



International Conference
Functional Inorganic Materials 2022

CONFERENCE PROGRAMME

5th of October. Arrival day.

17:00–20:00 Participant meeting at Vilnius Airport.

6th of October

Vilnius University seminar room 239, Universiteto St. 3 (live or online).

Time	Presenter	Institution	Title of the Lecture
8:00–9:00	Participant registration		
9:00–9:10	Welcome speech from the vice rector of Vilnius University Prof. (HP) Dr. Edita Sužiedelienė		
9:10–9:20	Welcome speech from Prof. Habil. Dr. Jūras Banys , the president of the Lithuanian Academy of Sciences		
9:20–9:30	Information from the chairman of the organizational committee Prof. Habil. Dr. Aivaras Kareiva		
Oral session (Chairperson Prof. Dr. Simas Šakirzanovas)			
9:30–10:00	Invited Speaker Prof. Dr. Pierre Rabu	University of Strasbourg, <i>France</i>	Insertion-Grafting to Exfoliation in Layered Functional Systems
10:00–10:30	Invited Speaker Prof. Dr. Aleksej Žarkov	Vilnius University, <i>Lithuania</i>	Phase Transformations in Calcium Phosphates
10:30–11:00	Invited Speaker Dr. Simonas Ramanavičius	Center for Physical Sciences and Technology, <i>Lithuania</i>	Formation and Applications of Nonstoichiometric Titanium Oxides and MXenes (Ti ₃ C ₂ T _x) Nanostructures
11:00–11:30	Coffee break		
11:30–12:00	Invited Speaker Prof. Dr. Koichiro Hayashi	Kyushu University, <i>Japan</i>	Carbonate Apatite Honeycomb Scaffolds for Bone Regeneration
12:00–12:30	Invited Speaker Prof. Dr. Artūras Katelnikovas	Vilnius University, <i>Lithuania</i>	Inorganic CsPbX ₃ (X = Cl, Br, I) Perovskite Quantum Dots: Synthesis, Properties, and Applications
12:30–14:00	Lunch break		
Oral session (Chairperson Prof. (HP) Dr. Aldona Beganskienė)			
14:00–14:30	Invited Speaker Prof. Dr. Vytautas Getautis	Kaunas University of Technology, <i>Lithuania</i>	Advanced Organic Molecules for New Generation Solar Cells
14:30–15:00	Invited Speakers Prof. Habil. Dr. Wojciech Kujawski ,	Nicolaus Copernicus University in Toruń, <i>Poland</i>	The Properties of Polymeric and Ceramic Membranes in Gas and Liquid Separation



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	Guoqiang Li, Dr. Katarzyna Knozowska, habil. Dr. Joanna Kujawa		
15:00–15:30	Invited Speaker Prof. Dr. Rasa Pauliukaitė	Center for Physical Sciences and Technology, <i>Lithuania</i>	Can Graphene Be Sensitive?
15:30–16:00	Invited Speaker Assoc. Prof. Dr. Lina Mikoliūnaitė	Center for Physical Sciences and Technology, <i>Lithuania</i>	Effect of Silver to Magnetite Properties in Ag/Fe ₃ O ₄ Nanoparticles Composite
16:00–16:20	Coffee break		
16:20–17:30	Poster session		
19:00	Dinner (Universiteto St. 3)		

7th of October

Vilnius University seminar room 239, Universiteto St. 3 (live or online).

Time	Presenter	Institution	Title of the Lecture
8:30–9:00	Participant registration		
Oral session (Chairperson Prof. Dr. Artūras Katelnikovas)			
9:00–9:30	Invited Speaker Prof. Dr. Kęstutis Baltakys	Kaunas University of Technology, <i>Lithuania</i>	Characterization of Functional Inorganic Materials by X-Ray Diffraction Methods
9:30–10:00	Invited Speaker Dr. Michele Back	University of Venice, <i>Italy</i>	Cr ³⁺ -Activated Phosphors: Effective Luminescent Thermometers?
10:00–10:30	Invited Speaker Dr. Anton Popov	Vilnius University, <i>Lithuania</i>	Surface Plasmon Resonance Spectroscopy as a Key to the Development of Sensitive Biosensors
10:30–11:00	Invited Speaker Prof. Dr. Anja Verena Mudring	Aarhus University, <i>Denmark</i>	How to Use Ionic Liquids to Make Inorganic Nanomaterials
11:00–11:30	Coffee break		
11:30–12:00	Invited Speaker (HP) dr. Jurgis Barkauskas	Vilnius University, <i>Lithuania</i>	Graphene-Based Materials: Synthesis, Chemistry and Applications
12:00–12:30	Invited Speaker Prof. dr. Malle Krunks	Tallinn University of Technology, <i>Estonia</i>	Antimony Chalcogenide Thin Film Solar Cells – Challenges and Prospects
12:30–14:00	Lunch break		



