

# NGC2017 Program Draft

## September 18, Monday, Morning

### Summer school: Tutorials I

**Chairs: Grigory Dunaevskiy and William Petuskey**

- 9:00 am – Stephen Goodnick, Arizona State University, Tempe, Arizona, USA, Nanotechnology  
9:45 am Pathways to Next-Generation Photovoltaics
- 10:00 am – Yoshiro Hirayama, Tohoku University, Sendai, Japan, Nuclear Spin Related  
10:45 am Measurements for Semiconductor Quantum Systems
- 11:00 am – Robert Nemanich, Arizona State University, Phoenix, Arizona, USA  
11:45 pm Diamond: a Brilliant Wide Bandgap Semiconductor
- 12:00 am – Vladimir Yakubov, National Research Tomsk State University, Tomsk, Russia, Theory  
12:45 pm and Technology of Wave Vision

13:00 pm –  
2:00 pm

### Lunch and Networking

## September 18, Monday, Afternoon

### Summer school: Tutorials II

**Chairs: Yoshiro Hirayama and Bjorn Lussem**

- 2:00 pm – Francis Balestra, Grenoble Institute of Technology, Grenoble, France, NanoCMOS and  
2:45 pm Tunnel FETs for the end of the Roadmap (online presentation)
- 3:00 pm – Victor Bykov, NT-MDT, Zelenograd, Russia, Scanning Probe Technology for Surface  
3:45 pm Structures Characterizations: High resolution in Microscopy and Spectroscopy
- 4:00 pm – David Gilmer, Nantero, Austin, Texas, USA, Fundamentals of Oxide Resistive Random  
4:45 pm Access Memories (RRAM)
- 5:00 pm – Roman Kezerashvili, The City University of New York, New York, USA, Superfluidity  
5:45 pm and Bose-Einstein Condensation in Two-dimensional Nanomaterials

## September 19, Tuesday, Morning

**Summer school: Tutorials III**  
**Chairs: Stephen Goodnick and Robert Nemanich**

- 9:00 am – Marco Buongiorno Nardelli, University of North Texas, Denton, Texas, USA, High-throughput Materials Discovery and Development: Breakthroughs and Challenges in the Mapping of the Materials Genome (online presentation)  
10:00 am
- 10:00 am – Dominic Gervasio, University of Arizona, Tucson, Arizona, USA, Science and Technology Challenges in Solar Energy Generation and Energy Storage  
10:45 am
- 11:00 am – Vladimiro Mujica, Arizona State University, Tempe, Arizona, USA, Quantum Confinement Effects in Nanoelectronic Materials  
11:45 pm

**Nanotechnology in Space I**  
**Chairs: Victor Bykov and Anatoli Korkin**

- 9:00 am – Victor Bykov, NT-MDT, Zelenograd, Russia, Space Technologies and Analytical Systems  
9:30 am
- 9:30 am – Mikhail Mikhailov, Tomsk State University of Control Systems and Radioelectronics, Tomsk, Russia, Nanotechnology Application for Spacecraft Smart Coatings  
10:00 am
- 10:00 am – Anton Tyazhev, National Research Tomsk State University, Tomsk, Russia, Gamma Ray Detectors for Terrestrial and Space Applications  
10:30 am
- 10:30 am – Coffee Break and Networking  
11:00 am
- 11:00 am – Roman Kezerashvili, The City University of New York, New York, USA, Solar Sail Acceleration by Thermal Desorption and Temperature Restriction on Heliocentric Orbits  
11:30 am
- 11:30 am – Pavel Ananyev, GUN, Ltd, Moscow, Russia, Electro-Magnetic Cold Drilling for Lunar Mining  
12:00 pm
- 12:00 pm – **Lunch and Networking**  
2:00 pm

**September 19, Tuesday, Afternoon**

**Summer school: Tutorials IV**  
**Chairs: Roman Kezerashvili and Valentin Suslyaev**

- 2:00 pm – Mikhail Baklanov, North China University of Technology, Beijing, China, Interconnect Challenges of ULSI Devices Beyond 10 nm Technology Nodes (online presentation)  
2:45 pm
- 3:00 pm – Tina Ng, University of California San Diego, San Diego, California, USA, Additively printed Electronics for Sensing  
3:45 pm

