

CONFERENCE OPENING. PLENARY

Wednesday, January 23, 2019, 10.00

Room 406

1. KASTELIK J.-C.  
*Polytechnic University of Hauts-de-France, Valenciennes, France*  
**Wavelength characterization of a tunable acousto-optic interferometer**
2. LINDE B.B.J.  
*University of Gdansk, Poland*  
**Experimental research of liquid by acoustic and photoacoustic methods**
3. POPOV S.M., BUTOV O.V., KOLOSOVSKIY A.O., ISAEV V.A., VOLOSHIN V.V., VOROB'EV I.L., VYATKIN M.Yu., FOTIADI A.A.<sup>1</sup>, CHAMOROVSKIY Yu.K.  
*Fryazino Branch of Kotelnikov Institute of Radioengineering and Electronics of RAS*  
<sup>1</sup>*Ulyanovsk State University*  
**Optical fiber with arrays of FBGS for photonics applications**
4. DEDIU V.A., BERGENTI I.  
*Institute of Nanostructured Materials of the National Research Council, Bologna, Italy*  
**Spin polarized electrodes for organic light emitting diodes**

POSTERS 1

Wednesday, January 23, 2019, 12.00

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POSTERS 2

Wednesday, January 23, 2019, 12.00

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Meeting 1

Wednesday, January 23, 2019, 13.00

Room 406

5. YUSHKOV K.B., CHAMPAGNE J.<sup>1</sup>, MOLCHANOV V.Ya.  
*National University of Science and Technology "MISIS", Moscow*  
<sup>1</sup>*Polytechnic University of Hauts-de-France, Valenciennes, France*  
**Phase object visualization with a hyperspectral acousto-optical method**
6. BORITKO S.V., KARANDIN A.V.  
*Scientific and Technological Center of Unique Instrumentation of the RAS, Moscow*  
**The use of acoustooptic diffraction during the sharp periodic control voltagephaseswitching for differential spectroscopy**
7. KOTOV V.M., SHKERDIN G.N., AVERIN S.V.  
*Fryazino Branch of Kotelnikov Institute of Radioengineering and Electronics of RAS*  
**Pulse modulation of multicolor radiation by means of acousto-optic Bragg diffraction**
8. KUPREYCHIK M.I., BALAKSHY V.I.  
*Lomonosov Moscow State University*  
**Regions of acousto-optic interaction with low angular and frequency selectivity have been investigated for the case of the diffraction in periodically inhomogeneous acoustic field in biaxial crystals**
9. PROKLOV V.V., LUGOVSKOI A.V.  
*Fryazino Branch of Kotelnikov Institute of Radioengineering and Electronics of RAS*  
**About the remote objects identification method based on the matched acoustic optical filtration of spectral signals**
10. MACHIKHIN A.S.<sup>1,2</sup>, KOZLOV A.B.<sup>1,3</sup>, KHOKHLOV D.D.<sup>1,2</sup>, POZHAR V.E.<sup>1</sup>, BORITKO S.V.<sup>1</sup>  
<sup>1</sup>*Scientific and Technological Center of Unique Instrumentation of the RAS, Moscow*  
<sup>2</sup>*National Research University "Moscow Power Engineering Institute"*  
<sup>3</sup>*POLYUS Research Institute of M.F. Stelmakh, Moscow*  
**Analysis of a transfer function of a wide-aperture acousto-optic tunable filter in the linear frequency modulation mode**
11. ROGOZHNIKOV G.S., ROMANOV V.V., YUSHKOV K.B.<sup>1</sup>  
*All-Russian Research Institute of Experimental Physics, Sarov, Nizhny Novgorod region*  
<sup>1</sup>*National University of Science and Technology "MISIS", Moscow*  
**Distributed free-space optical net for secure communications**
12. ARTEMOV E.V.<sup>1,2</sup>, KOPAEV I.A.<sup>2</sup>, NANII O.E.<sup>1,2</sup>, TRESHIKOV V.N.<sup>2</sup>  
<sup>1</sup>*Lomonosov Moscow State University*  
<sup>2</sup>*T8 Ltd, Moscow*  
**Pulse electrooptic compositional modulator with frequency shift**
13. TELESHEVSKI V.I., BUSHUEV S.V., GRISHIN S.G.<sup>1</sup>  
*Moscow State University of Technology (Stankin)*  
<sup>1</sup>*National Research Centre "Kurchatov Institute", Moscow*  
**Method of phase shift's electronic control in laser interference measurement systems**
14. PODLESNAYA A.S.<sup>1</sup>, LUKINYKH S.N.<sup>1</sup>, NANII O.E.<sup>1,2</sup>, TRESHIKOV V.N.<sup>1</sup>  
<sup>1</sup>*T8 Ltd, Moscow*  
<sup>2</sup>*Lomonosov Moscow State University*  
**Investigation of linear cross noises in fiber optical systems of communication**
15. IVANOV S.I., LAVROV A.P., SAENKO I.I.  
*Peter the Great Saint-Petersburg Polytechnic University*  
**Expanding the possibility of broadband signal sources direction finding in microwave photonic beamforming system for linear PAA**
16. ZEMTSOV D.S.<sup>1,2</sup>, ZLOKAZOV E.Yu.<sup>1</sup>, NEBAVSKIY V.A.<sup>1</sup>, STARIKOV R.S.<sup>1</sup>, KHAFIZOV I.Zh.<sup>1,2</sup>  
<sup>1</sup>*National Research Nuclear University MEPhI (Moscow Engineering Physics Institute)*  
<sup>2</sup>*Scientific and Technical Centre "Module", Moscow*  
**Pseudorandom photonic analog-to-digital convertor data processing**