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Oral session (Chairperson Prof. Dr. Rasa Pauliukaitė)			
14:00–14:30	Invited Speaker Prof. Dr. Rimantas Ramanauskas	Center for Physical Sciences and Technology, <i>Lithuania</i>	Corrosion Behaviour of Cerium Based Conversion Coatings on Zinc
14:30–15:00	Invited Speakers Habil. Dr. Anna Lukowiak	Polish Academy of Sciences, <i>Poland</i>	Bioactive Glasses with Luminescent Properties
15:00–15:30	Invited Speaker Prof. Dr. Tomas Tamulevičius	Kaunas University of Technology, <i>Lithuania</i>	Nanomaterials and their Structures for Optical Applications
15:30–16:00	Invited Speaker Prof. Habil. Dr. Gerd Meyer	KTH Royal Institute of Technology, <i>Sweden</i>	Small Cause — Great Effect: What the $4f^{n+1}5d^0 \rightarrow 4f^n5d^1$ Configuration Crossover Does to the Chemistry of Divalent Rare-Earth Halides and Coordination Compounds, and How it Makes the Formation of Cluster Complex Compounds and Polar Intermetallics Possible
16:00–17:30	Tour of Vilnius University		

8th of October

Vilnius University seminar room 239, Universiteto St. 3 (live or online).

Time	Presenter	Institution	Title of the Lecture
8:30–9:00	Participant registration		
Oral session (Chairperson Prof. Dr. Aleksej Žarkov)			
9:00–09:30	Invited Speaker Assoc. Prof. Dr. Linus Vilčiauskas	Center for Physical Sciences and Technology, <i>Lithuania</i>	From Fundamental Understanding to Applications in Energy Storage of Phosphate Framework Materials
9:30–9:40	Agnė Kizalaitė	Vilnius University, <i>Lithuania</i>	Novel Whitlockite Compounds: Structure and Properties
9:40–9:50	Dovydas Karoblis	Vilnius University, <i>Lithuania</i>	Investigation of Various Types Ferrites and Manganites Prepared via Sol-Gel Synthetic Approach
9:50–10:00	Anastasija Afonina	Vilnius University, <i>Lithuania</i>	Investigation of Phase Transformations in the Low Temperature Synthesis of Magnesium Whitlockite



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10:00–10:10	Dr. Halyna Yankovych	Institute of Geotechnics of the Slovak Academy of Sciences, <i>Slovakia</i>	Photocatalytic Removal of Halogenated Organic Substances and Industrial Dyes by Activated Carbon Composites
10:10–10:20	Dr. Viktoriia Kyshkarova	Institute of Geotechnics of the Slovak Academy of Sciences, <i>Slovakia</i>	Synthesis and Adsorption Potential of Organo-Inorganic Hybrids Based on the Polymers with Carboxyl Groups and Silica
10:20–10:30	Edvardas Brimas	Vilnius University, <i>Lithuania</i>	Analytical Methods Used for the Characterization of Adipose Tissue
10:30–11:00	Coffee break		
Oral session (Chairperson Assoc. Prof. Dr. Živilė Stankevičiūtė)			
11:00–11:10	Rūta Aukštakojtė	Vilnius University, <i>Lithuania</i>	A Dopamine Electrochemical Sensor Based on N-Doped Reduced Graphene Oxide Electrode
11:10–11:20	Monika Baublytė	Vilnius University, <i>Lithuania</i>	GdPO ₄ ·H ₂ O:Eu ³⁺ Ceramic Composites – Wood
11:20–11:30	Greta Inkrataitė	Vilnius University, <i>Lithuania</i>	YAG and LuAG Powder, Ceramic and Thin Films. The Effect of Boron Doping on Compounds Luminescence Properties
11:30–11:40	Rasa Karalkevičienė	Vilnius University, <i>Lithuania</i>	Solvothermal Synthesis of Calcium Hydroxyapatite via Hydrolysis of α-Tricalcium Phosphate in Different Aqueous-Organic Media
11:40–11:50	Laura Lukavičiūtė	Vilnius University, <i>Lithuania</i>	Synthesis of Structurized Phosphates and Their Application in Cosmetic Products
11:50–12:00	Andrius Pakalniškis	Vilnius University, <i>Lithuania</i>	Stabilization of Hexagonal Crystal Structure in the Orthorhombic LuFeO ₃ Matrix
12:00–12:10	Gintarė Rimkutė	Vilnius University, <i>Lithuania</i>	A Comparative Study of the Effect of Graphite Particle Size on the Formation of Sulfuric Acid Intercalated Graphite and Its Thermal Treatment
12:10–12:20	Rūta Raišeliienė	Vilnius University, <i>Lithuania</i>	Synthesis and Investigation of Magnesium Whitlockite Granules



