

CONFERENCE OPENING. PLENARY

Wednesday, January 24, 2018, 10.00

Room 403

1. MINAEV V.P.  
*IRE-Polus Corporation, Fryazino*  
**Physical effects at the action of laser light on biological tissue**
2. KOVANIS V.<sup>1,2</sup>  
<sup>1</sup>*Nazarbaev University, Astana, Kazakhstan*  
<sup>2</sup>*University of Central Florida, Orlando, Florida, USA*  
**Paradigm shift in non-hermitian photonics via an optical meta-molecule**
3. KUNDIKOVA N.D.<sup>1,2</sup>  
<sup>1</sup>*Soul Ural State University, Chelyabinsk*  
<sup>2</sup>*Institute of Electrophysics, UB RAN, Ekaterinburg*  
**The known effects of the spin-orbit interactions of light and prediction of new effects**
4. ANDREEV A.L.<sup>2</sup>, ANDREEVA T.B.<sup>1</sup>, ZALYAPIN N.V.<sup>1</sup>, KOMPANETS I.N.<sup>1,2</sup>  
<sup>1</sup>*Lebedev Physical Institute of the RAS, Moscow*  
<sup>2</sup>*National Research Nuclear University MEPhI (Moscow Engineering Physics Institute)*  
**Reorientation of novel liquid crystal ferroelectric in an alternating electric field**

POSTERS 1

Wednesday, January 24, 2018, 12.00

Room 403

POSTERS 2

Wednesday, January 24, 2018, 12.00

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Meeting 1

Wednesday, January 24, 2018, 13.00

Room 403

5. SIDOROV N.V., PALATNIKOV M.N., TEPLYAKOVA N.A., MANUKOVSKAYA D.V., SYUY A.V.<sup>1</sup>, KILE E.O.<sup>1</sup>, SHTAREV D.S.<sup>1,2</sup>  
*I.V. Tananaev Institute of Chemistry and Technology of Rare Elements and Mineral Raw Materials of Kola Science Center of the RAS, Apatity, Murmansk region*  
<sup>1</sup>*Far Eastern State Transport University, Khabarovsk*  
<sup>2</sup>*Institute of Tectonics and Geophysics named after Yu.A. Kosygin of the FEB RAS, Khabarovsk*  
**Photo-electric fields and band gap in lithium niobate crystals**
6. SAVCHENKOV E.N., SHANDAROV S.M., MANDEL A.E., AKHMATKHANOV A.R.<sup>1</sup>, SHUR V.Ya.<sup>1</sup>  
*Tomsk State University of Control Systems and Radioelectronics*  
<sup>1</sup>*Ural State University, Ekaterinburg*  
**Light diffraction on periodically poled domain structures in lithium niobate crystal in an applied sinusoidal voltage**
7. SKRYABIN N.N.<sup>1,2</sup>, BUKHARIN M.A.<sup>2</sup>, KOSTRITSKII S.M.<sup>3</sup>, KORKISHKO Yu.N.<sup>3</sup>, FEDOROV V.A.<sup>3</sup>, KHUDYAKOV D.V.<sup>4</sup>  
<sup>1</sup>*Moscow Institute of Physics and Technology (State University), Dolgoprudny*  
<sup>2</sup>*Optosystems Ltd., Moscow*  
<sup>3</sup>*RPC Optolink Ltd, Zelenograd*  
<sup>4</sup>*Prokhorov General Physics Institute of the RAS, Moscow*  
**Correction of Y-branches on proton-exchange waveguides in lithium niobate by femtosecond writing technology**
8. MAKIN V.S., MAKIN R.S.<sup>1</sup>  
*Scientific Research Institute for Optoelectronic Instrument Engineering, Sosnovy Bor, Leningrad region*  
<sup>1</sup>*National Research Nuclear University MEPhI (Moscow Engineering Physics Institute)*  
**Spatial periods of structures formed by ultrashort laser radiation in lithium niobate**
9. KOLESNIKOV A.I., KAPLUNOV I.A., TRETIKOV S.A., GRECHISHKIN R.M., VORONTSOVA E.Yu., IVANOVA P.V.  
*Tver State University*  
**Examination of optical anomalies in uniaxial crystals by the method of laser conoscopy**
10. ALOIAN G.A.<sup>1</sup>, KOVALENKO N.V.<sup>1</sup>, RYABUSHKIN O.A.<sup>1,2</sup>  
<sup>1</sup>*Moscow Institute of Physics and Technology (State University), Dolgoprudny*  
<sup>2</sup>*Fryazino Branch of Kotel'nikov Institute of Radioengineering and Electronics of RAS*  
**Measurement of low optical absorption coefficients of massive crystals**
11. ZHEVAIKIN K.E., FOKINA M.I., DENISYUK I.Yu.  
*ITMO University, Saint-Petersburg*  
**Investigation of refractive indexes of organic nonlinear optic crystals based on conformations of aminopyridine**
12. ZLOBIN A.O., SHANDAROV S.M., BURIMOV N.I., SHMIDT A.A., SHEPELEVICH V.V.<sup>1</sup>, MAKAREVICH A.V.<sup>1</sup>  
*Tomsk State University of Control Systems and Radioelectronics*  
<sup>1</sup>*I.P. Shamyakin Mozyr State Pedagogical University, Belarus*  
**Co-directional interaction of circularly-polarized light waves in the (110)-cut BSO crystal**

13. TRETIAKOV S.A., IVANOVA A.I., KAPLUNOV I.A., LAVROVA E.Yu.  
Tver State University  
**Method of thermal imaging control for determination of electrical resistivity and concentration of doping impurity in single crystals of germanium**
14. ZHUKOVA M.O., GRACHEV Ya.V., CHEGNOV V.P.<sup>1</sup>, CHEGNOVA O.I.<sup>1</sup>, BESPALOV V.G.  
ITMO University, Saint-Petersburg  
<sup>1</sup>Research Institute of Materials Science and Technology, Zelenograd  
**Influence of impurities in ZnSe crystals on terahertz transmission and photoelectrons dynamics**
15. MOLCHANOVA A.D., BOLDYREV K.N., POPOVA M.N., PROSNIKOV M.A.<sup>1</sup>, DUBROVIN R.M.<sup>1</sup>, PISAREV R.V.<sup>1</sup>  
Institute for Spectroscopy of the RAS, Troitsk  
<sup>1</sup>Ioffe physical-technical institute of the RAS, Saint-Petersburg  
**Lattice dynamics of structurally complex layered copper borate Cu<sub>3</sub>(BO<sub>3</sub>)<sub>2</sub>**
16. NEKRASOV A.D., SHAPIRO B.I., KRIVOBOK V.S.<sup>1</sup>, LEBEDEV V.S.<sup>1</sup>  
Moscow Technological University (Institution of Fine Chemical Technology)  
<sup>1</sup>Lebedev Physical Institute of the RAS, Moscow  
**Luminescent metallocomplexes J-aggregates of polymethine dyes for photonics and optoelectronics**

Meeting 2

Wednesday, January 24, 2018, 13.00

Room 402

17. ARAKELIAN S.M., KUCHERIK A.O., KUTROVSKAYA S.V., OSIPOV A.V., KHORKOV K.S., ISTRATOV A.V.  
Stoletovs Vladimir State University  
**Laser-induced topological superconducting states of thin nanocluster films – verification in electrophysical and optical characteristics**
18. ZOLOTOV P.I.<sup>1,2</sup>, DIVOCHIY A.V.<sup>2</sup>, VACHTOMIN Yu.B.<sup>2,3</sup>, PENTIN I.V.<sup>2</sup>, SELEZNEV V.A.<sup>2,3</sup>, MOROZOV P.V.<sup>2</sup>, SMIRNOV K.V.<sup>1,2,3</sup>  
<sup>1</sup>National Research University Higher School of Economics, Moscow  
<sup>2</sup>LLC «SCONTEL», Moscow  
<sup>3</sup>Moscow State University of Education  
**Development of superconducting single-photon detectors based on thin vanadium nitride films**
19. VOLGINA D.A., STEPANIDENKO E.A., KORMILINA T.K., CHEREVKOV S.A., DUBAVIK A., BARANOV M.A., FEDOROV A.V., USHAKOVA E.V., BARANOV A.V., TAKAI K.<sup>1</sup>, SAMOKHVALOV P.S.<sup>2</sup>, NABIEV I.R.<sup>2,3</sup>  
ITMO University, Saint-Petersburg  
<sup>1</sup>Hosei University, Tokyo, Japan  
<sup>2</sup>National Research Nuclear University MEPhI (Moscow Engineering Physics Institute)  
<sup>3</sup>University of Reims Champagne-Ardenne, France  
**Investigation of optical properties of alloyed quantum dot – gold nanoparticle colloidal complexes**
20. LEVCHENKO K.S., CHUDOV K.A., POROSHIN N.O., ZINOVIEV E.V., CHICHEVA P.A., SHOHINA E.A., SHMELIN P.S., GREBENNIKOV E.P.  
JSC «CSRIT «Technomash», Moscow  
**Organic chromophores with nonlinear optical properties for electrooptical modulators**
21. PODKOPAEV A.V.<sup>2,3</sup>, MIS'KEVICH A.I.<sup>1,3</sup>  
<sup>1</sup>National Research Nuclear University MEPhI (Moscow Engineering Physics Institute)  
<sup>2</sup>Obninsk Institute of Atomic Energy NRNU MEPhI, Kaluga region  
<sup>3</sup>Institute for Physics and Power Engineering named after A.I. Leyppunsky, Obninsk, Kaluga region  
**Experimental research OF XeBr excimer molecule luminescence in Ar-Xe-C<sub>2</sub>HBrClF<sub>3</sub> gas mixture with high energy particles excitation**
22. KISLOV D.A.  
Orenburg State University  
**Taking into account the increase in the dye molecules absorptivity in modeling of Graetzel solar cell with metallic nanoparticles**
23. YAKUNENKOV R.E., KNYAZEV K.I., FOKINA M.I., ZULINA N.A.  
ITMO University, Saint Petersburg  
**Research of organic dyes optical properties in polymer matrix with presence of plasmon resonance**
24. BOLDYREV K.N., MOLCHANOVA A.D., PISAREV R.V.<sup>1</sup>  
Institute for Spectroscopy of the RAS, Troitsk  
<sup>1</sup>Ioffe physical-technical institute of the RAS, Saint-Petersburg  
**Investigation of the phase B-T diagram of the copper metaborate CuB<sub>2</sub>O<sub>4</sub> by the optical method of linear antiferromagnetic dichroism**
25. AVDIZHIYAN A.Yu., LAVROV S.D., SHESTAKOVA A.P.  
Moscow Technological University (MIREA)  
**Optical properties of solid solutions of dichalcogenides of transition metals**
26. BOCHAROV A.A., RYBIN M.G.<sup>1</sup>, FUROV A.N., KONDRASHOV I.I.<sup>1</sup>, OBRAZTSOVA E.D.<sup>1</sup>, ERMAKOV A.D.  
Branch of the Military Academy of Strategic Missile Forces named after Peter the Great, Serpukhov  
<sup>1</sup>Prokhorov General Physics Institute of the RAS, Moscow  
**Application of the graphene photodetector and scintillator for detecting gamma- radiation**
27. ORESHKINA K.V., DUBROVIN V.D.  
ITMO University, Saint-Petersburg  
**Bromide photo-thermo-refractive glass with low fluorine concentration**
28. ERIN D.Yu.<sup>1,2</sup>, SEMJONOV S.L.<sup>1</sup>, EGOROVA O.N.<sup>1</sup>, ISKHAKOVA L.D.<sup>1</sup>, MILOVICH F.O.<sup>1</sup>, CHERNOOK S.G.<sup>1</sup>  
<sup>1</sup>Fiber Optic Research Center of the RAS, Moscow  
<sup>2</sup>Zababakhin All-Russia research institute of technical physics, Snezhinsk, Chelyabinsk region  
**Glasses for active optical fibers manufactured by containerless melting glass**

