

# V INTERNATIONAL CONFERENCE ON PHOTONICS AND INFORMATION OPTICS

February 4-6, 2016, Russia, Moscow

## ORGANIZERS OF THE CONFERENCE

The Russian Academy of Sciences

National Research Nuclear University «MEPhI» (Moscow Engineering Physics Institute)

## THE PROGRAM COMMITTEE

### Chairmans:

Gulyaev Yu.V. - Kotelnikov Institute of Radioengineering and Electronics of the RAS, Moscow

Evtikhiev N.N. - National Research Nuclear University MEPhI

Altshuler G.B. - IPG-Medical Corp., Marlborough, USA

Desyatnikov A.S. - Australian National University, Canberra, Australia

Fetisov Yu.K. - Moscow State University of Information Technologies, Radioengineering and Electronics

Fyodorov I.B. - Bauman Moscow State Technical University

Gabitov I.R. - University of Arizona, Tucson, USA

Komotskii V.A. - Peoples Friendship University of Russia, Moscow

Kompanets I.N. - Lebedev Physical Institute of the RAS, Moscow

Kozlov S.A. - ITMO University, Saint Petersburg

Krishtop V.V. - Far Eastern State Transport University, Khabarovsk

Kulchin Yu.N. - Institute of Automation and Control Processes FEB RAS, Vladivostok

Lavrov A.P. - Peter the Great Saint-Petersburg Polytechnic University

Maimistov A.I. - National Research Nuclear University MEPhI

Malomed B. - Tel Aviv University, Israel

Malov A.N. - Irkutsk State Medical University

Manykin E.A. - National Research Center "Kurchatov institute", Moscow

Nippolainen E. - University of Eastern Finland, Kuopio, Finland

Potaturkin O.I. - Institute of automation and electrometry SB RAS, Novosibirsk

Proklov V.V. - Fryazino Branch of Kotelnikov Institute of Radioengineering and Electronics of the RAS

Shandarov S.M. - Tomsk State University of Control Systems and Radioelectronics

Starikov R.S. - National Research Nuclear University MEPhI

Tverdokhlebo P.E. - Institute of Automation and Electrometry SB RAS, Novosibirsk

Tolstik A.L. - Belarusian State University, Minsk

Vishnyakov G.N. - Russian Research Institute for Optical and Physical Measurements, Moscow

Volostnikov V.G. - Samara Branch of Lebedev Physical Institute of the RAS

## THE ORGANIZING COMMITTEE

### Chairman:

Petrovskii A.N. - National Research Nuclear University «MEPhI»

### Scientific secretary:

Rodin V.G. - National Research Nuclear University «MEPhI»

Website of the conference - <http://fioconf.mephi.ru>

## THE CONFERENCE PROGRAM

### CONFERENCE OPENING. PLENARY

Wednesday, February 03, 2016, 10.00

Room 406

1. KONOV V.I.<sup>1,2</sup>, RAL'CHENKO V.G.<sup>1,2</sup>, BOLSHAKOV A.P.<sup>2</sup>, KONONENKO T.V.<sup>1,2</sup>, CONTE G.<sup>3</sup>  
<sup>1</sup>*Prokhorov General Physics Institute of the RAS, Moscow*  
<sup>2</sup>*National Research Nuclear University MEPhI (Moscow Engineering Physics Institute)*  
<sup>3</sup>*University Roma Tre, Rome, Italy*  
**Diamond radiation detectors**
2. KOVANIS V.  
*Nazarbaev University, Astana, Kazakhstan*  
**Fast, tunable & low linewidth photonic oscillators**
3. ALTSHULER G.B.  
*IPG-Medical Corp., Marlborough, USA*  
**Laser medicine : new achievements and prospects**
4. ARAKELIAN S.M., KUTROVSKAYA S.V., NOGTEV D.S., OSIPOV A.V., ANTIPOV A.A., KUCHERIK A.O., EMEL'YANOV V.I.<sup>1</sup>, VARTANYAN T.A.<sup>2</sup>, ZIMIN S.P.<sup>3</sup>  
*Stoletovs Vladimir State University*  
<sup>1</sup>*Lomonosov Moscow State University*  
<sup>2</sup>*ITMO University, Saint Petersburg*  
<sup>3</sup>*P.G. Demidov Yaroslavl state university*  
**New physical principles to create the hybrid elements of photonics and optoelectronics by laser-induced nanocluster structures with controlled topology**

### POSTERS 1

Wednesday, February 03, 2016, 12.00

Room 406

### Meeting 1

Wednesday, February 03, 2016, 13.00

Room 406

5. ALMOHAMED Y.<sup>1</sup>, BARILLE R.<sup>1</sup>, VODCHITS A.I.<sup>2</sup>, VOINOV Yu.P., GORELIK V.S., KUDRYAVTSEVA A.D., ORLOVICH V.A.<sup>2</sup>, TCHERNIEGA N.V.  
*Lebedev Physical Institute of the RAS, Moscow*  
<sup>1</sup>*B.I. Stepanov Institute of Physics of the Belarus NAS, Minsk*  
<sup>2</sup>*Universite of Angers, France*  
**Stimulated Raman scattering in liquids inserted into pores of photonic crystal**
6. EKIMOV E.A., LYAPIN S.G., BOLDYREV K.N.<sup>1</sup>, GAVVA V.A.<sup>2</sup>  
*Institute for High Pressure Physics of the RAS, Troitsk*  
<sup>1</sup>*Institute for Spectroscopy of the RAS, Troitsk*  
<sup>2</sup>*Institute of Chemistry of High-Purity Substances of the RAS, Nizhny Novgorod*  
**GeV: New color center in diamond**
7. BUNKIN A.F.<sup>1</sup>, LOSKUTOV A.I.<sup>2</sup>, OSHURKO V.B.<sup>1,2</sup>, PERSHIN S.M.<sup>1</sup>, FEDOROV A.N.<sup>1</sup>  
<sup>1</sup>*Prokhorov General Physics Institute of the RAS, Moscow*  
<sup>2</sup>*Moscow State University of Technology (Stankin)*  
**Inversed tip enhanced Raman scattering in methylhydroxyethylcellulose layers**
8. ANTSYGIN V.D.<sup>1</sup>, VLASOV M.Yu.<sup>1</sup>, MAMRASHEV A.A.<sup>1,2</sup>, NIKOLAEV N.A.<sup>1,2</sup>, POTATURKIN O.I.<sup>1</sup>  
<sup>1</sup>*Institute of Automation and Electrometry SB RAS, Novosibirsk*  
<sup>2</sup>*Institute of High current Electronics SB RAS, Tomsk*  
**Terahertz properties of lead germanate near phase transition**
9. KAPLUNOV I.A., NIKININ P.A.<sup>1</sup>, VOLOSHINOV V.B.<sup>1</sup>  
*Tver State University*  
<sup>1</sup>*Lomonosov Moscow State University*  
**Measurement of germanium transmission infrared and terahertz wavelength range**
10. SHANDAROV S.M., MANDEL A.E., SMIRNOV S.V., AKYLBAEV T.M., BORODIN M.V., 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*  
**Collinear diffraction of incoherent light on periodically poled domain structures in lithium niobate**
11. TEPLYAKOVA N.A., SIDOROV N.V., PALATNIKOV M.N., MANUKOVSKAYA D.V.  
*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*  
**The time evolution of intrinsic and laser induced defects in lithium niobate crystals exposed to laser radiation**
12. NALBANTOV N.N., STROGANOVA E.V., GALUTSKIY V.V.  
*Kuban State University, Krasnodar*  
**Quantum efficiency of energy transfer in Er:Yb:LiNbO<sub>3</sub> gradient laser crystals**

13. DYU V.G., KISTENEVA M.G., SHANDAROV S.M.  
*Tomsk State University of Control Systems and Radioelectronics*  
**Influence of an exposure by continuous laser radiation on optical absorption changes in Bi<sub>12</sub>TiO<sub>20</sub>:Al crystal**
14. ANDREEV A.L.<sup>2</sup>, KOMPANETS I.N.<sup>1,2</sup>, ZALYAPIN N.V.<sup>1</sup>, STARIKOV R.S.<sup>1</sup>  
<sup>1</sup>*National Research Nuclear University MEPhI (Moscow Engineering Physics Institute)*  
<sup>2</sup>*Lebedev Physical Institute of the RAS, Moscow*  
**Electrically controlled bistable light scattering in helix-free flc**
15. ALIEV S.A., TROFIMOV N.S., CHEKHLOVA T.K.  
*Peoples' Friendship University of Russia, Moscow*  
**Optical properties of titan dioxide gel films with the gold nanoparticles**
16. SHISHKINA K.V.<sup>1,2</sup>, LUKANIN V.I.<sup>2</sup>  
<sup>1</sup>*National Research Nuclear University MEPhI (Moscow Engineering Physics Institute)*  
<sup>2</sup>*Prokhorov General Physics Institute of the RAS, Moscow*  
**Nonlinear two-photon absorption in tungstates and molybdate crystals**

