraoui, Dr. Kamila Kluczevska-Chmielarz, Dr. Grzegorz Jagło, Mr. Hubert Grosicki, Mr. Przemysław Gwizd

Comparison of SPS and conventional sintering of BaTiO3 ceramics synthesized via a modified Pechini route

» Dr. Magdalena Krupska-Klimczak, Prof. Irena Jankowska-Sumara, Dr. Maciej Chrunik, Dr. Paweł Hyjek, Dr. Iwona Sulima

Exploring porosity-induced phase superposition in BaTiO3-based ferroelectric solid solutions

» Dr. Cristina Elena Ciomaga, Ms. Alexandra Hriscu, Dr. Felicia Gheorghiu, Dr. Nadejda Horchidan, Dr. Mihai Ciolan, Dr. Vlad Alexandru Lukacs, Dr. Leontin Padurariu, Prof. Liliana Mitoseriu

Processing-Microstructure-Property Relationships in CaMgSi₂O₇ Diopside Ceramics: Role of Calcination Temperature and Heating Rate

» Dr. HADI BARZEGARBAFROOEI Microelectronics Unit, Prof. Sami Myllymäki, Prof. Heli Jantunen

Chemical modification of La0.65Sr0.30Cr0.85Ni0.15O3-δ solid oxide cell hydrogen electrode surface to improve stability in electrolysis mode.

» Ms. elisabeth kaldvee, Dr. Indrek Kivi, Mr. Jaan Aruväli, Dr. Kuno Kooser, Prof. Gunnar Nurk

Effects of Zr-substitution on functional performance of BaTiO3-based solid solutions

» Dr. Felicia Gheorghiu, Dr. Cristina Elena Ciomaga, Dr. Nadejda Horchidan, Dr. Vlad Alexandru Lukacs, Prof. Liliana Mitoseriu, Dr. Leontin Padurariu

BSnT-polymer composites for mechanical energy recovery through the piezoelectric effect

» Dr. Nadejda Horchidan, Mr. Cosmin-Petre Lazăr, Dr. Cristina Elena Ciomaga, Dr. Vlad Alexandru Lukacs, Dr. Ovidiu-Gabriel Avădanei, Dr. Florin-Mihai Tufescu, Prof. Liliana Mitoseriu

Complexity of phase transitions in Pb(Hf0.7Sn0.3)O3 single crystals

» Prof. Irena Jankowska-Sumara, Prof. Krystian Roleder, Dr. Andrzej Majchrowski

Pronounced and Stable Internal Bias Fields in La-Doped BiFeO3-BaTiO3 Ceramics

» Mr. Jingwei Wei, Dr. David Hall

Alternative explanations for the maximum in the piezoelectric performances of the ferroelectric solid solution (1-x)BiFeO3-xBaTiO3

» Mr. Alberto Giribaldi, Prof. Tadej Rojac

Exploring the mechanical properties of BaZr0.7Ce0.2Y0.1O3-δ (BZCY721) proton-conductors produced via cold sintering process

» Mr. Syed Ali Afzal, Dr. Moritz Kindelmann, Dr. Jürgen Peter Gross, Dr. Jürgen Malzbender, Prof. Ruth Schwaiger, Prof. Olivier Guillon, Prof. Martin Bram

Pre-Intercalated Layered MnO2 Cathodes for Zn-Metal Batteries: Charge Storage and Degradation Mechanisms

» Mr. Elias Bodin, Mr. Patrick Mowe, Prof. Martin Winter, Dr. Kerstin Neuhaus

Synthesis of KNN Nanoparticles by a Low-Temperature Sol-Gel Route and Their Densification into Lead-Free Piezoceramics

» Mr. Bouabid Misski, Prof. Mohamed Mouyane, Prof. ahmad kassas, Prof. sylvain marinel, Prof. jacques noudem, Prof. Amine ALOUI-BELGHITI, Prof. Fouad BLEHORA, Prof. Mohamed Rguiti, Prof. jerome Bernard, Prof. David Houivet

