

THE PROGRAMM OF CONFERENCE

CONFERENCE OPENING. PLENARY

Wednesday, January 28, 2015, 10.00 Room 406

1. BIRIUKOV A.S., BUFETOV I.A.
Fiber optic research center of the RAS, Moscow
Hollow core optical fibers: from photonic crystal fibers to the fibers with negative curvature of the core-cladding boundary
2. ZHI ZHOU
Dalian university of technology, China
Advances of novel optical fiber sensor technology for structural health monitoring
3. PROKLOV V.V.
Fryazino branch of Kotel'nikov institute of radioelectronics and electronics of RAS
Effects of multifrequency acousto-optic Bragg diffraction with minor intermodulation distortions
4. MORARENKO V.V.
Keysight technologies Inc., Moscow
The up-to-date Keysight Technologies methods and solutions for optical components analysis for optical fiber communication lines

POSTERS

Wednesday, January 28, 2015, 12.00 Room 406

Meeting 1

Wednesday, January 28, 2015, 13.00 Room 406

5. KUZYAKOV B.A., MORARENKO V.V., SHMELEV B.A.
Moscow state technical university of radio-engineering, electronics and automation
¹*Keysight technologies Inc., Moscow*
Modern methods of implementation and selection of the orbital angular momentum of photons in the optical combined communications line
6. ELEZOV M.S.¹, OZHEGOV R.V.^{1,3}, KUROCHKIN Yu.V.², KOVALYUK V.V.^{1,3}, VAKHTOMIN Yu.B.³, GOLTSMAN G.N.^{1,4}
¹*Moscow state pedagogical university*
²*Russian quantum center, Skolkovo*
³*JSC "Superconducting nanotechnology", Moscow*
⁴*Higher school of economics Moscow institute of electronics and mathematics*
Polarization state reconstruction and measurement over 300 km performed with a superconducting single photon receiver
7. ZVEGINTZEV V.N.¹, IVANOV S.I., LAVROV A.P., SAENKO I.I.
Saint-Petersburg state polytechnical university
¹*OJSC «NII«Vector», Saint-Petersburg*
The characteristics of analog fiber-optic links for ultra-wideband signals transmission
8. TSARUK A.A., VYTNOV A.V., IVANOV D.V.
Institute of applied astronomy of the RAS, Saint-Petersburg
Methods of ultra-stable signal transfer via fiber optic cable for synchronization of radio astronomical equipment
9. DODUKHOVA I.A., BYLINA M.S.
Bonch-Bruevich Saint-Petersburg state university of telecommunications
Comparison of modeling results of erbium-doped fiber amplifier with results of other researchers
10. BYSHEVSKI-KONOPKO O.A., PROKLOV V.V., FILATOV A.L.
Fryazino branch of Kotel'nikov institute of radioelectronics and electronics of RAS
Application of multiband acousto-optic filters for spectrally encoded signals generation in incoherent optical communication systems
11. KHORKIN V.S., VOLOSHINOV V.B., KULAKOVA L.A.¹, KNYAZEV G.A.
Lomonosov Moscow state university
¹*Ioffe physical-technical institute of the RAS, Saint-Petersburg*
Acousto-optic characteristics of tellurium based glasses
12. ERMAKOV A.A., BALAKSHY V.I.
Lomonosov Moscow state university
Acoustic ray spectra in a tellurium single crystal
13. MOLCHANOV V.Ya., CHIZHIKOV S.I., YUSHKOV K.B.
National university of science and technology «MISIS», Moscow
Spatial shaping of laser beams by means of acousto-optics
14. BURMAK L.I., VISKOVATYKH A.V., MACHIKHIN A.S.
Scientific and technological center of unique instrumentation of the RAS, Moscow
Microimaging spectrometer and profilometer based on acousto-optic filtration
15. KUPREYCHIK M.I., BALAKSHY V.I.
Lomonosov Moscow state university
Spatial structure of acousto-optic interaction in biaxial crystal alpha-iodic acid
16. MANYKIN E.A.^{1,2}, MELNICHENKO E.V.¹
¹*National research nuclear university MEPhI (Moscow engineering physics institute)*
²*National research center "Kurchatov institute", Moscow*
Rare-earth elements properties analysis for quantum processing application