29. YUSHKOV K.B., NAUMENKO N.F., MOLCHANOV V.Ya.  
National University of Science and Technology "MISIS", Moscow  
**Acousto-optical spatial image filtering for phase object visualization in microscopy**
30. FILATOV A.L.  
Fryazino Branch of Kotelnikov Institute of Radioengineering and Electronics of RAS  
**A narrow-band acoustic signal for a zero order suppression of acousto-optic diffraction of a strongly focused laser beam**
31. BORITKO S.V., POZHAR V.E., KARANDIN A.V.  
Scientific and Technological Center of Unique Instrumentation of the RAS, Moscow  
**Opportunity of directly registration of differentiated optical spectra by the method of acousto-optical spectroscopy**
32. KOTOV V.M., SHKERDIN G.N., AVERIN S.V.  
Fryazino Branch of Kotelnikov Institute of Radioengineering and Electronics of RAS  
**Forming of the optical beam with the rotating polarization vector**
33. LAVROV E.A., MAZUR M.M., SHIRYAEV V.S.<sup>1</sup>, SNOPTIN G.E.<sup>1</sup>  
All-Russian Scientific Research Institute of Physical-Technical and Radiotechnical Measurements, Mendeleev, Moscow region  
<sup>1</sup>Devyat'kh Institute of Chemistry of High-Purity Substances of the RAS, Nizhny Novgorod  
**Research ultrasound attenuation in As<sub>2</sub>S<sub>3</sub> chalcogenide glass**
34. PETROV N.I.  
Scientific and Technological Center of Unique Instrumentation of the RAS, Moscow  
**Revival effect in optical waveguides**
35. MAZIN M.A., PARANIN V.D.  
Samara National Research University  
**Investigation of double refraction of optical path difference the gradient lens on the basis of astigmatic transformation of Bessel beams**
36. BUCHKOV S.B.<sup>1</sup>, VOLKOV I.V.<sup>1,2</sup>, KHATYREV N.P.<sup>1</sup>  
<sup>1</sup>All-Russian Research Institute for Optical and Physical Measurements, Moscow  
<sup>2</sup>Moscow Technological University (MIREA)  
**Technique of high-speed optoelectronic transducers performance parameters measurement**
37. DOROZHNIKIN A.N.<sup>1,2</sup>, NANII O.E.<sup>1,2</sup>, LUKINYKH S.N.<sup>1,2</sup>, SHIKHALIEV I.I.<sup>2,3</sup>, STARYKH D.D.<sup>2,3</sup>, KONYCHEV V.A.<sup>2</sup>, TRESHNIKOV V.N.<sup>2</sup>  
<sup>1</sup>Lomonosov Moscow State University  
<sup>2</sup>T8 Ltd, Moscow  
<sup>3</sup>Moscow Institute of Physics and Technology (State University), Dolgoprudny  
**Distributed Raman amplifiers in fiber optic communication lines**
38. BOGACHKOV I.V.  
Omsk State Technical University  
**A determination of the initial level of Brillouin frequency shift in optical fibers of various types**
39. JITELEV A.E.<sup>1,2</sup>, KONYCHEV V.A.<sup>2</sup>, LEONOV A.V.<sup>2</sup>, LUKINYKH S.N.<sup>1,2</sup>, NANII O.E.<sup>1,2</sup>, TRESHNIKOV V.N.<sup>2</sup>  
<sup>1</sup>Lomonosov Moscow State University  
<sup>2</sup>T8 Ltd, Moscow  
**Dependence of capacity of non-linear interference noise of OFTL from accumulated dispersion**
40. ZEMTSOV D.S., D.C., ZLOKAZOV E.Yu., NEBAVSKIY V.A., OSIPOV V.G., STARIKOV R.S., KHAFIZOV I.Zh.  
National Research Nuclear University MEPhI (Moscow Engineering Physics Institute)  
**Measurement of third order distortions of X-band photonic link**

41. VOKHMINTSEV K.V.<sup>1</sup>, LIN'KOV P.A.<sup>1</sup>, SAMOKHVALOV P.S.<sup>1</sup>, TAKAI K.<sup>3</sup>, FEDOROV A.V.<sup>4</sup>, BARANOV A.V.<sup>4</sup>, NABIEV I.R.<sup>1,2</sup>  
<sup>1</sup>National Research Nuclear University MEPhI (Moscow Engineering Physics Institute)  
<sup>2</sup>University of Reims Champagne-Ardenne, France  
<sup>3</sup>Hosei University, Tokyo, Japan  
<sup>4</sup>ITMO University, Saint-Petersburg  
**Large-scale synthesis of monodisperse PbS quantum dots**
42. POMOZOV A.R., KOLMYCHEK I.A., MURZINA T.V.  
Lomonosov Moscow State University  
**Linear and nonlinear optical properties of hyperbolic plasmonic metamaterials**
43. ALIEV S.A., KOPYEVA M.S., NIKOLAEV N.E., TROFIMOV N.S., CHEKHLOVA T.K.  
Peoples' Friendship University of Russia, Moscow  
**Optical properties of gel titanium dioxide films with addition of metal nanoparticles**
44. SAVIN S.S., BESPALOV A.V., NAYDENOV P.N., GERASKIN A.A.  
Moscow Technological University (MIREA)  
**Method of multiple ion-beam sputter-deposition to improve the homogeneity of optically transparent and submicron gold films**
45. IVANOVA A.K.<sup>1,2</sup>, IONIN A.A.<sup>2</sup>, KUDRYASHOV S.I.<sup>1,2</sup>, SARAIEVA I.N.<sup>2</sup>  
<sup>1</sup>National Research Nuclear University MEPhI (Moscow Engineering Physics Institute)  
<sup>2</sup>Lebedev Physical Institute of the RAS, Moscow  
**Plasma-mediated nanosecond laser generation of Si nanoparticles in water**
46. KOZLOV A.A., AKSENOV A.S., ABDULLAEV S.D., IVANOV A.V.<sup>1</sup>  
Moscow Technological University (Institution of Fine Chemical Technology)  
<sup>1</sup>Lomonosov Moscow State University  
**Degradation mechanisms of sensors based on photonic crystals**

47. GARTMAN A.D., MAYDYKOVSKIY A.I., SVYAKHOVSKIY S.E., MITETEL N.V., KUDRINSKIY A.A., MURZINA T.V.  
*Lomonosov Moscow State University*  
**Two-photon absorption spectroscopy in composite plasmonic structures based on porous silica**
48. NAYDENOV P.N., GOLIKOVA O.L., SAVIN S.S., CHEHOV A.L.<sup>1</sup>, BESPALOV A.V.  
*Moscow Technological University (MIREA)*  
<sup>1</sup>*Lomonosov Moscow State University*  
**Synthesis of symmetric 1D magnetoplasmonic crystals  $\text{Bi}_3\text{Fe}_5\text{O}_{12}/\text{Au}(\text{BiTm})_3(\text{FeGa})_5\text{O}_{12}$  by combining ion-beam techniques**
49. SHUGUROV A.I., BODROV S.B., MASHKOVICH E.A., BAKUNOV M.I.  
*Lobachevsky State University of Nizhny Novgorod*  
**Non-ellipsometric electro-optic sampling of terahertz pulses in GaAs**
50. GLINSKIY I.A.<sup>1,2</sup>, PONOMAREV D.S.<sup>1</sup>, KHABIBULLIN R.A.<sup>1</sup>, YACHMENEV A.E.<sup>1</sup>  
<sup>1</sup>*Institute of Ultra-High-Frequency Semiconductor Electronics of the RAS, Moscow*  
<sup>2</sup>*Moscow Technological University (MIREA)*  
**Evaluation efficiency conversion femtosecond optical pulses to terahertz radiation in photoconductive antennas based on  $\text{In}_{0.38}\text{Ga}_{0.62}\text{As}$**
51. KHUSYAINOV D.I.  
*Moscow Technological University (MIREA)*  
**Photogenerated carrier dynamics in thin film of a solid solution InGaAs at different wavelengths of the pump pulse**
52. MAMRASHEV A.A.<sup>1,2</sup>, MAXIMOV L.V.<sup>1,3</sup>, NIKOLAEV N.A.<sup>1,2</sup>, CHAPOVSKY P.L.<sup>1,3</sup>  
<sup>1</sup>*Institute of Automation and Electrometry SB RAS, Novosibirsk*  
<sup>2</sup>*Institute of High Current Electronics SB RAS, Tomsk*  
<sup>3</sup>*Novosibirsk State University*  
**Application of terahertz time-domain spectroscopy to the study of ortho and para isomers of water molecules**