Continued from **Wednesday, 14 October**

Comparison of Triple-Conducting Electrodes in Proton-Conducting and Dual-Phase Ceramic Membrane Reactors

» Mr. Sebastian Meixner, Dr. Maximilian Weiss, Prof. Alexander K. Opitz, Dr. Wendelin Deibert, Prof. Wilhelm Albert Meulenber

Functional properties in silver-CaTiO₃ composites

» Dr. Felicia Gheorghiu, Ms. Anda Maria Oajdea, Dr. Vlad Alexandru Lukacs, Dr. Cristina Elena Ciomaga, Dr. Šarūnas Svirskas, Prof. Juras Banys, Prof. Liliana Mitoseriu

In-situ monitoring of Ag-BaTiO₃ CerMet sintering process for tuning the metacomposite properties

» Prof. DONATELLA GIURANNO, Mrs. Ioana Raluca Gheatau, Dr. Vlad Alexandru Lukacs, Prof. Leontin Padurariu, Dr. Cristina Elena Ciomaga, Dr. Radu Stefan Stirbu, Prof. Liliana Mitoseriu

Encapsulated PICMA Actuators and their Applications

» Dr. Franziska Dolke

Microstructural Evolution and Functional Properties of BCZT and BCST Lead-Free Piezoceramics Prepared by Ultrafast Sintering

» Dr. Vladimír Prajzler, Dr. Vojtěch Mařák, Dr. Vijay Bijalwan

Electrical properties and energy harvesting of x(0.75NaBiT-0.25SrT)- (1-x) PVDF flexible composites

» Dr. Mirjana Vijatović Petrović, Dr. Adis Dzunuzovic, Dr. Jelena Bobić, Dr. Nikola Ilic, Dr. Zeljko Radovanovic, Dr. Zeljko Despotovic

Recycling Approach for Lead-Containing Piezoceramic Tapes

» Ms. Victoria Löhr, Prof. Jurij Koruza, Dr. Tanja Einhellinger-Müller, Ms. Friederike Assmann

Hierarchically Porous SnO₂ Nanofibers: A Comparative Study of Pristine, Au- and MXene-Modified Variants for H₂S Sensing

» Dr. Milica Počuča-Nešić, Dr. Slavica Savić Ružić, Dr. Katarina Vojisavljevic, Dr. Zorica Marinković Stanojević, Dr. Aleksandar Malešević, Dr. Jelena Mitrović, Mrs. Olivera Zemljak, Dr. Sanja Perać, Dr. Jelena Jovanović, Dr. Matejka Podlogar, Dr. Tian Tian, Dr. Nan Ma, Mr. Aleksa Luković, Dr. Goran Branković, Dr. Zorica Brankovic

The electronic structure and magnetoelectric properties of tetracalcium aluminoferrite Ca₂Fe₂-xAl_xO₅ synthesized by mechanochemical process

» Dr. Bartłomiej Andrzejewski, Dr. Tadeusz Lucinski, Dr. Ewa Markiewicz, Dr. Maria Pugaczowa-Michalska, Dr. Przemysław Skokowski, Dr. Maciej Chrunik, Prof. Barbara Kościelska

Dense LiF microwave dielectric ceramics with near-zero linear shrinkage during sintering

» Mr. Yingqiang Jia, Mr. Wenbin Hong, Prof. Lei Li, Prof. Shuya Wu, Prof. Bing Liu, Prof. Xiangming Chen

Influence of chemical reactions on grain growth in aerosol deposited films of sodium niobate

» Mr. Frank Heier, Prof. Kyle G. Webber

TiO₂-ZnO Semiconductor Heterostructures with Engineered Architecture for Photocatalytic Applications

» Ms. Marta Cama, Dr. David G. Calatayud, Mr. Bruno Prieto, Dr. Raul Gago, Dr. Marco Peiteado, Dr. Teresa Jardiel

Preparation, dielectric and electrical properties of Sodium Niobate based ceramics

» Dr. Abdul Manan, Ms. Jaweria Wazir, Mr. Umair Khan, Prof. Michael T. Lanagan, Dr. Safeer Ahmad