Meeting 2

Wednesday, February 03, 2016, 16.00

Room 406

17. KUZYAKOV B.A., TIHONOV R.V.  
*Moscow State University of Information Technologies, Radioengineering and Electronics*  
**Correction of work of laser communication channel in near space at influence of atmospherics**
18. ZVEGINTZEV V.N.<sup>1</sup>, IVANOV S.I., LAVROV A.P., SAENKO I.I.  
*Peter the Great Saint-Petersburg Polytechnic University*  
<sup>1</sup>*OJSC «NII«Vector», Saint Petersburg*  
**Characteristics of components in microwave photonic beamforming system setup for phased array antenna**
19. MATSAK I.S., KAPRANOV V.V., KUDRYAVTSEV E.M.<sup>1</sup>  
*S.P. Korolev Rocket and Space Corporation Energia, Korolev*  
<sup>1</sup>*National Research Nuclear University MEPhI (Moscow Engineering Physics Institute)*  
**Precise baseline correction in the mesurement of characteristics of laser beams**
20. KUZYAKOV B.A., TIHONOV R.V.  
*Moscow State University of Information Technologies, Radioengineering and Electronics*  
**Means to reduce the influence of turbulent atmosphere on the safety of the optical communication system**
21. YAVORSKY M.A., BARSHAK E.V., ALEXEYEV C.N.  
*V.I. Vernadsky Crimean Federal University, Simferopol*  
**OAM-based robust information transmission with twisted anisotropic fibers**
22. STERLIKOVA N.S., FEDYANIN D.Yu.  
*Moscow Institute of Physics and Technology (State University), Dolgoprudny*  
**CMOS hybrid plasmonic waveguides: towards plasmonic interconnects**
23. PROKLOV V.V., BYSHEVSKI-KONOPKO O.A., LUGOVSKOI A.V., FILATOV A.L.  
*Fryazino Branch of Kotelnikov Institute of Radioengineering and Electronics of RAS*  
**An experimental study of the principle of data transmission on O-CDMA lines operating on the basis of multi-band acoustooptical filters**
24. MOLCHANOV V.Ya., CHIZHIKOV S.I., YUSHKOV K.B.  
*National University of Science and Technology "MISIS", Moscow*  
**Temporal profiling of the ultrashort laser pulses by dispersive acoustooptical methods**
25. ZININ P.V., MACHIHIN A.S., BYKOV A.A.  
*Scientific and Technological Center of Unique Instrumentation of the RAS, Moscow*  
**Multimodal stand for research of the optical properties of diamonds**
26. KUDRIAVTSEV E.M., ZOTOV S.D., ROSHCUPKIN V.V.<sup>1</sup>  
*Lebedev Physical Institute of the RAS, Moscow*  
<sup>1</sup>*Baikov Institute of Metallurgy and Materials Sciences of the RAS, Moscow*  
**Two models of many acoustic pulses excitation in glass during CO<sub>2</sub>-laser pulse ("comb effect")**
27. SHELESTOV D.A., DOLONOV I.A., KOSHELEV K.I., PNIQV A.B.  
*Bauman Moscow State Technical University*  
**Space frequency keeeper based on line P(16) of <sup>13</sup>C<sub>2</sub>H<sub>2</sub>**
28. SELEZNEV V.A.<sup>1,2</sup>, DIVOCHIY A.V.<sup>1,2</sup>, VACHTOMIN Yu.B.<sup>1,2</sup>, MOROZOV P.V.<sup>1,2</sup>, VASIL'EV D.D.<sup>3</sup>, MOISEEV K.M.<sup>3</sup>, MALEVANNAYA E.I.<sup>3</sup>, SMIRNOV K.V.<sup>1,2,4</sup>  
<sup>1</sup>*Moscow State Pedagogical University*  
<sup>2</sup>*CJSC "Superconducting Nanotechnology", Moscow*  
<sup>3</sup>*Bauman Moscow State Technical University*  
<sup>4</sup>*National Research University "Higher School of Economics", Moscow*  
**Superconducting detector of IR single photons based on thin WSi films**

Meeting 2

Wednesday, February 03, 2016, 16.00

Room 407

29. DOBRETSOVA E.A., BOLDYREV K.N., BOROVIKOVA E.Yu.<sup>1</sup>, SAVON A.E.<sup>1</sup>, DEYNEKO D.V.<sup>2</sup>  
*Institute for Spectroscopy of the RAS, Troitsk*  
<sup>1</sup>*Lomonosov Moscow State University*  
<sup>2</sup>*Shubnikov Institute of Crystallography of the RAS, Moscow*  
**Optical and luminescent properties of huntite-like gallium borates**

30. VYSHNEVYY A.A., FEDYANIN D.Yu.  
*Moscow Institute of Physics and Technology (State University), Dolgoprudny*  
**Cooling of electrically pumped active plasmonic nanostructures**
31. SUPRUNOVA O.A., ZASEDATELEV A.V., CHISTYAKOV A.A.  
*National Research Nuclear University MEPhI (Moscow Engineering Physics Institute)*  
**Size-dependent nonlinear permittivity of gold nanoparticles**
32. KONSTANTINOVA E.I., ZYUBIN A.Yu.<sup>1</sup>, SLEZHKIN V.A., BRYUKHANOV V.V.<sup>1</sup>  
*Kaliningrad state technical university*  
<sup>1</sup>*Immanuel Kant baltic federal state university, Kaliningrad*  
**Raman spectroscopy of silver nanoparticles on matte glass surface**
33. TRETYACHENKO A.V., KRIVENKOV V.A., ZVAIGZNE M.A., MARTYNOV I.L., SAMOKHVALOV P.S., NABIEV I.R., CHISTYAKOV A.A.  
<sup>1</sup>*National Research Nuclear University MEPhI (Moscow Engineering Physics Institute)*  
**Effect of laser irradiation on the optical properties of CdSe/ZnS quantum dots**
34. ASHIKKALIEVA K.K.<sup>1</sup>, KONONENKO T.V.<sup>1,2</sup>, OBRAZTSOVA E.A.<sup>1,2</sup>, ZAVEDEEV E.V.<sup>1,2</sup>, KHOMICH A.A.<sup>2</sup>, KONOV V.I.<sup>1,2</sup>  
<sup>1</sup>*National Research Nuclear University MEPhI (Moscow Engineering Physics Institute)*  
<sup>2</sup>*Prokhorov General Physics Institute of the RAS, Moscow*  
**Formation of graphitic nanostructures in diamond bulk under femtosecond laser pulses**
35. BOIKOVA A.S.<sup>1,2,3</sup>, ILINA K.B.<sup>1,2,3</sup>, MARCHENKOVA M.A.<sup>2,3</sup>, DYAKOVA Yu.A.<sup>2,3</sup>, NABATOV B.V.<sup>2</sup>, PROSEKOV P.A.<sup>2,3</sup>, SEREGYN A.Yu.<sup>2,3</sup>, TERESHENKO E.Yu.<sup>2,3</sup>, KOVALCHUK M.V.<sup>2,3</sup>  
<sup>1</sup>*National Research Nuclear University MEPhI (Moscow Engineering Physics Institute)*  
<sup>2</sup>*Shubnikov Institute of Crystallography of the RAS, Moscow*  
<sup>3</sup>*National Research Centre "Kurchatov Institute", Moscow*  
**Investigation of organic thin films by optical and X-ray methods**
36. KUZNETSOVA Ju.O., MAKAROV V.I.<sup>1</sup>  
*National Research Nuclear University MEPhI (Moscow Engineering Physics Institute)*  
<sup>1</sup>*Prokhorov General Physics Institute of the RAS, Moscow*  
**Application of nanophotosensitisers (aluminum phthalocyanine nanoparticles) for early diagnosis and prevention of inflammatory diseases**
37. BYSTROV F.G.<sup>1</sup>, MAKAROV V.I.<sup>2</sup>, LOSCHENOV V.B.<sup>1,2</sup>  
<sup>1</sup>*National Research Nuclear University MEPhI (Moscow Engineering Physics Institute)*  
<sup>2</sup>*Prokhorov General Physics Institute of the RAS, Moscow*  
**Investigation of the aluminium phthalocyanine nanoparticles photoluminescence kinetics in pico- and nanosecond time range, depending on the pH and in the interaction with immune cells**
38. ILINA K.B.<sup>1,2,3</sup>, MARCHENKOVA M.A.<sup>2,3</sup>, DYAKOVA Yu.A.<sup>2,3</sup>, VOLKOV V.V.<sup>2,3</sup>, TERESHENKO E.Yu.<sup>2,3</sup>, BLAGOV A.E.<sup>2,3</sup>, PISAREVSKII Yu.V.<sup>2,3</sup>, KOVALCHUK M.V.<sup>2,3</sup>  
<sup>1</sup>*National Research Nuclear University MEPhI (Moscow Engineering Physics Institute)*  
<sup>2</sup>*Shubnikov Institute of Crystallography of the RAS, Moscow*  
<sup>3</sup>*National Research Centre "Kurchatov Institute", Moscow*  
**Investigation of the initial crystallization lysozyme by small-angle X-ray scattering method**
39. ROGOV P.Yu., BESPALOV V.G.  
*ITMO University, Saint Petersburg*  
**Impact of femtosecond laser pulses on eye and skin: mathematical models**
40. MACLYGINA Ju.S., BORODKIN A.V.  
*Prokhorov General Physics Institute of the RAS, Moscow*  
**The development of fiber-optic scaffolds for the glioblastoma diagnosis and prevention**

