

**MONDAY, March 3****ORGANIC MATERIALS AND DEVICES (Chair: Mārtiņš Rutkis)**

9:00 - 9:15	Study of novel indacene tetraone fragment containing electron acceptor materials for ternary organic solar cells	Raitis Gržibovskis
9:15 - 9:30	Investigation of light amplification for new DCM derivatives in the red-infrared region	Marta Liedskalniņa
9:30 - 9:45	ITIC structure conversion to D-A-D and A'-D-A-D-A' type non-fullerene acceptors for organic solar cell application	Kirills Dmitrijevs
9:45 - 10:00	Inkjet printing for heterogeneous polymer photonic structures	Anete Bērziņa
10:00 - 10:15	Introduction to Organic Single-Photon Sources for Quantum Photonics	Margarita Zommere

**10:15 - 10:45 COFFE BREAK****NANOMATERIALS. MICRO AND NANOFABRICATION (Chair: Ainārs Ozols)**

10:45 - 11:00	Fabrication of Submicron Structures via Double Exposure UV Lithography	Helēna Ose
11:00 - 11:15	Simultaneous in situ dielectric and crystallographic temperature dependent measurements	Kaspars Jaundzems
11:15 - 11:30	Synthesis of ZnS/ZnO and ZnO/ZnS core-shell nanoparticles via microwave-assisted solvothermal method	Milēna Dile
11:30 - 11:45	Novel Terpeneol-Based Silver Inks: Comparison of Ink-Jet Printing and Selective Laser-Sintering Methods for Use in Fast Prototyping of Thin Film Electronic Devices	Aleksandrs Novikovs
11:45 - 12:00	Application of Laser Technology in GeSn Epitaxial Layers	Pavels Onufrijevs

**TUESDAY, March 4****THIN FILMS AND RELATED TECHNOLOGIES (Chair: Juris Purāns)**

9:00 - 9:30	<b>Reactive High Power Impulse Magnetron Sputter Deposition (invited)</b>	<b>Tomas Kubart</b>
9:30 - 9:45	Atomic Layer Deposition, Mechanical Properties, and Wear Resistance of Ternary ( $\text{Cr}_{1-x}\text{Al}_x$ ) $_2\text{O}_3$ Films.	Mahtab Salari Mehr
9:45 - 10:00	Deposition of photochromic YHO thin films by magnetron sputtering and their characterization	Emija Ņetko
10:00 - 10:15	Optical and photochromic properties of YHO/MoO $_3$ thin films	Edvards Strods
10:15 - 10:30	Structural and optical properties of thermochromic $\text{V}_{1-x}\text{Re}_x\text{O}_2$ thin films obtained by DC magnetron sputtering	Tamara Tsebriienko

**10:30 - 11:00 COFFE BREAK****THIN FILMS AND RELATED TECHNOLOGIES (Chair: Juris Purāns)**

11:00 - 11:15	Planar n-Ga $_2\text{O}_3$ /p-GaN ultraviolet light detector	Ēriks Dipāns
11:15 - 11:30	Preparation of MoSe $_2$ and WSe $_2$ shells around ZnSe nanowires via magnetron sputtering and selenization	Luīze Dipāne
11:30 - 11:45	Contact method for obtaining core-shell structures in lead-free ferroelectric ceramics	Gusts Agafonovs

**WEDNESDAY, March 5****MATERIALS FOR ENERGY APPLICATIONS (Chair: Gints Kučinskis)**

9:00 - 9:30	<b>Catalyst/Electrolyte Interfacial Transformations: Key Descriptors Governing the Oxygen Evolution Reaction at Different pHs (invited)</b>	<b>Emiliana Fabbri</b>
9:30 - 9:45	Decoupled Water Electrolysis: Prospects and Challenges	Mārtiņš Vanags
9:45 - 10:00	Sustainable Hydrogen Production from Aluminium Waste	Līga Grīnberga
10:00 - 10:15	Dependence of hydrogen production efficiency on pyrolysis temperature and catalyst presence	Raitis Sika

**10:15 - 10:45 COFFE BREAK****MATERIALS FOR ENERGY APPLICATIONS (Chair: Gints Kučinskis)**

10:45 - 11:00	Influence of Inactive Components in Symmetric Supercapacitor Cells on Electrochemical Measurements	Laura Jērāne
11:00 - 11:15	Electrochemical performance of wood-derived carbon materials for supercapacitors	Dāvis Kalniņš
11:15 - 11:30	Al $_2\text{O}_3$ protective coating for cycle life extension of Na $_{0.67}\text{MnO}_2$ cathode material in Na ion batteries	Rita Leimane
11:30 - 11:45	The effect of magnetron sputtering deposited Al $_2\text{O}_3$ protective coating on NCM811 lithium-ion battery cathode cycling stability	Paula Malnača