Meeting 5

Thursday, January 25, 2018, 10.00

Room 403

53. ALEKSANDROV S.E., GAVRILOV G.A., KAPRALOV A.A., MATVEEV B.A., MURATIKOV K.L., SOTNIKOVA G.Yu.  
*Ioffe physical-technical institute of the RAS, Saint-Petersburg*  
**Optoelectronic methods of IR-photometry in solving of thermal and physical problems**
54. KOVALENKO N.V.<sup>1</sup>, ALOIAN G.A.<sup>1</sup>, KONYASHKIN A.V.<sup>1,2</sup>, RYABUSHKIN O.A.<sup>1,2</sup>  
<sup>1</sup>*Moscow Institute of Physics and Technology (State University), Dolgoprudny*  
<sup>2</sup>*Fryazino Branch of Kotelnikov Institute of Radioengineering and Electronics of RAS*  
**Surface equivalent temperature**
55. LUKASHOVA T.O.<sup>1,2</sup>, TRESHIKOV V.N.<sup>2</sup>  
<sup>1</sup>*Lomonosov Moscow State University*  
<sup>2</sup>*T8 Ltd, Moscow*  
**Numerical simulation of distributed sensor for temperature measuring based on coherent Rayleigh scattering reflectometer**
56. NIKOLAEV N.E., PAVLOV S.V., CHEKHLOVA T.K.  
*Peoples' Friendship University of Russia, Moscow*  
**Temperature coefficient of effective refractive index of the  $\text{TE}_1$  and  $\text{TM}_1$  modes in optical sol-gel waveguides**
57. MASALSKY N.V.  
*Scientific Research Institute of System Researches of the RAS, Moscow*  
**The optical waveguides with Gauss doping profile on the basis of "silicon on insulator" structure**
58. TEBENEVA T.S., BENDEROV O.B., STEPANOV B.S.<sup>1</sup>, IGNATOV A.I.<sup>2</sup>  
*Moscow Institute of Physics and Technology (State University), Dolgoprudny*  
<sup>1</sup>*Devyatykh Institute of Chemistry of High-Purity Substances of the RAS, Nizhny Novgorod*  
<sup>2</sup>*All-Russian Research Institute of Automatics, Moscow*  
**Chalcogenide optical fiber couplers made by FBT method**
59. ALEKSEYEV A.S., NOVIKOV S.G. C.Г., BERINTSEV A.V., RODIONOV V.A., SVETUKHIN V.V.  
*Ulyanovsk State University*  
**Experimental investigations of fiber sensor for gamma radiation sources dosimetry**
60. MINAEV N.V., ZHIGARKOV V.S., CHURBANOVA E.S., YUSUPOV V.I., BAGRATASHVILI V.N.  
*Institute of Photonic Technologies – branch of FSRC «Crystallography and Photonics» of the RAS, Troitsk*  
**Laser printing of gel microdrops with living cellular and microbial objects**
61. KOLYMAGIN D.A.<sup>1</sup>, ZVAGELSKY R.D.<sup>1</sup>, CHUBICH D.A.<sup>1</sup>, VITUKHNOVSKY A.G.<sup>1,2,3</sup>  
<sup>1</sup>*Moscow Institute of Physics and Technology (State University), Dolgoprudny*  
<sup>2</sup>*Lebedev Physical Institute of the RAS, Moscow*  
<sup>3</sup>*National Research Nuclear University MEPhI (Moscow Engineering Physics Institute)*  
**Periodical structures fabricated by STED-DLW stereolithography: morphology and optical properties**
62. KRUSHALOV S.V., LAVROV A.P., LEONOV M.B.<sup>1</sup>, MATYUSHIN I.V.<sup>2</sup>, PARPIN M.A.<sup>1</sup>, SEREGIN D.A.<sup>1</sup>, VASILYEV N.D.  
*Peter the Great Saint-Petersburg Polytechnic University*  
<sup>1</sup>*Scientific and Design Center for Optoelectronic Observation Complexes - Branch of JSC «Kometa Corporation», Saint-Petersburg*  
<sup>2</sup>*«Vegaluks» LLC, Saint-Petersburg*  
**Modeling and experimental investigation of focusing properties of two-dimensional Fresnel plate in its rings synthesis by many small holes**
63. KAREV P.V.  
*Industrial Metrology Co. LTD, Saint-Petersburg*  
**Piezoactuators micro motions for optoelectronic application**
64. BARYSHEV S.A., ODINOKOV S.B., KUZNETSOV A.S.  
*Bauman Moscow State Technical University*  
**Plasmonic magneto-optic structures for visualization of magnetic information**

PLENARY 2

Thursday, January 25, 2018, 13.00

Room 403

65. GORBACH D.V., NAZAROV S.A., MELNIKOVA E.A., KURILKINA S.N., TOLSTIK A.L.  
*Belarusian State University, Minsk*  
**Spin-orbital transformation of Bessel light beams by liquid crystal elements**
66. KUTANOV A.A., SYDYK UULU N., VELIKASOV S.S.<sup>1</sup>  
*Institute of Physical-Technical Problems and Material Science of NAS KR, Bishkek, Kyrgyz republic*  
<sup>1</sup>*Kyrgyz Russian Slavic University named after the first president of Russia B.N. Yeltsin, Bishkek, Kyrgyz republic*  
**3D laser recording on amorphous silicon layer**
67. KALENKOV S.G., KALENKOV G.S.<sup>1</sup>, SHTANKO A.E.<sup>2</sup>  
*Moscow Polytechnic University*  
<sup>1</sup>*Microholo Ltd, Moscow*  
<sup>2</sup>*Moscow state university of technology (Stankin)*  
**Hyperspectral holography of microobjects in non-coherent light**
68. PUTILIN A.N., MOROZOV A.V.<sup>1</sup>, DRUZHIN V.V.<sup>2</sup>, ZHIRKOV A.O.  
*Lebedev Physical Institute of the RAS, Moscow*  
<sup>1</sup>*Samsung Research Center, Moscow*  
<sup>2</sup>*Bauman Moscow State Technical University*  
**Holographic HMD displays**

POSTERS 3

Thursday, January 25, 2018, 15.00

Room 402

POSTERS 4

Thursday, January 25, 2018, 15.00

Room 403

Meeting 6

Thursday, January 25, 2018, 16.00

Room 403

69. KRASNIKOV I.V., SETEIKIN A.Yu., ROTH POT B.<sup>1</sup>, MEINHARDT-WOLLWEBER M.<sup>1</sup>  
*Amur State University, Blagoveshchensk*  
<sup>1</sup>*Leibniz University, Hannover, Germany*  
**Monte Carlo simulation of Raman scattering with determined wavelength in confocal microscopy in biological media**
70. LVOV K.V.<sup>1,2</sup>, STREMOUKHOV S.Yu.<sup>1,2</sup>, POTEMKIN F.V.<sup>1</sup>  
<sup>1</sup>*Lomonosov Moscow State University*  
<sup>2</sup>*National Research Centre "Kurchatov Institute", Moscow*  
**Raman nonlinearity contribution to supercontinuum generation under filamentation in condensed media**
71. MAIMISTOV A.I., DOVGII A.A.  
*National Research Nuclear University MEPhI (Moscow Engineering Physics Institute)*  
**Field distribution into binary linear waveguide array**
72. NASONOV A.A., NOVIKOV V.B., MURZINA T.V.  
*Lomonosov Moscow State University*  
**Amplification of second optical harmonic generation by plasmonic nanoparticles in photonic crystal microcavity**
73. GUBIN M.Yu., KARPOV S.N., PROKHOROV A.V.  
*Stoletovs Vladimir State University*  
**Nonclassical localized plasmon states generation in spaser systems with applying external magnetic field**
74. PERESKOKOV V.S., DZEDOLIK I.V.  
*V.I. Vernadsky Crimean Federal University, Simferopol*  
**Formation of surface plasmon-polariton vortices at reflection from curvilinear boundary**
75. BIKBAEV R.G.<sup>1,2</sup>, MYSLIVETS S.A.<sup>1,2</sup>, SVYAKHOVSKIY S.E.<sup>3</sup>, EVLASHIN S.A.<sup>4</sup>, VYUNISHEV A.M.<sup>1,2</sup>, PANKIN P.S.<sup>1,2</sup>, TIMOFEEV I.V.<sup>1,2</sup>, VETROV S.Ya.<sup>1,2</sup>, ARKHIPKIN V.G.<sup>1,2</sup>  
<sup>1</sup>*Siberian Federal University, Krasnoyarsk*  
<sup>2</sup>*Kirensky Institute of Physics SB RAS, Krasnoyarsk*  
<sup>3</sup>*Lomonosov Moscow State University*  
<sup>4</sup>*Skolkovo Institute of Science and Technology, Moscow region*  
**Broadband Tamm plasmon-polariton**
76. KAZANTSEVA E.V.  
*National Research Nuclear University MEPhI (Moscow Engineering Physics Institute)*  
**Polariton propagation in imperfect Bragg grating**
77. BYLINA M.S., GLAGOLEV S.F.  
*Bonch-Bruевич Saint-Petersburg State University of Telecommunications*  
**Model of the electromagnetic field of the single-mode fiber with the axisymmetric profile of the refraction index**
78. SYCHUGIN S.A., BAKUNOV M.I.  
*Lobachevsky State University of Nizhny Novgorod*  
**A model for generation of quasi-static precursor by a laser pulse of a finite transverse size**

79. VERGELES S.S.<sup>1,2</sup>, OGORODNIKOV L.L.<sup>2,3</sup>, LEBEDEV V.V.<sup>1,2</sup>, KOLOKOLOV I.V.<sup>1,2</sup>  
<sup>1</sup>Landau Institute for Theoretical Physics of the RAS, Chernogolovka  
<sup>2</sup>Moscow Institute of Physics and Technology (State University), Dolgoprudny  
<sup>3</sup>Skolkovo Institute of Science and Technology, Moscow region

**Intensity statistics in random fiber laser**

80. KULYA M.S., SEMENOVA V.A., BESPALOV V.G., PETROV N.V.  
ITMO University, Saint-Petersburg  
**Spatial-temporal evolution of pulsed broadband terahertz Gauss-Bessel beam**

Meeting 7

Thursday, January 25, 2018, 16.00

Room 403

81. ASTAPOVICH M.S., KOLYADIN A.N., GLADYSHEV A.V., KOSOLAPOV A.F., PRYAMIKOV A.D., KHUDYAKOV M.M., LIKHACHEV M.E., BUFETOV I.A.