Meeting 4

Thursday, February 04, 2016, 10.00

Room 406

41. BRUK M.A., ZHIKHAREV E.N., ROGOZHIN A.E.<sup>1</sup>, STRELTSOV D.R.<sup>2</sup>, KALNOV V.A.<sup>1</sup>, AVERKIN S.N.<sup>1</sup>, SPIRIN A.V.  
*L.Ya. Karpov Institute of Physical Chemistry, Moscow*  
<sup>1</sup>*Physics and Technology Institute of the RAS, Moscow*  
<sup>2</sup>*Enikolopov Institute of Synthetic Polymer Materials of RAS, Moscow*  
**Formation of micro- and nanostructures with well-rounded profile by new e-beam lithography principle**
42. RAKHIMOV R.A., OSIPOV E.V., DOVZHENKO D.S., MARTYNOV I.L., CHISTYAKOV A.A.  
*National Research Nuclear University MEPhI (Moscow Engineering Physics Institute)*  
**Dependence of the reflectance spectra of rugate-filters based on porous silicon on the parameters of electro-chemical etching**
43. SAVEL'EV E.A., GOLANT K.M.  
*Kotel'nikov Institute of Radioengineering and Electronics of RAS, Moscow*  
**The influence of fusing on the uniformity of the distribution of Yb<sup>3+</sup> ions and the formation of clusters on silica with phosphorus admixture synthesized by SPCVD**
44. ERIN D.Yu.<sup>1,2</sup>, NISHCHEV K.N.<sup>1</sup>, SEMJONOV S.L.<sup>2</sup>, EGOROVA O.N.<sup>2</sup>, VEL'MISKIN V.V.<sup>2</sup>  
<sup>1</sup>*Ogarev Mordovia State University, Saransk*  
<sup>2</sup>*Fiber Optic Research Center of the RAS, Moscow*  
**Glasses for active optical fibers manufactured by containerless melting glass**
45. KOSOLAPOV A.F., ALAGASHEV G.K., KOLYADIN A.N., PRYAMIKOV A.D., BIRIUKOV A.S., BUFETOV I.A., DIANOV E.M.  
*Fiber Optic Research Center of the RAS, Moscow*  
**Nested hollow-core fiber with decreased core diameter**

46. BUKHARIN M.A.<sup>1,2</sup>, SKRYABIN N.N.<sup>1,2</sup>, GANIN D.V.<sup>3,4</sup>, KHUDYAKOV D.V.<sup>2,4</sup>, VARTAPETOV S.K.<sup>4</sup>  
<sup>1</sup>Moscow Institute of Physics and Technology (State University), Dolgoprudny  
<sup>2</sup>Optosystems Ltd., Moscow  
<sup>3</sup>National Research Nuclear University MEPhI (Moscow Engineering Physics Institute)  
<sup>4</sup>Prokhorov General Physics Institute of the RAS, Moscow  
**Direct femtosecond writing of waveguides at low depths under the surface of crystals**
47. SOSUNOV A.V., PONOMAREV R.S., VOLYNTSEV A.B.  
 Perm State National Research University  
**Influence of lithium niobate sublayer structure to refractive index of optical waveguides**
48. LEVCHENKO K.S.<sup>1</sup>, ADAMOV G.E.<sup>1</sup>, BARACHEVSKI V.A.<sup>1,2</sup>, GREBENNIKOV E.P.<sup>1</sup>, ZINOVIEV E.V.<sup>1</sup>, KURBANGALEEV V.R.<sup>1</sup>, MALYSHEV P.B.<sup>1</sup>, POROSHIN N.O.<sup>1</sup>, SHMELIN P.S., CHUDOV K.A.<sup>1</sup>  
<sup>1</sup>OJSC «CSRIT «Technomash», Moscow  
<sup>2</sup>Photochemistry Center of the RAS, Moscow  
**Composite materials containing photochromic and fluorescent compounds for polymer planar waveguide**
49. BORODAKO K.A.<sup>1</sup>, GRIGORIEV A.A.<sup>1</sup>, SHELYAKOV A.V.<sup>1</sup>, SITNIKOV N.N.<sup>1,2</sup>, SHEYFER D.V.<sup>3,4</sup>, IVANOV A.A.<sup>1</sup>  
<sup>1</sup>National Research Nuclear University MEPhI (Moscow Engineering Physics Institute)  
<sup>2</sup>Keldysh Research Center, Moscow  
<sup>3</sup>University of Hamburg, Germany  
<sup>4</sup>Deutsches Elektronen-Synchrotron, Hamburg, Germany  
**Modification of properties of rapidly quenched TiNiCu alloy under laser radiation**
50. ZOLOTOV P.I.<sup>1,2</sup>, VACHTOMIN Yu.B.<sup>1,2</sup>, DIVOCHIY A.V.<sup>1,2</sup>, SELEZNEV V.A.<sup>1,2</sup>, SMIRNOV K.V.<sup>1,2,3</sup>  
<sup>1</sup>Moscow State Pedagogical University  
<sup>2</sup>CJSC "Superconducting Nanotechnology", Moscow  
<sup>3</sup>National Research University "Higher School of Economics", Moscow  
**Technology development of resonator-based structures for efficiency increasing of NBN detectors of IR single photons**
51. KHRAMTCOV I.A., FEDYANIN D.Yu.  
 Moscow Institute of Physics and Technology (State University), Dolgoprudny  
**Integrated Cu/Ge/Cu photodetector for silicon nanophotonics**
52. BURLAKOV I.D.<sup>1</sup>, EREMCHUK A.I.<sup>1,3</sup>, BOLTAR K.O.<sup>1,2</sup>, LOPUHIN A.A.<sup>1</sup>, VLASOV P.V.<sup>1</sup>  
<sup>1</sup>JSC «RD&P Center «Orion», Moscow  
<sup>2</sup>Moscow Institute of Physics and Technology (State University), Dolgoprudny  
<sup>3</sup>JSC «Shvabe-Photosystem», Moscow  
**Epitaxial InSb focal plane array**

PLENARY 2

Thursday, February 04, 2016, 13.00

Room 406

53. GABITOV I.R.<sup>1,2</sup>, KUPPERS F.<sup>3</sup>, SHKARAYEV M.S.<sup>4</sup>  
<sup>1</sup>University of Arizona, Tucson, USA  
<sup>2</sup>Skolkovo Institute of Science and Technology, Moscow region  
<sup>3</sup>Technical University of Darmstadt, Germany  
<sup>4</sup>Iowa State University, Ames, USA  
**Gross impact of slim chances: errors in optical fiber communication systems**
54. TOLSTIK A.L.  
 Belarusian State University, Minsk  
**Dynamic holography and singular optics**
55. SUKHAREV V.A., ZHYRKOVA I.S., PERLOV D.D.<sup>1</sup>, SADOVSKIY A.P.  
 IRE-Polus Corporation, Fryazino  
<sup>1</sup>IPG Photonics Corporation, Oxford, USA  
**New approach to growth of LBO crystals for laser applications**
56. DZEDOLIK I.V.  
 V.I. Vernadsky Crimean Federal University, Simferopol  
**Linear and nonlinear phonon-polaritons and plasmon-polaritons in different media**

POSTERS 2

Thursday, February 04, 2016, 15.00

Room 406

Meeting 5

Thursday, February 04, 2016, 16.00

Room 406

57. MININ I.V., MININ O.V.  
 Siberian State University of Geosystems and Technologies, Novosibirsk  
**Subwavelength optical tweezer of standing wave based on photonic jet**
58. MAKAROV V.A., PETNIKOVA V.M., SHUVALOV V.V.  
 Lomonosov Moscow State University  
**Adiabatic modulation of cnoidal wave by Kuznetsov - Ma soliton**

59. KAZANTSEVA E.V.<sup>1</sup>, MAIMISTOV A.I.<sup>1,2</sup>  
<sup>1</sup>National Research Nuclear University MEPhI (Moscow Engineering Physics Institute)  
<sup>2</sup>Moscow Institute of Physics and Technology (State University), Dolgoprudny  
**Solitary wave generation from continuum in asymmetric oppositely directed nonlinear waveguide coupler**
60. RYZHOV I.V., VASIL'EV N.A., KOSOVA I.S., SHERBAKOV S.V., KOVALEVA S.M., SHTAGER M.D., MALYSHEV V.A.<sup>1,2</sup>  
The A.I. Herzen State Pedagogical University of Russia, Saint-Petersburg  
<sup>1</sup>University of Groningen, The Netherlands  
<sup>2</sup>Saint Petersburg State University  
**Dynamic regimes of superradiance of an ensemble of three-level  $\Lambda$ -atoms in high Q cavity. Bifurcations of stationary points**
61. LYASHKO E.I.<sup>2</sup>, MAIMISTOV A.I.<sup>1,2</sup>  
<sup>1</sup>National Research Nuclear University MEPhI (Moscow Engineering Physics Institute)  
<sup>2</sup>Moscow Institute of Physics and Technology (State University), Dolgoprudny  
**Guided waves in the hyperbolic slab waveguide**
62. BURIMOV N.I., ZLOBIN A.O., SHMIDT A.A., SHANDAROV S.M., SHEPELEVICH V.V.<sup>1</sup>, MAKAREVICH A.V.<sup>1</sup>, KARGIN Yu.F.<sup>2</sup>  
Tomsk State University of Control Systems and Radioelectronics  
<sup>1</sup>I.P. Shamyakin Mozyr State Pedagogical University, Belarus  
<sup>2</sup>Baikov Institute of Metallurgy and Material Sciences of the RAS, Moscow  
**Flexoelectric contribution to the photorefractive response for codirectional interaction of light waves in sillenite crystals**
63. VASILYEV E.V., SHLENOV S.A.  
Lomonosov Moscow State University  
**Frequency-angular spectra of optical fields with phase dislocation upon self-action in fused silica**
64. AKIMOV A.A., VOROB'EVA E.V., IVAKHNIK V.V.  
Samara State University  
**Spatial and time characteristics of a six-wave radiation converter on thermal nonlinearity in the scheme with codirectional pumping waves**
65. IVAKHNIK V.V., SAVEL'EV M.V.  
Samara State University  
**Four-wave mixing in a transparent nanoliquid with allowance for spatial structure of the pump waves**
66. USHKOV A.A., SHCHERBAKOV A.A.  
Moscow Institute of Physics and Technology (State University), Dolgoprudny  
**Isofrequency surfaces in 3D-periodic artificial dielectric media**
67. MAKIN V.S., MAKIN R.S.<sup>1</sup>  
Scientific Research Institute for Optoelectronic Instrument Engineering, Sosnovy Bor, Leningrad region  
<sup>1</sup>Dimitrovgrad Engineering and Technological Institute of the NRNU MEPhI, Ulyanovsk region  
**Interaction of vector beams of laser radiation with condensed media**
68. KORONNOV A.A.<sup>1</sup>, SAFUTIN A.E.<sup>1</sup>, ZEMLYANOV M.M.<sup>1</sup>, MAMIN A.V.<sup>1</sup>, ZVEREV G.M.<sup>1,2</sup>  
<sup>1</sup>JSC "POLYUS Research Institute of M.F. Stelmah", Moscow  
<sup>2</sup>Moscow Institute of Physics and Technology (State University), Dolgoprudny  
**The damage mechanism of germanium avalanche photodiode as a result of high power laser irradiation influence**