17. DEGTEREV A.E., EREMEEV M.A., MIKHAILOV I.I., LAMKIN I.A., TARASOV S.A.  
*Saint-Petersburg State Electrotechnical University "LETI"*  
**Research of light-emitting structures, containing organic layers and colloidal quantum dots**
18. GORBYAK V.V., SIDOROV A.I.  
*ITMO University, Saint Petersburg*  
**Self-focusing of the continuous laser UV-radiation in the silver-containing silicate glass**
19. ELOPOV A.V.<sup>1</sup>, KARPOV O.N.<sup>2</sup>, ZAYTSEV V.B.<sup>1</sup>, ZHIGUNOV D.M.<sup>3</sup>, SHANDRYUK G.A.<sup>2</sup>, EZHOV A.A.<sup>1,2</sup>, MEREKALOV A.S.<sup>2</sup>, GOLOVAN L.A.<sup>1</sup>  
<sup>1</sup>*Lomonosov Moscow State University*  
<sup>2</sup>*A.V. Topchiev Institute of Petrochemical Synthesis of the RAS, Moscow*  
<sup>3</sup>*Skolkovo Institute of Science and Technology, Moscow region*  
**Spectra and kinetics of photoluminescence of cadmium selenide quantum dots embedded into liquid-crystal polymer matrix**
20. MIS'KEVICH A.I.<sup>1,2</sup>, PODKOPAEV A.V.<sup>1,3</sup>  
<sup>1</sup>*Institute for Physics and Power Engineering named after A.I. Leypunsky, Obninsk, Kaluga region*  
<sup>2</sup>*National Research Nuclear University MEPhI (Moscow Engineering Physics Institute)*  
<sup>3</sup>*Obninsk Institute of Atomic Energy NRNU MEPhI, Kaluga region*  
**Luminescent characteristics of high density gas mixtures Ar-Xe-C<sub>2</sub>HBrClF<sub>3</sub> excited by products of nuclear reaction <sup>235</sup>U**
21. SMIRNOV M.S., BUGANOV O.V.<sup>1</sup>, TIKHOMIROV S.A.<sup>1</sup>, OVCHINNIKOV O.V., ZVYAGIN A.I., GREVCEVA I.G.  
*Voronesh State University*  
<sup>1</sup>*B.I. Stepanov Institute of Physics of NAS of Belarus, Minsk*  
**Femtosecond dynamics of electronic excitations in hybrid associates based on CdS colloidal quantum dots**
22. KORSHUNOV V.M.<sup>1,2</sup>, AMBROZEVICH S.A.<sup>1,2</sup>, TAIDAKOV I.V.<sup>1</sup>, GORYACHYI D.O.<sup>1</sup>  
<sup>1</sup>*Lebedev Physical Institute of the RAS, Moscow*  
<sup>2</sup>*Bauman Moscow State Technical University*  
**Influence of fluorination of the carbon chain in ligand environment on luminescence of Eu(III) organic compounds**
23. ZVYAGIN A.I., PEREPELITSA A.S., SMIRNOV M.S., OVCHINNIKOV O.V.  
*Voronesh State University*  
**Nonlinear-optical properties of the associates of colloidal quantum dots Zn<sub>0.5</sub>Cd<sub>0.5</sub>S and molecules azure A**
24. SOKOLOVSKAYA O.I., TKACHENKO N.B.  
*Lomonosov Moscow State University*  
**Effect of light elastic scattering on photon lifetime and Raman scattering efficiency in suspension**
25. EPIFANOV E.O., SHUBNIY A.G., MINAEV N.V.  
*Institute of Photonic Technologies – branch of FSRC «Crystallography and Photonics» of the RAS, Troitsk*  
**Obtaining silver nanoparticles by method of laser ablation in supercritical CO<sub>2</sub> media and its implementation in porous materials**
26. IVANOVA A.K.<sup>1,2</sup>, IONIN A.A.<sup>2</sup>, KUDRYASHOV S.I.<sup>2</sup>  
<sup>1</sup>*National Research Nuclear University MEPhI (Moscow Engineering Physics Institute)*  
<sup>2</sup>*Lebedev Physical Institute of the RAS, Moscow*  
**Formation of hybrid silicon-gold nanoparticles by method of nanosecond laser ablation in liquid**
27. SHUBNIY A.G., EPIFANOV E.O., MINAEV N.V., TSVETKOV M.Yu.  
*Institute of Photonic Technologies – branch of FSRC «Crystallography and Photonics» of the RAS, Troitsk*  
**Optical materials microstructuring by wet laser-induced etching**
28. MKRTYCHEV O.V.  
*Belgorod V.G. Shukhov State Technology University, Novorossiisk Branch*  
**Study of interaction of radiation with a system of plane-parallel layers by means of recurrent equations**