Meeting 2

Wednesday, January 28, 2015, 16.00

Room 406

17. MAHILNY U.V., STANKEVICH A.I., TROFIMOVA A.V., MURAVSKY Al.An.¹, MURAVSKI An.Al.¹
Belarusian state university, Minsk, Belarus
¹*Institute of chemistry of new materials of NAS of Belarus, Minsk*
Photosensitive polymers for alignment of LC materials
18. 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
Nonlinear optical crystals of lithium niobate with low photorefraction effect: synthesis, structure, properties
19. STROGANOVA E.V., SUDARIKOV K.V., RASSEYKIN D.A., GALUTSKIY V.V.
Kuban state university, Krasnodar
Research of a photorefraction of gradient crystals of LiNbO₃ on the wavelength of 1053 nm
20. DYU V.G., KHUDYAKOVA E.S., KISTENEVA M.G., SHANDAROV S.M., KARGIN Yu.F.¹
Tomsk state university of control systems and radioelectronics
¹*Baikov institute of metallurgy and materials sciences of the RAS, Moscow*
Spectral dependences of impurity optical absorption in selenite-type crystals
21. ANTSYGIN V.D., POTATURKIN O.I., MAMRASHEV A.A., NIKOLAEV N.A.
Institute of automation and electrometry SB RAS, Novosibirsk
Terahertz optical properties anisotropy and structural peculiarities of KTP crystals
22. CHUMANOV M.V.^{1,2}, PARGACHEV I.A.^{1,2}, SEREBRENNIKOV L.Ya.^{1,2}, KRAKOVSKY V.A.², TAGILCEVA M.A.¹, KRIMCEVA K.O.¹
¹*Tomsk state university of control systems and radioelectronics*
²*Crystal T Ltd, Tomsk*
Devices for modulation and converting laser radiation based on RKTP crystal
23. OSIPOV E.V., DOVZHENKO D.S., MARTYNOV I.L., CHISTYAKOV A.A.
National research nuclear university MEPhI (Moscow engineering physics institute)
Optical properties of CdSe/ZnS/CdS/ZnS semiconductor quantum dots embedded in one dimensional photonic crystals based on porous silicon
24. NALEGAEV S.S., HOROSHIH D.A., TSYPKIN A.N.
Saint-Petersburg national research university of information technologies, mechanics and optics
A study of particularities of nonlinear optical properties of glasses and colloidal solutions with quantum dots
25. ALIEV S.A., TROFIMOV N.S., CHEKHLOVA T.K.
Peoples' friendship university of Russia, Moscow
Titan dioxide films photosensitivity research based on gel-technology method
26. ADAMOV G.E., VERBITSKIY E.V.¹, GREBENNIKOV E.P., ZINOVIEV E.V., POROSHIN N.O., RUSINOV G.L.¹, SHMELIN P.S.
OJSC «CSRIT «Technomash», Moscow
¹*I.J. Postovsky institute of organic synthesis UB RAS, Ekaterinburg*
Luminescence enhancement C₃₃H₂₃N₃O₂S fluorophore in the presence of silver nanoparticles as evidence of formation hybrid nanostructures
27. MERESHCHENKO A.S., OLSHIN P.K., SKRIPKIN M.YU., TVERYANOVICH Y.U.S., TARNOVSKY A.N.¹
Saint-Petersburg state university
¹*Bowling Green state university, Bowling Green, USA*
Femtosecond photochemistry of copper(II) chlorocomplexes in acetonitrile
28. KRIVENKOV V.A., SAMOKHVALOV P.S., SOLOVYEVA D.O., BILAN R.S., CHISTYAKOV A.A., NABIEV I.R.
National research nuclear university MEPhI (Moscow engineering physics institute)
Two-photon induced resonance energy transfer in quantum dots-bacteriorhodopsin bio-nano hybrid material

Meeting 3

Thursday, January 29, 2015, 10.00

Room 406

29. SEMJONOV S.L.
Fiber optic research center of the RAS, Moscow
Microstructured fibers in Fiber optics research center of the RAS
30. DURAEV V.P., MEDVEDEV S.V., KASATKIN E.V.
JSC "Nolatex", Moscow
Domestic element base for optoelectronics
31. KOLYADIN A.N., KOSOLAPOV A.F., PRYAMIKOV A.D., BIRIUKOV A.S., ALAGASHEV G.K., BUFETOV I.A.
Fiber optic research center of the RAS, Moscow
Dispersion in hollow-core microstructured optical fibers with a negative curvature of the core boundary
32. EGOROVA O.N., SEMJONOV S.L., VEL'MISKIN V.V., YATSENKO Yu.P., SVERCHKOV S.E., GALAGAN B.I., DENKER B.I., DIANOV E.M.
Fiber optic research center of the RAS, Moscow
¹*Prokhorov general physics institute of the RAS, Moscow*
Phosphate-core silica-clad Er/Yb-doped optical fiber
33. BUKHARIN M.A.^{2,3}, KHUDYAKOV D.V.^{1,3}, VARTAPETOV S.K.¹
¹*Prokhorov general physics institute of the RAS, Moscow*
²*Moscow institute of physics and technology, Dolgoprudny*
³*Optosystems Ltd, Moscow*
Direct femtosecond writing of waveguides with depressed cladding in neodymium doped phosphate glass
34. VEL'MISKIN V.V., EGOROVA O.N., ERIN D.Yu., SENATOROV A.K., CHERNOOK S.G., SEMJONOV S.L.
Fiber optic research center of the RAS, Moscow
The optimized fabrication method of the silica active optical fiber performs by sintering of powder oxides

35. BORODKIN A.A.¹, KHUDYAKOV D.V.^{1,2}, VARTAPETOV S.K.¹
¹*Prokhorov general physics institute of the RAS, Moscow*
²*Optosystems Ltd., Moscow*
Subnanosecond-pulsed all-PM fiber YB-doped laser
36. MIRONNIKOV N.G.^{1,2}, DEREVYANKO D.I.³, KOROLKOV V.P.^{1,2}, SHELKOVNIKOV V.V.³
¹*Institute of automation and electrometry, Novosibirsk*
²*Novosibirsk state university*
³*N.N. Vorozhtsov Novosibirsk institute of organic chemistry SB RAS*
The scanning laser writing on film of the hybrid photopolymer material based on thiol-acrylate oligomer siloxane
37. BORODAKO K.A.¹, SHEYFER D.V.^{1,2}, SHELYAKOV A.V.¹, SITNIKOV N.N.^{1,3}
¹*National research nuclear university MEPhI (Moscow engineering physics institute)*
²*University of Hamburg, Germany*
³*Federal state unitary enterprise "Keldysh research center", Moscow*
Effect of laser treatment on shape memory properties of TiNiCu alloy
38. PAVLOV S.V., RAVIN A.R., CHEKHLOVA T.K.
Peoples' friendship university of Russia, Moscow
Temperature correction of characteristics of planar waveguide lenses
39. BURDUKOVA O.A.¹, PETUKHOV V.A., SEMENOV M.A.
Lebedev physical institute of the RAS, Moscow
¹*Moscow institute of physics and technology, Dolgoprudny*
Laser dyes for diode pumping
40. GAVRICHEV V.D., KARACHAROV G.
Saint-Petersburg national research university of information technologies, mechanics and optics
Spectral and temperature characteristics of the solution of chemical indicators

PLENARY 2.