<b>THURSDAY, March 6</b>		
<b>DEVICES AND PROTOTYPES</b>		
9:00 - 9:30	<b>A way forward in marine robotics (invited)</b>	<b>Nikola Miskovic</b>
9:30 - 10:00	<b>Deep-sea – Materials challenges from a robotics oriented perspective (invited)</b>	<b>Alfredo Martins</b>
10:00 - 10:15	High surface area electrochemical microfluidic biosensor based on interlocked polymer micropillar array	Gunita Paidere
10:15 - 10:30	Surface functionalization of ITO for dual-mode hypoxia associated cancer biomarker detection	Edmunds Zutis
10:30 - 10:45	TemTA43 - Novel solutions for clinical monitoring of soft tissues	Paul Annus
10:45 - 11:00	Health status analyzers and Fraud	Alberts Kristiņš
11:00 - 11:30	<b>COFFE BREAK</b>	
<b>OPTICAL MATERIALS. MICRO AND NANOFABRICATION (Chair: Aivars Vembris)</b>		
11:30 - 12:00	<b>Characterization and applications of integrated photon pair sources (invited)</b>	<b>Alessio Baldazzi</b>
12:00 - 12:30	<b>Investigation of metal mirrors for space communication applications (invited)</b>	<b>Alexandr Belosludtsev</b>
12:30 - 12:45	Laser light coherence and hologram recording efficiency	Andris Ozols
12:45 - 13:15	<b>COFFE BREAK</b>	
<b>OPTICAL MATERIALS. MICRO AND NANOFABRICATION (Chair: Aivars Vembris)</b>		
13:15 - 13:30	Characterization of performance of various SERS substrates synthesized with different methods	Čiro Federiko Tipaldi
13:30 - 13:45	Nanoparticle Formation from Au Thin Film on Flat and Patterned Silicon Surface	Līga Ignatāne
13:45 - 14:00	The applications of organic low molecular weight compounds in thermoelectric composite systems with Sb <sub>2</sub> Te <sub>3</sub> nano and microparticles	Adriana Mauručaite
14:00 - 14:15	Improvement of long term stability and reduced oxidation with HCl treatment for Sb <sub>2</sub> Te <sub>3</sub> /PEO hybrid thermoelectrical materials	Oskars Bitmets
<b>FRIDAY, March 7</b>		
<b>STRUCTURE AND MORPHOLOGY. THEORY AND MODELLING (Chair: Andris Anspoks)</b>		
9:00 - 9:15	Materials thermometry using EXAFS spectroscopy	Alexei Kuzmin
9:15 - 9:30	Fine-tuning and validating universal machine learning interatomic potentials on the example of tungsten disulfide	Pjotrs Žguns
9:30 - 9:45	Study of the local atomic structure in silver selenide	Inga Pudza
9:45 - 10:00	Modelling of defect processes in yttrium orthosilicate crystals	Rostislav Rostovskij
10:00 - 10:15	Computational study of elastic and electronic properties of A <sub>2</sub> SiF <sub>6</sub> (A = Na, K, Cs) hexafluorosilicates under hydrostatic pressure	Ilya Chervyakov
10:15 - 10:30	Calculation of second hyperpolarizabilities: a factorial-designed study	Igors Mihailovs
10:30 - 11:00	<b>COFFE BREAK</b>	
<b>LUMINESCENCE AND RADIATION DEFECTS (Chair: Andris Antuzevičs)</b>		
11:00 - 11:15	Investigation of paramagnetic radiation-induced defect centres in lithium orthosilicate-lithium metatitanate ceramics	Andris Antuzevičs
11:15 - 11:30	EPR study of <sup>13</sup> C carbon isotope-implanted SiO <sub>2</sub> glass.	Linards Skuja
11:30 - 11:45	Features of luminescence of self-trapped exciton in crystalline quartz. The role of treatment in oxygen or hydrogen.	Anatolijs Truhins
11:45 - 12:00	Investigation and characterisation of persistent luminescence in Ca <sub>2</sub> Al <sub>2</sub> SiO <sub>7</sub> :Ce <sup>3+</sup>	Dace Ņilova
12:00 - 12:30	<b>COFFE BREAK</b>	
<b>LUMINESCENCE AND RADIATION DEFECTS (Chair: Andris Antuzevičs)</b>		
12:30 - 12:45	Cr <sup>3+</sup> doped CaAl <sub>12</sub> O <sub>19</sub> phosphor for temperature and pressure sensing	Pāvels Rodionovs
12:45 - 13:00	EPR of neutron-radiation-induced defects in GGG	Jēkabs Cīrulis
13:00 - 13:15	Luminescence properties of embedded perovskite CsPbBr <sub>x</sub> I <sub>3-x</sub> nanoparticles	Artur Bogachov
13:15 - 13:30	Investigation of electroluminescence in ZnS:Mn thick films, obtained by microwave-assisted solvothermal synthesis method	Madara Kļave