Fiber Optic Research Center of the RAS, Moscow

**Effective Raman generation at 4.4  $\mu\text{m}$  and measurement with its help the optical characteristics of the hollow-core revolver fiber**

82. BURDUKOVA O.A.<sup>1,2,1</sup>, PETUKHOV V.A.<sup>1,2</sup>, SEMENOV M.A.<sup>2</sup>  
<sup>1</sup>Moscow Institute of Physics and Technology (State University), Dolgoprudny  
<sup>2</sup>Lebedev Physical Institute of the RAS, Moscow

**Quasi-longitudinal pumping of the dye laser by green laser diodes**

83. YAKUSHENKOV P.O.<sup>1,2,3</sup>  
<sup>1</sup>National Research University of Electronic Technology "MIET", Zelenograd  
<sup>2</sup>Moscow Institute of Physics and Technology (State University), Dolgoprudny  
<sup>3</sup>JSC «Angstrom», Zelenograd

**Modulation of semiconductor laser changing its magnetization**

84. KUDELIN I.S., DVORETSKIY D.A., SAZONKIN S.G., OREKHOV I.O., PNEV A.B., KARASSIK V.E., DENISOV L.K.  
Bauman Moscow State Technical University

**Generation peculiarities of multibound solitons in an all-fiber erbium-doped ring laser with a highly nonlinear resonator**

85. YAKUNIN V.P.  
Institute on Laser and Information Technologies – branch of FSRC «Crystallography and Photonics» of the RAS, Shatura  
**Characterization of the active media of diode and fiber laser systems for power scaling to multi-kilowatt radiation level based on incoherent methods of beam combining**

86. SHILOVA G.V.<sup>1</sup>, SIROTKIN A.A.<sup>1,2</sup>, ZVEREV P.G.<sup>1</sup>  
<sup>1</sup>Prokhorov General Physics Institute of the RAS, Moscow  
<sup>2</sup>National Research Nuclear University MEPhI (Moscow Engineering Physics Institute)

**Nd:YAP laser with intracavity SRS-conversion and sum-frequency generation**

87. SHULGA A.V., KHOMCHENKO A.V., SHILOVA I.V.  
Belarusian-Russian University, Mogilev, Belarus

**Waveguide technique of laser mode discrimination**

88. EGOROV F.A., POTAPOV V.T.  
Fryazino Branch of Kotelnikov Institute of Radioengineering and Electronics of RAS  
**Polarization modulation of light in anisotropic optical micro/nano fibers with torsional oscillations**

89. DMITRIEV A.L., CHESNOKOV N.N.<sup>1</sup>  
Baltic State Technical University «VOENMEH» named after D.F. Ustinov, Saint-Petersburg  
<sup>1</sup>Sartogosm Ltd, Saint-Petersburg

**Reduction of the weight of optical fiber during distribution of laser radiation**

90. FEDORTSOV A.B., MANUKHOV V.V.<sup>1</sup>, IVANOV A.S.  
Saint-Petersburg Mining University  
<sup>1</sup>Saint-Petersburg State University  
**Two-laser contactless method of the determining the electronic properties of semiconductors and dielectrics**

91. US N.A., ZADOROZHNY S.P., AVERSHIN A.A.  
Air Force Academy named after prof. N.E. Zhukovsky and Yu.A. Gagarin, Voronezh  
**Ring packaged gyroscope with a semiconductor laser diode**

92. AKMALOV A.E., KOTKOVSKII G.E., CHISTYAKOV A.A.  
National Research Nuclear University MEPhI (Moscow Engineering Physics Institute)  
**Laser desorption of traces of explosives in ion mobility spectrometry**

Meeting 8

Friday, January 26, 2018, 10.00

Room 403

93. VINAROV A.Z., DYMOV A.M., SOROKIN N.I., MINAEV V.P.<sup>1</sup>, LEKAREV V.Yu.  
Sechenov First Moscow State Medical University  
<sup>1</sup>IRE-Polus Corporation, Fryazino

**On the difference in action of the laser light with wavelength near 2 $\mu\text{m}$  on biotissue in gas and water media**

94. ORLOV A.V., BAIKOVA T.V., BAKHMUTOV D.N.<sup>1</sup>, GONCHUKOV S.A., SVISTUNOVA T.S.<sup>2</sup>  
National Research Nuclear University MEPhI (Moscow Engineering Physics Institute)  
<sup>1</sup>Moscow State University of Medicine and Dentistry  
<sup>2</sup>Infectious Clinical Hospital №2, Moscow

**Raman and fluorescent spectroscopy of biological liquids**

95. EFIMOV T.A.<sup>1</sup>, ZAKHARENKO A.M.<sup>2</sup>, KULCHIN Yu.N.<sup>1,2</sup>, ROMASHKO R.V.<sup>1,2</sup>  
<sup>1</sup>Institute of Automation and Control Processes of FEB RAS, Vladivostok  
<sup>2</sup>Far Eastern Federal University, Vladivostok

**Laser biosensor based on micromechanical oscillator**

96. ZAYTSEV V.V., MAMONTOV O.V.<sup>1</sup>, KAMSHILIN A.A.  
ITMO University, Saint-Petersburg  
<sup>1</sup>V.A. Almazov North-West Federal Medical Research Centre, Saint-Petersburg  
**Measuring peripheral blood flow in the limbs by means of photoplethysmography**
97. VASILENKO A.N., PRIMAK I.U., KHOMCHENKO A.V.  
Belarusian-Russian University, Mogilev, Belarus  
**Scattered light measurement for the birefringence distribution estimations**
98. ZABALUEVA Z.A., NEPOMNYASCHAYA E.K., VELICHKO E.N., AKSENOV E.T.  
Peter the Great Saint-Petersburg Polytechnic University  
**Development of laser correlation spectroscopy by cross-correlation method**
99. BUSURIN V.I., KOROBKOV V.V., MULIN P.V., WIN Yi.N.  
Moscow Aviation Institute (National Research University)  
**The analysis of linear acceleration effect on the characteristics of the optoelectronic ring three-axis angular velocity transducer**
100. TSAREVA A.M., MAKAEVA R.Kh., SAFINA D.M.  
Kazan National Research Technical University named after A.N. Tupolev - KAI  
**The application of optical control methods in aircraft building**
101. SUETIN N.V.  
Peoples' Friendship University of Russia, Moscow  
**Experimental characteristics of a laser radiation modulator with a modulating block made of two phase diffraction gratings**
102. KUDRYAVTSEV P.S., LIU Zh.  
Moscow Aviation Institute (National Research University)  
**Investigation of the forecast system for measuring the height with a non-contact scanning profilometer**
103. PAVLOV I.N., RASKOVSKAYA I.L., RINKEVICHYUS B.S.  
National Research University "Moscow Power Engineering Institute"  
**Measurement of evaporation rate of a liquid droplet on a transparent substrate using the refraction method**
104. ARTYUKOV I.A., BUSAROV A.S., VINOGRADOV A.V., POPOV N.L.  
Lebedev Physical Institute of the RAS, Moscow  
**Coherent X-ray reflection microscopy with objects illuminated under grazing angles**

Meeting 9

Friday, January 26, 2018, 13.00

Room 403

105. BYKOVSKY A.Yu., SHERBAKOV A.A.<sup>1</sup>  
Lebedev Physical Institute of the RAS, Moscow  
<sup>1</sup>Moscow Institute of Physics and Technology (State University), Dolgoprudny  
**Position-based cryptography in mixed schemes of multiple-valued logic and quantum key distribution**
106. PLJONKIN A.P., OGORODNIKOV Yu.Yu.<sup>1</sup>  
Southern Federal University, Taganrog  
<sup>1</sup>Krasovsky Institute of Mathematics and Mechanics, UB RAS, Ekaterinburg  
**About approximation of integer factorization problem for quantum cryptography**
107. PAVLOV A.V.  
ITMO University, Saint-Petersburg  
**On the effectiveness of common parts detecting by the method of superimposed Fourier holograms in dependence of the recording media properties**
108. EVTIKHIEV N.N., KURBATOVA E.A., CHERYOMKHIN P.A.  
National Research Nuclear University MEPhI (Moscow Engineering Physics Institute)  
**Coefficients quantization at off-axis digital hologram wavelet compression**
109. EVTIKHIEV N.N., KRASNOV V.V., SHIFRINA A.V.  
National Research Nuclear University MEPhI (Moscow Engineering Physics Institute)  
**Method of asymmetric optical encryption of images using spatially incoherent illumination**
110. IVANOV P.A.  
Yaroslavl State Technical University  
**Quadratic filters in problems of images recognition with usage of optoelectronic correlators**
111. VOLOSTNIKOV V.G.<sup>1</sup>, VORONTSOV E.N.<sup>1</sup>, KOTOVA S.P.<sup>1,2</sup>, LOSEVSKY N.N.<sup>1</sup>, PROKOPOVA D.V.<sup>1,2</sup>, SAMAGIN S.A.<sup>1</sup>  
<sup>1</sup>Samara Branch of the Lebedev Physical Institute  
<sup>2</sup>Samara National Research University  
**Phase filters for 3d localization of point light sources**
112. SOKOLENKO B.V., HALILOV S.I., PRISYAZHNIUK A.V., POLETAEV D.A.  
V.I. Vernadsky Crimean Federal University, Simferopol  
**Vortex interferometric microscopy with Laguerre-Gaussian beams**
113. KOVALEV M.S., KRASIN G.K., ODINOKOV S.B., SOLOMASHENKO A.B.  
Bauman Moscow State Technical University  
**The calculation of the diffraction integral using Chebyshev polynomials**
114. ARSENYAN T.I.<sup>1</sup>, BLANK A.V.<sup>1,2</sup>, VOKHNIK O.M.<sup>1</sup>, KONONENKO V.S.<sup>1</sup>, SUHAREVA N.A.<sup>1</sup>, TUGAENKO V.Yu.<sup>2</sup>  
S.P. Korolev Rocket and Space Corporation Energia, Korolev  
<sup>1</sup>Lomonosov Moscow State University  
**Non-equilibrium thermodynamics of the ensemble of coherent wave beams**
115. KOROLENKO P.V., KUBANOV R.T., RYZHIKOVA Yu.V.  
Lomonosov Moscow State University  
**Photonics: aesthetic aspect**
116. KUZNETSOV P.A.<sup>2</sup>, MOSHCHEV I.S.<sup>1,2</sup>, KUZNETSOV A.N.<sup>2</sup>  
<sup>1</sup>National Research University "Moscow Power Engineering Institute"  
<sup>2</sup>JSC «RD&P Center «Orion», Moscow  
**Dynamic range expansion in short-wave IR FPA by auto-tuning of the integration time**

