

Monday 20.6.2022

12:30- Registration

13:00-14:00 Lunch

14:00 Opening

14:20-17:00 Session 1

17:30-18:30 Session 2 (posters)

19:00-22:00 Welcome party

Tuesday 21.6.2022

8:20-10:40 Session 3

11:00-12:00 Carla Capsule

12:00-13:30 Lunch

13:30-15:40 Session 4

17:00 Dinner

18:30 Social program by KVANT

Wednesday 22.6.2022

12:00-13:30 Lunch

13:20-16:40 Session 5 (students)

17:15-18:30 Session 6 (posters)

19:00 Slovak evening (dinner)

Thursday 23.6.2022

8:20-10:40 Session 7

11:00-12:20 Session 8

12:20 Conference closure

13:00 Lunch

Free social program

Friday 24.6.2022

8:00-10:00 Departure

session 1 chair: Kováč J.

Monday, June 20

• **Keynote lectures** •

14:00 *CONFERENCE OPENING*

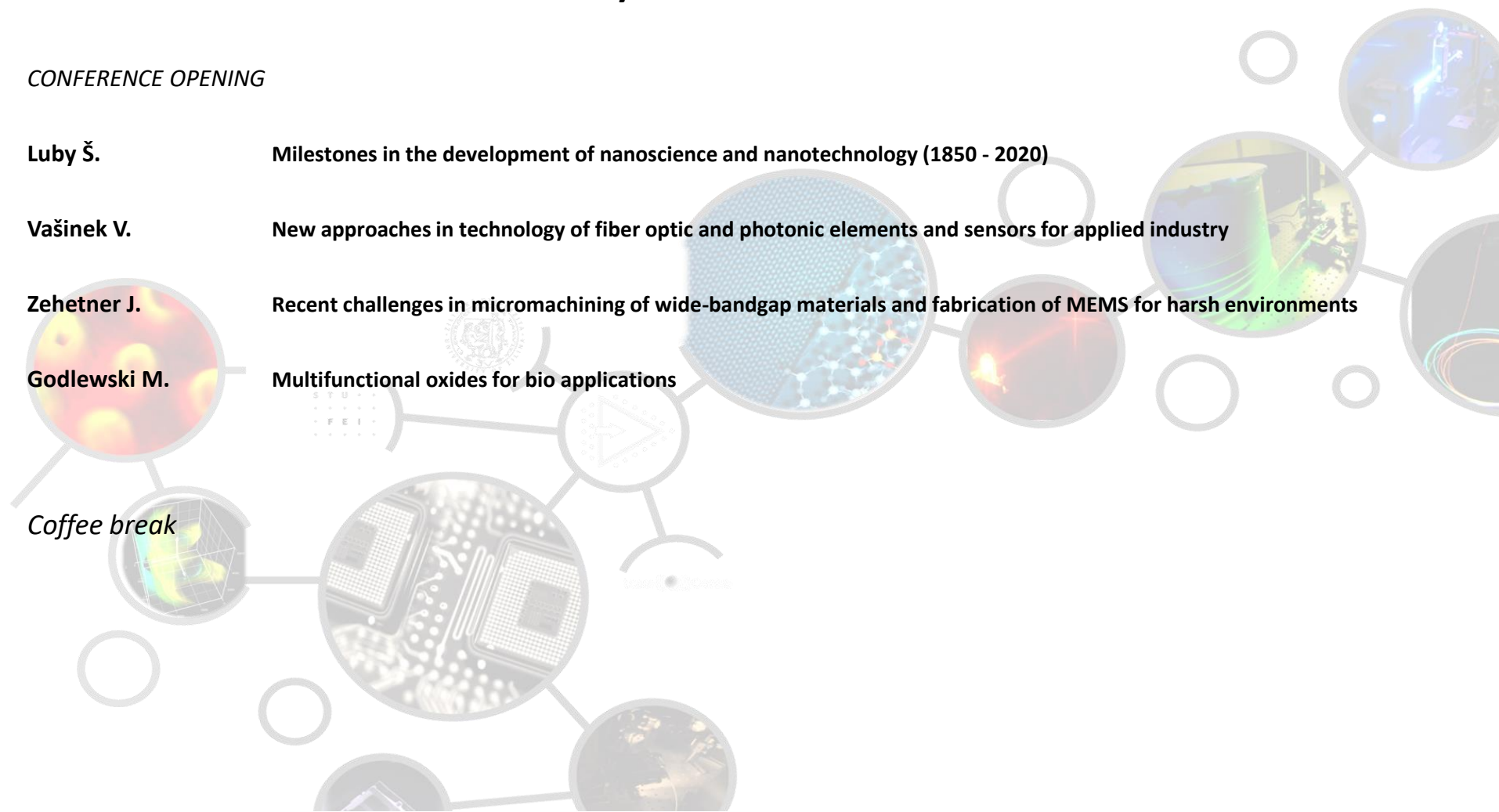
14:20 **Luby Š.** Milestones in the development of nanoscience and nanotechnology (1850 - 2020)