Thursday, January 29, 2015, 13.00 Room 406

41. VENEDIKTOV V.YU., SOLOVYEV M.A.¹
Saint-Petersburg state electrotechnical university "LETI"
¹*Vavilov state optical institute, Saint-Petersburg*
Holographic wavefront sensors
42. DONGSHENG LI
Dalian university of technology, China
Monitoring and evaluation of arch bridge suspender damage using FBG sensors
43. YAKUSHENKOV Yu.G.
Moscow state university of geodesy and cartography
General methodology for calculation the electro-optical devices' basic parameters and characteristics
44. NIPPOLAINEN E.
University of Eastern Finland, Kuopio, Finland
Imaging of relative phase of blood pulsation
45. KUTANOV A.A., SNIMSHIKOV I.A., NURBEK S.U.
Institute of physical and technical problems and material science of NAS of the Kyrgyz Republic, Bishkek, Kyrgyz Republic
Direct laser recording of DOE on a-Si film
46. GONCHAROVA P.S., KRISHTOP V.V., SYUY A.V., KIREEVA N.M., PONOMARCHUK Yu.V., LIVASHVILI A.I., KORNEENKO T.N.
Far eastern state transport university, Khabarovsk
Control of optical spectrum in a few anisotropic elements system

Meeting 4

Thursday, January 29, 2015, 16.00 Room 406

47. PODOLIAN N.P.¹, ROMASHKO R.V.^{1,2}, KULCHIN Yu.N.¹, NIPPOLAINEN E.³, KAMSHILIN A.A.³
¹*Institute of automation and control processes of FEB RAS, Vladivostok*
²*Far eastern federal university, Vladivostok*
³*University of Eastern Finland, Kuopio, Finland*
Study of maximal amplitude of blood pulsation by 2D-photoplethysmography
48. ALEKSANDROV S.E.^{1,2}, GAVRILOV G.A.^{1,2}, SOTNIKOVA G.Yu.^{1,2}
Ioffe physical-technical institute of the RAS, Saint-Petersburg
¹*Saint-Petersburg state polytechnical university*
Threshold sensitivity of the mid-IR sensors
49. MASALSKY N.V.
Scientific research institute of system researches of the RAS, Moscow
Method for selective detection of substances on based of the "silicon on insulator" waveguide structure
50. KOLESNIKOV S.Yu., SKORNYAKOVA N.M.
National research university "Moscow power engineering institute"
Use of tracers of various type in the particle image velocimetry method
51. BUSURIN V.I., TUAN P.A., AKHLAMOV P.S.
Moscow aviation institute (National research university)
Characteristics and errors of microopto-electromechanical velocity speed transducer based on optical tunneling effect
52. BUSURIN V.I., LWIN N.H., BERDJUGIN N.A.
Moscow aviation institute (National research university)
Error analysis of three axial acceleration transducer based on optical tunneling effect
53. KUTUZA I.B., POZHAR V.E.
Scientific and technological center of unique instrumentation of the RAS, Moscow
Application of acousto-optical spectrometry for characterization and classification of diamonds

54. EGOROV A.N., MAVRITSKIY O.B., NASTULYAVICHUS A.A., PECHENKIN A.A., SMIRNOV N.A., CHUMAKOV A.I.
National research nuclear university MEPhI (Moscow engineering physics institute)
NIR microscopy possibilities for the visualization of silicon microelectronic structure topology through the substrate
55. VEDYASHKINA A.V., RINKEVICHYUS B.S.
National research university "Moscow power engineering institute"
3D-visualization of caustics' formation in laser refractography problems
56. DUDEKOVA V.V.¹, ZAKHAROV Yu.N.^{1,2}
¹*Lobachevsky state university of Nizhny Novgorod*
²*Harvard university, Cambridge, USA*
Theoretical calculation of optimal excitation power to obtain super resolution by BALM method
57. GORJUNOV A.E., PAVLOV P.V., PETROV N.V.¹, MALOV A.N.²
Air Forces academy named by prof. N.E. Zhukovsky and Ju.A. Gagarin, Voronezh
¹*Saint-Petersburg national research university of information technologies, mechanics and optics*
²*Irkutsk state medical university*
The vortex beams usage for surface roughness parameters estimation
58. ODINOKOV S.B., ZHERDEV A.Yu., RUCHKINA M.A.
Bauman Moscow state technical university
Research of influence of geometrical parameters on spectral-angular characteristics of the plasmon spectral gratings

Meeting 5

Friday, January 30, 2015, 10.00

Room 406

59. PROKHOROV A.V., GUBIN M.Yu., GLADUSH M.G.¹, LEKSIN A.Yu., ARAKELIAN S.M.
Vladimir state university
¹*Institute for spectroscopy of the RAS, Troitsk*
Generation of dissipative laser bullets in a dense optical medium
60. MAKAROV V.A., PETNIKOVA V.M., RUDENKO K.V., SHUVALOV V.V.
Lomonosov Moscow state university
Adiabatic approximation for solving non-integrable system of coupled nonlinear Schrödinger equations in nonlinear optics
61. KAZANTSEVA E.V.¹, MAIMISTOV A.I.^{1,2}
¹*National research nuclear university MEPhI (Moscow engineering physics institute)*
²*Moscow institute of physics and technology, Dolgoprudny*
Solitary waves in an array of quantum dots
62. RYZHOV I.V., VOLOSHIN A.A., VASIL'EV N.A., KOSOVA I.S., MALYSHEV V.A.^{1,2}
Herzen Russian state pedagogical university, Saint-Petersburg
¹*Saint-Petersburg state university*
²*University of Groningen, Netherlands*
Dicke superradiance: from regular nonlinear dynamics to chaos
63. BYKOV N.V.^{1,2}, MAIMISTOV A.I.^{1,3}
¹*National research nuclear university MEPhI (Moscow engineering physics institute)*
²*Dorodnicyn computing centre of the RAS, Moscow*
³*Moscow institute of physics and technology, Dolgoprudny*
Conical diffraction near by positive and negative refractive media interface
64. KOZLOV D.A., KOTLYAR V.V.
Image processing systems institute of the RAS, Samara
Overcoming the diffraction limit at laser light focusing by microcylinder
65. IVAKHNIK V.V., SAVEL'EV M.V.
Samara state university
Four-wave mixing in a transparent medium based on electrostriction and Dufour effect at large reflectance
66. BUSAROV A.S., VINOGRADOV A.V., POPOV N.L.
Lebedev physical institute of the RAS, Moscow
Formation and transfer of images of inclined objects by coherent X- ray beams
67. KOROLENKO P.V., RYZHIKOVA Yu.V.
Lomonosov Moscow state university
Pattern properties in the optical characteristics of 1d photonic crystals with metamaterials
68. YAKOVLEVA T.V., KNIAZKOV A.V.
Dorodnicyn computing centre of the RAS, Moscow
¹*Saint-Petersburg state polytechnical university*
Comparison of two techniques of electro-optical coefficient determination
69. SEMKIN A.O., SHARANGOVICH S.N.
Tomsk state university of control systems and radioelectronics
Analytical model of light diffraction on polarization holographic diffraction PDLC structures
70. VASIL'EV I.V., LOMANOV A.N.
P.A. Soloviev Rybinsk state aviation technical university, Yaroslavl region
Mathematical model of multipass modulation using the SLM with reflective cell