Meeting 6

Friday, February 05, 2016, 10.00

Room 406

69. MASALSKY N.V.  
Scientific Research Institute of System Researches of the RAS, Moscow  
**Optical method for control of liquid ammonia concentration**
70. AKMALOV A.E., KOTKOVSKII G.E., CHISTYAKOV A.A.  
National Research Nuclear University MEPhI (Moscow Engineering Physics Institute)  
**Laser desorption of traces of explosives with low vapor pressure**
71. VEDYASHKINA A.V., PAVLOV I.N., RINKEVICHYUS B.S.  
National Research University "Moscow Power Engineering Institute"  
**Determination of inhomogeneous condensed media parameters by location of laser radiation caustics**
72. PISAREVSKY Yu.V., KOLESNIKOV S.A.<sup>1</sup>, KOLESNIKOVA E.S.<sup>1</sup>, TURUTIN Yu.A.<sup>2</sup>  
Shubnikov Institute of Crystallography of the RAS, Moscow  
<sup>1</sup>Semenov Institute of Chemical Physics of the RAS, Moscow  
<sup>2</sup>Ecochemistry-Ecotoximetry Ltd, Moscow  
**Interferometric absorption analysis based interference-polarizing filter**
73. SIDOROV I.S.<sup>1</sup>, VOLYNSKY M.A.<sup>1</sup>, MAMONTOV O.V.<sup>1,2</sup>, KAMSHILIN A.A.<sup>1</sup>  
<sup>1</sup>ITMO University, Saint Petersburg  
<sup>2</sup>V.A. Almazov North-West Federal Medical Research Centre, Saint-Petersburg  
**Study of gravitation influence on facial blood perfusion by imaging photoplethysmography**
74. VERENIKINA N.M., KOVALEV M.S., KOLOSOVA E.S.  
Bauman Moscow State Technical University  
**Contactless measuring spectral sensitivity of eye in the extended range wavelengths**
75. ANDREEVA N.V., KUZMINA T.B., ANDREEVA O.V.  
ITMO University, Saint Petersburg  
**Research of plasmon resonance in developed holographic photomaterials**
76. PAVLOV I.N., RINKEVICHYUS B.S., TOLKACHEV A.V., VEDYASHKINA A.V.  
National Research University "Moscow Power Engineering Institute"  
**Investigation of possibilities of surface plasmon resonance method for visualization of processes in near-wall liquid layer**

77. BUSURIN V.I., KOROBKOV V.V., TUAN Ph.A.  
*Moscow Aviation Institute (National Research University)*  
**Research of dynamic characteristics of microopto-electromechanical angular velocity transducer**
78. KOROBKOV V.V., LWIN N.H.  
*Moscow Aviation Institute (National Research University)*  
**Method of calculation of acceleration transducer based on optical tunneling effect**
79. BUSAROV A.S., VINOGRADOV A.V., POPOV N.L.  
*Lebedev Physical Institute of the RAS, Moscow*  
**Coherent X-ray microscopy at inclined lighting of the reflecting objects**
80. GRACHEV Ya.V., KUZMINA A.V., BESPALOV V.G.  
*ITMO University, Saint Petersburg*  
**Influence of scanning time spread on performance of terahertz time-domain spectroscopy**

Meeting 7

Friday, February 05, 2016, 13.00

Room 406

81. BUTS A.I., LYAVSHUK I.A., LYALIKOV A.M., YANICHKIN V.V.  
*Grodno State University named after Ya. Kupala, Belarus*  
**Optical image processing defocused gratings of optical inhomogeneities in the visualization phase object**
82. ERMOLAEV P.A., VOLYNISKY M.A., VOLKOV M.V., SEMENKOV K.P., MARGARYANTS N.B.  
*ITMO University, Saint Petersburg*  
**Analysis of video data for microscopic objects behaviour research**
83. SHEVKUNOV I.A., PETROV N.V., KATKOVNIK V.Ya.<sup>1</sup>  
*ITMO University, Saint Petersburg*  
<sup>1</sup>*Tampere University of Technology, Finland*  
**Wavefront reconstruction in digital off-axis holography via sparse coding of amplitude and absolute phase**
84. IRTUGANOV N.N., ARTYUKOV I.A.  
*Lebedev Physical Institute of the RAS, Moscow*  
**The use of non-linear filters in microtomography of low-contrast objects**
85. VOVK T.A., NIKOLAYEVA T.Yu., PETROV N.V.  
*ITMO University, Saint Petersburg*  
**Calibration of the method for estimating the volume of particles based on peak to pedestal relation of correlation function**
86. 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*  
**Combination of BaLM and holographic methods in the same optical setup to obtain superresolution in case of studying of translucent microobjects**
87. BYKOVSKY A.Yu.  
*Lebedev Physical Institute of the RAS, Moscow*  
**The multi-objective optimization for the formation of the multiple-valued logic model of an agent**
88. IVANOV P.A.  
*Yaroslavl State Technical University*  
**Invariant correlation filters in problems of geometrically distorted images recognition**
89. PETROVA E.K., STARIKOV R.S., SHAULSKY D.V.  
*National Research Nuclear University MEPhI (Moscow Engineering Physics Institute)*  
**Modelling of invariant correlation recognition of color images of rotated objects**
90. DAVYDOVA M.G.<sup>1</sup>, KOROLENKO P.V.<sup>1,2</sup>, RYZHIKOVA Yu.V.<sup>1</sup>, FEDOROV S.A.<sup>1</sup>  
<sup>1</sup>*Lomonosov Moscow State University*  
<sup>2</sup>*Lebedev Physical Institute of the RAS, Moscow*  
**Scaling in the characteristics of quasiperiodic structures with self-similar symmetry**
91. BOBRESHOV A.M., ZOLOTUKHIN E.V., KOSHELEV A.G.  
*Voronesh State University*  
**The oled multichannel diode as circular display**
92. KAPYRIN N.I., KOLDASOVA S.K.  
*Moscow Aviation Institute (National Research University)*  
**A formal language for optical processes and a tool for modeling and optimization of photogrammetric equipment**

Meeting 8

Friday, February 05, 2016, 16.00

Room 406

93. KUTANOV A.A., SNIMSHIKOV I.A., NURBEK S.U., VELIKASOV S.S., MAKAROV V.P.  
*Institute of Physical-Technical Problems and Material Science of NAS KR, Bishkek, Kyrgyz republic*  
**Interference spectral filters on amorphous silicon films and direct laser recording on it**
94. YANOVSKY A.V.  
*Scientific and Technical Centre «Atlas». Moscow*  
**The combined security hologram providing a 3D-display of analog image**
95. PAVLOV A.V.  
*ITMO University, Saint Petersburg*  
**Generalization of patterns series by superimposed fourier holograms**

96. KOVALEV M.S., KRASIN G.K., MALININA P.I., ODINOKOV S.B.  
*Bauman Moscow State Technical University*  
**Wavefront sensor based on the holographic optical elements**
97. DYOMIN V.V., KAMENEV D.V.  
*National Research Tomsk State University*  
**Extracting information from digital particles holograms. Results and prospects**
98. EVTIKHIEV N.N., KURBATOVA E.A., CHERYOMKHIN P.A.  
*National Research Nuclear University MEPhI (Moscow Engineering Physics Institute)*  
**Methods of compression of information about 3D-scenes using digital holography**
99. EVTIKHIEV N.N., KRASNOV V.V., SHIFRINA A.V.  
*National Research Nuclear University MEPhI (Moscow Engineering Physics Institute)*  
**Application of input amplitude masks in scheme of optical image encryption with spatially-incoherent illumination**
100. CHIPEGIN A.A., PUTILIN S.E., PETROV N.V.  
*ITMO University, Saint Petersburg*  
**Focused image holography for studying ultrafast processes**
101. DYOMIN V.V., KOZLOVA A.S.  
*National Research Tomsk State University*  
**Position determination of particles in hologram based on Viola-Jones method without reconstruction process**
102. SAVONIN S.A.<sup>1</sup>, RYABUKHO V.P.<sup>1,2</sup>  
<sup>1</sup>*Saratov State University*  
<sup>2</sup>*Institute of Precision Mechanics and Control of the RAS, Saratov*  
**Application of mathematical simulation for numerical object micro-inclination correction in digital holographic interferometry**
103. MOSEYKO D.V., MANUHIN B.G., ANDREEVA O.V.  
*ITMO University, Saint Petersburg*  
**Thermal effects in polymer holographic media**
104. BETIN A.Yu., GRAD Ya.A., NIKOLAEV V.V., ODINOKOV S.B., SOLOMASHENKO A.B.  
*Bauman Moscow State Technical University*  
**Holographic indicator based on relief-phase diffraction gratings**