Flexible PTC Composite with Tunable Switching Temperature for Adaptive Thermal Management Near Room Temperature

» Ms. Youran Zhang, Ms. Ruiyu Zhao, Prof. Mingsheng Ma, Prof. Jiwei Zhai, Prof. Zhifu Liu

Continued from **Wednesday, 14 October**

Machine learning assisted τ_f value prediction of ABO₄-type microwave dielectric ceramics

» Ms. Mingyue Yang, Mr. Liangyu Mo, Mr. Jincheng Qin, Mr. Faqiang Zhang, Prof. Mingsheng Ma, Prof. Yongxiang Li, Prof. Zhifu Liu

Impedance spectroscopic analysis of lead-free piezoceramics obtained by ultrafast high-temperature sintering

» Mr. Joao L. Miranda, Dr. Alexander Tkach, Prof. Paula M. Vilarinho

Optical Properties of Ti-doped ZnO Ceramics

» Mr. Hasan Kutay Verim, Dr. Gökhan Hardal, Dr. Berat Yüksel Price, Dr. Caner İldeş

Laser-Induced Conductive Pathways on α -Fe₂O₃ Ceramics for Humidity and Water-Level Sensing

» Mr. Henrique Gomes, Dr. Nuno M. Ferreira, Dr. Florinda M. Costa

8pm

Conference Dinner - Ristorante Reset, Novi Sad

University of Novi Sad

Thursday, 15 October

8:30am

4.1.1. Advanced characterisation: Structural and local characterisation of electroceramics

University of Novi Sad

Chaired by: Prof. Florin Ciubotaru and Dr. Xiaoli Zhu

8:30am

In Situ Impedance Spectroscopy: Tracking Solid-Liquid Interfaces and Grain Boundary Evolution During Cold Sintering

» Dr. Thomas Herisson de Beauvoir

9am

Inter-laboratory reproducibility of piezoelectric ceramic characterization: insights from a European Round Robin study

» Mr. Erwan Ionin, Dr. Rémi Rouffaud, Prof. Isabelle Monot-Laffez, Dr. Loïck Bonnet, Dr. Ana Borta-Boyon, Dr. Andraž Bradeško, Mr. Marcello Pasquinelli, Dr. Egon Merks, Dr. Holger Neubert, Prof. Astri Bjørnetun Haugen, Dr. Paula Huth, Prof. Franck Levassort

9:15am

Effect of Si poisoning on the electrochemical and microstructural properties of La_{0.65}Sr_{0.30}Cr_{0.85}Ni_{0.15}O_{3- δ} -Gd_{0.1}Ce_{0.9}O_{2- δ} electrode in electrolysis mode.

» Mr. Laur Kristjan Salvan, Dr. Priit Möller, Dr. Sara Paydar, Dr. Valdek Mikli, Prof. Enn Lust, Prof. Gunnar Nurk

9:30am

Impact of the porosity's distribution on electrochemical performances of NiO-3YSZ supported SOFC electrode

» Mr. Clément Guillet, Dr. Émilie Béchade, Dr. Emmanuelle Bichaud, Dr. Romain Billard, Dr. Cédric Bourges, Prof. Pierre-Marie Geffroy

9:45am

Electro-Optical Characterization of Carbon Nanotubes via Time-Resolved Orientational Dynamics

» Dr. Sinny Trivedi, Dr. Silas O'Toole, Prof. Dominic Zerulla

10am

Energy decoupling in BST nanoceramics: tuning resistive states for neuromorphic synaptic devices

» Dr. Roxana-Elena Patru, Dr. Catalina STANCIU, Dr. Elena Mirabela Soare, Dr. Bogdan Vasile, Dr. Nadejda Horchidan, Prof. Liliana Mitoseriu, Prof. Adelina - Carmen Ianculescu, Dr. Lucian Pintilie, Dr. Ioana Pintilie

