

Conference Schedule

May 25, 2021 (Tuesday)

The whole day **Arrival, free time**

May 26, 2021 (Wednesday)

09:00 - 10:00 **On-site registration** (Higher School of Economics - St. Petersburg, site on Kantemirovskaya 3)

10:00 - 10:10 **Opening ceremony**

Alexey Zhukov (*Higher School of Economics - St. Petersburg, Russia*)

10:10 - 10:40 **MOVPE of III-N heterostructures:
how to get out of the imposed rut**

Wsevolod Lundin (*Ioffe Institute RAS, Russia*)

10:40 - 11:10 **Молекулярно-пучковая
эпитаксия полупроводниковых наногетероструктур
квантово-каскадных и вертикально-излучающих
лазеров и лазеры ближнего и среднего ИК-
диапазона на их основе**

Anton Egorov (*Connector Optics Ltd / Alferov University RAS, Russia*)

11:10 - 11:40 **Will it be possible to make room
temperature THz quantum cascade lasers?**

Rustam Khabibullin (*Mokerov Institute RAS, Russia*)

11:40 - 12:00 **Coffee Break**

12:00 - 12:30 **Гетероструктуры с квантовыми
ямами HgCdTe/CdHgTe для лазеров среднего ИК и
ТГц диапазонов**

Vladimir Gavrilenko (*Institute for Physics of Microstructures RAS, Russia*)

12:30 - 13:00 III-V nanowire synthesis and applications in optoelectronics: opportunities and challenges

Vladimir Dubrovskii (*St. Petersburg University, Russia*)

13:00 - 13:30 Towards international year of glass: from vessels to photonics

Andrey Lipovskii (*Peter the Great St. Petersburg Polytechnic University, Russia*)

13:30 - 13:45 Комплексная характеристизация широкого класса объектов с использованием современных методов сканирующей зондовой микроскопии

Краснобородько Сергей (*NT-MDT, Russia*)

13:45 - 14:30 Elevator speech session I

(Young scientists explain key idea of their posters in 1 minute presentation using 1-2 slides)

14:30 - 16:00 Lunch

16:00 - 18:00 Poster Session I

3. Nanophotonics, Spectroscopy, Microcavities, Optics, Plasmonics, Spintronics, Electro- and Magneto optics

5. Electric, Magnetic and Microwave Devices

6. Other Aspects of Nanotechnology

May 27, 2021 (Thursday)

09:00 - 10:00 On-site registration

10:00 - 10:30 Facilitated integrated photonics with strip-loaded waveguides

Matthieu Roussey (*University of Eastern Finland, Finland*)

10:30 - 11:00 Optical states on the surface of multilayer Bragg reflectors within the reflection band and new types of laser devices based on them

Nikolay Ledentsov (*VI Systems GmbH, Germany*)

**11:00 - 11:30 Monolithic integration of InP on
Si by direct epitaxial growth**

Elizaveta Semenova (*Technical University of Denmark, Denmark*)

11:30 - 12:00 Coffee Break

**12:00 - 12:30 Rolled-up III-V
nanoheterostructures for 3D functional elements and
devices**

Wang Qi (*Beijing University of Posts and Telecommunications, China*)

**12:30 - 13:00 Internal optical loss and light-
current characteristic in injection lasers**

Levon Asryan (*Virginia Polytechnic Institute and State University, USA*)

**13:00 - 13:15 Современные решения в
nanoфотонике от компании NKT Photonics**

Стариков Александр (*Научное оборудование, Россия*)

13:15 - 14:00 Elevator speech session II

(young scientists explain key idea of their posters in 1 minute presentation using 1-2 slides)

14:00 - 15:30 Lunch

15:30 - 17:30 Poster Session II

1. Crystal growth and structural properties of semiconductor materials and nanostructures
4. Nanobiotechnology, Biophysics and Biophotonics
2. Lasers, solar cells and other optoelectronic devices

**17:30 - 18:00 Closing remarks and award
ceremony**

Alexey Zhukov (*Higher School of Economics - St. Petersburg, Russia*)

May 28, 2021 (Friday)

The whole day

Departure, free time

Optional: Guided tour at the Int. Lab. of Quantum Optoelectronics, HSE – St Petersburg (11.00-12.00)

Participants of SPBOPEN2021 are invited to attend SPBPOEM as listeners (<https://www.spb-poem.com/>).