117. VLADIMIROV A.P.<sup>1,2,3</sup>, MIKHAILOVA Yu.A.<sup>2,3</sup>, DRUKARENKO N.A.<sup>1</sup>  
<sup>1</sup>*Institute of Engineering Science, UB RAS, Ekaterinburg*  
<sup>2</sup>*Ural State University, Ekaterinburg*  
<sup>3</sup>*Ekaterinburg Research Institute of Viral Infections*  
**Dynamic speckle-interferometry of technical and biological objects**
118. PAVLOV P.V., MALOV A.N.<sup>1</sup>, NEUPOKOEVA A.V.<sup>2</sup>  
*Air Force Academy named after prof. N.E. Zhukovsky and Yu.A Gagarin, Voronezh*  
<sup>1</sup>*Irkutsk National Research Technical University*  
<sup>2</sup>*Irkutsk State Medical University*  
**Determination of the technical condition of working liquids by digital speckle images parameters analysis**
119. ISMANOV Yu.H., TYNYSHOVA T.D., ISMAILOV D.A., KULMURZAEV N.M.  
*Institute of Physical-Technical Problems and Material Science of NAS KR, Bishkek, Kyrgyz republic*  
**Multichannel holographic interferometer for studying complex phase and reflecting media**
120. OSINTSEV A.V.  
*National Research Nuclear University MEPhI (Moscow Engineering Physics Institute)*  
**Study of dimensional stability of metal-ceramic prostheses by holographic interferometry**
121. CHERNYKH D.A., CHERNYKH V.T.  
*Kazan National Research Technical University named after A.N. Tupolev - KAI*  
**Holographic method for investigation non-stationary processes**
122. MIRONOVA T.V., KRAISKII A.V.  
*Lebedev Physical Institute of the RAS, Moscow*  
**Determination of diffusion coefficient in hydrogel**
123. KLYCHKOVA D.M.<sup>1,2</sup>  
<sup>1</sup>*Saratov National Research State University*  
<sup>2</sup>*Institute of Precision Mechanics and Control of the RAS, Saratov*  
**Spatial spectrum of coherence signal at object defocusing in digital holographic microscopy in transmission with quasimonochromatic partially spatially coherent illumination**
124. DUDENKOVA V.V.<sup>1</sup>, ZAKHAROV Yu.N.<sup>1,2</sup>  
<sup>1</sup>*Lobachevsky State University of Nizhny Novgorod*  
<sup>2</sup>*Harvard University, Cambridge, USA*  
**Investigation of fluorescent biological objects by method of localization fluorescent microscopy BaLM in laser scanning mode**
125. CHIPEGIN A.A., PETROV N.V.  
*ITMO University, Saint-Petersburg*  
**Features of the wavefront shaping technique using digital micromirror device in digital interferometric diagnostics**
126. KOVALEV M.S., ODINOKOV S.B., RUCHKA P.A.  
*Bauman Moscow State Technical University*  
**Digital synthesis of Fourier holograms with consideration of the methods of their realization**
127. KOVALEV M.S., ODINOKOV S.B., STSEPURO N.G.  
*Bauman Moscow State Technical University*  
**Frenel holograms: synthesis and application methods**
128. DZHAMANKYZOV N.K., ISMANOV Yu.H., ZHUMALIEV K.M., ALYMKULOV S.A.  
*Institute of Physical-Technical Problems and Material Science of NAS KR, Bishkek, Kyrgyz republic*  
**The temperature field distribution in photothermoplastic media during of hologram recording**

Posters 1Wednesday, January 24, 2018, 12.00

129. LIVASHVILI A.I., KRISHTOP V.V., KOSTINA G.V., VINOGRADOVA P.V., KIREEVA N.M.  
*Far Eastern State Transport University, Khabarovsk*  
**Dynamics of switching waves in a nanofluid in a light field**
130. SIDOROV N.V., GORELIK V.S.<sup>1,2</sup>  
*I.V. Tananaev Institute of Chemistry and Technology of Rare Elements and Mineral Raw Materials of Kola Science Center of the RAS, Apatity, Murmansk region*  
<sup>1</sup>*Lebedev Physical Institute of the RAS, Moscow*  
<sup>2</sup>*Lomonosov Moscow State University*  
**Intermittent beam track of the focused laser beam and laser excitement of the coupled connected states of two photons in dielectric crystals**
131. MINKOV K.N.<sup>1,2</sup>, RUZHITSKAYA D.D.<sup>1,3</sup>, SAMOILENKO A.A.<sup>1</sup>  
<sup>1</sup>*All-Russian Research Institute for Optical and Physical Measurements, Moscow*  
<sup>2</sup>*National Research University Higher School of Economics, Moscow*  
<sup>3</sup>*Lomonosov Moscow State University*  
**Calculation of parameters of spontaneous parametric down-conversion for selection of nonlinear crystal characteristics**
132. LITVINOVA M.N., POGODINA V.A., SYUY A.V., SIDOROV N.V.<sup>1</sup>, PALATNIKOV M.N.<sup>1</sup>  
*Far Eastern State Transport University, Khabarovsk*  
<sup>1</sup>*I.V. Tananaev Institute of Chemistry and Technology of Rare Elements and Mineral Raw Materials of Kola Science Center of the RAS, Apatity, Murmansk region*  
**Electrooptical properties of doped lithium niobate crystals**
133. BRETSKO M.V., LAPAYEVA S.N.  
*V.I. Vernadsky Crimean Federal University, Simferopol*  
**Interaction monoscopically patterns with singularities in the electro-optic crystal**



134. BOBREVA L.A., SIDOROV N.V., PALATNIKOV M.N.  
*I.V. Tananaev Institute of Chemistry and Technology of Rare Elements and Mineral Raw Materials of Kola Science Center of the RAS, Apatity, Murmansk region*  
**Hydrogen connections in crystals LiNbO<sub>3</sub>:Zn**
135. PIKOUL O.Yu.  
*Far Eastern State Transport University, Khabarovsk*  
**Use of compensator in laser conoscopic method to analyze optical parameters of crystal**
136. DYU V.G., SOKOLOV D.V., TOKMASHOV T.D., SHANDAROV S.M.  
*Tomsk State University of Control Systems and Radioelectronics*  
**Dynamics of the optical absorption in the Bi<sub>12</sub>TiO<sub>20</sub>:Al crystal induced by nanosecond laser pulses**
137. MAKSIMENKO V.A.  
*Far Eastern State Transport University, Khabarovsk*  
**Investigation of the photoinduced defects in the photorefractive crystals with polarization interference method**
138. KOLESNIKOV A.I., TRETIKOV S.A., KAPLUNOV I.A., GRECHISHKIN R.M., LYAKHOVA M.B., RYBINA S.S., VORONTOV M.S.  
*Tver State University*  
**Regularly oriented flare spots of laser light reflection from polished single crystal surfaces**
139. SIM E.S., SHANDAROV S.M., KISTENEVA M.G., ZHURIN T.A., SMIRNOV S.V.  
*Tomsk State University of Control Systems and Radioelectronics*  
**λ-Modulation of photoconductivity in the bismuth germanium oxide crystal**
140. PRUDNIKOV I.R.  
*Lomonosov Moscow State University*  
**Peculiarities of light wave diffraction in a 1-D photonic crystal with a few extremely thin spacer layers**
141. PUSTOZEROV A.V., OKUNEV D.V., SHANDAROV V.M.  
*Tomsk State University of Control Systems and Radioelectronics*  
**Research of conditions of self-focusing of light beams in lithium niobate with photovoltaic mechanism of the nonlinear response under the influence of background illumination**
142. GALUTSKIY V.V., GURSKAYA E.M., YAKOVENKO N.A.  
*Kuban State University, Krasnodar*  
**Simulation of PPLN:Yb<sup>3+</sup> gradient amplifier of optical signals**
143. IONIN A.A.<sup>1</sup>, KINYAEVSKIY I.O.<sup>1</sup>, KLIMACHEV Yu.M.<sup>1</sup>, MOZHAEVA V.A.<sup>1,2</sup>, BADIKOV D.V.<sup>3</sup>, BADIKOV V.V.<sup>3</sup>  
<sup>1</sup>*Lebedev Physical Institute of the RAS, Moscow*  
<sup>2</sup>*Moscow State University of Geodesy and Cartography*  
<sup>3</sup>*Kuban State University, Krasnodar*  
**Transformation of the frequency of radiation of the CO laser in the nonlinear crystal**
144. MARTCEVA A.V., ABDIRALI E.E., SHANDAROV S.M., SIM E.S., SMIRNOV S.V., SEREBRENNIKOV L.Ya., KOLEGOV A.A.<sup>1</sup>  
*Tomsk State University of Control Systems and Radioelectronics*  
<sup>1</sup>*Zababakhin All-Russia research institute of technical physics, Snezhinsk, Chelyabinsk region*  
**Spectral dependences of the optical transmittance of epitaxial structures grown on sapphire substrates**
145. VEKSHIN M.M., KUPLEVICH M.A., NIKITIN V.A., YAKOVENKO N.A.  
*Kuban State University, Krasnodar*  
**Fabrication of glass integrated-optic splitters 1×4 by ion exchange in KNO<sub>3</sub> salt melt**
146. KNIAZKOV A.V., SMUROV S.A.  
*Peter the Great Saint-Petersburg Polytechnic University*  
**The study of the surface distribution of the electrooptical properties of the medium in a transverse cell by using reflected light**
147. KARANSKY V.V., SMIRNOV S.V.  
*Tomsk State University of Control Systems and Radioelectronics*  
**Planarization of the surface of optical modulators from Mn-Zn ferrites with the aid of electron-beam machining**
148. VEKSHIN M.M., NIKITIN V.A., YAKOVENKO N.A.  
*Kuban State University, Krasnodar*  
**Design of mode multiplexer based on the integrated-optic asymmetric Y-coupler in glass**
149. NIKITIN P.A.  
*Lomonosov Moscow State University*  
**Backward collinear diffraction of broadband radiation**
150. PROKLOV V.V., REZVOV Yu.G.<sup>1</sup>  
*Fryazino Branch of Kotel'nikov Institute of Radioengineering and Electronics of RAS*  
<sup>1</sup>*Novomoskovsk Institute of Mendeleev University of Chemical Technology, Tula region*  
**Diffraction of a plane light wave in the acousto-optic multi-frequency filter**
151. PETROV N.I., DANILOV V.A., POPOV V.V.<sup>1</sup>, USIEVICH B.A.<sup>2</sup>  
<sup>1</sup>*Scientific and Technological Center of Unique Instrumentation of the RAS, Moscow*  
<sup>2</sup>*Lomonosov Moscow State University*  
<sup>2</sup>*Prokhorov General Physics Institute of the RAS, Moscow*  
**Resonance absorption of light by subwavelength diffractive gratings**
152. BYSHEVSKI-KONOPKO O.A.<sup>1</sup>, PROKLOV V.V.<sup>1</sup>, VELIKOVSKIY D.Yu.<sup>1,2</sup>, KARANDIN A.V.<sup>2</sup>  
<sup>1</sup>*Fryazino Branch of Kotel'nikov Institute of Radioengineering and Electronics of RAS*  
<sup>2</sup>*Scientific and Technological Center of Unique Instrumentation of the RAS, Moscow*  
**Research of the method of the distant recognition of optical signals on their a priori known spectral signs on the basis of multiband acousto-optical filtration of radiation**
153. YAKOVLEVA T.V.  
*Federal Research Center «Computer Science and Control» of the RAS, Moscow*  
**Nonlinear filtration of Rician data as a basis for a new approach to measuring the signals' phase shift**
154. AKIMOVA Ya.E., EGOROV Yu.A.  
*V.I. Vernadsky Crimean Federal University, Simferopol*  
**Measurement of orbital angular momentum beams with fractional topological charge**
155. AGEEV A.E., DZHIOEV E.S., IVANOV D.A., KUZYAKOV B.A.  
*Moscow Technological University (MIREA)*  
**The combined optical communication system using orbital angular momentum of photons**