8:30am

4.2.1. Applications of electroceramic materials and structures: Electroceramics for energy applications (fuel cells)

Chaired by: Prof. Vanja Subotic and Dr. Jovana Stanojev

8:30am

Advanced Electroceramics for Solid Oxide Cells

» Prof. Albert Tarancón

Continued from **Thursday, 15 October**

- 9am **A pressing matter: cold sintering-assisted preparation of yttria-stabilized zirconia for solid oxide fuel cell applications**
» Mr. Žiga Bertalanč, Dr. Kostja Makarovič, Mr. Blaz Perko, Mr. Leon Kavčič, Mrs. Janina Roknić, Ms. Brigita Kmet, Dr. Tecush Mohammadi, Dr. Mojca Otoničar, Prof. Andreja Benčan Golob, Prof. Barbara Malič, Dr. Andraž Bradeško
- 9:15am **Influence of Alkali Secondary Phase on the Interfacial Charge Transport and Sinterability of Ceria-Based Ceramics**
» Mr. Henrique Tidej, Dr. João Grilo
- 9:30am **Multiscale Study of Ti-Doped Alkali Niobate Ceramics**
» Mrs. Janina Roknić, Dr. Katarina Žiberna, Dr. Andraž Bradeško, Dr. Aljaž Drnovšek, Ms. Maja Koblar, Ms. Brigita Kmet, Mr. Silvo Drnovšek, Prof. Barbara Malič, Prof. Goran Dražič, Prof. Andreja Benčan Golob
- 9:45am **Towards Circular Fuel Cell Technologies: Nickel Recovery from End-of-Life MCFCs and SOFCs**
» Mr. Diogo Sousa, Dr. Aleksandr Bamburov, Dr. Francielly Cesconeto, Dr. Aleksey Yaremchenko
- 10am **Tuning Ferroelectric Properties of Bismuth Ferrite Solar Cells**
» Mr. Marcel Habrik, Dr. Susanne Wagner, Dr. Holger Röhm, Prof. Alexander Colsmann
- 8:30am **4.3.1. Theory and modelling: Advanced modelling methods**
Chaired by: Dr. Leontin Padurariu and Dr. Goran Brankovic
- 8:30am **Domain structure evolution in uniaxial ferroelectrics: the role of the depolarization field-driven correlations and of the fluctuations of nonpolar polarization components**
» Prof. Yuri Genenko, Dr. Olga Yu Mazur
- 9am **Power Budget Analysis of Piezoelectric Harvester Based on Coupled Bidirectional Transducer Model**
» Ms. Sumeyya Javaid, Prof. Jens Kirchner, Prof. Georg Fischer

- 9:15am **First-Principles Insights into Core-Shell Formation in Na_{0.5}Bi_{0.5}TiO₃-SrTiO₃**
» Dr. Marc Túnica, Dr. Lorenzo Villa, Mr. René Meja, Prof. Karsten Albe
- 9:30am **Modelling of the piezoelectric maxima that can be present at intermediate porosity levels and applied poling fields, in ferroelectric ceramic bulks**
» Dr. Radu Stefan Stirbu
- 9:45am **Can V2CTx MXene Act as a Non-Plasmonic SERS Substrate? A Resonant Charge-Transfer Model**
» Ms. Elvira Tot, Prof. Mirjana Siljegovic, Dr. Marko Radovic, Prof. Zeljka Cvejic
- 10am **Optimization of Ionic Transport in Bismuth-Based Electroceramics via Liquid-Phase Sintering for SOFC Applications**
» Dr. Senel Çobaner, Dr. Önder Albayrak
- 10:15am **Coffee Break**
University of Novi Sad
- 10:45am **4.1.2. Applications of electroceramic materials and structures: Electroceramics for energy applications**
University of Novi Sad
Chaired by: Dr. Thomas Herisson de Beauvoir
- 10:45am **Synthesis and Characterization of High-Entropy Ceramics for Electrocatalytic and Energy Conversion Applications**
» Mr. Y. Sai Swaroop Sarma, Mr. Aaditya Rangan, Mr. Arindam Chatterjee, Mr. N. Sreenivasulu, Prof. Subramshu S. Bhattacharya
- 11:15am **La-Doped High-Entropy Perovskite Oxides: Design, Electronic Structure, and Thermoelectric Performance**
» Dr. Imrongnaro Longkumer, Dr. Subrahmanyam Bandaru, Mr. Asif Ali, Dr. Hakan Ünsal, Dr. Nikola Kanas, Dr. Ondrej Hanzel, Prof. Vladimir V Srdić, Dr. Alexandra Kovalčíková, Dr. Peter tatarko

