



80<sup>th</sup> International Scientific  
Conference of the  
University of Latvia 2022

## Atomic physics, optical technologies and medical physics

Thursday, 10 February 2022, 10.00 AM, online ZOOM

### Programme

9.55–10.00	Introduction	
Vadītājs/Chair: Asoc.Prof. Dr Roman Viter		
10.00–10.20	<p><b>Prof Arunas RAMANAVICIUS,</b> <i>Vilnius University</i></p> <p><i>R.Boguzaitė, E.Brazys, Chen Chen-Fu, M.Drobysh, S.Ramanavičius, V.Ratautaite, U.Samukaite-Bubniene, R.Viter</i></p>	“Conducting polymers in the design of affinity sensors”
10.20–10.40	<p><b>Dr Viktoriia FEDORENKO</b> <i>University of Latvia, Institute of Atomic Physics and Spectroscopy</i></p>	“Application of Polydopamine Functionalized Zinc Oxide for Aflatoxin B1 Sensor Design”
10.40–11.00	<p><b>Dr Maksym POGORIELOV</b> <i>University of Latvia, Institute of Atomic Physics and Spectroscopy</i></p>	“ZnO-Au-mAb platform development for <i>Listeria monocytogenes</i> detection”
11.00–11.20	<p><b>Dr Roman VITER</b> <i>University of Latvia, Institute of Atomic Physics and Spectroscopy</i></p>	“ZnO-Schiff base nanostructures as optical chemical sensors for metal ion detection”
11.20-11.40	<p><b>Simonas RAMANAVIČIUS,</b> <i>State research institute Center for Physical Sciences and</i></p>	“Formation of titanium oxide and suboxide nanostructures with favourable properties for biomedical applications”

	<p><i>Technology</i></p> <p><i>A.Ramanavičius, A.Jagminas</i></p>	
<b>11.40-12.00</b>	<p><b><i>Irina TEPLIAKOVA,</i></b> <i>Odessa I.I. Mechnikov National University</i></p>	<p><b>“Photoluminescence properties of ZnSe:Al, ZnSe:Cu nanoparticles obtained by chemical synthesis”</b></p>
<b>12.00–12.40</b>	<b>Coffee break, discussions</b>	
<b>Vadītājs/Chair: Dr Maksym POGORIELOV</b>		
<b>12.40–13.00</b>	<p><b><i>Simonas RAMANAVIČIUS,</i></b> <i>State research institute Center for Physical Sciences and Technology</i></p> <p><i>S.Adomavičiute- Grabusoves, A.Popov, D.Selskas, V.Šablinskas, O.Gogotsi, A.Ramanavičius, R.Viter</i></p>	<p><b>“Application of MXenes (Ti<sub>3</sub>C<sub>2</sub>T<sub>x</sub>) structures in adsorption and detection of organic molecules”</b></p>
<b>13.00–13.20</b>	<p><b><i>Mindaugas TAMOSIUNAS,</i></b> <i>University of Latvia, Institute of Atomic Physics and Spectroscopy</i></p>	<p><b>“Viability assessment of C. albicans biofilms by laser speckle contrast imaging following sonosensitization”</b></p>
<b>13.20–13.40</b>	<p><b><i>Oksana SULAIEVA,</i></b> <i>LLC CSD Health Care</i></p> <p><i>O.Dudin</i></p>	<p><b>“A multidisciplinary approach drives laboratory medicine Progress”</b></p>
<b>13.40–14.00</b>	<p><b><i>Olesa TVEREZOVSKA,</i></b> <i>Biomedical Research Centre/ Medical Institute, Sumy State University</i></p> <p><i>V.Holubnycha</i></p>	<p><b>“Influence of autoclaving on antibacterial properties of silver nanoparticles”</b></p>
<b>14.00- 14.20</b>	<p><b><i>Volodymyr BURANYCH,</i></b> <i>Sumy State University</i></p>	<p><b>“Ag-doped 3D scaffolds modification for osteogenic applications and tissue engineering”</b></p>
<b>14.20-14.40</b>	<p><b><i>Yevheniia HUSAK,</i></b> <i>Silesian University of Technology, Sumy State University</i></p> <p><i>J.Pykacz, J.Olszaniicki, A.Ossowska,</i></p>	<p><b>“Silicate-, fluoride- enriched oxide coatings on magnesium for orthopaedic applications”</b></p>

	<i>M.Pogorielov,</i>	
<b>14.40-15.00</b>	<b><i>Viktoriiia KORNIENKO,</i></b> <i>Sumy State University</i>  <i>J.Varava, K.Diedkova,</i> <i>Y.Husak, Y.Samokhin</i>	<b>“Chitosan electrospun nanofibers: surface morphology and hydrophobicity after different crosslinking”</b>
<b>15.00–15.10</b>	<b>Conclusions, discussions</b>	