4:00 pm – Björn Lüssem, Kent State University, Kent, Ohio, USA, Minority and Majority Currents in  
4:45 pm Organic Field-Effect Transistors

5:00 pm – Fred Roozeboom, Technische Universiteit Eindhoven, Eindhoven, Netherlands, Atomic  
5:45 pm Layer Processing: Basics, Materials, Processes and Applications (online presentation)

## **Nanotechnology in Space II**

**Chair: Victor Bykov**

2:00 pm – Alexander Shalumov, Research Institute ASONIKA, Moscow, Russia, Computational  
2:20 pm Modeling of External Impact on Electronic Devices

2:20 pm – Alexander Vorozhtsov, National research Tomsk state university, Tomsk, Russia,  
2:40 pm Nanoparticles for Applications in High Energy Materials and Light Alloys

2:40 pm – Aliya Prokofieva, Galaktika, Moscow, Russia, TBD  
3:00

3:00 pm – Coffee Break and Networking  
3:30 pm

3:30 pm – Round Table Discussions  
6:00 pm

## **September 20, Wednesday, Morning**

### **Optoelectronics, Photonics, and Plasmonics I**

**Chairs: Albert Nasibulin and Elena Semouchkina**

9:00 am – Ken-Ichi Ueda, Osaka University, Osaka, Japan, Thermal-Lens-Free Heat Capacitive  
9:30 am Active Mirror

9:30 am – Elena Semouchkina, Michigan Tech, Houghton, Michigan, USA, From Microwaves to  
10:00 am Optics: All Dielectric Solutions for Coordinate Transformation-Based Devices

10:00 am – Kodo Kawase, Nagoya University, Nagoya, Japan  
10:30 am THz Spectroscopic Imaging Using Optical Parametric Generator

10:30 am – Coffee Break and Networking  
11:00 am

11:00 am – Vladimir Pavelyev, Samara University, Samara, Russia, Silicon Diffractive Optics for  
11:30 pm THz Laser Radiation

11:30 am – Igor Dorofeev, National Research Tomsk State University, Tomsk, Russia, Quasi-optical  
12:00 am Resonator for Precision Measurements and NonDestructive Testing in Gigahertz and Terahertz Wavelength Ranges

## **Magnetic Materials and Devices**

**Chairs: Igor Shvets and Victor Tugushev**

- 9:00 am – Patrick Lenahan, Pennsylvania State University, University Park, Pennsylvania, USA  
9:30 am Spin Dependent Variable Range Hopping and Spin Dependent Charge Pumping in Metal- Insulator- Semiconductor Systems (online presentation)
- 9:30 am – Joerg Debus, Technical University of Dortmund, Dortmund, Germany, Magneto-optical  
10:00 am Effects of Nitrogen-vacancy Centers in Diamond Crystals
- 10:00 am – Victor Tugushev, National Research Center "Kurchatov Institute", Moscow, Russia,  
10:30 am Anomalous Hall Conductivity in 3D Magnetic Topological Insulator Based Nanostructures
- 10:30 am –  
11:00 am Coffee Break and Networking
- 11:00 am – Flavio Abreu Araujo, University Paris-Sud, Orsay Cedex, France, Dynamical  
11:30 am Neuromorphic Computing with Nanoscale Magnetic Oscillators
- 11:30 am – Geliia Karlova, Tomsk State University of Control Systems and Radioelectronics  
11:45 pm (TUSUR), Tomsk, Russia, Development of Phased Array Antenna Element for Active Magnetic Positioning System Based on Semiconductor Hall-Effect Sensors
- 11:45 pm – Igor Shvets, Tomsk State University, Tomsk, Russia, Intrinsic Spin Hall Response in  
12:00 pm Three-Dimensional Topological Insulator/Normal Insulator Heterostructures