156. CHAYMARDANOV P.A.  
*Bonch-Bruевич Saint-Petersburg State University of Telecommunications*  
**Development of software for computer modeling of fiber optic transmission systems**
157. LUTCHENKO S.S., BOGACHKOV I.V., KOPYTOV E.Yu.  
*Omsk State Technical University*  
**A determination of the availability factor of fiber-optic communication lines with consideration of influence of external factors**
158. BARSHAK E.V., VIKULIN D.V., YAVORSKY M.A.  
*V.I. Vernadsky Crimean Federal University, Simferopol*  
**The CNOT gate in multi-elliptical optical fibers**
159. BOGACHKOV I.V.  
*Omsk State Technical University*  
**A study of the Mandelstam – Brillouin scatter characteristics in specialized optical fibers**
160. ZAICHKO K.V.  
*Tomsk State University of Control Systems and Radioelectronics*  
**Modeling of the optical fiber attenuation of various doses of ionizing radiation**
161. UKOLOV D.S.<sup>1</sup>, MOZHAEV R.K.<sup>1</sup>, CHERNIAK M.E.<sup>1,2</sup>  
<sup>1</sup>*National Research Nuclear University MEPhI (Moscow Engineering Physics Institute)*  
<sup>2</sup>*Specialized Electronic Systems, Moscow*  
**Study of gamma-ray induced attenuation of fluorine-doped single-mode radiation hard optical fiber**
162. KUZUYAKOV B.A.  
*Moscow Technological University (MIREA)*  
**A method of retransmission signals in the optical range atmospheric communication line using a quadcopter**
163. GAMILOVSKAYA A.V., VOLKHIN Yu.N., ANDREEV A.S., BOGACHKOV I.V.  
*Omsk State Technical University*  
**Ultra-wideband frequency converter, realized with the use of radiophotonics methods and means**
164. VOLKOV I.V.<sup>1,2</sup>  
<sup>1</sup>*Moscow Technological University (MIREA)*  
<sup>2</sup>*All-Russian Research Institute for Optical and Physical Measurements, Moscow*  
**Optical adjustable beamforming system for expansion of the receiving band the radiotelescope VHF range with a 2D phased array antenna**

Posters 2

Wednesday, January 24, 2018, 12.00

165. GONCHAROV S.A.<sup>1</sup>, KRIVENKOV V.A.<sup>1</sup>, SAMOKHVALOV P.S.<sup>1</sup>, NABIEV I.R.<sup>1,2</sup>, RAKOVICH Yu.P.<sup>1,3,4</sup>  
<sup>1</sup>*National Research Nuclear University MEPhI (Moscow Engineering Physics Institute)*  
<sup>2</sup>*University of Reims Champagne-Ardenne, France*  
<sup>3</sup>*Basque University, San Sebastian, Spain*  
<sup>4</sup>*Basque Foundation for Science, Bilbao, Spain*  
**Photoluminescence properties of thin-film nanohybrid material based on quantum dots and gold nanorods**
166. KOBRANOVA A.A., SIDOROV A.I., LEBEDEV V.F., ANTROPOVA T.V.<sup>1</sup>  
*ITMO University, Saint-Petersburg*  
<sup>1</sup>*Grebenshchikov Institute of Silicate Chemistry of the RAS, Saint-Petersburg*  
**Forming of nanodiamonds from carbon quantum dots in nanoporous glass under laser irradiation**
167. KOLCHIN A.V., KASHAEV F.V., SKOBELKINA A.V., ZABOTNOV S.V., GOLOVAN L.A., PRESNOV D.E., KAMINSKAYA T.P., KASHKAROV P.K.  
*Lomonosov Moscow State University*  
**Features of light scattering and photoluminescence by silicon nanoparticles synthesized by chemical etching and laser ablation in liquids**
168. KALUGIN A.I., ANTONOV E.A.  
*Kalashnikov Izhevsk State Technical University*  
**Theoretical spectra of permittivity of isoelectronic crystals Ge-GaAs-ZnSe-CuBr**
169. ORESHKINA K.V., DUBROVIN V.D., PICHUGIN I.S.  
*ITMO University, Saint-Petersburg*  
**Luminescent properties and crystallization kinetics of sodium aluminosilicate glass containing SrF<sub>2</sub> and BaF<sub>2</sub> nanocrystals and europium**
170. LOZING N.A.<sup>1,2</sup>, GLADUSH M.G.<sup>1,3</sup>, EKIMOV E.A.<sup>4</sup>, EREMCHEV I.Yu.<sup>1</sup>  
<sup>1</sup>*Institute for Spectroscopy of the RAS, Troitsk*  
<sup>2</sup>*National Research University Higher School of Economics, Moscow*  
<sup>3</sup>*Moscow State University of Education*  
<sup>4</sup>*Vereshchagin Institute for High Pressure Physics of the RAS, Troitsk*  
**Spontaneous variations between fluorescence intensities of a diamond microcrystal with Ge-V centers**
171. ANTONOV E.A., KALUGIN A.I.  
*Kalashnikov Izhevsk State Technical University*  
**Characteristic energy loss and permittivity spectra of diamond**
172. PYATNOV M.V.<sup>1</sup>, AVDEEVA A.Yu.<sup>1</sup>, VETROV S.Ya.<sup>1,2</sup>  
<sup>1</sup>*Siberian Federal University, Krasnoyarsk*  
<sup>2</sup>*Kirensky Institute of Physics SB RAS, Krasnoyarsk*  
**Hybrid states of optical localized modes in chiral photonic crystal structure**
173. KRYUKOVA I.S.<sup>1</sup>, DOVZHENKO D.S.<sup>1</sup>, CHISTYAKOV A.A.<sup>1</sup>, NABIEV I.R.<sup>1,2</sup>  
<sup>1</sup>*National Research Nuclear University MEPhI (Moscow Engineering Physics Institute)*  
<sup>2</sup>*University of Reims Champagne-Ardenne, France*  
**Preparation of freestanding porous silicon photonic crystals**

174. PANKIN P.S.<sup>1,2</sup>, SVYAKHOVSKIY S.E.<sup>3</sup>, VYUNISHEV A.M.<sup>1,2</sup>, TIMOFEEV I.V.<sup>1,2</sup>, VETROV S.Ya.<sup>1,2</sup>  
<sup>1</sup>Siberian Federal University, Krasnoyarsk  
<sup>2</sup>Kirensky Institute of Physics SB RAS, Krasnoyarsk  
<sup>3</sup>Lomonosov Moscow State University  
**Defect modes in quasiperiodic photonic crystal**
175. VILEISHIKOVA E.V., RACHKOVSKAYA G.E.<sup>1</sup>, KICHANOV S.E.<sup>2</sup>, ZAKHAREVICH G.B.<sup>1</sup>  
<sup>1</sup>Belarusian National Technical University, Minsk  
<sup>2</sup>Belarusian State Technological University, Minsk  
<sup>3</sup>Joint institute of nuclear researches, Dubna  
**Structure and cooperative up-conversion of oxyfluoride glass-ceramics with Eu<sup>3+</sup>, Tb<sup>3+</sup>:PbF<sub>2</sub> nanocrystals**
176. STOLYARCHUK M.V., CHERNAKOV D.I., SIDOROV A.I.  
<sup>1</sup>ITMO University, Saint-Petersburg  
**Ultraviolet writing of optical luminescent waveguides in photo-thermo-refractive glass**
177. DAVYDOV V.N., TUEV V.I., KARANKEVICH O.A.  
<sup>1</sup>Tomsk State University of Control Systems and Radioelectronics  
**Application of Onzager principle to the polar and axial phenomena in the crystal optics**
178. KUCHERENKO M.G., RUSINOV A.P., KISLOV D.A.  
<sup>1</sup>Orenburg State University  
**Calculation of field characteristics in periodic gratings made up of metal nanorods with activated plasmon modes**
179. ZAKOMIRNY V.I.<sup>1,2</sup>, GERASIMOV V.S.<sup>1</sup>, ERSHOV A.E.<sup>1,3</sup>  
<sup>1</sup>Siberian Federal University, Krasnoyarsk  
<sup>2</sup>Royal Institute of Technology, Stockholm, Sweden  
<sup>3</sup>Institute of Computational Modeling, SB RAS, Krasnoyarsk  
**TiN as alternative plasmonic material for periodic structures with narrow resonance**
180. POPOV M.E., ZHDANOVA K.D., MITETELO N.V., MAMONOV E.A., MURZINA T.V.  
<sup>1</sup>Lomonosov Moscow State University  
**Third-order nonlinear effects in organic microstructures**
181. KUCHERENKO M.G., TEREININA L.V.  
<sup>1</sup>Orenburg State University  
**Efficient polarizability of a spherical layered nanocomposite in 2D and 3D lattice from identical elements**
182. DOLGIKH I.A., KOLMYCHEK I.A.  
<sup>1</sup>Lomonosov Moscow State University  
**The generation of optical second harmonic in permalloy "C"-shaped nanostructures arrays**
183. KUCHERENKO M.G., CHMEREVA T.M.  
<sup>1</sup>Orenburg State University  
**Magnetic circular dichroism of optical absorption of bimetallic layer nanoparticles with ferromagnetic core and diamagnetic shell**
184. VOITSEKHOVSKII A.V., NESMELOV S.N., DZYADUKH S.M.  
<sup>1</sup>National Research Tomsk State University  
**Threshold characteristics of MIS-photodetector based on graded-gap HgCdTe grown by molecular-beam epitaxy on alternative substrates**
185. AVERIN S.V., KUZNETZOV P.I., ZHITOV V.A., ZAKHAROV L.Yu., KOTOV V.M.  
<sup>1</sup>Fryazino Branch of Kotel'nikov Institute of Radioengineering and Electronics of RAS  
**Electrical, optical and spectral characteristics of ZnSe/ZnTe/GaAs heterostructure and MSM-photodetector on its base**
186. DAVYDOV V.N., SOLDATKIN V.S., KARANKEVICH O.A.  
<sup>1</sup>Tomsk State University of Control Systems and Radioelectronics  
**Resistive profiling as research technique of a semiconductor's devices and heterostructures**
187. MOSHKOVA M.A.<sup>1,2</sup>, DIVOCHIY A.V.<sup>2</sup>, MOROZOV P.V.<sup>2</sup>, ZOLOTOV P.I.<sup>1,2</sup>, VACHTOMIN Yu.B.<sup>2,3</sup>, SMIRNOV K.V.<sup>1,2,3</sup>  
<sup>1</sup>National Research University Higher School of Economics, Moscow  
<sup>2</sup>LLC «SCONTEL», Moscow  
<sup>3</sup>Moscow State University of Education  
**High-efficiency NBN single-photon detectors with photon number resolution functionality**
188. DAVYDOV V.N., KARANKEVICH O.A.  
<sup>1</sup>Tomsk State University of Control Systems and Radioelectronics  
**Capture and emission of carriers of the charge of a quantum well of a semiconductor source of optical radiation**
189. BABKIN O.E., MELIDINA A.A., ILINA V.V., BABKINA L.A.<sup>1</sup>  
<sup>1</sup>Saint-Petersburg State University of Film and Television  
<sup>2</sup>S@H Technology Ltd., Saint-Petersburg  
**Russian photopolymer material for production of optic cables**
190. MAHILNY U.V., STANKEVICH A.I.  
<sup>1</sup>Belarusian State University, Minsk  
**Polymeric layers for optical structures with controllable waveguide parameters**
191. SIMONOV N.O., FLORYA I.N., KORNEEVA Yu.P., KORNEEV A.A., GOLTSMAN G.N.  
<sup>1</sup>Moscow State University of Education  
**Single-photon response in thin superconducting MoN<sub>x</sub> films**
192. CHISTOEDOVA A.A.  
<sup>1</sup>Tomsk State University of Control Systems and Radioelectronics  
**Optical properties of ITO films**
193. SMIRNOV V.V., ALYKOVA O.M., BEZNISKO E.I.  
<sup>1</sup>Astrakhan State University  
**The calculation of the basic parameters of ferrite-garnets films with consideration of empirical ratios**
194. ANDREEVA Ya.M., AGEEV E.I., SERGEEV M.M., VEIKO V.P.  
<sup>1</sup>ITMO University, Saint-Petersburg  
**Laser synthesis of copper nanoparticles in porous films on the base of silica gel**
195. DANILOV P.A.<sup>2</sup>, IONIN A.A.<sup>2</sup>, KUDRYASHOV S.I.<sup>1,2</sup>, SARAIEVA I.N.<sup>2</sup>, UMANSKAYA S.F.<sup>1,2</sup>  
<sup>1</sup>National Research Nuclear University MEPhI (Moscow Engineering Physics Institute)  
<sup>2</sup>Lebedev Physical Institute of the RAS, Moscow  
**Femtosecond laser impact on a thin film of copper (I) oxide**