Posters 1

Wednesday, February 03, 2016, 12.00

105. ROGALIN V.E.<sup>1,2</sup>, ASHKINAZI E.E.<sup>3,4</sup>, POPOVICH A.F.<sup>3</sup>, RAL'CHENKO V.G.<sup>3,4</sup>, KONOV V.I.<sup>3,4</sup>, KAMENEV V.G.<sup>5</sup>, ARANCHII S.M.<sup>1</sup>, RUZIN M.V.<sup>6</sup>, USPENSKII S.A.<sup>4</sup>  
<sup>1</sup>*National Center of Laser Systems and Complexes Astrophysika, Moscow*  
<sup>2</sup>*Tver State University*  
<sup>3</sup>*Prokhorov General Physics Institute of the RAS, Moscow*  
<sup>4</sup>*National Research Nuclear University MEPhI (Moscow Engineering Physics Institute)*  
<sup>5</sup>*All-Russian Research Institute of Automatics, Moscow*  
<sup>6</sup>*Lamet Ltd, Moscow*  
**The behavior of water-cooled polycrystalline diamond optical components at extremely high power density C.W. laser irradiation**
106. MARTSINUKOV S.A., CHERNIGOVSKIY V.V., KOSTRIN D.K., LISENKOV A.A.<sup>1</sup>  
*Saint Petersburg State Electrotechnical University*  
<sup>1</sup>*Institute of Problems of Mechanical Engineering of the RAS, Saint Petersburg*  
**Research of phase transformations in materials using heating by laser radiation**
107. VEIKO V.P., KARLAGINA Yu.Yu., ODINTSOVA G.V., AGEEV E.I., ANDREEVA Ya.M., ROMANOV V.V.  
*ITMO University, Saint Petersburg*  
**Investigation of reflectance spectra dependence on light incidence angle for metal surface oxidized by fiber laser**
108. CHISTYAKOV A.A., KOZLOVSKII K.I., KOTKOVSKII G.E., KUZHISHCHIN Yu.A., KRIVENKOV V.A., MITYAGIN Yu.A.<sup>1</sup>, PIRYAZEV I.N.  
*National Research Nuclear University MEPhI (Moscow Engineering Physics Institute)*  
<sup>1</sup>*Lebedev Physical Institute of the RAS, Moscow*  
**A study of photocurrent and a THz radiation power of the photoconductive antenna based on LT-GaAs dependence on the focus and femtosecond laser pulse parameters**
109. MARTSINUKOV S.A., CHERNIGOVSKIY V.V., KOSTRIN D.K., LISENKOV A.A.<sup>1</sup>  
*Saint Petersburg State Electrotechnical University*  
<sup>1</sup>*Institute of Problems of Mechanical Engineering of the RAS, Saint Petersburg*  
**Research of inertia of control system of the radiation power of gas discharge lasers**
110. ROGALIN V.E.<sup>1,2</sup>, KUGAENKO O.M.<sup>3</sup>, ASHKINAZI E.E.<sup>4,5</sup>, ANDREEVA M.S.<sup>6</sup>  
<sup>1</sup>*National Center of Laser Systems and Complexes Astrophysika, Moscow*  
<sup>2</sup>*Tver State University*  
<sup>3</sup>*National University of Science and Technology "MISIS", Moscow*  
<sup>4</sup>*Prokhorov General Physics Institute of the RAS, Moscow*  
<sup>5</sup>*National Research Nuclear University MEPhI (Moscow Engineering Physics Institute)*  
<sup>6</sup>*Lomonosov Moscow State University*  
**Modification the surface of oxidized aluminum after exposure it by impulse of CO<sub>2</sub>-laser**
111. ODINTSOVA G.V., VLASOVA E.A., KOPYTOV S.M., YATSUK R.M., KARLAGINA Yu.Yu., ANDREEVA Ya.M.  
*ITMO University, Saint Petersburg*  
**The influence of laser oxidation on titanium film adhesion to silver surface**



112. MAKIN V.S., MAKIN R.S.<sup>1</sup>  
 Scientific Research Institute for Optoelectronic Instrument Engineering, Sosnovy Bor, Leningrad region  
<sup>1</sup>Dimitrovgrad Engineering and Technological Institute of the NRNU MEPhI,  
 Ulyanovsk region  
**Materials treatment by radially polarized radiation**
113. GANIN D.V.<sup>1,2</sup>, LAPSHIN K.E.<sup>2</sup>, OBIDIN A.Z.<sup>2</sup>, VARTAPETOV S.K.<sup>2</sup>  
<sup>1</sup>National Research Nuclear University MEPhI (Moscow Engineering Physics Institute)  
<sup>2</sup>Prokhorov General Physics Institute of the RAS, Moscow  
**Method of high precision cutting of biodegradable coronary stents and transparent materials by femtosecond laser**
114. VOVCHENKO E.D., MELEKHOV A.P.  
 National Research Nuclear University MEPhI (Moscow Engineering Physics Institute)  
**The influence of parameters of laser radiation on emission properties of laser triggered vacuum spark**
115. BAZZAL Kh., FADAIJAN A.P., VOROPAY E.S., ZAJOGIN A.P.  
 Belarusian State University, Minsk  
**Investigation of the AIO radical deformation processes in the plasma when the aluminum alloy D16T is subjected to the effect of double laser pulses in the air**
116. SHTAREV D.S., SHTAREVA A.V.<sup>1</sup>, DORONIN I.S., BLOKH A.I., SYUY A.V.  
 Far Eastern State Transport University, Khabarovsk  
<sup>1</sup>Institute of Tectonics and Geophysics named after Yu.A. Kosygin of the FEB RAS, Khabarovsk  
**Optical and catalytic properties of alkaline earth metal bismuthates**
117. CHERNOV A.I.<sup>1,2</sup>, FEDOTOV P.V.<sup>2</sup>, OBRAZTSOVA E.D.<sup>1,2</sup>  
<sup>1</sup>National Research Nuclear University MEPhI (Moscow Engineering Physics Institute)  
<sup>2</sup>Prokhorov General Physics Institute of the RAS, Moscow  
**Hybrid materials based on single-walled carbon nanotubes and graphene nanoribbons for photonics**
118. ADAMOV G.E., LEVCHENKO K.S., KURBANGALEEV V.R., POROSHIN N.O., GREBENNIKOV E.P.  
 OJSC «CSRIT «Technomash», Moscow  
**Creation and investigation of 2D nanostructures based on modified fullerenes C<sub>60</sub> linked by photo-managed spacers**
119. MAYOR A.Yu., PROSCHENKO D.Yu.<sup>1</sup>, SHCHIPUNOV Yu.A.<sup>2</sup>, POSTNOVA I.V.<sup>2</sup>  
 Institute of Automation and Control Processes of FEB RAS, Vladivostok  
<sup>1</sup>Far Eastern Federal University, Vladivostok  
<sup>2</sup>Institute of Chemistry of FEB RAS, Vladivostok  
**Optical properties of carbon colloids quantum dots**
120. BOLDYREV K.N., MOLCHANOVA A.D., KUZMIN N.N.<sup>1</sup>  
 Institute for Spectroscopy of the RAS, Troitsk  
<sup>1</sup>Lomonosov Moscow State University  
**New magneto-optic effects in CuB<sub>2</sub>O<sub>4</sub>**
121. ILINSKIY A.V., CASTRO R.A.<sup>1</sup>, NABIULLINA L.A.<sup>1</sup>, PASHKEVICH M.E.<sup>2</sup>, SHADRIN E.B.  
 Ioffe Physical-Technical Institute of the RAS, Saint Petersburg  
<sup>1</sup>The A.I. Herzen State Pedagogical University of Russia, Saint Petersburg  
<sup>2</sup>Peter the Great Saint Petersburg Polytechnic University  
**Magneto-optics of nondoped bismuth silicate**
122. KUDRIAVTSEV E.M., ZOTOV S.D., LEBEDEV A.A., ROSHCHUPKIN V.V.  
 Lebedev Physical Institute of the RAS, Moscow  
<sup>1</sup>Baikov Institute of Metallurgy and Materials Sciences of the RAS, Moscow  
**Slow soliton-like elastic waves in metals: one more observation and application**
123. YAREMENKO N.G., STRAKHOV V.A., KARACHEVTSEVA M.V.  
 Fryazino Branch of Kotelnikov Institute of Radioengineering and Electronics of RAS  
**The oscillations of hole capture time in n-AlGaAs/GaAs quantum well heterostructures**
124. NIKONOV A.V.<sup>1,2</sup>, IAKOVLEVA N.I.<sup>1</sup>, BOLTAR K.O.<sup>1,2</sup>, PONOMARENKO V.P.<sup>1,2,3</sup>  
<sup>1</sup>JSC «RD&P Center «Orion», Moscow  
<sup>2</sup>Moscow Institute of Physics and Technology (State University), Dolgoprudny  
<sup>3</sup>JSC «Shvabe-Photosystem», Moscow  
**Spectral properties of multilayer heterostructures in IR range**
125. KULYAKHTINA N.M.<sup>1,2</sup>, NIKONOV A.V.<sup>1,2</sup>, IAKOVLEVA N.I.<sup>1</sup>, PONOMARENKO V.P.<sup>1,2,3</sup>  
<sup>1</sup>JSC «RD&P Center «Orion», Moscow  
<sup>2</sup>Moscow Institute of Physics and Technology (State University), Dolgoprudny  
<sup>3</sup>JSC «Shvabe-Photosystem», Moscow  
**Optical parameters of III-V heteroepitaxial layers**
126. MAKIN V.S., MAKIN R.S.<sup>1</sup>  
 Scientific Research Institute for Optoelectronic Instrument Engineering, Sosnovy Bor, Leningrad region  
<sup>1</sup>Dimitrovgrad Engineering and Technological Institute of the NRNU MEPhI,  
 Ulyanovsk region  
**Nature of abnomal grating formation having subdiffraction spatial periods**
127. KOTLIKOV E.N., IURKOVETS E.V.  
 State University of Aerospace Instrumentation, Saint Petersburg  
**Correction of optic spectra on absorption substrate**
128. ASEEV V.A., BIBIK A.Yu., KOLOBKOVA E.V., NIKONOROV N.V.  
 ITMO University, Saint Petersburg  
**Structural and spectral and luminescence properties fluorine-containing nanoglassceramics doped with erbium**
129. STROKOVA Yu.A., SVYAKHOVSKIY S.E., SALETSKY A.M.  
 Lomonosov Moscow State University  
**Nonradiative intermolecular energy transfer in one-dimensional porous silicon photonic crystal**