1. Crystal growth and structural properties of semiconductor materials and nanostructures

May 27, 2021

15:30 - 17:30 Poster Session II

1-1	Nikitina	Anna	Anatolievna	Termo induced functional material based on Mie-resonant silicon nanoparticles covered with polymer shell
1-2	Rudyk	Nikolay	Nikolaevich	Study of the effect of plasma frequency on the parameters of vertically oriented CNT
1-3	Акулов	Алексей	Александрович	Nanostructuring at oblique incidence deposition of cobalt
1-4	Борисов	Владислав	Игоревич	Synthesis of gold nanoparticles by the spark discharge method for ultraviolet plasmonics
1-5	Вакулов	Захар	Евгеньевич	Growth of lithium niobate thin films by PLD on SiO ₂ /Si structures
1-6	Гелдаш	Андрей	Александрович	Influence of magnetron sputtering modes on the parameters of ZnO:Ga films
1-7	Гращенко	Александр	Сергеевич	Method for the modification of graphite to a solid mixture of single crystals of silicon carbide and graphite
1-8	Грушевский	Егор	Алексеевич	The scalable production of high-quality nanographite by organic radical-assisted electrochemical exfoliation.
1-9	Данилина	Элеонора	Михайловна	Estimation of thermodynamic stability of isoperiodic epitaxial structures whith GaInSbAs and GaInAsP solid solutions
1-10	Духан	Денис	Дмитриевич	Study of In/GaAs nanodroplet formation in conditions of nonstationary supersaturation during droplet epitaxy
1-11	Еремеев	Юрий	Анатольевич	Stress relaxation mechanisms in hybrid SiC/Si(111) substrates grown by the atomic substitution method
1-12	Ерёменко	Михаил	Михайлович	Study of the initial stage of GaAs growth on FIB-modified silicon substrates
1-13	Жилова	Ольга	Владимировна	The Structure of a Multilayer Heterogeneous System [(Co40Fe40B20)34(SiO ₂)66/ZnO/SnO ₂]33
1-14	Житяева	Юлия	Юревна	Effect of the Young's modulus of polycrystalline silicon on

				the characteristics of MEMS accelerometer
1-15	Зинченко	Тимур	Олегович	Development of epitaxial PbS layers obtaining method for photoelectric transducers
1-16	Золотухин	Дмитрий	Сергеевич	Optical and structural properties of the GaAs heterostructures grown using AlGaAs superlattice buffer layer on compliant Si(100) substrates with the preformed porous-Si (por-Si) layer
1-17	Гридчин	Владислав	Олегович	Core-shell InGaN nanowires on Si substrates: MBE growth and physical properties
1-18	Кириченко	Данил	Владимирович	Effect of the ultra-low arsenic flux on characteristics of In(As) nanostructures formed during droplet epitaxy
1-19	Коваль	Ольга	Юрьевна	Quantitative analysis of metastable wurtzite phase into the self-catalyzed GaP NWs
1-20	Корнюшин	Денис	Владимирович	Laser sintering of oxidized copper nanoparticles deposited by dry aerosol printing
1-21	Кузнецов	Юрий	Михайлович	Method for β -FeSi ₂ thermoelectric films fabrication by pulsed laser deposition in vacuum
1-22	Куимов	Илья	Михайлович	The dispersion of flexural modes in the borophene lattice
1-23	Куксин	Артем	Викторович	Electrically conductive CNT networks formed by laser
1-24	Курбатов	Сергей	Валерьевич	Fabrication technique of 3D all solid-state thin film lithiumion batteries
1-25	Пономарев	Роман	Сергеевич	Near-surface layer dislocation density of lithium niobite single crystal wafers
1-26	Масталиева	Виктория	Анатольевна	Study of nonlinear optical phenomena in silicon nanowires
1-27	Махмуд-Ахунов	Марат	Юсупович	Nanostructured electrodes for supercapacitors
1-28	Меркулова	Ирина	Евгеньевна	Study of annealing temperature effects on aluminum-induced crystallization of a-SiO _x thin films
1-29	Мороз	Алексей	Юрьевич	Laser-induced optical nonlinearity in a Li-rich glass
1-30	Стороженко	Виктория	Юрьевна	TiO ₂ -SnO ₂ thin films prepared by new pyrolysis solid-phase method
1-31	Муратова	Екатерина	Николаевна	Investigation of the features of the porous morphology of anodic alumina films at the initial stage of anodization
1-32	Низамеев	Ирек	Рашатович	The influence of the surface density of oriented nickel networks on the conducting electrode's optical transparency
1-33	Низамеева	Гулия	Ривалевна	Transmission spectra of transparent electrodes based on oriented platinum nanowires at various concentrations of the metal used
1-34	Никитина	Лариса	Сергеевна	Investigation of the effect of annealing on Si(001) substrate modified by Ga+ focused ion beam
1-35	Никольская	Алена	Андреевна	Study of the 9R-Si hexagonal phase formation with variations in the synthesis conditions
1-36	Нифталиева	Валерия	Владимировна	Application of graphene structures formed on silicon carbide substrates as elements of field emission devices
1-37	Панков	Сергей	Юрьевич	The structure and optical properties of the ZnO/SnO multilayered system
1-38	Панов	Дмитрий	Юрьевич	Investigation of gallium oxide crystals depending on growth conditions
1-39	Панченко	Иван	Викторович	Research of FIB local milling processes for creation of nanosized field emission structures
1-40	Пермякова	Ольга	Олеговна	Modelling electroforming process under constant bias conditions
1-41	Резван	Алексей	Анатольевич	Plasma surface treatment of local modify Si plates
1-42	Резник	Родион	романович	MBE growth and properties of III-V nanowires with quantum dots
1-43	Рочас	Станислав	Станиславович	Wafer fusion technique features for efficient and effective bonding of A3B5 materials
1-44	Рыбин	Владислав	Витальевич	Influence of ultrasonic treatment on the change of