Meeting 6

Friday, January 30, 2015, 13.00

Room 406

71. ZHUMALIEV K.M., TALYPOV K.K., AKKOZOV A.D.
Institute of physical and technical problems and material science of NAS of the Kyrgyz Republic, Bishkek, Kyrgyz Republic
About synthesis of the holographic operation filters for spatial image processing
72. BEKHTIN Yu.S., GURYEVA M.N.
Ryazan state radio engineering university
Non-threshold wavelet-based fusion of IR-images with FPN

73. IVANOV P.A.
Yaroslavl state technical university
Scaled invariant image recognition with the help of invariant correlation filters
74. KONSTANTINOV M.V., STARIKOV R.S., SHAULSKY D.V.
National research nuclear university MEPhI (Moscow engineering physics institute)
Using 3D models of objects as etalons for MINACE distortion invariant filters synthesis
75. BYKOVSKY A.Yu.
Lebedev physical institute of the RAS, Moscow
The method of multi-parametrical robotic agent modeling based on discrete K-valued logics
76. SHAULSKY D.V.
All-Russian research institute of automatics, Moscow
Image quality enhancement in fiberscopes of optical non-destructive testing system
77. KAMINSKAYA T.P., KOCHIKOV I.V., NECHIPURENKO D.Yu., POPOV V.V.
Lomonosov Moscow state university
Quality improvement of the images obtained with diffractive optical elements computed by iterative methods
78. NIKOLAYEVA T.Yu., PETROV N.V.
Saint-Petersburg national research university of information technologies, mechanics and optics
Processing of images and holograms in the problem of characterization of particles
79. ZAALISHVILI N.U., KALENKOV S.G.
Moscow state university of mechanical engineering (MAMI)
About one digital approach of microobject phase profiling in hyperspectral Fourier-microscopy
80. KOTOVA E.I., SMIRNOVA A.L.
Saint-Petersburg national research university of information technologies, mechanics and optics
Holographic ballistic gravimeter
81. GREBENYUK K.A.
Saratov state university named after N.G. Chernyshevskiy
Mathematical model of digital array photo sensor
82. SOLYAKOV V.N., KOZLOV K.V., KYZNETSOV P.A., POLESSKY A.V.
Orion research and production association, Moscow
Mathematical model of time delay integration focal plane array

Meeting 7

Friday, January 30, 2015, 16.00

Room 406

83. BORISKEVICH A.A., EROHOVETS V.K., TKACHENKO V.V.
United institute of informatics problems of NAS of Belarus, Minsk
Models of Fourier and Fresnel digital quantized holograms
84. ISMAILOV D.A., ZHUMALIEV K.M., AKKOZOV A.D., JEENBEKOV A.A.¹
Institute of physical and technical problems and material science of NAS of the Kyrgyz Republic, Bishkek, Kyrgyz Republic
¹*Kyrgyz-Russian (Slavic) university, Bishkek, Kyrgyz Republic*
Holographic storage of digital information based on the generated holograms
85. BETIN A.Yu.¹, BOBRINEV V.I.¹, DONCHENKO S.S.¹, ZLOKAZOV E.Yu., ODINOKOV S.B.¹, STARIKOV R.S.
National research nuclear university MEPhI (Moscow engineering physics institute)
¹*Bauman Moscow state technical university*
Line-by-line information readout system from multiplexed 1D Fourier holograms for holographic memory
86. KALENKOV S.G.¹, KALENKOV G.S.², SHTANKO A.E.
Moscow state university of technology (Stankin)
¹*Moscow state university of mechanical engineering (MAMI)*
²*Microholo Ltd, Moscow*
Hyperspectral holography of microobjects in uncoherent light
87. BONDAREVA A.P., EVTIKHIEV N.N., KRASNOK V.V., STARIKOV S.N.
National research nuclear university MEPhI (Moscow engineering physics institute)
Scheme of optical image encryption with digital information input and dynamic encryption key based on two LC SLMS
88. EVTIKHIEV N.N., KURBATOVA E.A., STARIKOV S.N., CHERYOMKHIN P.A.
National research nuclear university MEPhI (Moscow engineering physics institute)
Compression of digital holograms for 3d-surveillance systems and medical-biological applications
89. BELASHOV A.V.^{1,2}, PETROV N.V.¹, SEMENOVA I.V.²
¹*Saint-Petersburg national research university of information technologies, mechanics and optics*
²*Ioffe physical-technical institute of the RAS, Saint-Petersburg*
Digital holography algorithms application for processing of holographic interferogram of fast wave processes
90. LYALYUSHKIN L.S., PAVLOV A.V.
Saint-Petersburg national research university of information technologies, mechanics and optics
4F Fourier holography scheme dynamical properties in dependence of holographic recording media characteristics
91. ZHUMALIEV K.M., ISMAILOV D.A., JEENBEKOV A.A.¹, DEMIANOVICH P.D.¹, ABAIROVA D.², SARYBAEVA A.A.²
Institute of physical and technical problems and material science of NAS of the Kyrgyz Republic, Bishkek, Kyrgyz Republic
¹*Kyrgyz-Russian (Slavic) university, Bishkek, Kyrgyz Republic*
²*Kyrgyz state technical university named after I. Razzakov, Bishkek, Kyrgyz Republic*
Improve of recording of diffraction gratings in Dot matrix hologram
92. KYDRIAVTSEV P.V., MANUHIN B.G., ANDREEVA O.V.
Saint-Petersburg national research university of information technologies, mechanics and optics
Research of thermal effects during polymeric holograms recording are presented
93. JAMANKYZOV N.K., ZHUMALIEV K.M.
Institute of physical and technical problems and material science of NAS of the Kyrgyz Republic, Bishkek, Kyrgyz Republic
About the speed recording hologram in phottermoplastic carriers
94. KOLYUCHKIN V.V., ODINOKOV S.B.
Bauman Moscow state technical university
The method of authentication security holograms