Continued from **Thursday, 15 October**

11:30am **Tailored Growth of ZnO 1D Nanostructures for Hydrogen-Selective CO₂ Electroreduction**

» Ms. Ana Castellanos-Aliaga, Mr. Elías Rodríguez-Jara, Dr. Érica Corodero-Oyonarte, Dr. David G. Calatayud, Dr. Paula P. Navarro, Dr. Amador C. Caballero, Prof. Keeko Matsumoto, Prof. Kiyoharu Tadanaga, Dr. Carolina Rosero, Dr. Teresa Jardiel, Dr. Marco Peiteado

10:45am **4.2.2. Applications of electroceramic materials and structures: Electroceramics for energy applications (fuel cells)**

Chaired by: Prof. Albert Tarancón

10:45am **Carbon-Based Glass Foam for High-Power Microwave Absorption**

» Prof. Ratiba Benzerga, Prof. Vincent Laur, Prof. Ronan Lebullenger, Prof. Laurent Le Gendre, Prof. Ala Sharaiha

11:15am **Phosphate Langbeinites as Promising Multifunctional Materials**

» Ms. Intissar Driouech, Dr. Olivier Toulemonde, Prof. Mohamed Saadi, Prof. Jamal Khmias

11:30am **Tactile Sensing and Ferroelectric Behavior of BaTiO₃-Elastomer Composites**

» Ms. Sofiia Butenko, Prof. Teeranoot Chanthasopephan, Dr. Frank Clemens

10:45am **4.3.2. Applications of electroceramic materials and structures: Electroceramics for energy applications**

Chaired by: Dr. Martino Aldrigo

10:45am **From research to commercialization of thermoelectrics in Europe**

» Dr. Nikola Kanas

11:15am **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**

» Dr. María José Escudero, Dr. Judit Medina, Dr. Vanessa Cascos, Dr. Elena Millan Ordoñez, Prof. Paloma Adeva, Dr. Esperanza Ruíz

11:30am **Cold sintering assisted hybrid sintering of electro-ceramics**

» Prof. Jing Guo

11:45am **4.1.3. Plenary Session 4**

University of Novi Sad

Chaired by: Prof. Pascal Marchet

11:45am **Key Issues and Recent Progresses in Microwave Dielectric Ceramics**

» Prof. Xiangming Chen

12:30pm **Lunch**

University of Novi Sad

2pm **4.1.4. Novel synthesis and processing methods: Novel processing methods for electroceramics and composites**

University of Novi Sad

Chaired by: Dr. Frank Clemens and Prof. Jianjiang Bian

2pm **Downscaling grain size toward the nanometre range – A key-factor for tuning the crystalline structure and functional properties in (Ba,Sr)TiO₃ ceramics**

» Prof. Adelina - Carmen Ianculescu, Dr. Roxana Patru, Dr. Catalina Stanciu, Dr. Adrian Surdu, Dr. Elena Mirabela Soare, Dr. Adrian Nicoara, Ms. Roxana Trusca, Dr. Bogdan Vasile, Dr. Nadejda Horchidan, Prof. Liliana Mitoseriu, Dr. Ioana Pintilie, Dr. Lucian Pintilie

2:30pm **Highly Conductive Ti₃C₂T_x (MXene) Monolayer Field-Effect Transistors via a Modified-LB Route: Fabrication, Challenges, and Future Applications**

» Ms. Jovana Paskaš, Ms. Sara Joksović, Dr. Jovana Stanojev, Prof. Zdeněk Sofer, Dr. Branimir Bajac, Dr. Vasa Radonić, Dr. Venkatadivakar Botcha