				monocrystalline silicon defective region
1-45	Рябко	Андрей	Андреевич	ZnO nanorods coating modified with AgInS ₂ quantum dots
1-46	Сигаев	Александр	Петрович	Effects of plasma treatment parameters on the adsorption properties of tin dioxide-based nanomaterials
1-47	Спиридовонов	Владислав	Алексеевич	Growth of bulk (Al _x Ga _{1-x}) ₂ O ₃ crystals from melts using the Czochralski method and study of their physical properties
1-48	Терпицкий	Алексей	Николаевич	MBE growth of AlGaAs/Ge/AlGaAs core-shell nanowire
1-49	Уваров	Александр	Вячеславович	Conformality of a-Si:H deposited by low temperature PECVD for solar cells application
1-50	Федина	Сергей	Викторович	Self-consistent modeling of MBE self-catalyzed GaAs nanowire growth
1-51	Хубецов	Александр	Андреевич	Effect of Yb ₃₊ -doping level on the structure and spectroscopic properties of ZnO optical ceramics
1-52	Хузин	Артур	Альбертович	Hybrid molecules based on fullerene C ₆₀ and fulgimides - promising molecular switches
1-53	Черненко	Наталия	Евгеньевна	The influence of temperature and arsenic molecular form at crystallization stage on the InAs nanostructure growth during droplet epitaxy
1-54	Шандыба	Никита	Андреевич	Effect of wet chemical treatment on the properties of GaAs FIB-modified surface
1-55	Шиховцов	Иван	Андреевич	Study of electrophysical and resistive switching parameters of nanocrystalline vanadium oxide films
1-56	Шубина	Ксения	Юрьевна	Separation of III-N layers from silicon substrates by KOH etching
1-57	Воронцов	Владислав	Алексеевич	Investigation of Resistive Switching in Ag/Ge/Si(001) Stack by Conductive Atomic Force Microscopy
1-58	Надоян	Ирина	Валерьевна	Nanoobject mass measurement using the node displacement of the second harmonic of the nanomechanical resonator
1-59	Глухенькая	Виктория	Борисовна	Local structural rearrangements in Ge ₂ Sb ₂ Te ₅ thin films under thermal crystallization
1-60	Конев	Данил	Викторович	Magnetron sputtered TiO ₂ with metal NPs for plasmonic applications
1-61	Кошелев	Александр	Владимирович	Production of upconversion BaY ₂ F ₈ :Yb, Er nanoparticles by high-energy milling for photonic and biomedical applications
1-62	Лянгузов	Николай	Владимирович	Catalytic growth of vertically aligned carbon nanotubes via chemical vapor deposition
1-63	Толкач	Никита	Михайлович	Raman analysis of the crystallinity degree for the local regions in Ge ₂ Sb ₂ Te ₅ films after laser exposure at different parameters

2. Lasers, solar cells and other optoelectronic devices

May 27, 2021

15:30 - 17:30 Poster Session II

2-1	Baranov	Artem	Igorevich	The properties of interface between a-Si:H and silicon nanowires formed by cryogenic dry etching
2-2	Boudjemila	Linda		Feature of degradation of silicon-based solar photovoltaic cells
2-3	Mukhangali	Sungat		Processing and characterization of GaP nanowires encapsulated into a PDMS large-scale membrane for flexible optoelectronics
2-4	Абдурахманова	Софья	Рустамовна	Method development to secure the stability of the parameters of pulsed and continuous radiation in laser systems with semiconductor pumping

2-5	Бадильо	Пабло	Даниэль	Surface reconstruction post-processing method for 3Dscanned objects
2-6	Ведь	Михаил	Владиславович	Magnetoresistive current driven light-emitting diode
2-7	Дегтярева	Светлана	Андреевна	Development of visual display and data transmission system for patients with chronic disorders of consciousness
2-8	Жмыхов	Вадим	Юрьевич	Optical properties of single crystals of BaF ₂ – SrF ₂ – ErF ₃ solid solutions
2-9	Иванов	Антон	Евгеньевич	A comprehensive study of current-crowding effect in high power vertical AlInGaN LEDs under high pulsed current
2-10	Камарчук	Анна	Владимировна	Optimization of the profile and material of wire contacts for an IR photodetector
2-11	Кияницын	Сергей	Юрьевич	Computer simulations of solar cells based on silicon/boron phosphide selective contacts
2-12	Кочетков	Федор	Михайлович	Stretchable transparent light-emitting diode membranes based on multiple quantum well InGaN microwires and carbon nanotubes
2-13	Кудряшов	Дмитрий	Александрович	Optimization of p-aSi:H/p-Si ohmic contact for solar cells
2-14	Логунов	Семён	Эдуардович	Three-component magnetic field monitoring system for autonomous space devices
2-15	Максимова	Алина	Андреевна	Study of GaP/Si electron-selective contact deposited by plasma
2-16	Мехтиев	Эл	Эльчин	Polarization control algorithm for QKD systems
2-17	Муретова	Мария	Евгеньевна	Asymmetric barrier layers design for 980 nm diode laser
2-18	Петренко	Артем	Александрович	Random bit generator on quantum dot micropillar lasers
2-19	Писаренко	Иван	Вадимович	Numerical simulation of transients in AlInGaN photodetector with controlled relocation
2-20	Ракитина	Анастасия	Андреевна	Simulation of double-junction III-phosphides/silicon solar cells
2-21	Раудик	Сергей	Анатольевич	Numerical modeling of non-planar GaN LED with CNT top contact
2-22	Реутов	Алексей	Алексеевич	Photon counting statistics with imperfect detectors
2-23	Ромашкин	Алексей	Валентинович	Spray deposited thin uniform NiO/Spiro-OMeTAD composite hole transport layer with top carbon nanotube layer
2-24	Рудавин	Никита	Владимирович	QKD key generation control protocol
2-25	Семакова	Антонина	Александровна	Temperature dependence of the optoelectronic properties LED heterostructures with a staggered type II InAsSb/InAsSbP heterojunction
2-26	Тальнишних	Надежда	Андреевна	Several processes participating in a decrease and the droop of external quantum efficiency in green InGaN/GaN MQW structures
2-27	Тойкка	Андрей	Сергеевич	Laser treatment of ITO thin films with Carbon Nanotubes for Liquid Crystal Devices
2-28	Фролов	Илья	Владимирович	Investigation of the dynamic parameters of electroluminescence in different parts of the spectrum in local regions of the light-emitting heterostructure
2-29	Шишкина	Дарья	Александровна	Photovoltaic characteristics of structures with porous silicon obtained by various technological plans
2-30	Шишкин	Иван	Александрович	Simulation of nanowires structures optical properties
2-31	Артеев	Дмитрий	Сергеевич	Determination of hole diffusion length in n-GaN
2-32	Макаров	Михаил	Эрнстович	Numerical simulation of effective light transmission through a photonic memory cell
2-33	Рочас	Станислав	Станиславович	1.3 μm vertical-cavity surface-emitting lasers based on InGaAs/InGaAlAs superlattice
2-34	Самарцев	Илья	Владимирович	Photosensitive heterostructure for wavelength up to 1.3 μm with digital metamorphic buffer on GaAs
2-35	Корнышов	Григорий	Олегович	Focused ion beam milling of ridge waveguides of edge-emitting semiconductor lasers