Posters

95. KUZYAKOV B.A., TIHONOV R.V., SHMELEV B.A.
Moscow state technical university of radio-engineering, electronics and automation
Assess the impact of atmospheric noise in the laser telecommunication channels earth-satellite
96. KUZYAKOV B.A., TIHONOV R.V.
Moscow state technical university of radio-engineering, electronics and automation
Selective optical fibers according to the fashion of the angular orbital momentum of the photons in the optical combination line telecommunications
97. PLJONKIN A.P.
Southern federal university, Taganrog
Improving the security of synchronization of quantum key distribution system
98. ZACHINYAEV Yu.V.
Southern federal university, Taganrog
Experimental research of the fiber-optic based chirp generator unit
99. VINOGRADOVA I.L., SULTANOV A.K., MESHKOV I.K., ANDRIANOVA A.V., ABDRAKHMANOVA G.I., GRAKHOVA E.P.
Ufa state aviation technical university
The approach of spectrum ultra-wide band signal transformation by optical part of RoF
100. VINOGRADOVA I.L.
Ufa state aviation technical university
The application of optical pulses frequency modulation for non-relation management of fiber optical networks
101. RYABCHENOK V.Yu., BEZPALY A.D., VERKHOTUROV A.O., TIMOFEEV A.N., ABRAMOVA A.V., EREMEEVA A.A., SHANDAROV V.M.
Tomsk state university of control systems and radioelectronics
Investigation of intensive laser radiation influence on lithium niobate properties within a waveguide layer
102. KOSTRITSKII S.M., KORKISHKO Yu.N., FEDOROV V.A., SEVOSTYANOV O.G.¹, CHIRKOVA I.M.¹
RPC Optolink Ltd, Zelenograd
¹*Kemerovo state university*
Study of electrooptical properties and phase composition of proton-exchanged waveguides in LiNbO₃ crystals
103. PARANIN V.D., PANTELEI E.
S.P. Korolyov Samara state aerospace university
Spectrum transmission of lithium niobate of different producers
104. PIKOUL O.Yu., SIDOROV N.V.¹, PALATNIKOV M.N.¹
Far eastern state transport university, Khabarovsk
¹*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*
Convergent beam interference in the single crystals LiNbO₃:Gd
105. LITVINOVA V.A., LITVINOV V.A.¹
Far eastern state transport university, Khabarovsk
¹*Moscow institute of physics and technology, Dolgoprudny*
Modeling of upconversion in nonlinear crystals
106. GRIBENYUKOV A.I., VEROZUBOVA G.A., OKUNEV A.O.¹
Institute of monitoring of climatic and ecological systems SB RAS, Tomsk
¹*Yaroslav-the-Wise Novgorod state university, Veliky Novgorod*
Preparation of nonlinear optical material ZnGeP₂ and its properties
107. ASALKHANOVA M.A.^{1,2}, ROMASHKO R.V.^{1,2}
¹*Institute of automation and control processes of FEB RAS, Vladivostok*
²*Far eastern federal university, Vladivostok*
Influence of optical gyrotropy on two-wave mixing at dynamic hologram in photorefractive crystal
108. KAZAK A.A., MELNIKOVA E.A., TOLSTIK A.L.
Belarusian state university, Minsk, Belarus
Controlled diffraction structures based on photo-orientation of liquid crystals
109. SHEPELEVICH V.V., MAKAREVICH A.V., SHANDAROV S.M.¹
¹*I.P. Shamyakin Mozyr state pedagogical university, Belarus*
¹*Tomsk state university of control systems and radioelectronics*
Optimization of the output characteristics of the mixed holograms in BTO crystal of arbitrary cut
110. VAZHINSKY O.T.^{1,2}, PARGACHEV I.A.^{1,2}, SEREBRENNIKOV L.Ya.^{1,2}, KRAKOVSKY V.A.², SHANDAROV S.M.¹, TARASENKO K.S.¹
¹*Tomsk state university of control systems and radioelectronics*
²*Crystal T Ltd, Tomsk*
Temperature dependence of contrast ratio of electro-optical Q-switch based on high resistance KTiPO₄ crystal
111. KUROCHKINA M.A., SHCHERBININ D.P., KONSHINA E.A.
Saint-Petersburg national research university of information technologies, mechanics and optics
The optical properties of nematic liquid crystals doped semiconductor quantum dots CdSe/ZnS
112. ARAPOV Yu.D.¹, GRECHIN S.G.
Bauman Moscow state technical university
¹*Zababakhin All-Russia research institute of technical physics, Snezhinsk, Chelyabinsk region*
The influence of thermo-deformation processes on phase-matching temperature bandwidth indifferent nonlinear frequency conversion crystals
113. KUCHERENKO M.G., NALBANDYAN V.M.
Orenburg state university
Absorption and spontaneous emission of light by molecules near metal nanoparticles in external magnetic field
114. LIVASHVILI A.I., YAKUNINA M.I., KOSTINA G.V., KRISHTOP V.V., LIHOVODOVA T.B.
Far eastern state transport university, Khabarovsk
The dynamics of the concentration of nanoparticles in liquid-phase medium under the influence of the periodic light field