Continued from **Thursday, 15 October**

- 2:45pm **Development of Ceria-Zirconia (CexZr1-XO2) based-Structured Catalyst: Rheological Optimization, Mechanical Robustness, and Electrocatalytic performances for fuel production**
» Ms. Rehana Batool, [Dr. Srinivasan Nedunchezian](#)
- 3pm **Epitaxial La3-xSrxMnO3/Ba1-xSrxTiO3 Ultra-Thin Oxide Heterostructures from the Liquid Phase**
» [Ms. Danica Piper](#), Dr. Jelena Vukmirovic, Dr. Marija Milanovic, Dr. Ivan Stijepovic, Ms. Iva Tokovic, Dr. Xuyun Guo, Prof. Vladimir V Srdic
- 3:15pm **Development of BaTiO3-based thermoplastic filaments for Fused Deposition Modelling: towards piezoelectric performance comparable to conventional pressing**
» [Mr. Soufyane Satha](#), Dr. Mohamed Aymen BEN ACHOUR, Prof. Mohamed Rguiti, Dr. Florian Jean, Dr. Yannick Lorgouilloux, Prof. Christian Courtois
- 3:30pm **Interface-Engineered MgO-Based Low-Temperature Co-Fired Ceramics with Significantly Enhanced High-Strength and Superior High-Thermal-Conductivity**
» [Mr. Mingzhao Xu](#), Ms. Yani Lu, Dr. Hongye Wang, Dr. Xinwei Xu, Dr. Jin Cheng, Ms. Shan Gao, Mr. Huajiang Jin, Prof. Hong Wang
- 3:45pm **Additive manufacturing of lead-free piezoelectric ceramics using stereolithography (SLA)**
» Dr. Anass Chrir, [Prof. Mohamed Rguiti](#), Dr. Mohamed Aymen BEN ACHOUR, Dr. Rabie Aloui, Dr. Barbara Lafarge, Dr. Yannick Lorgouilloux, Prof. Christian Courtois
- 2pm **4.2.3. Applications of electroceramic materials and structures: Electroceramics for energy applications (fuel cells)**
Chaired by: Prof. Pierre-Marie Geffroy and Prof. Aleksandra Dapčević
- 2pm **Solid Oxide Cells: The Core Component of Power-to-X-to-Power Systems**
» [Prof. Vanja Subotic](#)

- 2:30pm **Direct Electrochemical Synthesis of Ammonia in Protonic Ceramic Cells: Selecting Perovskite-Related Cathode Materials**
» [Dr. Blanca I. Arias Serrano](#), Dr. Aleksandr Bamburov, Dr. Kiryl Zakharchuk, Mr. Mehdi Hedayati, Dr. Alejandro Natoli Gutiérrez, Dr. Francielly Cesconeto, Dr. Aleksey Yaremchenko
- 2:45pm **Piezoelectric Anisotropy of Bismuth-based Perovskite Piezoelectric Ceramics**
» Mrs. Hongyu Luo, Mr. Yongchen Wang, [Prof. Jinrong Cheng](#)
- 3pm **From hydration to microstructure: Multimodal Insights into Proton-Conducting Ceramic Electrolytes**
» [Dr. Maximilian Weiss](#), Dr. Wendelin Deibert, Mr. Andreas Steiger-Thirsfeld, Dr. Jakob Willner, Prof. Andreas Limbeck, Prof. Wilhelm Albert Meulenberg, Prof. Alexander K. Opitz
- 3:15pm **Thin film ceramic layers enabling lightweight solid oxide fuel cell for aviation application**
» [Dr. Vignesh Ahilan](#), Dr. Pedro Nehter, Dr. Helge Geisler, Dr. Oliver Rohr, Mr. Christian Metzner
- 3:30pm **V- and Mo-based perovskites for anodes of biogas-fueled SOFCs: Redox behavior and stability**
» [Dr. Aleksey Yaremchenko](#), Dr. Rui Pinto, Prof. Jorge Frade
- 2pm **4.3.3. Applications of electroceramic materials and structures: Electroceramics for energy applications**
Chaired by: Dr. Branimir Bajac and Dr. Marija Milanovic
- 4pm **Closing**
University of Novi Sad