3. Nanophotonics, Spectroscopy, Microcavities, Optics, Plasmonics

May 26, 2021

16:00 - 18:00 Poster Session I

3-1	Рыбалко	Дмитрий	Александрович	Selectively excited photoluminescence spectroscopy of InAs/InGaAs/GaAs quantum dot arrays in 20-200 °K temperature range
3-2	Алай	Петр	Александрович	Optical properties of plasmonic metal nanoparticles on GaN surface
3-3	Андреев	Дмитрий	Павлович	Fiber Optic Attenuator
3-4	Андрюшкин	Владислав	Васильевич	Influence of low temperatures and thermal annealing on the optical properties of InGaPAs quantum dots
3-5	Бабаев	Антон	Анатольевич	The origin of PL decay in QDs-rGO system
3-6	Бабкина	Анастасия	Николаевна	Mn ⁴⁺ concentration effect on spectral properties of lithiumgermanate glass-ceramics
3-7	Бабухин	Данила	Валерьевич	Unambiguous state discrimination and joint measurement attacks on passive side channel of the light source in BB84 decoy-state protocol
3-8	Баева	Мария	Григорьевна	Encapsulation of Recrystallized Inorganic Perovskite Quantum Dots in Nonwoven Fluoropolymer Fibers
3-9	Бастракова	Марина	Валерьевна	Microwave transport in a single-photon detector based on an array of Josephson cells
3-10	Бенимецкий	Фёдор	Анатольевич	Exciton-polaritons in planar dielectric waveguides integrated with WSe ₂ monolayer
3-11	Беспалова	Полина	Георгиевна	SYNTHESIS AND STUDYING PROPERTIES OF THE GNP@FeO _x STRUCTURE
3-12	Бессонова	Ирина	Геннадьевна	Tunable laser induced periodic surface structures in Ge ₂ Sb ₂ Te ₅ thin films
3-13	Васильева	Анастасия	Валерьевна	Identification of pigments of Russian icons by means of X-ray fluorescence spectroscopy
3-14	Венедиктов	Илия	Олегович	Performance of microheaters for tunable on-chip interferometer
3-15	Викторов	Евгений	Александрович	Photoionization of polarized xenon atoms
3-16	Волокитина	Анна	Андреевна	Polarized spectroscopy of electric and magnetic dipole transitions of Europium (III) ions in C ₂ sites
3-17	Высоких	Юрий	Евгеньевич	Crystallization of bi-layers bi-substituted iron films
3-18	Гаврилович	Арина	Альбертовна	Passive decoy-state quantum key distribution with imperfect source
3-19	Гилев	Павел	Андреевич	Quantum error correction for quantum image transmission algorithm
3-20	Голтаев	Александр	Сергеевич	Investigation of a single-photon hybrid emitting system based on nanodiamonds with NV-centers integrated with GaP NWs
3-21	Голышев	Дмитрий	Петрович	Application of the evolutionary algorithm for fluorescence decay analysis
3-22	Грязнова	Екатерина	Михайловна	On the possibility of using the optical method for express quality control of fruits
3-23	Гуреева	Ирэна	Михайловна	The development of an optical system for lighting various rooms with sunlight
3-24	Давыдов	Максим	Николаевич	On necessity for analytical solution of the Bloch equations for nuclear magnetic resonance signals at condition express control of liquid medium
3-25	Рахманова	Гульнаز	Раифовна	Four-spin chiral interactions in D _{3h} magnet
3-26	Дмитриева	Диана	Сергеевна	Fiber-optic sensor for remote monitoring the γ -radiation of various powers