12:00 pm –  
3:00 pm

### **Excursion and Lunch**

## **September 20, Wednesday, Afternoon**

### **Optoelectronics, Photonics, and Plasmonics II**

**Chairs: Pavle Radovanovic and Ken-Ichi Ueda**

- 3:00 pm – Sergey Maksimenko, Belarusian State University, Minsk, Belarus, Propagation and  
3:30 pm Generation of Electromagnetic Waves in Carbon Nanotubes and Graphene
- 3:30 pm – Yuriy Gladush, Skolkovo Institute of Science and Technology, Moscow, Russia, Polymer-  
4:00 pm free Films of Single-walled Carbon Nanotubes as a Saturable Absorbers for Fiber Lasers
- 4:00 pm – Pavle Radovanovic, University of Waterloo, Waterloo, Ontario, Canada, Tuning Plasmon  
4:30 pm Resonance of In<sub>2</sub>O<sub>3</sub> Nanocrystals Throughout Mid-Infrared: Dopant, Phase, and Electronic Structure Dependence
- 4:30 pm –  
5:00 pm Coffee Break and Networking
- 5:00 pm – Alexei Popov, Pushkov Institute of Terrestrial Magnetism, Ionosphere and Radio Wave  
5:30 pm Propagation, Troitsk, Russia, Parametric resonance and theory of Bragg waveguides

- 5:30 pm – Raul Rordriguez, Tomsk Polytechnic University, Tomsk, Russia, Optical Absorption at  
6:00 pm the Nanoscale
- 6:00 pm – Dzmitry Bychanok, Belarusian State University, Minsk, Belarus, Design of Carbon  
6:15 pm Nanotube-based Broadband Radar Absorber for Ka-band Frequency Range
- 6:15 pm – Alexander Plekhanov, Institute of Automation and Electrometry of the Siberian Branch  
6:30 pm of the Russian Academy of Sciences, Novosibirsk, Russia, Compact Planar Electro-  
optical Modulators based on Poled Chromophore-doped Polyimides
- 6:30 pm – Olga Sedelnikova, Nikolaev Institute of Inorganic Chemistry SB RAS, Novosibirsk,  
6:45 pm Russia, Effect of Interlayer Coupling on Plasmonic Properties of Twisted Bilayer  
Graphene
- 6:45 pm – Steponas Asmontas, Center for Physical Sciences and Technology, Vilnius, Lithuania,  
7:00 pm Peculiarities of Photovoltage Formation Across SI and GAAS p-n Junction under  
Illumination of Laser Radiation

### **Modeling and simulation**

**Chairs: Vladimiro Mujica and Vladimir Skripnyak**

- 3:00 pm – Vladimir Burtman, University of Utah, Salt Lake City, Utah, USA, Generalized Charge  
3:30 pm Transfer (GCT) Model for Analysis of Transport Phenomena in Molecular and DNA  
stacks (online presentation)
- 3:30 pm – Vladimiro Mujica, Arizona State University, Tempe, Arizona, USA, Chirality Effects in  
4:00 pm Molecular Electronics
- 4:00 pm – Sergey Beznosyuk, Altai State University, Barnaul, Russia, Quantum Mechanical  
4:30 pm Approaches to Computer Simulation Graphene-Metal Nanosystems
- 4:30 pm –  
5:00 pm Coffee Break and Networking
- 5:00 pm – Giacomo Giorgi, University of Perugia, Perugia, Italy, Hybrid Organic-Inorganic Halide  
5:30 pm Perovskites: Dimensionality vs. Applicability. A Theoretical Standpoint
- 5:30 pm – Alexander Kvashnin, Skolkovo Institute of Science and Technology, Moscow, Russia  
6:00 pm Computational materials discovery in various dimensionalities
- 6:00 pm – Roman Kezerashvili, The City University of New York, New York, USA, Trions in TMDC  
6:15 pm Monolayers: Faddeev equations and Hyperspherical Harmonics Approaches
- 6:15 pm – Olga Maslova, Altai State University, Barnaul, Russia, Computer Simulation of  
6:30 pm Graphene-Molybdenum Nanosized Sensor of Carbon Monoxide Molecules