196. GORBYAK V.V., SIDOROV A.I., PODSVIROV O.A.<sup>1</sup>, YURINA U.V.<sup>1</sup>  
*ITMO University, Saint-Petersburg*  
<sup>1</sup>*Peter the Great Saint-Petersburg Polytechnic University*  
**Electron beam optical information recording in silver-containing glasses**
197. GORYAEV M.A.  
*The A.I. Herzen State Pedagogical University of Russia, Saint-Petersburg*  
**Conditions of photoeffect sensitization in dye – semiconductor system**
198. VOLKOVA N.A.<sup>1</sup>, ISTOMINA O.V.<sup>2</sup>, EVSTROPIEV S.K.<sup>1</sup>, KOLOBKOVA E.V.<sup>1,2</sup>, NIKONOROV N.V.<sup>1</sup>  
<sup>1</sup>*ITMO University, Saint-Petersburg*  
<sup>2</sup>*Saint-Petersburg State Technological Institute (Technical University)*  
**Features of the photolysis of diazole dye Chicago Sky Blue in aqueous solutions of metal nitrates and composite organic-inorganic coatings**
199. EGORYSHEVA A.V.<sup>1</sup>, DUDKINA T.D., GAITKO O.M.<sup>1</sup>, ELLERT O.G.<sup>1</sup>  
*National Research Nuclear University MEPhI (Moscow Engineering Physics Institute)*  
<sup>1</sup>*Kurnakov Institute of General and Inorganic Chemistry of the RAS, Moscow*  
**Photocatalytic properties of complex oxide Bi<sub>1.8</sub>Cr<sub>1.2</sub>SbO<sub>7</sub> with pyrochlore structure**
200. YURCHENKO D.A., PICHUGIN I.S., IGNATIEV A.I.  
*ITMO University, Saint-Petersburg*  
**The effect of antimony in the formation of silver nanoparticles in photo-thermo-refractive glasses**
201. PICHUGIN I.S., IGNATIEV A.I., IVANOV S.A., KOZLOVA D.A.  
*ITMO University, Saint-Petersburg*  
**Germanosilicate photo-thermo-refractive glasses**
202. PICHUGIN I.S., IGNATIEV A.I., KOZLOVA D.A., ORESHKINA K.V.  
*ITMO University, Saint-Petersburg*  
**Influence of halogens on the holographic and spectral properties of photo-thermo-refractive glasses**

*Posters 3*

Thursday, January 25, 2018, 15.00

203. KARTSEV P.F., KUZNETSOV I.O.  
*National Research Nuclear University MEPhI (Moscow Engineering Physics Institute)*  
**Accounting the interaction with external electromagnetic field in the quantum Monte Carlo simulation of polaritonic system in resonator**
204. AVERBUKH B.B., AVERBUKH I.B.  
*Pacific State University, Khabarovsk*  
**The condition for the realization of the optical magnetic mirror from the viewpoint of molecular optics**
205. MITYUREVA A.A., SMIRNOV D.V.  
*Saint-Petersburg State University*  
**Calibration of the cross sections of multiphoton ionization of atoms on the cross sections of their electronic ionization**
206. HOPERSKY A.N., NADOLINSKY A.M., KONEEV R.V.  
*Rostov State Transport University, Rostov-on-Don*  
**Rayleigh scattering of two photons by an atom**
207. SEMENOVA L.E.  
*Prokhorov General Physics Institute of the RAS, Moscow*  
**Scattering of light under two-photon excitation near resonance with the A<sub>n=2</sub> exciton level in a GaN crystal**
208. ASTASHKEVICH S.A.  
*Saint-Petersburg State University*  
**Shannon entropy and fisher information for the H<sub>2</sub><sup>+</sup> molecule**
209. AVERBUKH B.B., AVERBUKH I.B.  
*Pacific State University, Khabarovsk*  
**Exit of the area of existence of backward waves outside the metamaterial and impossibility of realization of the superlens**
210. ARKHIPOV D.N., ASTASHKEVICH S.A., MITYUREVA A.A., SMIRNOV V.V.  
*Saint-Petersburg State University*  
**Study of photoionization dynamics of the hydrogen molecular ion by the trajectory-based method**
211. ZVINENKO K.K., ZAKOLDAEV R.A., SERGEEV M.M.  
*ITMO University, Saint-Petersburg*  
**Structuring of the quartz glass using ultrashort laser pulses of different wavelengths**
212. MAKIN V.S., MAKIN R.S.<sup>1</sup>  
*Scientific Research Institute for Optoelectronic Instrument Engineering, Sosnovy Bor, Leningrad region*  
<sup>1</sup>*National Research Nuclear University MEPhI (Moscow Engineering Physics Institute)*  
**Nanogratings production in system USP laser pulses – metalloorganic gas – deposited metal – sapphire in synergetic interference field with waveguide modes participation**
213. MININA O.V.<sup>1,2</sup>  
<sup>1</sup>*National Research Tomsk State University*  
<sup>2</sup>*V.E. Zuev Institute of Atmospheric Optics, SB RAS, Tomsk*  
**The waveguide regime during filamentation of femtosecond laser pulses in air**
214. SMAYEV M.P., DOROFEEV V.V.<sup>1</sup>, OKHRIMCHUK A.G.  
*Mendeleev University of Chemical Technology of Russia, Moscow*  
<sup>1</sup>*Devyat'kh Institute of Chemistry of High-Purity Substances of the RAS, Nizhny Novgorod*  
**Creation of single mode waveguide in the bulk of tellurite glass by femtosecond laser pulses**
215. MAKIN V.S., MAKIN R.S.<sup>1</sup>  
*Scientific Research Institute for Optoelectronic Instrument Engineering, Sosnovy Bor, Leningrad region*  
<sup>1</sup>*National Research Nuclear University MEPhI (Moscow Engineering Physics Institute)*  
**Quartz glass ordered structuring by nanosecond laser pulse and universal polariton model**