3-27	Добрецова	Елена	Анатольевна	Growth and Optical Properties of The Bixbyite-type Thuliumdoped Yttrium Scandate
3-28	Доможирова	Александра	Николаевна	Electrical resistivity, magnetotransport and optical properties of WTe ₂ single crystal before and after quenching
3-29	Дуплинский	Алескей	Валерьевич	Star calibration of the single-photon receiver for satellite-toground QKD
3-30	Елманова	Анна	Валерьевна	Characterization of telecom focusing grating couplers in the first and second diffraction order
3-31	Еремеев	Кирилл	Николаевич	Structure and spectral properties of Fe:ZnAl ₂ O ₄ transparent glass-ceramic and ceramic
3-32	Ермолаев	Артур	Анатольевич	Features of the fiber-optics data system using optical solitons
3-33	Иванина	Александра	Игоревна	Simulation of the photonic nanojet effect for Raman scattering enhancement in the diagnostics of oxide films
3-34	Квицинский	Анатолий	Геннадьевич	Polarization-sensitive terahertz spectroscopy of grapheme nanostructures
3-35	Комракова	София	Андреевна	Thermo-optical properties of nanophotonic devices with carbon nanotube films
3-36	Кривенко	Юрий	Евгеньевич	Traffic interception in fiber optical video-systems
3-37	Кулаченков	Никита	Константинович	MOF-based non-linear optical composite
3-38	Лубянкина	Екатерина	Андреевна	Peculiarities of ion-exchange in poled glasses
3-39	Лытаев	Александр	Алексеевич	Computation of optical waveguide interaction for quantum gates implementation
3-40	Макеев	Сергей	Сергеевич	Features of spectral analysis of nuclear magnetic resonance signal for express-control of hydrocarbon media
3-41	Матросова	Александра	Сергеевна	Organic phosphor based fiber-optic sensor for detection of UV radiation
3-42	Машинский	Константин	Викторович	Tuning of weak plasmon mode radiation damping in grapheme structure with asymmetric unit cell
3-43	Михайлова	Татьяна	Владиславовна	Magneto-Optical Spectra of Magnetic Photonic Crystal with Composite (SiO ₂ -Au) Layer
3-44	Хорин	Павел	Алексеевич	Neural networks application to determine the types and magnitude of aberrations from the pattern of the point spread function out of the focal plane
3-45	Никитков	Кирилл	Андреевич	The study of molecular composition in biomimetic interface of biocomposite/dentin
3-46	Николаева	Анна	Андреевна	Analogue of the Kerker effect for spontaneous parametric down-conversion process in dielectric nanoparticle
3-47	Осьченко	Алина	Анатольевна	Mass spectrometry analysis of C-dots produced by femtosecond laser irradiation of L-lysine film
3-48	Песняков	Владислав	Викторович	Absorption properties of bromide photo-thermo-refractive glasses doped with Ytterbium
3-49	Пилипова	Валерия	Михайловна	Development of a fiber-optic system for testing instruments for monitoring nuclear power plants
3-50	Пирогов	Владимир	Владимирович	Numerical simulation of optical coupling between a microring resonator and a directly connected straight waveguide
3-51	Поповский	Никита	Игоревич	Features of the construction of photonic integrated circuits for communication systems
3-52	Проходцов	Алексей	Игоревич	Thermo-optical properties of silicon nitride Mach-Zehnder interferometer for the on-chip quantum random number generator
3-53	Пчелкин	Григорий	Александрович	Control of the mode composition of optical radiation in a microstructured fiber
3-54	Родин	Сергей	Алексеевич	Features of using a shutter-type modulator in fiber-optic systems
3-55	Розенблит	Алина	Дмитриевна	Two-particle topological states induced by quantum statistics and their electric circuit emulation
3-56	Яковлев	Захар	Александрович	Interlayer Exciton-Polaron in Atom-thin Bilayers

3-57	Савельев	Дмитрий	Андреевич	The investigation of the features optical vortices focusing by ring gratings with the variable height using high-performance computer systems
3-58	Савин	Данила	Дмитриевич	Development of a light control system using an optical aerial information transmission system
3-59	Святкина	Виталия	Игоревна	Use of differential refractometer for condition control of flowing liquid
3-60	Седых	Ксения	Олеговна	Discrete optical Zeno effect for polarization of light
3-61	Скурлов	Иван	Дмитриевич	Temperature-dependent near-IR photoluminescence of lead selenide nanoplatelets
3-62	Тихонов	Сергей	Сергеевич	Investigation of laser and thermal sintering processes of silver nanoparticles agglomerates synthesized by spark discharge
3-63	Томилин	Сергей	Владимирович	Phase Detection of Surface Plasmon Resonance
3-64	Томилина	Ольга	Андреевна	Ellipsometry of plasmonic nanostructures
3-65	Фирсов	Дмитрий	Дмитриевич	Characterization of In(Ga,Al)As/GaAs metamorphic heterostructures for mid-IR emitters by FTIR photoreflectance spectroscopy
3-66	Хабаров	Кирилл	Михайлович	Formation of planar plasmon microstructures by dry aerosol printing
3-67	Харченко	Антон	Александрович	Bimodality in the electroluminescence spectra of "quantum well-dots" InGaAs nanostructures
3-68	Цыкарева	Юлиана	Витальевна	A simple representation of the quantum entanglement of coupled harmonic oscillators in terms of the reflection coefficient
3-69	Чехонин	Игорь	Анатольевич	Coherent tunable diffractive pulse shaping and generation of the 0π -pulse in Rb vapor
3-70	Шишкина	Дарья	Александровна	Simulating the spectral characteristics of reflection in planar porous structures with antireflection coatings ZnS/DyF3
3-71	Школдин	Виталий	Алексеевич	STM Light Emission and I(V) study of single gold nanoantenna at ultra hight vacuum
3-72	Яковлев	Николай	Викторович	Effect of the FWM and SRS on the fiber optics wavelength multiplexing system parameters
3-73	Пимахина	Елена	Владимировна	Raman spectroscopy and optical microscopy of medical infusion solutions for parenteral nutrition
3-74	Бобылев	Даниил	Артурович	Photonic topological states controlled by hybrid dipole resonances
3-75	Исаков	Филипп	Андреевич	On need to control of the upper edge prism state in a flow refractometer for measurements with error a less than 10-4

