



THE 20TH BALTIC CONFERENCE  
ON INTELLECTUAL COOPERATION  
**NANOMATERIALS AND  
NANOTECHNOLOGY  
THROUGH TIME: PAST INSIGHTS,  
PRESENT ADVANCES,  
FUTURE DIRECTIONS**

## Conference programme

**Thursday 6<sup>th</sup> May 2027**

**Venue: Lithuanian Academy of Sciences.  
Gedimino Avenue 3, 01102 Vilnius**

| Time        | Speaker                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Title of the presentation                                                                                                                      |
|-------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------|
| 8:00–9:00   | <b>Registration</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                                                                                                                |
| 9:00–9:30   | <b>Opening ceremony</b><br><b>Chair of the session Prof. Aivaras Kareiva</b><br><b>Welcome speeches by:</b> <ul style="list-style-type: none"> <li>President of Lithuanian Academy of Sciences <b>Vytautas Nekrošius</b>.</li> <li><b>Representative</b> of the Ministry of Economy and Innovation of the Republic of Lithuania.</li> <li>President of Estonian Academy of Sciences <b>Mart Saarma</b>.</li> <li>President of Latvian Academy of Sciences <b>Ivars Kalvins</b>.</li> <li>Chairman of Finnish Society of Sciences and Letters <b>Jan Sundberg</b>.</li> </ul> |                                                                                                                                                |
| 9:30–9:55   | <b>Keynote lecture</b><br><b>Prof. Dariusz Hreniak</b><br>Institute of Low Temperature and Structure Research, Polish Academy of Sciences, Poland.                                                                                                                                                                                                                                                                                                                                                                                                                           | Cooperative phenomena in rare-earth-doped persistent luminescent nanomaterials and their potential applications in the design of new phosphors |
| 9:55–10:20  | <b>Keynote lecture</b><br><b>Prof. Arūnas Ramanavičius</b><br>Vilnius University and Lithuanian Academy of Sciences, Lithuania                                                                                                                                                                                                                                                                                                                                                                                                                                               | The application of conducting polymers in sensor design                                                                                        |
| 10:20–10:45 | <b>Invited speaker</b><br><b>Prof. Anatolijs Šarakovskis</b><br>Institute of Solid State Physics, University of Latvia, Latvia                                                                                                                                                                                                                                                                                                                                                                                                                                               | Upconversion luminescence in oxyfluoride glass and nanoceramics                                                                                |
| 10:45–11:10 | <b>Invited speaker</b><br><b>Prof. Maria Luisa Saladino</b><br>University of Palermo, Italy                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Luminescent markers for cultural heritage objects                                                                                              |
| 11:10–11:30 | <b>Coffee break</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                                                                                                                |