216. SIVERS A.N., ZAKOLDAEV R.A., SERGEEV M.M., KOSTYUK G.K., VEIKO V.P., ANFIMOVA I.N.<sup>1</sup>, ANTROPOVA T.V.<sup>1</sup>  
*ITMO University, Saint-Petersburg*  
<sup>1</sup>*Grebenshchikov Institute of Silicate Chemistry of the RAS, Saint-Petersburg*  
**Laser-induced formation of molecular barriers inside of porous glass**
217. ZHONG L.<sup>1,2</sup>, ZAKOLDAEV R.A.<sup>1</sup>, SERGEEV M.M.<sup>1</sup>, VEIKO V.P.<sup>1</sup>, GIRSOVA M.A.<sup>3</sup>, ANTROPOVA T.V.<sup>3</sup>  
<sup>1</sup>*ITMO University, Saint-Petersburg*  
<sup>2</sup>*Huazhong University of Science and Technology, Wuhan, China*  
<sup>3</sup>*Grebenshchikov Institute of Silicate Chemistry of the RAS, Saint-Petersburg*  
**Space-selective stabilization of Bi active centers inside porous glass by laser pulses**
218. DEMIDOV V.V.<sup>1</sup>, ANANYEV V.A.<sup>1,2</sup>, TER-NERSESYANTS E.V.<sup>1</sup>  
<sup>1</sup>*S.I. Vavilov State Optical Institute, Saint-Petersburg*  
<sup>2</sup>*ITMO University, Saint-Petersburg*  
**Higher-order mode delocalization capability in microstructured fiber lasers with extremely low symmetry**
219. DEMIDOV V.V.<sup>1</sup>, LEONOV S.O.<sup>2</sup>, ANANYEV V.A.<sup>1,2</sup>, TIGAEV V.O.<sup>2</sup>, YELISTRATOVA E.A.<sup>2</sup>  
<sup>1</sup>*S.I. Vavilov State Optical Institute, Saint-Petersburg*  
<sup>2</sup>*Bauman Moscow State Technical University*  
<sup>3</sup>*ITMO University, Saint-Petersburg*  
**Study of modal content and spectral transmission of anti-resonant microstructured fibers with a hollow core of 50 μm in diameter**
220. GANIN D.V., LAPSHIN K.E., VARTAPETOV S.K.  
*Prokhorov General Physics Institute of the RAS, Moscow*  
**Methods of elongation of femtosecond laser pulses with transparent materials interaction region for high speed and precision material processing**
221. VEIKO V.P., LUONG V.C., ODINTSOVA G.V., ROMANOV V.V., YATSUK R.M.  
*ITMO University, Saint-Petersburg*  
**Optimization of color laser marking technology for industrial application**
222. GALUSHKIN M.G.  
*Institute on Laser and Information Technologies – branch of FSRC «Crystallography and Photonics» of the RAS, Shatura*  
**Peculiarities of thermal parameters of laser powder surfacing**
223. IABBAROVA D.R., SALIKHOV R., HABIBULLINA L.V.  
*Kazan National Research Technical University named after A.N. Tupolev - KAI*  
**Graphitization of the carbon fiber wrap during laser cutting of carbon plastic**
224. GALUSHKIN M.G.  
*Institute on Laser and Information Technologies – branch of FSRC «Crystallography and Photonics» of the RAS, Shatura*  
**Determination of vapor recoil pressure and its dependence on beam scanning velocity in deep-penetration laser welding**
225. IABBAROVA D.R., SALIKHOV R., HABIBULLINA L.V.  
*Kazan National Research Technical University named after A.N. Tupolev - KAI*  
**Investigation of heat-affected zone after laser cutting of CCFC by using of optical microscopy technology**
226. MAXIMOVA S.V.<sup>1</sup>, KOVAL V.V.<sup>1</sup>, ZAKOLDAEV R.A.<sup>1</sup>, SHAKHNO E.A.<sup>1</sup>, KUZIVANOV M.O.<sup>1</sup>, MOROZOV Yu.S.<sup>1,2</sup>  
<sup>1</sup>*ITMO University, Saint-Petersburg*  
<sup>2</sup>*S.I. Vavilov State Optical Institute, Saint-Petersburg*  
**Oxidation of titane films by picosecond laser pulses in multibeam interference scheme**
227. KOPIEV P.S., LENTOVSKII V.V., FEDOROV D.L.  
*Baltic State Technical University «VOENMEH» named after D.F. Ustinov, Saint-Petersburg*  
**Development of design of powerful semiconductor lasers for remote power supply**
228. BAZZAL Kh., VOROPAY E.S., ZAJOGIN A.P., LICHKOVSKIY V.V.  
*Belarusian State University, Minsk*  
**Influence of the channel form on the AIN formation processes when aluminum target is subjected to a series of double laser pulses**
229. KOZLOVSKII K.I., LISOVSKY M.I., MELEKHOV A.P., PLEKHANOV A.A., CHISTYAKOV A.A.  
*National Research Nuclear University MEPhI (Moscow Engineering Physics Institute)*  
**Terahertz radiation of low-inductance discharge in vacuum with laser plasma initiation**
230. KOZLOVSKII K.I., MELEKHOV A.P.  
*National Research Nuclear University MEPhI (Moscow Engineering Physics Institute)*  
**Optimization of terahertz radiation generation by plasma of laser triggered vacuum spark**
231. KOVAL V.V.<sup>1</sup>, RYMKEVICH V.S.<sup>1</sup>, ZAKOLDAEV R.A.<sup>1</sup>, SERGEEV M.M.<sup>1</sup>, MOROZOV Yu.S.<sup>1,2</sup>  
<sup>1</sup>*ITMO University, Saint-Petersburg*  
<sup>2</sup>*S.I. Vavilov State Optical Institute, Saint-Petersburg*  
**increasing the resolution of laser-induced microplasma**
232. SHILOVA G.V.<sup>1</sup>, SIROTKIN A.A.<sup>1,2</sup>, ZVEREV P.G.<sup>1</sup>  
<sup>1</sup>*Prokhorov General Physics Institute of the RAS, Moscow*  
<sup>2</sup>*National Research Nuclear University MEPhI (Moscow Engineering Physics Institute)*  
**Laser with 563 nm wavelength generation**
233. VASILTSOV V.V., GALUSHKIN M.G.  
*Institute on Laser and Information Technologies – branch of FSRC «Crystallography and Photonics» of the RAS, Shatura*  
**Modeling of parameters of terahertz gas laser pumped by waveguide CO<sub>2</sub> lasers**
234. KOLYADIN A.N., ASTAPOVICH M.S., GLADYSHEV A.V., KOSOLAPOV A.F., PRYAMIKOV A.D., ALAGASHEV G.K., KHUDYAKOV M.M., LIKHACHEV M.E., BUFETOV I.A.  
*Fiber Optic Research Center of the RAS, Moscow*  
**Effective Raman generation at 4.4 μm and measurement with its help the optical characteristics of the hollow-core revolver fiber**
235. ROGOZHIN M.V.<sup>1</sup>, ROGALIN V.E.<sup>2,3</sup>, KRIMSKY M.I.<sup>1,2</sup>  
<sup>1</sup>*Moscow Institute of Physics and Technology (State University), Dolgoprudny*  
<sup>2</sup>*National Center of Laser Systems and Complexes Astrophysika, Moscow*  
<sup>3</sup>*Tver State University*  
**Thermal control of laser diodes by using phase change material heat exchanger**

236. MOZHAEV R.K.<sup>1</sup>, CHERNIAK M.E.<sup>1,2</sup>  
<sup>1</sup>National Research Nuclear University MEPhI (Moscow Engineering Physics Institute)  
<sup>2</sup>Specialized Electronic Systems, Moscow  
**Study of quantum well laser diode's and heterostructural p-i-n photodiode's in fiber-optic modules radiation hardness to gamma-ray and neutron irradiation**
237. MALOV A.N., NEBOGIN S.A., VAYCHAS A.A.<sup>1</sup>  
Irkutsk National Research Technical University  
<sup>1</sup>Irkutsk Branch of Moscow State Technical University of Civil Aviation  
**Laser radiation influence on planar bioorganic solution crystallization**
238. KOVALENKO A.A., EVTIKHIEV N.N.<sup>1</sup>, ALTSHULER G.B.<sup>2</sup>, VINNICHENKO V.A.  
IRE-Polus Corporation, Fryazino  
<sup>1</sup>National Research Nuclear University MEPhI (Moscow Engineering Physics Institute)  
<sup>2</sup>IPG Medical, Marlborough, USA  
**Comparison of a novel 450-nm laser with Ho:YAG (2100 nm), Tm-fiber (1940 nm), and KTP (532 nm) lasers for soft-tissue ablation**
239. DUDOVA D.S.<sup>1</sup>, BARDAKOVA K.N.<sup>1,2</sup>, MINAEV N.V.<sup>1</sup>, TIMASHEV P.S.<sup>1,2</sup>  
<sup>1</sup>Institute of Photonic Technologies – branch of FSRC «Crystallography and Photonics» of the RAS, Troitsk  
<sup>2</sup>Sechenov First Moscow State Medical University  
**Laser induced formation of functional matrices for biomedicine**
240. NEUPOKOEVA A.V., MALOV A.N.<sup>1</sup>, NEBOGIN S.A.<sup>1</sup>  
Irkutsk State Medical University  
<sup>1</sup>Irkutsk National Research Technical University  
**Determination of the technical condition of working liquids by digital speckle images parameters analysis**
241. TIMCHENKO P.E., TIMCHENKO E.V., VOLOVA L.T.<sup>1</sup>, FROLOV O.O., KIYKO N.K., KULABUHOVA A.Yu.  
Samara National Research University  
<sup>1</sup>Samara State Medical University  
**Optical evaluation of implants based on the dura mater**
242. KOKORINA L.A., MALOV A.N.<sup>1</sup>, NEUPOKOEVA A.V., TRETYAKOVA M.N.<sup>2</sup>  
Irkutsk State Medical University  
<sup>1</sup>Irkutsk National Research Technical University  
<sup>2</sup>Irkutsk State University  
**Study of the nutrient environment laser activation effect on the microbial growth dynamics**
243. VINNICHENKO V.A., EVTIKHIEV N.N.<sup>1</sup>, ALTSHULER G.B.<sup>2</sup>, YAROSLAVSKY I.V.<sup>2</sup>, KOVALENKO A.A.  
IRE-Polus Corporation, Fryazino  
<sup>1</sup>National Research Nuclear University MEPhI (Moscow Engineering Physics Institute)  
<sup>2</sup>IPG Medical, Marlborough, USA  
**Application of thulium fiber laser for lithotripsy**
244. TIMCHENKO E.V., TIMCHENKO P.E., PISAREVA E.V., VLASOV M.Yu.<sup>1</sup>, VOLOVA L.T.<sup>1</sup>, TYUMCHENKOVA A.S., FEDOROVA Ya.V.  
Samara National Research University  
<sup>1</sup>Samara State Medical University  
**Spectral studies of rat bone tissue in modeling osteoporosis and effectiveness of treatment by hydroxyapatite**

*Posters 4*

Thursday, January 25, 2018, 15.00

245. GUBIN M.Yu., SHESTERIKOV A.V., GLADUSH M.G.<sup>1,2</sup>, PROKHOROV A.V.  
Stoletovs Vladimir State University  
<sup>1</sup>Institute for Spectroscopy of the RAS, Troitsk  
<sup>2</sup>Moscow State University of Education  
**The features of surface plasmon-polariton pulses generation via cooperative effects in waveguide spaser**
246. SEMKIN A.O., SHARANGOVICH S.N., DOLGIREV V.O., SON D.I.  
Tomsk State University of Control Systems and Radioelectronics  
**Conversion of Gaussian light beams into Bessel-like ones by holographic diffractive elements in PDLC, controllable by external electric field**
247. HALILOV S.I., RUBASS A.F., IBRAGIMOV A.E., ALEXEYEV C.N., YAVORSKY M.A., SOKOLENKO B.V.  
V.I. Vernadsky Crimean Federal University, Simferopol  
**Vortex fiber optical filter**
248. TASHTIMIROVA D.U., SAVCHENKO E.A., AKSENOV E.T., KUPTSOV V.D.  
Peter the Great Saint-Petersburg Polytechnic University  
**Optical tweezers based on Bessel beams**
249. GORYACHEV L.V.  
Sarov State Physics and Technical Institute NRNU MEPhI, Nizhny Novgorod region  
**The need to consider edge wave at the solution of diffraction problems**
250. GORYACHEV L.V.  
Sarov State Physics and Technical Institute NRNU MEPhI, Nizhny Novgorod region  
**Introduction of scattering coefficient for solving diffraction problems**
251. KAREV P.V.  
Industrial Metrology Co. LTD, Saint-Petersburg  
**Ultrasonic piezo motors for optical stabilization**
252. KHARASOV D.R.<sup>1</sup>, KONYASHKIN A.V.<sup>1,2</sup>, RYABUSHKIN O.A.<sup>1,2</sup>  
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