15:00 **Vašínek V.** New approaches in technology of fiber optic and photonic elements and sensors for applied industry

15:40 **Zehetner J.** Recent challenges in micromachining of wide-bandgap materials and fabrication of MEMS for harsh environments

16:20 **Godlewski M.** Multifunctional oxides for bio applications

17:00 *Coffee break*



session 2 host: Kováč J.

17:30 - 18:30

Monday, June 20

• Posters •

- 1 Vanko G. Diamond-Based RF MEMS Microheaters for Insects Behavior Monitoring
- 2 Vincze A. SIMS analysis of organic materials
- 3 Potocký Š. Optical biosensing by thin diamond films
- 4 Chvala A. Thermo-Mechanical Simulation Study of Power Transistor Embedded in PCB
- 5 Kozarik J. Measurement of Dynamic On-Resistance of Packaged and Unpackaged GaN HEMTs and Effect of Repetitive Short-Circuit Stress
- 6 Pribytny P. Electro-thermal Characterizations, Compact Modeling and TCAD based Device Simulations of Power Electronics Modules
- 7 Izsák T. Optimization of mask material for deep reactive ion etching of GaAs structures
- 8 Lettrichova I. IP-Dip inverted pyramids for SERS
- 9 Gašo P. Multimode interference splitter
- 10 Seyringer D. Impact of Rib Waveguides on Performance of SiN-Based AWGs

session 2 host: Kováč J.

17:30 - 18:30

Monday, June 20


• Posters •

- 11 Chovan J. Design and modelling of a 2x2 optical switch
- 12 Jandura D. NSOM characterization of Talbot effect in 1D grating
- 13 Sojkova M. Influence of the substrate on the growth of PtSe₂ Films
- 14 Jelínek M. Silica optical fibers in gamma radiation detection
- 15 Holá M. Compact diode laser system for dimensional metrology
- 16 Gorauš M. Sensing Polymer Structures Based on Fabry-Perot Interferometer For Lab-On-Fiber Applications
- 17 Latal J. Temperature and mechanical strain dynamic changes measurement by fiber optic sensory network
- 18 Marek J. Analysis of 15 A–1200 V class IGBTs under repetitive SC conditions
- 19 Hulman M. Few-layer PtSe₂: thickness-dependent metal-insulator transition and the growth on NbN
- 20 Novák J. Improve the accuracy of your sensor data

• **Organic electronics and nanotechnology** •

08:20	Weis M.	Organic transistors for sensors with molecular recognition
09:00	Stehlík Š.	Nanodiamonds; tiny gemstones with rich science
09:40	Kromka A.	Growth of carbon allotropes in plasma CVD system
10:00	Novák J.	MOVPE growth of edge rich GaP surfaces for preparation of Molybdenum Disulphide
10:20	Pribusová S. L.	Epitaxial Growth of Hexagonal and Monoclinic Phase of MoTe ₂ on a Sapphire Substrate in One-Zone CVD Chamber
10:40	<i>Coffee break</i>	
11:00	Carla Capsule	
12:00	Lunch	

• **Semiconductor structures** •

- 13:20 **Bremond G.** A comparison approach in doping profiles characterization by electrical modes from scanning probe microscopy between ZnO and GaN nanowires
- 14:00 **Ruterana P.** Transmission electron microscopy investigations of processes in InGaN/GaN heterostructures towards improving the light emission efficiency
- 14:40 **Dawidowski W.** Influence of reactor cooling atmosphere on structural and optical properties of dilute nitrides grown by AP-MOVPE
- 15:00 **Prazmowska-Czajka J.** Technology of electronic mesh structures
- 15:20 **Radziewicz D.** Investigation of reflectivity of different Ti/Au metalizations for application in QC VCSEL
- 17:00 **Dinner**
- 18:30 **Social program sponsored by** 