### **September 21, Thursday, Morning**

#### **Energy Transformation and Storage**

**Chairs: Dominic Gervasio and Koichi Yamashita**

- 9:00 am – Stephen Goodnick, Arizona State University, Tempe, Arizona, USA, Nonequilibrium  
9:30 am Electron and Phonon Dynamics in Advanced Concept Solar Cells
- 9:30 am – Koichi Yamashita, University of Tokyo, Tokyo, Japan, Theoretical Study on Energy  
10:00 am Conversion Processes of Perovskite Solar Cells
- 10:00 am – Dominic Gervasio, University of Arizona, Tucson, Arizona, USA, Chemical Processing in  
10:30 am Molten Salts
- 10:30 am –  
11:00 am Coffee Break and Networking
- 11:00 am – Artem Kabanov, Samara University, Samara, Russia, Methods for Prediction of New  
11:15 am Perspective Materials for the Electrochemical Systems of Energy Storage
- 11:15 am – Alex Laikhtman, Holon Institute of Technology, Holon, Israel, Tungsten Disulfide  
11:30 am Nanoparticles as a Medium for Hydrogen Storage: Comparison of Hydrogenation  
Methods and Determination of Chemical Configuration
- 11:30 am – Lyubov Bulusheva, Nikolaev Institute of Inorganic Chemistry SB RAS, Novosibirsk,  
11:45 pm Russia, Li-ion Capacity of Coupled Graphene and Molybdenum Sulfide Materials
- 11:45 am – Sergii Sergiienko, National University of Science and Technology (MISI), Moscow,  
12:00 pm Russia, Structure and Transport Properties of the Spark Plasma Sintered Barium  
Cerate Based Proton Conductor

**Non-volatile Memory Devices**  
**Chairs: David Gilmer and Vladimir Gritsenko**

- 9:00 am – Yakov Roizin, TowerJazz, Migdal Haemek, Israel, Nonvolatile memories for IoT  
9:30 am applications
- 9:30 am – David Gilmer, Nantero, Austin, Texas, USA, NRAM: A Disruptive Carbon-Nanotube  
10:00 am Resistance-Change Memory
- 10:00 am – Vladimir Gritsenko, Rzanov Institute of Semiconductor Physics, Novosibirsk, Russia  
10:30 am The Charge Transport Mechanism and the Nature of Traps in Charge Trap Flash,  
ReRAM and FeRAM Devices
- 10:30 am –  
11:00 am Coffee Break and Networking
- 11:00 am – Sergei Koveshnikov, Institute of Microelectronics Technology Russian Academy of  
11:30 am Sciences, Chernogolovka, Russia, Fundamental Properties of Cross-bar Non-volatile  
RRAM Elements and their Integration for Low Energy System-on-chip Applications
- 11:30 am – Konstantin Egorov, Moscow Institute of Physics and Technology, Moscow, Russia,  
12:00 pm Plasma-Enhanced Atomic Layer Deposition of Oxygen Deficient TaO<sub>x</sub> Thin Films for  
Resistive Switching Memory Applications