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|-------------|----------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------|
|             | <b>Chair of the session Prof. Markku Leskela</b>                                                                                             |                                                                                                                         |
|             | <b>Speaker</b>                                                                                                                               | <b>Title of the presentation</b>                                                                                        |
| 11:30–11:55 | <b>Keynote lecture</b><br><b>Prof. Olli Ikkala</b><br>Aalto University, Finland                                                              | <b>To be announced</b>                                                                                                  |
| 11:55–12:20 | <b>Keynote lecture</b><br><b>Dr. Monika Mortimer</b><br>National Institute of Chemical Physics and Biophysics, Estonia                       | Navigating the Nanoworld Responsibly: From Early Toxicological Insights to Safe-and-Sustainable-by-Design Nanomaterials |
| 12:20–12:45 | <b>Keynote lecture</b><br><b>Prof. Maksym Pogorelov</b><br>University of Latvia, Latvia                                                      | 2D nanomaterials MXenes for biomedical applications: hype and promise                                                   |
| 12:45–13:10 | <b>Keynote lecture</b><br><b>Prof. Natalia Sobczak</b><br>Institute of Metallurgy and Materials Science, Polish Academy of Sciences, Poland. | High-Temperature Interactions and Bonding of Liquid Metals with Graphene- and Oxide-Based Aerogels                      |
| 13:10–13:25 | <b>Invited speaker</b><br><b>Dr. Maira Elksne</b><br>Institute of Solid State Physics, University of Latvia                                  | Organ-on-a-chip; devices for the separation and detection of extracellular vesicles and other cancer biomarkers         |
| 13:25–14:30 | <b>Lunch Break</b>                                                                                                                           |                                                                                                                         |
|             | <b>Chair of the session Dr. Monika Mortimer</b>                                                                                              |                                                                                                                         |
| 14:30–14:55 | <b>Keynote lecture</b><br><b>Prof. Tambet Teesalu</b><br>University of Tartu                                                                 | Homing peptides for precision nanomedicine: from discovery to clinical translation                                      |
| 14:55–15:20 | <b>Keynote lecture</b><br><b>Prof. Donats Erts</b><br>University of Latvia, Latvia                                                           | Nanomaterials for application in energy conversion and storage                                                          |
| 15:20–15:45 | <b>Keynote lecture</b><br><b>Prof. Tomas Tamulevičius</b><br>Kaunas University of Technology, Lithuania                                      | Self-Assembled Plasmonic Metasurfaces: From Nanoparticles to Functional Photonic Devices                                |
| 15:45–16:10 | <b>Keynote lecture</b><br><b>Prof. Joanna Wojewoda-Budka</b><br>Institute of Metallurgy and Materials Science, Poland                        | From Antibacterial Coatings to CeO <sub>2</sub> Nanozymes: Nanomaterials that Heal and Protect                          |
| 16:10–16:40 | <b>Coffee break</b>                                                                                                                          |                                                                                                                         |
|             | <b>Chair of the session Prof. Justina Gaidukevič</b>                                                                                         |                                                                                                                         |
| 16:40–18:00 | <b>Poster presentations</b>                                                                                                                  |                                                                                                                         |
| 19:00–22:00 | <b>Conference dinner (Neringa Restaurant, 23 Gedimino Avenue, Vilnius)</b>                                                                   |                                                                                                                         |





# Conference programme

**Friday 7<sup>th</sup> May 2027**

| Time        | Speaker                                                                                                                       | Title of the presentation                                                                                      |
|-------------|-------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------|
| 8:00–9:00   | <b>Registration</b>                                                                                                           |                                                                                                                |
|             | <b>Chair of the session Prof. Anatolijs Šarakovskis</b>                                                                       |                                                                                                                |
| 9:00–9:25   | <b>Keynote lecture</b><br><b>Prof. Markku Leskela</b><br>University of Helsinki, Finland                                      | Atomic layer processes enabling nanotechnology                                                                 |
| 9:25–9:50   | <b>Invited speaker</b><br><b>Prof. Angela Ivask</b><br>University of Tartu, Estonia                                           | From contact to consequence: nanomaterial interactions with cells                                              |
| 9:50–10:15  | <b>Invited speaker</b><br><b>Prof. Justina Gaidukevič</b><br>Vilnius University and Lithuanian Academy of Sciences, Lithuania | Development of Conducting Polymer–Exfoliated Graphite Composites for Electrochemical Neurotransmitter Analysis |
| 10:15–10:40 | <b>Invited speaker</b><br><b>Prof. Andris Šutka</b><br>Riga Technical University, Latvia                                      | Nanomaterials in triboelectric generators for mechanical energy harvesting and sensing                         |
| 10:40–11:00 | <b>Coffee break</b>                                                                                                           |                                                                                                                |
|             | <b>Chair of the session Prof. Dariusz Hreniak</b>                                                                             |                                                                                                                |
| 11:00–11:25 | <b>Invited speaker</b><br><b>Prof. Andres Krumme</b><br>Tallinn University of Technology, Estonia                             | Electroactive biobased nanofibers for triboelectric energy harvesting                                          |
| 11:25–11:50 | <b>Invited speaker</b><br><b>Prof. Pierre Rabu</b><br>University of Strasbourg, France                                        | <b>To be announced</b>                                                                                         |
| 11:50–12:20 | <b>Award of the best posters</b><br><b>Closing of the conference</b>                                                          |                                                                                                                |
| 13:00–14:30 | <b>Tour of the Vilnius University (Optional)</b>                                                                              |                                                                                                                |



**Vilnius  
University**