• **Student competition** •

- 12:00 **Lunch**
- 13:20 Piejko A. Contrast of surface potential in doped monolayers of van der Waals crystals
- 13:30 Hrubíšák F. Growth and properties of Ga₂O₃ on 4H-SiC using liquid-injection MOCVD
- 13:40 Serecunova S. Comparison of 3D 1×4 Splitters based on different splitting approaches
- 13:50 Stępniaik M. Parasitic masking during GaN SA-MOVPE under increased pressure conditions
- 14:00 Vojteková T. Optical Characterisation of MoTe₂ Thin Films
- 14:10 Matuš M. Investigation of Electrically Active Defects in Quasi-vertical GaN Devices for High Power Applications
- 14:20 Ramdani R. The mechanism of crystallographic degradation in InAlN/GaN heterostructures
- 14:30 Koval' F. Simulation and modeling of electrical properties and reliability of power IGBT elements and modules
- 14:40 Mrena D. 2D PhC slab fabrication and leaky modes visualization
- 14:50 **Coffee Break**

• **Student competition** •

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- 15:00 Režo V. Environmental chamber for measuring gas sensors
 - 15:10 Hrdá J. Influence of Li-doping on the structural properties of thin-layer MoS₂ films
 - 15:20 Miček P. Focusing of the near-field probe emission by means of hyperbolic layered metamaterial
 - 15:30 Sobota M. Organic charge-modulated field-effect transistor for biosensing application
 - 15:40 Esfahani N. E. Strong Field Enhancement of the Film Coupled Nanoparticle Plasmonic Based Structure
 - 15:50 Feiler M. Design and simulation of grating for fiber-to-chip coupling on SION material platform
 - 16:00 Hausner M. Fabrication of SiON photonic waveguides and analysis of ICP/RIE etch rates
 - 16:10 Mizera T. Polymer based 3D 1x4 MMI splitter
 - 16:20 Keshtkar J. Structural and electrical properties of NiO thin films grown by DC magnetron sputtering
 - 16:30 Kočí M. PtSe₂ and MoS₂ active layers for gas sensing at room temperature

session 6

host: Kováč J.

17:00 - 18:30

Wednesday, June 22

• **Posters** •

- 1 Debnár T. Analysis of the movement of employees on the construction site using IoT sensors
- 2 Cernaj L. Wireless temperature sensor for use in healthcare
- 3 Foltán E. Design and fabrication of ecg signal generator
- 4 Kokavec O. Preparation technologies of OLED (organic light-emitting diodes) with emission dopant
- 5 Nevřela J. Organic field-effect transistors using ink-jet printing
- 6 Micjan M. Evaluation of organic semiconductor parameters of DNTT in organic field-effect transistors devices
- 7 Ziman M. Design and simulations of 1xN polymer-based MMI splitters
- 8 Režo V. Air monitoring systems for schools and Universities
- 9 Vanderka A. Thermal and pressure tests of fiber FBGs and Fabry-Perot interferometers manufactured from PDMS at the fibers tips
- 10 Florovič M. Thermal resistance utilization as a key parameter for HEMT average temperature determination

session 6 host: Kováč J.