## **Discovery Session: Interaction of Radiation with Matter and Image Recognition I**

**Chairs: Igor Dorofeev and Olga Kharapudchenko**

- 9:00 am – Rakhaf M.H. Douhan, Tomsk State University, Tomsk, Russia, Parameters of  
9:15 am Photodetectors with Ge-Si Quantum Dots
- 9:15 am – Sherin Berdybaeva, Tomsk State University, Tomsk, Russia, Fluorescence Sensing of  
9:30 am Nitroaromatic Compounds
- 9:30 am – Valentin Rodionov, Tomsk State University, Tomsk, Russia, Simulation of Spin  
9:45 am Configuration Changes in Nano-sized Manganese-Zinc Ferrite and Magnetite
- 9:45 am – Anastassiya Lozinskaya, Tomsk State University, Tomsk, Russia, Charge Carrier  
10:00 am Lifetime Determination in GaAs:Cr under Near-Surface Illumination
- 10:00 am – Alexandra Pavlova, Tomsk State University, Tomsk, Russia, Dielectric Properties of  
10:15 am Essential Oils at THz Frequency Range
- 10:15 am – Anastasiya Kachusova, Tomsk State University, Tomsk, Russia, A Comparison of the  
10:30 am Results of Measuring Permittivity Achievable with Coaxial and Cavity Perturbation  
Methods
- 10:30 am –  
11:00 am Coffee Break and Networking
- 11:00 am – Bair Tarbaev, Tomsk State University, Tomsk, Russia, Finding an Object in the Video  
11:15 am Stream.
- 11:15 am – Semen Kasatkin, Tomsk State University, Tomsk, Russia, The Methods of Pattern  
11:30 am Recognition.
- 11:30 am – Evgeniy Vayman, Tomsk State University, Tomsk, Russia, The Diffraction Hyperbole of  
11:45 am the Skin Layer
- 12:00 pm –  
2:00 pm **Lunch and Networking**

## **September 21, Thursday, Afternoon**

### **Carbon Based Materials in Electronics and Photonics**

**Chairs: Sergey Maksimenko and Vladimir Popov**

- 2:00 pm – Albert Nasibulin, Skolkovo Institute of Science and Technology, Moscow, Russia Single-  
2:30 pm walled Carbon Nanotubes: from Synthesis to Applications
- 2:30 pm – Robert Nemanich, Arizona State University, Phoenix, Arizona, USA, Defect Control in  
3:00 pm Diamond Epitaxy for High Temperature Electronics

- 3:00 pm – Georgy Fedorov, Moscow Institute of Physics and Technology, Moscow, Russia  
3:30 pm Graphene Based Nanostructures for Detecting Terahertz Radiation
- 3:30 pm –  
4:00 pm Coffee Break and Networking
- 4:00 pm – Elena Obraztsova, A.M. Prokhorov General Physics Institute of RAS, Moscow, Russia,  
4:30 pm New Materials Based on Filled Single-Wall Carbon Nanotubes
- 4:30 pm – Yutaka Ohno, Nagoya University, Nagoya, Japan  
5:00 pm Flexible Bio-electronics Based on Carbon Nanotube Thin Films
- 5:00 pm – Vladimir Popov, Rzhanov Institute of Semiconductor Physics, Novosibirsk, Russia,  
5:30 pm Diamond-Graphite-Diamond Heterostructures Produced by Implantation and HPHT  
Annealing for Lift-off Transfer and New Devices
- 5:30 pm – Sergey Makarov, Altai State University, Barnaul, Russia, Diamond-like Carbon Films  
6:00 pm

**Electronics Structure and Charge Transport**  
**Chairs: Steffen Duhm and Evgeny Gousev**

- 1:30 pm – Luca Larcher, University of Modena, Modena, Italy, Multiscale Modeling of Memristor  
2:00 pm Devices for Novel Memory and Logic System Architectures (online presentation)
- 2:00 pm – Hiroaki Bente, Nara Institute of Science and Technology, Nara, Japan, Nanoscale  
2:30 pm Mapping of Charge Transport Properties of Conjugated Polymer Films by Conducting  
Atomic Force Microscopy
- 2:30 pm – Satoshi Kera, Institute for Molecular Science, Okazaki, Japan, Tracking Charge  
3:00 pm Transport of Organic Semiconductor Material by Electronic Structure Measurement
- 3:00 pm – Oleg Tolbanov, National Research Tomsk State University, Tomsk, Russia, Electronics  
3:30 pm Properties of GaAs Crystals Containing Deep Nanoclusters
- 3:30 pm –  
4:00 pm Coffee Break and Networking
- 4:00 pm – Steffen Duhm, Soochow University, Suzhou, China, Vertical Adsorption Distances  
4:30 pm Impact Energetics at Organic-Metal Interfaces
- 4:30 pm – Axel Fischer, Technical University Dresden, Dresden, Germany, A Vertical Organic  
5:00 pm Transistor with Areal Current Densities in the kA/cm<sup>2</sup> Regime
- 5:00 pm – Oana Jurchescu, Wake Forest University, Winston-Salem, North Carolina, USA Charge  
5:30 pm Transport in Hybrid Perovskite Field-effect Transistors (online presentation)