4. Nanobiotechnology, Biophysics and Biophotonics

May 27, 2021

15:30 - 17:30 Poster Session II

4-1	Абелит	Анна	Андреевна	High-detailed electro- and optical investigation of the cell/toxin interaction
4-2	Антипенко	Владимир	Викторович	Influence of applied power on tissue impedance for carrying out radiofrequency ablation of biological tissue and determination the transmurality effect achieving moment
4-3	Богданов	Алексей	Михайлович	BrUSLEE and his shadow: two cryogenically stable emissive states within a GFP variant
4-4	Богданов	Андрей	Александрович	Investigation of the cytotoxicity of silver nitrate and silvercysteine nanocomplexes
4-5	Вронская	Анна	Алексеевна	Identification of new silk-like protein from <i>B.magister</i> and development of functional materials based on it
4-6	Герасимов	Евгений	Игоревич	The effect of optogenetic activation of astrocytes on the hippocampal neurons activity

4-7	Гулин	Александр	Андреевич	Chemical composition of extracellular vesicles of mesenchymal stromal cells: TOF-SIMS and BCARS approach
4-8	Демина	Полина	Андреевна	Blood vessels of inflammation visualization <i>in vivo</i> via colominic acid decorated upconversion nanoparticles
4-9	Егорова	Анастасия	Васильевна	Diagnostic optical complex for non-invasive analysis of the oxygen status of human tissues
4-10	Зубик	Александра	Николаевна	Microfluidic chips for real-time PCR
4-11	Клименко	Владимир	Витальевич	Combination of photodynamic therapy with radachlorin and cytostatic chemotherapy with cisplatin or doxorubicin reduced resistance of K562 and Hela human cell lines
4-12	Колпаков	Владимир	Николаевич	In vitro model of structural and functional recovery of brain injury in microfluidic chip
4-13	Кондукторова	Анастасия	Алексеевна	Studying of the supramolecularly ordered layered structure of chitosan gel films
4-14	Краснопевцева	Марина	Константиновна	Time-resolved polarized fluorescence decay in FAD in watermethanol solutions
4-15	Левин	Алексей	Игоревич	Application of an automated complex resistance and phase difference measuring method for rheographic studies in the diagnosis of human cardiovascular system diseases
4-16	Логинова	Екатерина	Максимовна	Medical applications of porous silicon
4-17	Мазинг	Мария	Сергеевна	Application of the Kohonen neural network for monitoring tissue oxygen supply under hypoxic conditions
4-18	Малинкина	Ольга	Николаевна	Influence of the nature of a polysaccharide on the surfacemorphological and physical-mechanical properties of sol-gel plates
4-19	Мельникова	Надежда	Михайловна	Thermostability of lysozyme amyloid fibrils
4-20	Наумов	Евгений	Игоревич	Study of pressure and finger actuated multilayer microfluidic devices, made by lithographic and 3d printed molds.
4-21	Резник	Владислав	Сергеевич	Using of «bubble sensors» to control the quality of sequencing by the Illumina / Solexa method
4-22	Ронишенко	Богдан	Вячеславович	Tunable modification of water-soluble semiconductor QDs for bioconjugation
4-23	Сочилина	Анастасия	Владимировна	Vinyl group content as a tool to govern the properties of modified hyaluronic acid for scaffold fabrication via photoinduced crosslinking
4-24	Сырчина	Мария	Сергеевна	Femtosecond laser synthesis and comparative analysis of fluorescent carbon dots from L-lysine aqueous solution
4-25	Тертеров	Иван	Николаевич	Computational modeling of schedule-specific chemotherapy outcomes in mouse tumor models
4-26	Тюшкевич	Андрей	Андреевич	Investigation of the polymerization rate of hydrogel microparticles in microfluidic device
4-27	Фатхутдинова	Ландыш	Ильшатовна	Synthesis of Calcium Carbonate Particles with Different Geometries
4-28	Федоров	Евгений	Георгиевич	Analysis of the limiting behavior of a biological neurons system with delay
4-29	Юденко	Анна	Николаевна	A split flavin binding fluorescent reporter to detect proteinprotein interactions
4-30	Пимахина	Елена	Владимировна	Comparison of the effectiveness of blood transfusion and reinfusion