115. BAZZAL K., VOROPAY E.S., ZAJOGIN A.P.
Belarusian state university, Minsk, Belarus
The effect of interpulse time on the formation of tin oxide nanoparticles and fractals upon sputtering of thin films onto glass surface by double laser pulses in the air
116. UMREIKO D.S.¹, VILEISHIKOVA E.V., KOMYAK A.I., ZAJOGIN A.P., UMREIKO S.D.¹
Belarusian state university, Minsk, Belarus
¹*Sevchenko research institute of applied physical problems, Minsk, Belarus*
Investigation into the formation of uranium oxide and aluminum nanoclusters with laser modification of the oxidized aluminum surface
117. KISLOV D.A.
Orenburg state university
Effect of plasmonic silver nanoparticles on the photovoltaic properties of Graetzel solar cells
118. IZMODENOVA S.V., KISLOV D.A., KUCHERENKO M.G.
Orenburg state university
Influence silver nanoparticles of the nonradiative electron-excitation energy transfer between molecules inside reverse micelles
119. PROKHOROV S.D., MARTYNOV I.L., CHISTYAKOV A.A.
National research nuclear university MEPhI (Moscow engineering physics institute)
Research of fluorescence of strongly diluted solutions of cadmium selenide based semiconductor quantum dots
120. BAZZAL K., VOROPAY E.S., ZAJOGIN A.P.
Belarusian state university, Minsk, Belarus
Spectral studies of thin-film deposition of zinc and copper oxides from brass onto the glass surface by double laser pulses at atmospheric pressure
121. UMREIKO D.S.¹, VILEISHIKOVA E.V., ZAJOGIN A.A., KOMYAK A.I., ZAJOGIN A.P.
Belarusian state university, Minsk, Belarus
¹*Sevchenko research institute of applied physical problems, Minsk, Belarus*
Spectral studies of the photochemical formation processes of variable valence uranium nanocomplexes in acetone
122. OVECHENKO D.S., BOYCHENKO A.P.
Kuban state university, Krasnodar
Features electrochemiluminescence at reception nanoporous oxide aluminum in alkaline environment
123. ZVAIGZNE M.A., MARTYNOV I.L., CHISTYAKOV A.A., SAMOKHVALOV P.S.
National research nuclear university MEPhI (Moscow engineering physics institute)
Influence of surface ligands on luminescent properties of cadmium selenide quantum dots in a matrix of polymethylmethacrylate
124. GORYAEV M.A., SMIRNOV A.P.
Herzen Russian state pedagogical university, Saint-Petersburg
Luminescence of adsorbed dye and spectral sensitization
125. KLYUKIN D.A., LEONTIEVA V.S., SIDOROV A.I., IGNATIEV A.I., NIKONOROV N.V.
Saint-Petersburg national research university of information technologies, mechanics and optics
Data storage in the luminescent glasses under UV laser radiation
126. EGORYSHEVA A.V.¹, FEDOTOV P.V.², OBRAZTSOVA E.D.², MELEKHOV A.P., DUDKINA T.D.
National research nuclear university MEPhI (Moscow engineering physics institute)
¹*Kurnakov institute of general and inorganic chemistry of the RAS, Moscow*
²*Prokhorov general physics institute of the RAS, Moscow*
New luminophores on basis of 60B₂O₃–32CaF₂–8Bi₂O₃ glasses doped with Cr and Nd
127. SERGEEV M.M., VEIKO V.P., MATUZIN E.I.
Saint-Petersburg national research university of information technologies, mechanics and optics
Distinctive features of direct laser-induced 3D crystallization of foturan glass
128. DEMICHEV I.A., SIDOROV A.I., NIKONOROV N.V.
Saint-Petersburg national research university of information technologies, mechanics and optics
The ion-exchange specifics effect on valent states of copper in silicate glass
129. VARTAPETOV S.K.², GANIN D.V.^{1,2}, LAPSHIN K.E.², OBIDIN A.Z.²
¹*National research nuclear university MEPhI (Moscow engineering physics institute)*
²*Prokhorov general physics institute of the RAS, Moscow*
Femtosecond laser fabrication of cyclic structures in bulk of transparent dielectrics
130. ZAKOLDAEV R.A., SERGEEV M.M., KOSTYUK G.K., VEIKO V.P., YAKOVLEV E.B.
Saint-Petersburg national research university of information technologies, mechanics and optics
Laser-induced microoptical elements formation on the glass surface
131. VEKSHIN M.M., NIKITIN V.A., YAKOVENKO N.A.
Kuban state university, Krasnodar
Fabrication of glass integrated optical circuits with horn element for radiation input
132. VEIKO V.P., KARLAGINA Yu.Yu, ODINTSOVA G.V., SKURATOVA A.L., SNYTKINA D.A., YATSUK R.M.¹
Saint-Petersburg national research university of information technologies, mechanics and optics
¹*Baltic state technical university «VOENMEH» named after D.F. Ustinov, Saint-Petersburg*
Laser formation of color structures on metal surfaces by means of layered growth of oxide films
133. MIRONNIKOV N.G.^{1,2}KOROLKOV V.P.^{1,2}
¹*Institute of automation and electrometry SB RAS, Novosibirsk*
²*Novosibirsk state university*
Create the thermo-optical correctors to fix of the thermal lens of solid state lasers
134. ANAN'IN O.B., BOGDANOV G.S., GERASIMOV I.A., MELEKHOV A.P., NOVIKOV I.K., PIROG V.V.
National research nuclear university MEPhI (Moscow engineering physics institute)
Influence of laser plasma on spatial-temporal distribution of the intensity high-power laser radiation
135. BABANIN V.F., MAHER B.A.¹, IVANOV A.V.², MIKHALEVA N.V., OMEL'ANUK Yu.G.
Yaroslavl state technical university
¹*Lancaster university, UK*
²*Lomonosov Moscow state university*
Application of Mossbauer spectroscopy ⁵⁷Fe and microscopy techniques to study the biosynthesis of magneto-ordered minerals in living matter and soils