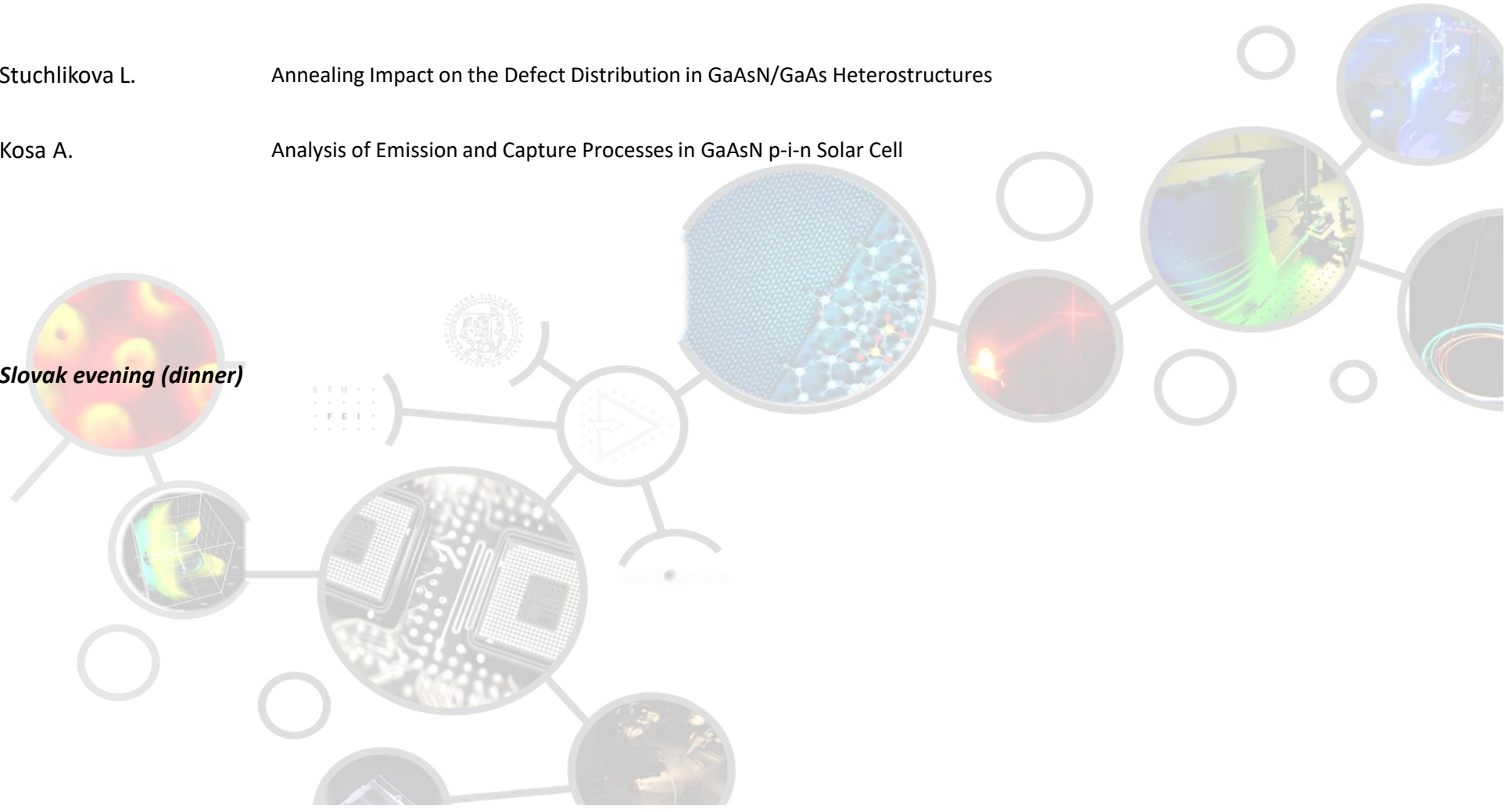
17:00 - 18:30

Wednesday, June 22

• Posters •

- 11 Stuchlikova L. Annealing Impact on the Defect Distribution in GaAsN/GaAs Heterostructures
- 12 Kosa A. Analysis of Emission and Capture Processes in GaAsN p-i-n Solar Cell

18:30 *Slovak evening (dinner)*



• **Optoelectronics and Photonics** •

- 08:20 **Zapien J. A.** **Advancing in-situ and in-operando optical characterization strategies for energy devices**
- 09:00 **Hinderhofer A.** **In-situ Structural Characterization of Lead Halide Perovskite Solar Cells**
- 09:40 **Hrabina J.** **Dissemination of precise frequencies over a free-space optical link**
- 10:00 **Miliaieva D.** **Electronic properties of HPHT nanodiamonds for photovoltaics**
- 10:20 **Novotny P.** **Special blazed gratings for spectral selectivity in CO2 lasers used in a DIAL detection system**
- 10:40 **Coffee break**

session 8

chair: **Stuchlíková L.**

Thursday, June 23

• **Semiconductor devices** •

11:00	Huran J.	Effect of electric field on the photoelectron emission properties of very thin carbon films prepared by electron beam-plasma vacuum deposition
11:20	Osvald J.	Anomalous intersection point of Schottky diodes i-v curves measured at different temperatures
11:40	Haško D.	Advanced methods for quantitative nanomechanical characterization of soft specimens
12:00	Chvala A.	Electro-Thermal Simulation Analysis and Optimization of Power IGBT under UIS Test Condition
12:20	<i>Conference closure</i>	
13:00	Lunch <i>Free social program</i>	

Friday, June 24

Departure on Friday after breakfast