130. OSIPOV E.V., MARTYNOV I.L., DOVZHENKO D.S., KOTKOVSKII G.E., CHISTYAKOV A.A.  
National Research Nuclear University MEPhI (Moscow Engineering Physics Institute)  
**Quenching of photoluminescence of conjugated polymer imbedded into porous silicon microcavity in the presence of nitroaromatic compound vapors**
131. LIPATOVA Zh.O., KOLOBKOVA E.V., NIKONOROV N.V.  
ITMO University, Saint Petersburg  
**Luminescence of cadmium selenide molecular clusters and quantum dots in fluorine-phosphate glasses**
132. DOVZHENKO D.S., OSIPOV E.V., MARTYNOV I.L., CHISTYAKOV A.A.  
National Research Nuclear University MEPhI (Moscow Engineering Physics Institute)  
**Enhancement of luminophore spontaneous emission in photonic crystal for improvement of sensor sensitivity**
133. SEVOSTYANOV O.G., KOSTRITSKII S.M.<sup>1</sup>, PALATNIKOV M.N.<sup>2</sup>, VASIL'EVA V.V., CHIRKOVA I.M.  
Kemerovo State University  
<sup>1</sup>RPC Optolink Ltd, Zelenograd  
<sup>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  
**Photoluminescence in doped lithium niobate crystals**
134. PANTELEI E., PARANIN V.D.  
Samara State Aerospace University  
**Transmission and reflection of lithium niobate in 190-25000 nm wavelength band**
135. ILLARIONOV A.I., ILLARIONOVA E.A.<sup>1</sup>, NICONOVICH O.L.  
Irkutsk State Transport University  
<sup>1</sup>Irkutsk State Medical University  
**Optical and nonlinear optical properties of rifampicin**
136. DYOMIN V.V., POLOVTSEV I.G., KAMENEV D.V.  
National Research Tomsk State University  
**Quality control device for ZnGeP<sub>2</sub> monocrystals**
137. UMREIKO D.S., ZAJOGIN A.A., KOMYAK A.I.  
Belarusian State University, Minsk  
**Peculiarities of the oxygen exerted effects on the processes of photochemical formation of the variable valence uranium complexes in solutions of uranyl perchlorate in acetone**
138. MAHILNY U.V., STANKEVICH A.I., TROFIMOVA A.V.  
Belarusian State University, Minsk  
**Photosensitive composition for photoalignment of LC materials**
139. GORYAEV M.A.  
The A.I. Herzen State Pedagogical University of Russia, Saint Petersburg  
**Sensitization of internal photoeffect in silicon by dyes**
140. SAPARINA S.V., KHARINCEV S.S., ALEKSEEV A.M.<sup>1</sup>  
Kazan (Volga Region) Federal University, Kazan  
<sup>1</sup>Nazarbaev University, Astana, Kazakhstan  
**Possibilities of TERS and IR snom for visualization of binary polymers with subwavelength spatial resolution**
141. CHERNYKH E.A., KHARINCEV S.S., ALEKSEEV A.M.<sup>1</sup>  
Kazan (Volga Region) Federal University, Kazan  
<sup>1</sup>Nazarbaev University, Astana, Kazakhstan  
**Experimental study of the surface morphology of the composite polymer PTB7:PC71BM:DIO using plasmon high-resolution microscopy**
142. GONCHARUK I.N., ILINSKIY A.V., POPOVA I.O.<sup>1</sup>, SHADRIN E.B.  
Ioffe Physical-Technical Institute of the RAS, Saint Petersburg  
<sup>1</sup>The A.I. Herzen State Pedagogical University of Russia, Saint Petersburg  
**Demonstration of correlation interaction of electrons in Raman spectra of vanadium dioxide crystals**
143. TIMCHENKO E.V., TIMCHENKO P.E., TREGUB N.V., SELEZNEVA E.A., ASADOVA A.A.  
Samara State Aerospace University  
**Investigation of environmental pollution by heavy metals by Raman spectroscopy**
144. EGORYSHEVA A.V.<sup>1</sup>, DUDKINA T.D., GAITKO O.M.<sup>1</sup>, RUDNEV P.O.<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  
**Synthesis of visible light photocatalyst based on complex bismuth oxide**
145. FARRAKHOVA D.S.<sup>1</sup>, KUZNETSOVA Ju.O.<sup>1</sup>, LOSCHENOV V.B.<sup>1,2</sup>  
<sup>1</sup>National Research Nuclear University MEPhI (Moscow Engineering Physics Institute)  
<sup>2</sup>Prokhorov General Physics Institute of the RAS, Moscow  
**Diagnosis of early tooth caries with the use of aluminum phthalocyanine nanoparticles by laser-induced fluorescence**
146. SHAROVA A.S.<sup>1</sup>, MACLYGINA Ju.S.<sup>2</sup>, LOSCHENOV V.B.<sup>1,2</sup>  
<sup>1</sup>National Research Nuclear University MEPhI (Moscow Engineering Physics Institute)  
<sup>2</sup>Prokhorov General Physics Institute of the RAS, Moscow  
**Bacteriochlorin as an infrared photosensitizer for deep-lying brain tumor diagnostics and therapy**
147. SHADRIN E.B., ILINSKIY A.V., KAPRALOVA V.M.<sup>1</sup>, SAMOILOV V.O.<sup>2</sup>  
Ioffe Physical-Technical Institute of the RAS, Saint Petersburg  
<sup>1</sup>Peter the Great Saint Petersburg Polytechnic University  
<sup>2</sup>Pavlov Institute of Physiology of the RAS, Saint Petersburg  
**Magneto-optics of Fe<sup>2+</sup> ions in hemoglobin**
148. TIMCHENKO E.V., TIMCHENKO P.E., VOLOVA L.T.<sup>1</sup>, ROSENBAUM A.Yu., KULABUHOVA A.Yu.  
Samara State Aerospace University  
<sup>1</sup>Samara State Medical University  
**Tissue analysis teeth by Raman spectroscopy**