136. BABANIN V.F., ZALUTSKII A.A., IVANOV A.V.¹, SED'MOV N.A., FROLOV V.V.
Yaroslavl state technical university
¹*Lomonosov Moscow state university*
Origin and composition of the strongly magnetic phase of the soil according Mossbauer spectroscopy ^{57}Fe magnetometry
137. ANTONOVA I.A.^{1,2}, BOLSHAKOV A.P.², YUROV V.Y.²
¹*National research nuclear university MEPhI (Moscow engineering physics institute)*
²*Prokhorov general physics institute of the RAS, Moscow*
Spectroscopy of microwave discharge at CVD growth of single-crystal diamond
138. MITYAGIN Yu.A.¹, KUZHICHIN Yu.A., KRIVENKOV V.A., SAVINOV S.A.¹, KOZLOVSKII K.I., CHISTYAKOV A.A.
National research nuclear university MEPhI (Moscow engineering physics institute)
¹*Lebedev physical institute of the RAS, Moscow*
The study of power and spectrum of THz radiation photoconductive diodes based on GaAs under the influence of femtosecond laser
139. SHISHKANOV O.N., BOYCHENKO A.P.
Kuban state university, Krasnodar
About topography optical centers formation electrofield images on silver halide film Agfa
140. VOLCOV V.G., GINDIN P.D.¹
Bauman Moscow state technical university
¹*OJSE «Shvabe – Photodevice», Moscow*
The ability to actively pulse of night vision devices when operating in degraded conditions of observation
141. VOLCOV V.G., GINDIN P.D.¹
Bauman Moscow state technical university
¹*OJSE «Shvabe – Photodevice», Moscow*
Binocular television night vision goggles
142. ANDREEV D.S., BUDTOLAEV A.K., BUDTOLAEVA A.K., KHAKUASHEV P.E., CHINAREVA I.V.
Orion research and production association, Moscow
Minimizing the capacitance of pin-photodiodes based on heteroepitaxial structure of InGaAs/InP
143. VOLCOV V.G., GINDIN P.D.¹
Bauman Moscow state technical university
¹*OJSE «Shvabe – Photodevice», Moscow*
Asymmetric pseudonocardia night vision goggles
144. VOLCOV V.G., GINDIN P.D.¹
Bauman Moscow state technical university
¹*OJSE «Shvabe – Photodevice», Moscow*
Pseudonocardia night vision goggles with coaxial lens
145. TIMCHENKO E.V., TIMCHENKO P.E., TASKINA L.A., TREGUB N.V., SELEZNEVA E.A.
S.P. Korolyov Samara state aerospace university
Optical methods for measuring de-gassing of hydrogen in cities
146. TIMCHENKO E.V., TIMCHENKO P.E., TASKINA L.A., VOLOVA L.T.¹, PONOMAREVA U.V.¹
¹*S.P. Korolyov Samara state aerospace university*
²*Samara state medical university*
Optical methods for study of the demineralization influence on the organic and mineral structure of bone tissue
147. MALOV A.N., VAYCHAS A.A.¹, NOVIKOVA E.A.
Irkutsk state medical university
¹*Irkutsk branch of Moscow state technical university of civil aviation*
Laser radiation action on bilious stones growth process
148. ZAKHAROV M.S.¹, ZAKHAROV S.M.
Institute of electronic controlling computers, Moscow
¹*JSC «Sberbank-technology», Moscow*
Investigation of heart rate photoplethysmogram by the wavelet analysis
149. ROMASHKO R.V.^{1,2}, BEZRUK M.N.¹, ERMOLAEV S.A.¹
¹*Institute of automation and control processes of FEB RAS, Vladivostok*
²*Far eastern federal university, Vladivostok*
The hydrophone is an adaptive optical fiber interferometer
150. RYABUKHO P.V.¹, SAVONIN S.A.¹, SHAPOSHNIKOV O.A.³, RYABUKHO V.P.^{1,2}
¹*Saratov state university named after N.G. Chernyshevskiy*
²*Institute of precision mechanics and control of the RAS, Saratov*
³*SPC «ALMAZ-FASOTRON», Saratov*
Digital holographic interferometry of bending temperature deformation of electronic boards
151. TKACHENKO V.V.
United institute of informatics problems of NAS of Belarus, Minsk
Integrated LED-matrix modules for raster photoplotters and displays
152. BYCHKOVSKIY Ya.S., DRAZHNICKOV B.N., SOLYAKOV V.N., KONDYUSHIN I.S., KOZLOV K.V.
Orion research and production association, Moscow
Measurement equipment for investigation MCT photodetector with TDI
153. IVANOV A.Yu., LYAVSHUK I.A., LYALIKOV A.M.
Janka Kupala state university, Grodno, Belarus
Analysis of aberration influence on the measurement control precision of the transparent wedge-formed lays of diffraction elements
154. KOMOTSKII V.A., SUETIN N.V., CHEKHANOVSKII D.S.¹
Peoples' friendship university of Russia, Moscow
¹*Business-center "Piskarevskii", Saint-Petersburg*
The investigation of 10.6 mkm radiation diffraction on reflective diffraction gratings
155. LYAVSHUK I.A., LYALIKOV A.M.
Janka Kupala state university, Grodno, Belarus
The measurement control of the microstructured elements lays realization by means of the single-channel laser interferometers
156. ROMASHKO R.V.^{1,2}, KOLCHINSKIY V.A.¹
¹*Institute of automation and control processes of FEB RAS, Vladivostok*
²*Far eastern federal university, Vladivostok*
Measurement of the refractive index using a laser profilometer

