

ADVANCED MATERIALS AND TECHNOLOGIES 2025

Date: 25–29 August 2025

Venue: Hotel “Gabija” Vytauto St. 40,
Palanga, Lithuania
<http://www.gabija.lt/en/>

advancedmaterials.ktu.edu



AUGUST 25, MONDAY

14:00 – 20:00 **Arrival and registration**

AUGUST 26, TUESDAY

Chairperson *Sigitas Tamulevičius*

8:30 – 9:00 **Registration**

9:00 – 9:15 **Opening of the Conference–School**

9:15 – 10:00 **3D Integration in VTT Q50 Quantum Processor Unit**

Kestutis Grigoras (VTT Technical Research Centre of Finland, Finland)

10:00 – 10:45 **Vitrimers: Paving the Way for Sustainable Thermosets**

Angels Serra (Universitat Rovira i Virgili, Catalonia)

10:45 – 11:15 **Decoupled Water Electrolysis: Opportunities and Challenges**

Andris Šutka (Riga Technical University, Latvia)



11:15 – 11:35 **COFFEE BREAK**

Chairperson *Kestutis Grigoras*

11:35 – 12:20 **Salts for Energy Harvesting**

Anja Verena Mudring (Aarhus University, Denmark)

12:20 – 13:05 **Salts for Energy Storage**

Gerd Heinrich Meyer (Aarhus University, Denmark)

13:05 – 13:35 **Synthesis of 2D Structures for Efficient Energy Conversion**

Pawel Gluchowski (Graphene Energy Ltd / Polish Academy of Sciences, Poland)

13:35 – 14:05 **Amphiphobic Materials in Marine Environment and Underwater Robotic Applications**

Michele Ferrari (Institute of Condensed Matter and Technologies for Energy, Italy)

14:05 – 15:00 **BREAK**

15:00 – 17:00 **Social Event: 3×3 Basketball Tournament**
(Palanga Sports Center, Sporto str. 3, Palanga)

17:00 – 18:00 **BREAK**

18:00 – 21:00 **Welcome Party** (Hotel Gabija Restaurant, Vytauto St. 40, Palanga)

AUGUST 27, WEDNESDAY

Chairperson *Juozas Vidas Gražulevičius*

8:30 – 9:00 **Registration**

9:00 – 9:45 **Nanoantennas for Controlled Emission in Solid-State Lighting**

Jaime Gómez Rivas (Eindhoven University of Technology, Netherlands)

9:45 – 10:30 **Charge Transport and Excitonics in Organic Light-Emitting Diodes**

Peter Bobbert (Eindhoven University of Technology, Netherlands)

10:30 – 11:15 **Stars in Your Eyes - Monodisperse Macromolecules for Photonic and Optoelectronic Applications**

Peter Skabara (University of Glasgow, Scotland)



11:15 – 11:35 **COFFEE BREAK**

Chairperson *Peter Skabara*

11:35 – 12:20 **Optical Microscopy for Nanoscience and Neuroscience**

Shi-Wei Chu (National Taiwan University, Taiwan)

12:20 – 12:50 **A Unified Model for Light-Matter Coupling in OLEDs**

Olli Siltanen (University of Turku, Finland)

12:50 – 13:20 **Plasmonic Nanoparticles for SERS Probing of Biomolecules**

Lina Mikoliūnaitė (Vilnius University, Lithuania)

13:20 – 14:05 **2e, or not 2e: A Story of Frustrated Josephson Circuits**

Saulius Vaitiekėnas (University of Copenhagen, Denmark)

14:05 – 14:20 **RIANA: Research Infrastructure Access in Nanoscience & Nanotechnology**

Andrius Žutautas (Kaunas University of Technology, Lithuania)

14:20 – 16:00 **BREAK**

16:00 – 21:00 **Social Event: Orienteering Competition, Exploring Lithuanian Kitchen** (“HBH Palanga”, Žibininkai Village, <http://www.hbh.lt/>)

AUGUST 28, THURSDAY

Chairperson Andrei Kholkin

8:30 – 9:00 Registration

9:00 – 9:45 Broad Band Frequency Measurements of Advanced Materials

Juras Banys (Vilnius University, Lithuania)

9:45 – 10:30 Epitaxy and Ferroic Order in Complex Perovskite Oxides

Elzbieta Gradauskaite (Université Paris-Saclay, France)

10:30 – 11:15 Dielectric Materials for Energy Storage

Vladimir V. Shvartsman (University of Duisburg-Essen, Germany)



11:15 – 11:35 COFFEE BREAK

Chairperson Juras Banys

11:35 – 12:05 Growth of 2D and 1D-2D Nanomaterials

Boris Polyakov (University of Latvia, Latvia)

12:05 – 12:35 Magnetoelectric Nanostructures for Biomedical Applications

Andrei Kholkin (University of Latvia, Latvia)

12:35 – 13:05 Frontiers in Accurate and Low Noise Atomic Force Microscopy Using a New Interferometric Detector

Roger Proksch (Oxford Instruments, CA United States)

13:05 – 14:05 BREAK

Chairperson Ivan Maximov

14:05 – 14:50 Preparation and luminescent properties of phosphors for high CRI white LED

Robert Tomala (Polish Academy of Sciences / Vilnius University, Poland / Lithuania)

14:50 – 15:20 Persistent Luminescence– Historical Overview, Current Status, and Future Prospects

Guna Doke (University of Latvia / Vilnius University, Latvia / Lithuania)

15:20 – 15:50 Functional 3D-Printed Ceramics: Manufacturing, Applications, and Challenges

Greta Merkininkaitė (Vilnius University, Lithuania)



15:50 – 16:00 COFFEE BREAK

16:00 – 18:00 Poster Session with Voting for the Best Poster (Chairperson Tomas Tamulevičius)

18:00 – 18:30 Best Poster Awards and Conference Photo

AUGUST 29, FRIDAY

Chairperson Robert Tomala

9:00 – 9:45 Light - the Ubiquitous Technology

Hubert Halbritter (ams-OSRAM International, Germany)

9:45 – 10:30 Circular Economy and Advanced Materials: Pathways Toward Sustainable Innovation

Žaneta Stasiškienė (Kaunas University of Technology, Lithuania)

10:30 – 10:50 SeBaltEc Project: Semiconductor Sustainability Platform in the Baltic and Neighbouring Countries

Ivan Maximov (Lund University, Sweden)



10:50 – 11:10 COFFEE BREAK

Chairperson Sigita Tamulevičius

11:10 – 11:55 ZnO Tetrapod Synthesis and Application

Simas Račkauskas (Kaunas University of Technology, Lithuania)

11:55 – 12:40 Electron Paramagnetic Resonance: A Pathway to Understanding Optical Processes in Inorganic Solids

Andris Antuzevics (University of Latvia, Latvia)

12:40 – 13:00 Laser-Ablated 3D Architectures for High-Performance Lithium-Ion Battery Electrodes

Hyeong-Jin Kim (Gwangju Institute of Science and Technology, Korea)

13:00 – 13:10 Closing Remarks

13:10 – 13:30 Certificates and Coffee Break