149. TIMCHENKO E.V., TIMCHENKO P.E., VOLOVA L.T.<sup>1</sup>, SHAL KOVSKAYA P.Yu., PERSHUTKINA S.V.  
*Samara State Aerospace University*  
<sup>1</sup>*Samara State Medical University*  
**Assessment of biotissue implants Raman spectroscopy**
150. MYASOEDOVA I.A., SALMIN V.V., SALMINA A.B.  
*Krasnoyarsk State Medical University named after Prof. V.F. Voyno-Yasenetsky*  
**Holography and synthesis of polymer microstructures to meet the challenges of biomedicine and biotechnology**
151. DUDOVA D.S.<sup>1,2</sup>, MINAEV N.V.<sup>2</sup>  
<sup>1</sup>*National Research Nuclear University MEPhI (Moscow Engineering Physics Institute)*  
<sup>2</sup>*Institute on Laser and Information Technologies of the RAN, Troitsk*  
**The creation of three-dimensional structures from biocompatible compositions based on chitosan-chitin using 3D printing**
152. GANIN D.V.<sup>1,2</sup>, LAPSHIN K.E.<sup>2</sup>, OBIDIN A.Z.<sup>2</sup>, VARTAPETOV S.K.<sup>2</sup>  
<sup>1</sup>*National Research Nuclear University MEPhI (Moscow Engineering Physics Institute)*  
<sup>2</sup>*Prokhorov General Physics Institute of the RAS, Moscow*  
**Femtosecond laser fabrication of linear graphitized microstructures in a bulk of polycarbonate samples by ultrashort laser pulses**
153. MAKIN V.S., MAKIN R.S.<sup>1</sup>  
*Scientific Research Institute for Optoelectronic Instrument Engineering, Sosnovy Bor, Leningrad region*  
<sup>1</sup>*Dimitrovgrad Engineering and Technological Institute of the NRNU MEPhI, Ulyanovsk region*  
**"Switching" the spatial period of resonant gratings forming by scanned femtosecond radiation in glass**
154. MAKIN V.S., LOGACHEVA E.I.<sup>1</sup>  
*Scientific Research Institute for Optoelectronic Instrument Engineering, Sosnovy Bor, Leningrad region*  
<sup>1</sup>*Institute for Nuclear Energetic, Sosnovy Bor, Leningrad region*  
**Instability of glass brittle cracking by scanned laser radiation**
155. LEVCHENKO A.S., FROLOV D.R., BABENKO A.A., NIKIFOROV N.D., KOROTKOV K.S., RUDOMAN A.N.  
*Kuban State University, Krasnodar*  
**Extracting S-parameters of bilateral electro-optic network**
156. KOSTRITSKII S.M., KORKISHKO YU.N., FEDOROV V.A., SEVOSTYANOV O.G.<sup>1</sup>, CHIRKOVA I.M.<sup>1</sup>  
*RPC Optolink Ltd, Zelenograd*  
<sup>1</sup>*Kemerovo State University*  
**Electrooptic efficiency of phase modulators with proton-exchanged LiNbO<sub>3</sub> waveguides**
157. VEKSHIN M.M., KUZMENKO A.D., NIKITIN V.A., YAKOVENKO N.A.  
*Kuban State University, Krasnodar*  
**Optical loss measurement in buried Ag<sup>+</sup>-waveguides, fabricated in K-8 glass**
158. BABKIN O.E., ILINA V.V., MELIDINA A.A.  
*Saint Petersburg State Institute of Film and Television*  
**Development of material for color coding of fiber optic cables**
159. KUZYAKOV B.A.  
*Moscow State University of Information Technologies, Radioengineering and Electronics*  
**Perspective methods of implementation of the orbital angular momentum of photons at the optical telecommunication lines**
160. PLJONKIN A.P.  
*Southern Federal University, Taganrog*  
**Improving the security of photon detection algorithm in quantum key distribution system**
161. PLIVAK S.A., SHUMILIN A.S.  
*Southern Federal University, Taganrog*  
**Secured data transmission system based on the VLC-technology**
162. ILYASOVA A.A., RUBASS A.F., HALILOV S.I.  
*V.I. Vernadsky Crimean Federal University, Simferopol*  
**Investigation of signal multiplexing of the beams carrying optical vortices after passing through low mode fiber**
163. HALILOV S.I., RUBASS A.F.  
*V.I. Vernadsky Crimean Federal University, Simferopol*  
**Investigation of signal demultiplexing in beam Laguerre-Gaussian after passing through low mode fiber**
164. ZACHINYAEV Yu.V., PLIVAK S.A., SHUMILIN A.S.  
*Southern Federal University, Taganrog*  
**Self-phase modulation based chirp generation**
165. POGREBNAYA A.O., RUBASS A.F.  
*V.I. Vernadsky Crimean Federal University, Simferopol*  
**Phase structure of the beam transferring the optical vortex with the fractional topological charge in the uniaxial crystal**
166. ZLOKAZOV E.Yu., NEBAVSKIY V.A., STARIKOV R.S.  
*National Research Nuclear University MEPhI (Moscow Engineering Physics Institute)*  
**Mathematical modelling of microwave photonic time-stretch system**

Posters 2

Thursday, February 04, 2016, 15.00

167. MININ I.V., MININ O.V.  
*Siberian State University of Geosystems and Technologies, Novosibirsk*  
**Mesophotonics of isolated and cluster of self-similar three-dimensional dielectric particles**
168. VASIL'EV S.V., ZHARKIY N.V., IVANOV A.Yu.  
*Grodno State University named after Ya. Kupala, Belarus*  
**Express-diagnostics of crater growth dynamics on laser treating of materials**

169. BOYCHENKO A.P., SEVRYUKOV S.Yu., OVECHENKO D.S.  
*Kuban State University, Krasnodar*  
**About possibility of generation the soft X-rays and the vacuum UV-rays from barrier discharge by effect electrons runaway**
170. ZOLOTOVSKII I.O., LAPIN V.A., SEMENTSOV D.I.  
*Ulyanovsk State University*  
**Modulation instability of wave packets in medium with a running refractive index wave**
171. LITVINOVA M.N., LITVINOVA V.A., KARPETZ Yu.M.  
*Far Eastern State Transport University, Khabarovsk*  
**Second harmonic generation in doped and periodically poled silica fibers**
172. ILLARIONOV A.I., IVANOV M.S., GOREVA O.V.  
*Irkutsk State Transport University*  
**Influence of parameters of the optical system having the spherical aberration on the structure of the optical second harmonic**
173. IVANOV V.I., IVANOVA G.D., KHE V.K.  
*Far Eastern State Transport University, Khabarovsk*  
**The light induced pseudoprism in nanosuspension**
174. IVANOVA S.V.  
*Lebedev Physical Institute of the RAS, Moscow*  
**Scattering of laser light by nonlinear crystal in far-field**
175. SEMENOVA L.E.  
*Prokhorov General Physics Institute of the RAS, Moscow*  
**Hyper-Raman scattering of light in CdS near resonance with the  $A_{n=1}$  exciton**
176. LIVASHVILI A.I., KRISHTOP V.V., KOSTINA G.V.  
*Far Eastern State Transport University, Khabarovsk*  
**Concentration switching wave in nanofluids, located in a light field**
177. GADOMSKY O.N., SHCHUKAREV I.A.  
*Ulyanovsk State University*  
**Masking of bodies covered with a quasi-zero refractive index composite layer by a wave flow method**
178. AVERBUKH B.B., AVERBUKH I.B.  
*Pacific State University, Khabarovsk*  
**The medium from electric dipoles with single or zero refractive indices**
179. KARTSEV P.F., KUZNETSOV I.O.  
*National Research Nuclear University MEPhI (Moscow Engineering Physics Institute)*  
**Annihilation process dynamics of positronium in the state of Bose-Einstein condensate**
180. ASTASHKEVICH S.A.  
*Saint Petersburg State University*  
**Informational inequalities for vibrational states of diatomic molecules**
181. BABENKO I.D., BARBANAKOVA Yu.A., GALUTSKIY V.V., STROGANOVA E.V., YAKOVENKO N.A.  
*Kuban State University, Krasnodar*  
**Modelling of coercitive field in lithium niobate crystal with gradient of concentration**
182. DMITRIEV E.A., BEREZINA E.A., KRADKO V.A., RYABCHENOK V.Yu., PERIN A.S., SHANDAROV V.M.  
*Tomsk State University of Control Systems and Radioelectronics*  
**Study of spatial inhomogeneity of photorefractive properties of lithium niobate crystal**
183. PIKOUL O.Yu., 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*  
**The interference of light in the single crystals  $\text{LiNbO}_3:\text{Er}$**
184. GOREVA O.V.  
*Irkutsk State Transport University*  
**Formation of the nonlinear response of the crystal at Vector interactions of light waves**
185. GARIFULLIN A.I., KHAMADEEV M.A., GAINUTDINOV R.Kh.  
*Kazan (Volga region) Federal University, Kazan*  
**Calculation of the dispersion relations in photonic crystals by plane waves expansion method and transfer-matrix method**
186. SEMKIN A.O., SHARANGOVICH S.N., DOLGIREV V.O., SON D.I., SON S.I.  
*Tomsk State University of Control Systems and Radioelectronics*  
**Photoinduced laser emission's polarization condition changing in liquid crystal cells with polymeric photoaligner**
187. PIKOUL O.Yu., KOVALENKO L.L.  
*Far Eastern State Transport University, Khabarovsk*  
**Conoscopic patterns of the crystal quartz plate  $\lambda/4$**
188. ILLARIONOV A.I.  
*Irkutsk State Transport University*  
**Determination aberrations focusing lenses by nonlinear optical method**
189. GARNAEVA G.I., NEFEDIEV L.A., SAHBIEVA A.R.  
*Kazan (Volga region) Federal University, Kazan*  
**The image conversion of transparency by external electromagnetic standing waves in the optical echo-holography**
190. BUBIS E.L.<sup>1</sup>, LOZHKAREV V.V.<sup>1</sup>, STEPANOV A.N.<sup>1,3</sup>, SMIRNOV A.I.<sup>1,3</sup>, MARTYNOV V.O.<sup>1</sup>, MALSHAKOVA O.A.<sup>1</sup>, SILIN D.E.<sup>1</sup>, GUSEV S.A.<sup>2,3</sup>  
<sup>1</sup>*Institute of Applied Physics of the RAS, Nizhny Novgorod*  
<sup>2</sup>*Institute for Physics of Microstructures of the RAS, Nizhny Novgorod*  
<sup>3</sup>*Lobachevsky State University of Nizhny Novgorod*  
**About the inversion of an image of a small-scale opaque object in illuminating beam focusing at the absorbing medium**