5. Electric, Magnetic and Microwave Devices

May 26, 2021

16:00 - 18:00

Poster Session I

5-1	Арсенов	Павел	Владимирович	Double slot aerosol jet printed antenna for X-band applications
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5-2	Беликов	Иван	Игоревич	Terahertz Detector Utilizing a SiO ₂ /Graphene/SiO ₂ Sandwich Suspended at the Feed of a Planar Antenna
5-3	Валов	Антон	Петрович	The use of digital data processing to improve the metrological characteristics of the rubidium frequency standard
5-4	Водопьянов	Максим	Алексеевич	Method for reducing phase fluctuations of a precision frequency response meter for microwave quantum generators
5-5	Волик	Артем	Вячеславович	Improving the accuracy of the method for measuring the electrophysical parameters of soft magnetic materials
5-6	Гайдученко	Игорь	Андреевич	Graphene FET detector as THz mixer
5-7	Гревцева	Анна	Сергеевна	Features of the formation of the frequency of the microwave excitation signal in the quantum frequency standard on rubidium atoms - 87
5-8	Жуков	Михаил	Валерьевич	Scanning ion-conductance microscope with modulation of the sample position along the Z-coordinate and separate Z-axial and lateral (X, Y) scanning
5-9	Ильина	Марина	Владимировна	The influence of the lower electrode materials of aligned carbon nanotubes on their piezoelectric response
5-10	Кидяев	Николай	Филиппович	Research and calculation of dynamic characteristics of a microelectromechanical device
5-11	Княгинин	Дмитрий	Александрович	Study of characteristics of n-p-n type bipolar power transistor in small-sized metalpolymeric package type SOT-89
5-12	Кухтяева	Ольга	Борисовна	GaN power IC normally-on and normally-off transistors technology and simulation
5-13	Листюхин	Владислав	Александрович	Information and measuring system for monitoring the parameters of overhead power lines
5-14	Лукашев	Никита	Александрович	Modified quantum frequency standard on Hg-199 ions
5-15	Мороз	Ангелина	Валентиновна	Development of a fiber-optic microwave signal transmission system for an X-band receiving module with dual frequency conversion
5-16	Мязин	Никита	Сергеевич	New nuclear magnetic resonance magnetometer design for studying variations of the mid-field magnetic strength
5-17	Пестова	Анастасия	Николаевна	Four-point probe stand for magnetoresistance measurement of unpatterned wafers
5-18	Приходько	Анатолий	Николаевич	Towards Multipixel THz Schottky Diode Detector with a Single RF Output Line
5-19	Савельев	Дмитрий	Николаевич	The scalable production of high-quality nanographite by organic radical-assisted electrochemical exfoliation
5-20	Севостьянов	Дмитрий	Юрьевич	Research Of Dynamic Characteristics Of A Three-axis Micromechanical Gyroscope-Accelerometer
5-21	Седых	Сергей	Владимирович	Silicon carbide of 4H-SiC type Schottky diode current-voltage characteristics in small-sized type metal-polymeric package SOT-89
5-22	Семянникова	Алена	Александровна	Structural, magnetic and electrical properties of the Co ₂ MnZ (Z = Al, Si, Ga, Ge) Heusler compounds – promising magnetic materials for spintronics
5-23	Стороженко	Виктория	Юрьевна	Electrophysical properties of SnO ₂ -ZnO thin films prepared by sol-gel method
5-24	Тихомиров	Владимир	Геннадьевич	Monolithic transistor switch for microwave radiometry
5-25	Ткаченко	Алексей	Вячеславович	Design and analysis of the inline RF MEMS switch for application in 5G mobile networks
5-26	Уваров	Илья	Владимирович	A seesaw-type MEMS switch with enhanced contact force: the first results
5-27	Шлепаков	Павел	Сергеевич	Design and simulation of the compact MEMS energy harvester based on aluminium nitride
5-28	Шугуров	Константин	Юрьевич	Single GaN nanowires for high current commutation devices

5-29	Шумилин	Александр	Иванович	Supercapacitor with electrodes based on high-purity singlewalled carbon nanotubes
5-30	Энис	Яков	Борисович	Analysis of the possibility of creating an acoustic velocity sensor using GaN epitaxial films
5-31	Джиникашвили	Александр	Джумберович	LK-5 glass surface modification by glass blowing method based on microsystem technology
5-32	Солдатенкова	Мария	Дмитриевна	Study of thermal relaxation in thin NbN films by noise thermometry
5-33	Тарасова	Оксана	Сергеевна	Materials absorbing electromagnetic radiation with resistive coating (Co40Fe40B20)X(SiO2)100-X
5-34	Ван	Дин		Prospective directions for the development of microwave frequency standards for satellite navigation systems

