

**PROGRAMM**  
*International conference*  
**"Nanomaterials for biosensors and biomedical applications"**  
*Jurmala, Latvia, Hotel Jurmala Spa, July 2-4, 2019*

**July 2**

**8.30-14.30 Registration & morning coffee (8.30-9.00)**

<b>Plenary Section</b> Co-Chairs Assoc. Prof. D. Erts, Dr. R. Viter	
9.00-9.10	Opening of the conference
9.10-9.55	<b>Invited</b> Prof. Bernhard B. Singer, HopQ mediated interaction of Helicobacter pylori to distinct CEACAMs are crucial risk factors involved in the development of a variety of gastric diseases
9.55-10.40	<b>Invited</b> Assoc. Prof. Jaime García-Rupérez, Novel approaches for the development of high sensitivity photonic biosensors
<b>Coffee break</b>	
<b>Microfluidics Section</b> Chair Dr. Mikhael Bechelany	
11.00-11.45	<b>Invited</b> Prof. Stefan Gassmann, Microfluidics - Basics, Application and Education
11.45-12.05	Dr. Leandro Lorenzelli, 3D Microelectrodes arrays (3D-MEAs) for 3D neurons' electrophysiological activity mapping
12.05-12.25	Dr. Georg Pucker, WGM resonator based integrated optical circuits for lab-on-chip sensors at ~0.85 micron
<b>Lunch</b>	
<b>Materials Section</b> Chair Assoc. Prof. Jaime García-Rupérez	
13.30-14.00	Dr. Mikhael Bechelany, Design of nanomaterials and interfaces for biosensors and biomedical applications
13.00-14.30	Prof. Wojciech Simka, Oxide coatings formed on Zr alloys via PEO process
14.30-14.50	Dr. Oleksiy Gogotsi, MXenes for biosensors and biomedical applications
15.00	<b>Excursion</b>
<b>19.00</b>	<b>Dinner</b>

# July 3

## 8.30-17.00 Registration

<b>Plenary Section</b> <b>Chair Prof. Wojciech Simka</b>	
9.00-9.45	<b>Invited</b> Prof. Malgorzata Szczerska, Fiber-optic sensors and biosensors with nanomaterial coatings
9.45-10.30	<b>Invited</b> Prof. Sigitas Tamulevičius, Diamond like carbon thin films and nanostructures for sensor applications
<b>Coffee break</b>	
<b>Biomaterials Section</b> <b>Chair Prof. Stefan Gassman</b>	
10.50-11.35	<b>Invited</b> Assoc. Prof. Pasquale Del Gaudio, <i>In situ</i> gelling polysaccharides submicrometric particles: a novel weapon to improve wound care armamentarium
11.35-11.55	Dr. Stefano Linari, Electro spinning applications in tissue engineering'
11.55-12.15	Ms. Hafsah Akhtara, Next Generation Oxide Containing Bioactive Scaffolds for Craniofacial Vascularisation & Bone Regeneration
12.15-12.35	Mr. Liam A. Boyle, Primary Cilia Elongation Enhances Mechanosensitivity
<b>Lunch</b>	
<b>Biomaterials Section</b> <b>Chair prof. Malgorzata Szczerska</b>	
14.30-14.50	Dr. Mehmet Turemis, Integration of the photonic 1D ZnO nanorods to optical transducer for bio/sensor applications
14.50-15.10	Prof. Marek Piątkowski, Novel chitosan-based biomaterials for skin tissue regeneration with ferrimagnetic properties
15.10-15.30	Tugba Cebe, Nano and Microfibers to Investigate the Collagen Microstructure of Osteogenesis Imperfecta on Polycaprolactone Scaffolds
15.30-15.50	Mrs. Julia Radwan-Pragłowska, Novel hemostatic agents for biomedical applications
15.50-16.10	Dr. Viktoriia Holubnychy, Tetrapodal ZnO-CuNPs composites: cell toxicity and antibacterial effect
16.10-16.30	Mr. Łukasz Janus, Novel hybrid polymer-carbon quantum dots for biomedical applications
16.45-17.45	<b>POSTER SECTION</b> <b>Chair Prof. Maksym Pogorielov</b> <b>drinks and snacks, best poster competition</b>
19.00	<b>Dinner</b>

## 9.00 – 16.00 Mid term meeting

**Horizon 2020 project “Novel photonic metal oxide nanostructures for early stage cancer detection” No. 778157-CanBioSE**

# July 4

## 8.30-12.00 Registration

<b>Plenary Section</b> <b>Chair Prof. Arunas Ramanavičius</b>	
9.00-9.45	<b>Invited</b> Dr. Samuel Lara-Avila, Sub-ppb gas detection with atomically thin platinum layers
9.45-10.30	<b>Invited</b> Dr. Saad B Qasim, Effect of cross-linking and drug loading efficiency on freeze casted biomimetic templates for periodontal engineering
<b>Coffee</b>	
<b>Materials and Sensors Section</b> <b>Chair Dr. Pasquale del Gaudio</b>	
10.50-11.35	<b>Invited</b> Dr. Simona Sbardelatti, Development of biomedical device: a new approach for a productive collaboration with companies
11.35-11.55	Prof. Arunas Ramanavičius, Conducting polymers in Affinity sensors
11.55-12.15	Dr. Igor Iatsunskyi, Multifunctional nanocomposites produced by ALD
12.15-12.35	Prof. Sualieva Oksana, Tumor immune microenvironment: factors affecting it and role in prognosis of cancer
<b>Lunch</b>	
<b>Materials and Sensors Section</b> <b>Chair Dr. Igor Iatsunskyi</b>	
14.30-14.50	Dr. Viktoriia. Korniienko, Time-depending antibacterial effect of chitosan sponges against different bacterial strains
14.50-15.10	Mr. Octavio Graniel, Au-covered hollow urchin-like ZnO nanostructures for surface-enhanced Raman scattering (SERS) sensing
15.10-15.30	Ms. Margarita Baitimirova, Structure and optical properties of Bi <sub>2</sub> Se <sub>3</sub> /ZnO and graphene/Bi <sub>2</sub> Se <sub>3</sub> /ZnO heterostructures
15.30-15.50	Dr. Juris Prikulis, Application of anodic aluminum oxide membranes for plasmonic nanoparticle assembly in optically active arrays
15.50-16.10	Dr. Violeta Martin-Gil, Use of Nanofibers produced by Electrospinning for Medical Applications.
<b>Coffee</b>	
<b>Materials Treatment Section</b> <b>Chair Prof. Sigitas Tamulevičius</b>	
16.30-16.50	Prof. Tomas Tamulevičius, Laser imposed micro and nano patterns: from nanoparticles and hydrophobic surfaces to anti-counterfeiting applications
16.50-17.10	Prof. Maksym Pogorielov, Ti implant laser treatment - influence to cell viability and antibacterial properties
17.10-17.30	Prof. L. Orazi, Laser surface nano-patterning for biomedical and industrial applications
17.30-17.50	<b>Conclusions, Conference closing</b>

### Mid term meeting

**9.00 – 16.00 Horizon 2020 project “Nanostructural surface development for dental implant manufacturing” No. 777926 –NanoSurf**