191. CHERNIAK M.E.<sup>1,2</sup>, MEKHOVSKIY E.A.<sup>1,2</sup>, ULANOVA A.V.<sup>1,2</sup>  
<sup>1</sup>National Research Nuclear University MEPhI (Moscow Engineering Physics Institute)  
<sup>2</sup>Specialized Electronic Systems, Moscow  
**Analysis of the interline CCD-sensor dark signal increase under gamma-irradiation**
192. UHOV A.A., KOSTRIN D.K., GERASIMOV V.A., SELIVANOV L.M.  
 Saint Petersburg State Electrotechnical University  
**Suppression of interference in the structure of CCD photodetectors**
193. MITROFANOV S.S., POVAROV K.S.  
 ITMO University, Saint Petersburg  
**Research of precision characteristics of a circular photodetector of "Multiskan"**
194. NASTULYAVICHUS A.A., POPOVA E.V., STIFUTKIN A.A., BUZHAN P.Zh., ILYIN A.L., MAVRITSKIY O.B., EGOROV A.N.  
 National Research Nuclear University MEPhI (Moscow Engineering Physics Institute)  
**Application of ultrashort laser pulses for timing characterization of silicon photomultipliers**
195. KALASHNIKOV E.V.  
 Scientific Research Institute for Optoelectronic Instrument Engineering, Sosnovy Bor, Leningrad region  
**Digital polarization interferometer**
196. BUSURIN V.I., WIN Yi.N., SEMUSHEVA S.M.  
 Moscow Aviation Institute (National Research University)  
**Research of the ring resonator deformation on the measurement of angular velocity**
197. BUSURIN V.I., KOROBKOV K.A.  
 Moscow Aviation Institute (National Research University)  
**Decision support system for pilot when driving at the airport**
198. POLYAKOV A.V.  
 Belarusian State University, Minsk  
**Optoelectronic perimeter security system**
199. GOLUBEV K.A.<sup>1</sup>, KALASHNIKOV E.V., CHARUKHCHEV A.V.  
 Scientific Research Institute for Optoelectronic Instrument Engineering, Sosnovy Bor, Leningrad region  
<sup>1</sup>JCK "Master-FIT", Saint Petersburg  
**Video measuring system for assembling work place**
200. BARYSHNIKOV N.V., DENISOV D.G., KARASSIK V.E., SAKHAROV A.A.  
 Bauman Moscow State Technical University  
**Methods and equipment certification control the radius of curvature of the spherical surface optical products with wavefront sensor**
201. VOLYNSKY M.A., SIDOROV I.S., KAMSHILIN A.A.  
 ITMO University, Saint Petersburg  
**Influence of light polarization on its temporal modulation while it interacts with biological tissue in-vivo**
202. BELAVENTSEVA A.V.<sup>1</sup>, ROMASHKO R.V.<sup>1,2</sup>, KULCHIN Yu.N.<sup>1,2</sup>, KAMSHILIN A.A.<sup>3</sup>  
<sup>1</sup>Institute of Automation and Control Processes of FEB RAS, Vladivostok  
<sup>2</sup>Far Eastern Federal University, Vladivostok  
<sup>3</sup>ITMO University, Saint Petersburg  
**The research of the thermal relaxation process of living tissue by the method of blood pulsation imaging**
203. UHOV A.A., KOSTRIN D.K., GERASIMOV V.A., SELIVANOV L.M.  
 Saint Petersburg State Electrotechnical University  
**Optimization of method for determination of the thickness of thin optically transparent films**
204. CHIGRIN R.N., ANDREEVA N.V., ANDREEVA O.V.  
 ITMO University, Saint Petersburg  
**Research of phase changes in process of storage of fine aqueous suspensions of inorganic substances**
205. BALBEKIN N.S., KULYA M.S., GORODETSKY A.A.<sup>1</sup>, NOVOSELOV E.V.<sup>2</sup>, PETROV N.V.  
 ITMO University, Saint Petersburg  
<sup>1</sup>Aston University, Birmingham, UK  
<sup>2</sup>Chalmers University of Technology, Gothenburg, Sweden  
**The modelling of broadband pulse holograms with noise**
206. BORODIN A.N.  
 Baikal State University of Economics and Law, Irkutsk  
**Optical filter characteristics calculation with the angular selective transmission**
207. EVTIKHIEV N.N., PETROVA E.K., PYANKOV S.S., STARIKOV R.S., SHAULSKY D.V.  
 National Research Nuclear University MEPhI (Moscow Engineering Physics Institute)  
**Research of correlation filter synthesis based on artificial training sets received by the adjustment of real images**
208. PAVLOV P.V., MALOV A.N.<sup>1</sup>, NEUPOKOEVA A.V.<sup>1</sup>, NIKOLAYEVA T.Yu.<sup>2</sup>, PETROV N.V.<sup>2</sup>  
 Air Force Academy named after prof. N.E. Zhukovsky and Yu.A Gagarin, Voronezh  
<sup>1</sup>Irkutsk State Medical University  
<sup>2</sup>ITMO University, Saint Petersburg  
**Identification of particles in the volume by methods of image processing and «chessboard»**
209. PAVLOV P.V., LAGOSHNYI I.S., MALOV A.N.<sup>1</sup>, NEUPOKOEVA A.V.<sup>1</sup>  
 Air Force Academy named after prof. N.E. Zhukovsky and Yu.A Gagarin, Voronezh  
<sup>1</sup>Irkutsk State Medical University  
**Determination roughness parameters of the speckle an image using the method of «chessboard»**
210. VOLKOV M.V., VINOGRADOV Yu.V.  
 ITMO University, Saint Petersburg  
**Evaluation of object surface shifts with using phase shifting interferometry methods**

211. TALAIKOVA N.A.<sup>1,2</sup>, RYABUKHO V.P.<sup>1,3</sup>  
<sup>1</sup>Saratov State University  
<sup>2</sup>University of Oulu, Finland  
<sup>3</sup>Institute of Precision Mechanics and Control of the RAS, Saratov  
**Compact diffraction phase microscope for 3D visualization of phase objects**
212. BELASHOV A.V.<sup>1,2</sup>, PETROV N.V.<sup>1</sup>, SEMENOVA I.V.<sup>2</sup>  
<sup>1</sup>ITMO University, Saint Petersburg  
<sup>2</sup>Ioffe Physical-Technical Institute of the RAS, Saint Petersburg  
**Random and systematic errors in digital holographic tomography**
213. KAMENEV D.V., SINITSYN A.S.  
National Research Tomsk State University  
**The research of particles size and position variance caused by the use of spherical wavefront at the stage of digital hologram registration**
214. MURAVYEVA M.S.<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  
**Analysis of recording and reconstruction process of hologram in the system of scanning holographic microscopy**
215. BELYAVTSEV A.Yu., CHIGRIN R.N., PANCHENKO A.V.<sup>1</sup>, ANDREEVA N.V., TYNDYK M.L.<sup>1</sup>, ANDREEVA O.V.  
ITMO University, Saint Petersburg  
<sup>1</sup>N.N. Petrov Research Institute of Oncology, Saint Petersburg  
**Using of digital holographic interferometry for estimation of phase changes of transparent biomaterial**
216. BONDAREVA A.P., EVTIKHIEV N.N., KRASNOV V.V., MOLODTSOV D.Yu., CHERYOMKHIN P.A., ERKIN I.Yu.  
National Research Nuclear University MEPhI (Moscow Engineering Physics Institute)  
**Optical encryption of series of images using a set of encryption keys using scheme operating with spatially-incoherent illumination based on two LC SLMs**
217. NALEGAEV S.S., KRASNOV V.V.<sup>1</sup>, PETROV N.V.  
ITMO University, Saint Petersburg  
<sup>1</sup>National Research Nuclear University MEPhI (Moscow Engineering Physics Institute)  
**An authentication system of commercially-rated technical devices with use of asymmetric holographic encryption**
218. BERDYSHEVA S.A., KRASNOV V.V., NALEGAEV S.S.<sup>1</sup>, STARIKOV R.S.  
National Research Nuclear University MEPhI (Moscow Engineering Physics Institute)  
<sup>1</sup>ITMO University, Saint Petersburg  
**Optical encryption of digital information depicted as QR-codes with spatially-incoherent monochromatic illumination**
219. KULAKOV M.N., PORSHNEVA L.A., STARIKOV R.S., CHERYOMKHIN P.A.  
National Research Nuclear University MEPhI (Moscow Engineering Physics Institute)  
**Calculation of kinoforms of 3D-scenes by the "ping-pong" method**
220. PETROV N.V.<sup>1</sup>, CHERYOMKHIN P.A., SHEVKUNOV I.A.<sup>1</sup>  
National Research Nuclear University MEPhI (Moscow Engineering Physics Institute)  
<sup>1</sup>ITMO University, Saint Petersburg  
**Use of spectral information under reconstruction of color digital holograms «in reflection»**
221. DYOMIN V.V., KOZLOVA A.S.  
National Research Tomsk State University  
**Hologram video processing methods based on Gabor wavelet transformation**
222. KURBATOVA E.A., KRASNOV V.V., MOLODTSOV D.Yu., PORSHNEVA L.A., CHERYOMKHIN P.A., RODIN V.G.  
National Research Nuclear University MEPhI (Moscow Engineering Physics Institute)  
**Method of modeling of digital holograms registering and images optical reconstruction**
223. KOLYUCHKIN V.V., ZLOKAZOV E.Yu.<sup>1</sup>, ODINOKOV S.B., TALALAEV V.Ye., TSYGANOV I.K.  
Bauman Moscow State Technical University  
<sup>1</sup>National Research Nuclear University MEPhI (Moscow Engineering Physics Institute)  
**Optoelectronic device for verify the authenticity of security holograms**
224. MOLODTSOV D.Yu., KRASNOV V.V., CHERYOMKHIN P.A., RODIN V.G.  
National Research Nuclear University MEPhI (Moscow Engineering Physics Institute)  
**Impact of DMD-SLMs errors on reconstructed Fourier holograms quality**