**Discovery Session: Interaction of Radiation with Matter and Image Recognition II**  
**Chair: Alexander Badin, Olga Kharapudchenko**

- 2:00 pm – Aleksey Odod, Tomsk State University, Tomsk, Russia, OLED's Based Novel Metal-Organic Complexes with Berillium and Zink  
2:15 pm
- 2:15 pm – Kulshara Burumbaeva, Tomsk State University, Tomsk, Russia, Transition to the State of Free Excitons near the Fundamental Absorption Edge  
2:30 pm
- 2:30 pm – Viktor Shpilnoy, Tomsk State University, Tomsk, Russia, The Two-Channel Device for Study of Microwave Properties  
2:45 pm
- 2:45 pm – Mariya Didenko, Tomsk State University, Tomsk, Russia, The Decomposition Products of Atmospheric Pressure Plasma of Repetitive Pulsed Discharge in Apokamp  
3:30 pm
- 3:00 pm – Maksim Sokolov, Tomsk State University, Tomsk, Russia, Influence of Gradient Magnetic Fields on Dynamics of Human Brain  
3:15 pm

## **September 22, Friday, Morning**

### **Fabrication of Nanostructured Materials and Devices I**

**Chairs: Damir Islamov and Alexey Kovalgin**

- 9:00 am – Seunghyup Yoo, Korea Advanced Institute of Science and Technology, Daejeon, Korea  
9:30 am Polymer Gate Dielectrics Prepared by Initiated Chemical Vapor Deposition for Flexible Electronics on Various Soft Platforms (online presentation)
- 9:30 am – Alexey Kovalgin, University of Twente, Enschede, Netherlands, Hotwire-assisted  
10:00 am Atomic Layer Deposition of Pure Metals and Metal Nitrides
- 10:00 am – Tatiana Kopylova, Tomsk State University, Tomsk, Russia, Molecular Layer Epitaxy  
10:30 am Method for Molecular Nanoelectronics
- 10:30 am –  
11:00 am style="text-align: center;">Coffee Break and Networking
- 11:00 am – Alexander Okotrub, Nikolaev Institute of Inorganic Chemistry, Novosibirsk, Russia,  
11:30 am Multiwall Carbon Nanotube Forest: Synthesis, Structure and Applications
- 11:30 am – Kirill Lozovoy, Tomsk State University, Tomsk, Russia, Comparative Analysis of  
12:00 pm Germanium Quantum Dots Growth on Si(100), Si(111) and Sn/Si(100) Surfaces

### **Technology Innovations I**

**Chairs: Olga Babkina and Konstantin Belyakov**

- 9:00 am – Konstantin Belyakov, Tomsk State University, Tomsk, Russia, Ecosystem of  
9:30 am Innovations at the Tomsk State University
- 9:30 am – Evgeni Gousev, Qualcomm, San Jose, California, USA, Overcoming the High Power and  
10:00 am High Cost of Computer Vision

- 10:00 am – Alexander Fertman, Skolkovo Foundation, Moscow, Russia, Advanced Manufacturing:  
10:30 am Trends and Ideas for Small and Middle Size Business
- 10:30 am – Coffee Break and Networking  
11:00 am
- 11:00 am – William Petuskey, Arizona State University, Tempe, Arizona, USA, Accelerating  
11:30 am Materials Innovation and Implementation: What Strategies can be
- 11:30 am – Yuri Tkachenko, IP-Management, Nizhny Novgorod, Russia, Development,  
12:00 pm Management and Licensing Intellectual Property: There are more Money than Good  
Proposals (online presentation)

### **Discovery Session: Interaction of Radiation with Matter and Image Recognition III** **Chairs: Grigoriy Kuleshov, Elena Krasilova**