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12:20–12:30	Justinas Januškevičius	Vilnius University, <i>Lithuania</i>	Aqueous Sol-Gel Synthesis of Select Orthoferrite Powders, Coatings, Nanotubes
12:30–12:40	Lukas Šerpytis	Vilnius University, <i>Lithuania</i>	Continuous Flow Synthesis of Silicon Dioxide Microparticles
12:40–12:50	Greta Merkininkaitė	Vilnius University, <i>Lithuania</i>	Additive Manufacturing of Inorganic 3D Nanostructures by Combining Laser Lithography and Pyrolysis
12:50–13:00	Davit Tediashvili	Vilnius University, <i>Lithuania</i>	Degradation Study of Vanadium-Based Materials for Aqueous Na-Ion Battery Cathodes
13:00–13:10	Diana Griesiūtė	Vilnius University, <i>Lithuania</i>	Synthesis and Optical Properties of Mn-Doped Calcium Pyrophosphate Polymorphs
13:10–13:40	Conference result review. Scientific discussions. Closing of the conference.		

POSTER SESSION 6 th of October, 16:20–17:30		
P1	Dr. Rasa Alaburdaitė	UV Investigation of CdS Layers on Polypropylene Film
P2	Darija Astrauskytė	Deposition of Optical Coatings on Micro-Optics
P3	Darius Budrevičius	The Optimal Eu Concentration for Luminesces Properties of GdPO ₄
P4	Narvydas Dėnas	Enzyme and Prussian Blue Based Detection of Mercury Ions
P5	Marius Dzvinka	Study of Properties of Europium-Doped Sodium Aluminum Germanate
P6	Neringa Gailiūtė	Synthesis and Analysis of Mg ₂ /Al ₁ -CO ₃ and Zn ₂ /Al ₁ -CO ₃ Layered Double Hydroxide Modified Wood
P7	Dr. Yuriy Gerasymchuk	Structure and Morphology of Thin Layers of Bismuth Ferrite Obtained by the Sol-Gel Method Depending on Different Substrates
P8	Erlandas Kabašinskas	Phase Transformations of Amorphous Calcium Phosphate in Molten Salts
P9	Prof. Habil. Dr. Aivaras Kareiva	Novel Co-Substituted Yttrium Gallium Garnets
P10	Gabija Kavaliauskaitė	Prussian Blue in Formation of Bio-Electrochemical Systems
P11	Dr. Valentina Krylova	Functionalization of Polyvinylchloride Textile Surface with Thin Films of Silver Oxide by Chemical Method
P12	Miglė Liudžiūtė	Structural Characterizations of Cadmium Telluride-Cadmium Sulfide Layers on Polyamide 6



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P13	Gabija Navašinskaitė	In-situ Synthesis of Calcium Phosphate Bioceramics Derived from Eggshells to Improve Strength and Fire Resistance of Scots Pine Wood
P14	Dr. Neringa Petrasauskiene	UV/Vis Investigation of Cu_xS Thin Films Deposited on Polypropylene by Chemical Bath Technique
P15	Ignas Pocius	Simulating Microwave Field Distribution in a Novel Superconducting EPR Microresonator
P16	Laura Sakalauskiene	Reagentless Electrochemical Glucose Biosensor Based on Electrochemically Deposited Gold Nanostructures and Prussian Blue
P17	Birutė Serapinienė	Effect of the Acid Sulphate Solution Additives on the Active Real Surface Area of the Electrodeposited Copper Honeycomb-Like Structures
P18	Dr. Monika Skrudienė	Optically Active Yttrium Aluminum Garnet and Silica Glass System
P19	Robert Tomala	Influence of Grain Size on Properties of Lanthanum Manganite Nanocrystals and Nanoceramics
P20	Justinas Turčak	Overview of Donors in Silicon for Spin-Based Quantum Technologies
P21	Dr. Skirmantė Tutlienė	Substitution Effects on the Stability and Electrochemical Properties of $NaTi_2-xM_x(PO_4)_3$ ($M = Zr(IV), Hf(IV)$) Anodes for Aqueous Sodium Ion Batteries
P22	Gediminas Usevičius	ESEEM Spectroscopy of Methyl Group Quantum Tunneling in Co^{2+} -Doped Dimethylammonium Zinc Formate
P23	Dr. Tyrpekl Vaclav	Lanthanide Oxalates: Synthesis, Structure, and Applications
P24	Klaudija Vaičiukynaitė	Formation and Investigation of Cobalt Sulfide Layers on the Surface of Polyamide 6
P25	Kristina Vasiliauskienė	Hydration Properties of Mayenite and Gypsum Mixture
P26	Paulina Verbaitytė	Coupling of Microwaves to a Planar EPR Microresonator via a 3D Cavity
P27	Gerda Žižiūnaitė	Electrochemical Prussian Blue-Based Hypochlorite Sensor
P28	Dr. Edita Zubrytė	The Performance of Waste Nanomaterial in the Remediation of a Real Aluminum Anodizing Wastewater