157. KRYUKOV N.A., PEGANOV S.A.
Saint-Petersburg state university
On the accuracy and reliability of optical measurements of dynamic characteristics
158. MALOV A.N., VAYCHAS A.A.
Irkutsk state medical university
¹*Irkutsk branch of Moscow state technical university of civil aviation*
Laser radiation distribution in the porous scattering compressed media
159. KUCHERENKO M.G., RUSINOV A.P.
Orenburg state university
The interference effects of the molecular light absorption near spherical metal nanoparticles
160. SEMENOVA L.E.
Prokhorov general physics institute of the RAS, Moscow
Hyper-Raman scattering in A₂B₆ compounds
161. IVANOVA S.V.
Lebedev physical institute of the RAS, Moscow
Quasielastic light scattering in quartz
162. ASTASHKEVICH S.A.
Saint-Petersburg state university
Fisher information of vibrational states of diatomic molecules
163. AVERBUKH B.B.
Pacific state university, Khabarovsk
Refraction of a plane S-polarized electromagnetic wave on the interface vacuum – medium from the electric and magnetic dipoles
164. KOTLIKOV E.N., IURKOVETS E.V.
Saint-Petersburg state university of aerospace instrumentation
Analysis of possibility of using numerical methods for determination of optical constants of films
165. YABLOKOVA L.V.^{1,2}, GOLOVASHKIN D.L.^{1,2}
¹*S.P. Korolyov Samara state aerospace university*
²*Image processing systems institute of the RAS, Samara*
Implementation of the joint decision of the difference equations of Maxwell and d'Alembert, taking into account the frequency dispersion on the GPU
166. LITVINOVA M.N., LITVINOVA V.A., KARPETZ Yu.M.
Far eastern state transport university, Khabarovsk
The second harmonic generation in periodically poled silica fibers
167. BALBEKIN N.S., PETROV N.V.
Saint-Petersburg national research university of information technologies, mechanics and optics
The modeling peculiarities of diffractive propagation of the broadband terahertz two-dimensional field
168. SEMKIN A.O., SHARANGOVICH S.N.
Tomsk state university of control systems and radioelectronics
Diffraction characteristics of the PDLC photonic structures with smooth spatial inhomogeneity of the control field
169. KUZMIN M.S., ROGOV S.A.
Saint-Petersburg state polytechnical university
Investigation of coherent optical information processing systems with liquid-crystal input device
170. BUBIS E.L., BUDAGOVSKY I.A.¹, ZOLOT'KO A.S.¹, SMAYEV M.P.¹, SHVETSOV S.A.^{1,2}
¹*Institute of applied physics of the RAS, Nizhny Novgorod*
¹*Lebedev physical institute of the RAS, Moscow*
²*Moscow institute of physics and technology, Dolgoprudny*
Contrast sign inversion of image using nonlinear liquid-crystalline filter
171. EVTIKHEV N.N., ZLOKAZOV E.Yu., PETROVA E.K., STARIKOV R.S., SHAULSKY D.V.
National research nuclear university MEPhI (Moscow engineering physics institute)
MINACE filters: recognition of the images received from various independent sources
172. KALENKOV G.S.¹, MIRONOV S.N.², SHTANKO A.E.
¹*Moscow state university of technology (Stankin)*
¹*Microholo Ltd, Moscow*
²*Moscow state university of instrument engineering and informatics*
High-numerical aperture optics wavefront aberrations ray tracing simulation
173. ZAKAREEVA A.R., STARIKOV S.N., CHERYOMKHIN P.A.
National research nuclear university MEPhI (Moscow engineering physics institute)
Method of shots modeling using noises and radiometric parameters of registering cameras
174. KRASNOV V.V., STARIKOV R.S., STARIKOV S.N., ERKIN I.Yu.
National research nuclear university MEPhI (Moscow engineering physics institute)
Modeling of effect of LC SLM phase fluctuations on kinoforms optical reconstruction quality
175. SIDYAKINA Z.A.
Penza state university of architecture and construction
Influence of adverse diffraction orders on the quality of image
176. CHERYOMKHIN P.A., KRASNOV V.V., KURBATOVA E.A., STARIKOV R.S., STARIKOV S.N.
National research nuclear university MEPhI (Moscow engineering physics institute)
Method of increase of signal-to-noise ratio of registered SHOTS using dark and light spatial noise portraits of camera's photosensor
177. BORISOV V.N., VENIAMINOV A.V.
Saint-Petersburg national research university of information technologies, mechanics and optics
Determination of refractive index and absorbance modulation amplitudes from angular selectivity of holograms in polymer material with phenanthrenequinone
178. GANZHERLI N.M., GULYAEV S.N.¹, MAURER I.A., CHERNYKH D.F.
¹*Ioffe physical-technical institute of the RAS, Saint-Petersburg*
¹*Saint-Petersburg state polytechnical university*
Influence of methods of formation random relief-phase holographic structures on their characterizations

179. LESNICHII V.V.^{1,2}, PETROV N.V.¹, CHERYOMKHIN P.A.
National research nuclear university MEPhI (Moscow engineering physics institute)
¹*Saint-Petersburg national research university of information technologies, mechanics and optics*
²*Albert Ludwig university of Freiburg, Freiburg in Breisgau, Germany*
Improvement of quality of color digital holograms
180. SAVONIN S.A.¹, RYABUKHO P.V.¹, RYABUKHO V.P.^{1,2}
¹*Saratov state university named after N.G. Chernyshevskiy*
²*Institute of precision mechanics and control of the RAS, Saratov*
Interpolation post-processing of digital focused-image holograms
181. SHEVKUNOV I.A., PETROV N.V.
Saint-Petersburg national research university of information technologies, mechanics and optics
Digital in-line phase shifting holography with rotatable plane-parallel plate
182. PORSHNEVA L.A., KRASNOV V.V., RODIN V.G., CHERYOMKHIN P.A.
National research nuclear university MEPhI (Moscow engineering physics institute)
Dynamic reconstruction of volume scenes from registered digital holograms
183. ZLOKAZOV E.Yu., STARIKOV R.S., ODINOKOV S.B.¹
¹*National research nuclear university MEPhI (Moscow engineering physics institute)*
¹*Bauman Moscow state technical university*
Specificity of correlation pattern recognition methods application in security holograms identity control device
184. MOLODTSOV D.Yu., RODIN V.G., STARIKOV S.N.
National research nuclear university MEPhI (Moscow engineering physics institute)
The possibility of using the DMD SLM for hologram filters displaying in dispersive correlator