- 9:00 am – Tvardovskiy Aleksandr, Tomsk State University, Tomsk, Russia, Timed Finite State  
9:15 am Machines Test Derivation
- 9:15 am – Maksim Gromov, Tomsk State University, Tomsk, Russia, Toward Digital Expert  
9:30 am
- 9:30 am – Aleksandr Kireev, Tomsk State University, Tomsk, Russia, Anthropomorphic  
9:45 am Manipulator
- 9:45 am – Nikolaj Yudin, Tomsk State University, Tomsk, Russia, The Copper-vapor Laser with a  
10:00 am Pump efficiency of ~ 3% for Medicine
- 10:00 am – Andrey Laputenko, Tomsk State University, Tomsk, Russia, Testing Microcontroller  
10:15 am Based Cyber Physical Systems Using Timed Automata
- 10:15 am – Olesya Kuchinskaya, Tomsk State University, Tomsk, Russia, Position Control of Laser  
10:30 am Beams Multiple Filamentation on the Atmospheric Path
- 10:30 am – Coffee Break and Networking  
11:00 am

### **September 22, Friday, Afternoon**

#### **Fabrication of Nanostructured Materials and Devices II** **Chairs: Alexey Kovalgin and Tatyana Kopylova**

- 2:00 pm – William Petuskey, Arizona State University, Tempe, Arizona, USA, Morphology, Low-  
2:30 pm Temperature Fabrication of nano-Ceramics with New Functionality
- 2:30 pm – Damir Islamov, Institute of Semiconductor Physics, Novosibirsk, Russia, Influence of  
3:00 pm ALD Synthesis Conditions on the Trap Density in Thin Films of Hafnium Oxide

3:00 pm – Vyacheslav Timofeev, Rzhanov Institute of Semiconductor Physics, Novosibirsk, Russia, Morphology, Structure and Optical Properties of Semiconductor Films with GeSiSn Nanoislands and Strained Layers  
3:30 pm

3:30 pm – Coffee Break and Networking  
4:00 pm

4:00 pm – Emine Guneri, Erciyes University, Kayseri, Turkey The Structural, Optical and  
4:30 pm Electrical Properties of SnO<sub>2</sub> Nano thin Films Deposited By Spin Coating

4:30 pm – Felipe Perez Rodriguez, Benemerita Universidad Autonoma de Puebla, Puebla,  
5:00 pm Mexico, Magnetic Response of Fe and Ni Nanoparticles Embedded in Artificial SiO<sub>2</sub> Opals

5:00 pm – Arturo Rodríguez-Gómez, Universidad Nacional Autonoma de Mexico, Mexico, The  
5:30 pm auto-formation of silicon quantum dots embedded in a silicon nitride matrix on the

## **Technology Innovations II**

**Chairs: Olga Babkina and Konstantin Belyakov**

2:00 pm – Nikolay Evseev, Tomsk State University, Tomsk, Russia, Technology of High-purity  
2:15 pm Aluminum Nitride Production by Self-propagating High-temperature Synthesis

2:15 pm – Ruslan Gadirov, Tomsk State University, Tomsk, Russia, Inkjet Printing of Organic  
2:30 pm Materials and Devices

2:30 pm – Grigoriy Kuleshov, Tomsk State University, Tomsk, Russia, Broadband Protective  
2:45 pm Coating to Reduce the Level of Electromagnetic Radiation of the Gigahertz Range  
Supplimentary materials

2:45 pm – Roman Malakhov, ZOOM, Tomsk, Russia, Distributed Road Traffic Monitoring Network  
3:30 pm

3:00 pm – Rail Satarov, Tomsk State University, Tomsk, Russia, Positioning for People Behind  
3:15 pm Barriers in Real Time with System «DOZOR-400»

3:15 pm – Vladimir Yurin, Tomsk State University, Tomsk, Russia, Multiwave Laser Cutting of  
3:30 pm Thin Glasses

3:30 pm – Coffee Break and Networking  
4:00 pm

4:00 pm – Round Table on Technology Innovations Commercialization  
6:00 pm