6. Other Aspects of Nanotechnology

May 26, 2021

16:00 - 18:00 Poster Session I

6-1	Fomin	Aleksandr	Aleksandrovich	Structure and characteristics of a thin-layer "aluminum - carbon nanotubes" sandwich structure
6-2	Божедомова	Анастасия		Investigation of the thermal properties of In-doped Ge2Sb2Te5 materials for phase change memory application
6-3	Васильева	Ольга	Васильевна	Varieties of carbon nanostructures in a flame
6-4	Войко	Алексей	Владимирович	Enhancing the physical and mechanical properties of tantalum by induction chemical thermal treatment
6-5	Гавриков	Максим	Владимирович	Investigation of the effect of temperature on the energy spectrum of indium antimonide quantum dots
6-6	Гурьева	Светлана	Анатольевна	Solid-state phase transition in n-alkanes of different parity
6-7	Денисенко	Марк	Анатольевич	Design of the Two-Axis Micromachined Gyroscope
6-8	Дрязгов	Михаил	Александрович	Determination of measurement fidelity for a superconducting photon-number resolving detector with micron-wide strips
6-9	Егоров	Иван	Святославович	Study of the welded joint of VT1-0 titanium with 1.3343 steel
6-10	Захаров	Родион	Константинович	Entanglement of two dipole-coupled qubits induced by a thermal field of one-mode lossless cavity with Kerr medium
6-11	Кицюк	Евгений	Павлович	Electrophoresis of CNT-RuO2 composite for planar supercapacitor
6-12	Клейманов	Роман	Валерьевич	Lithium aluminosilicate glass-ceramics for low-temperature anodic sealing of MEMS sensors
6-13	Козловский	Александр	Валерьевич	Dependence of field-effect biosensor sensitivity on photoinduced processes in Si and its conductivity type
6-14	Комаревцев	Иван	Михайлович	Single-step alkaline etching of deep silicon cavities for chipscale atomic clock technology
6-15	Кондратьев	Валерий	Михайлович	III-V nanowires for ammonia detection
6-16	Кошуро	Владимир	Александрович	Study of hardness and morphology of carbide coatings obtained on complex shaped steel items by electro-spark

				alloying
6-17	Кузьменко	Виталий	Олегович	Optimization of deep silicon plasma etching process for microstructures fabrication
6-18	Лендяшова	Вера	Вадимовна	Separation of III-N partially coalesced nanowire arrays from Si substrate
6-19	Леоненко	Екатерина	Сергеевна	Features of Electrophoretic Formation of Local Heat Sources Based on Nanosized Powder Al
6-20	Малохатко	Софья	Владимира	Influence of active structure parameters on resonant frequency of acoustic transducer membranes
6-21	Маркелова	Ольга	Анатольевна	Influence of laser processing conditions on the depth and microhardness of layers formed on titanium
6-22	Аль Алвани	Аммар	Жебер Кадим	Modeling of the interaction of porphyrin molecules in a nonpolar solvent
6-23	Морозова	Екатерина	Владимировна	Optical and thermoelectric properties of carbon nanotubes with encapsulated fullerenes
6-24	Науменко	Данил	Валерьевич	Analysis of frequency response sensor of MEMS gyroscope in vacuum chamber
6-25	Ниязов	Рамиль	Асхатович	Spin-dependent transport through a helical Aharonov-Bohm interferometer
6-26	Осипова	Елена	Олеговна	Researching of the structure and mechanical properties of gas-thermal coatings after induction heat treatment
6-27	Палканов	Павел	Алексеевич	Improving the physical and mechanical properties of tool steel by induction chemical-thermal treatment
6-28	Порватов	Вадим	Андреевич	Robotic ensemble platform for emulation of friction-assisted phase formation in active matter
6-29	Родригес	Салазар	Даниэл Хосе	Fabrication of probe tips via the FIB method for nanodiagnosis of the surface of solids by atomic force microscopy
6-30	Рошаль	Дарья	Сергеевна	Carbon nanotubes sorting due to commensurate molecular wrapping
6-31	Рябова	Маргарита	Артуровна	<i>In situ</i> Investigation of Individual Filament Growth in Conducting Bridge Memristor by Contact Scanning Capacitance Microscopy
6-32	Смирнова	Мария	Александровна	Study of ripple formation on Si surface under Ga ion beam bombardment
6-33	Смирнова	Елизавета	Алексеевна	Properties of Plasma Enhanced Atomic Layer Deposited Ruthenium Thin Films from Ru(EtCp)2
6-34	Смолкина	Мария	Олеговна	The electron transmission properties in a system of two chained orthogonal rings
6-35	Сорокина	Лариса	Ивановна	Al-CuOx multilayer nanostructures: formation features and thermal properties of new type of local heat source
6-36	Фаттахов	Илья	Сергеевич	Processing of electron diffraction data on a transmission electron microscope
6-37	Фимин	Андрей	Владимирович	Investigation of the dielectric fatigue of active dielectrics on the example of lead titanate films PbTiO3
6-38	Фомина	Марина	Алексеевна	Induction-thermal action effect on the surface area of titanium products
6-39	Шаров	Владислав	Андреевич	Work function tailoring in gallium

				phosphide nanowires
6-40	Щелкунов	Андрей	Юрьевич	Study of the hardness distribution after induction heat treatment of titanium over the surface and the cross-section
6-41	Аль Алвани	Аммар	Жебер Кадим	Study of Langmuir monolayers and Langmuir-Schaefer films based on symmetrical <i>meso</i> -aryl-substituted porphyrin derivative
6-42	Петриев	Илья	Сергеевич	The influence of a pentagonally structured Pd-coating on the low-temperature hydrogen permeability of palladium-based membranes