29. POPOVA A.V., GONCHAROVA P.S., SYUY A.V., LIVASHVILI A.I., KIREEVA N.M., SAVICH D.E., KRISHTOP V.V.  
*Far Eastern State Transport University, Khabarovsk*  
**Experimental measurement of thickness of anisotropic plate by interference-polarization method**
30. TRETIKOV S.A., KAPLUNOV I.A., KOLESNIKOV A.I., IVANOVA A.I.  
*Tver State University*  
**Influence heating on the profile of surface and the optical transmission of single crystals of germanium**
31. ALESHINA L.A., SIDOROVA O.V., KADETOVA A.V., SIDOROV N.V.<sup>1</sup>, TEPLYAKOVA N.A.<sup>1</sup>, PALATNIKOV M.N.<sup>1</sup>  
*Petrozavodsk State University*  
<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 superstructure caused by defects in nonlinear optical lithium niobate crystals**
32. ARTEMOV D.E.<sup>1,2</sup>, SCHETININ A.V.<sup>2</sup>, NANII O.E.<sup>1,2</sup>, TRESHIKOV V.N.<sup>2</sup>  
<sup>1</sup>*Lomonosov Moscow State University*  
<sup>2</sup>*T8 Ltd, Moscow*  
**Effect of polarization of an optical carrier on the operation of an Mach-Zehnder electro-optical modulator on lithium niobate**
33. MOLCHANOVA A.D.<sup>1</sup>, KUZMIN N.N.<sup>1,2</sup>, BOLDYREV K.N.<sup>1</sup>  
<sup>1</sup>*Institute for Spectroscopy of the RAS, Troitsk*  
<sup>2</sup>*Lomonosov Moscow State University*  
**Investigation of the absorption spectra of copper metaborate CuB<sub>2</sub>O<sub>4</sub> in magnetic fields of Faraday geometry**
34. DOLGANOV P.V.<sup>1</sup>, BAKLANOVA K.D.<sup>1,2</sup>, DOLGANOV V.K.<sup>1</sup>  
<sup>1</sup>*Institute of Solid State Physics of the RAS, Chernogolovka*  
<sup>2</sup>*National Research University Higher School of Economics, Moscow*  
**Spectral characteristics of one-dimensional and three-dimensional liquid-crystalline photonic crystals**

35. MASHCHENKO V.I.<sup>1</sup>, SITNIKOV N.N.<sup>2,3</sup>, ERMAKOVA M.V.<sup>1</sup>, KHABIBULLINA I.A.<sup>2</sup>, SHELYAKOV A.V.<sup>3</sup>, BELYAEV V.V.<sup>1</sup>  
<sup>1</sup>Moscow Region State University, Moscow  
<sup>2</sup>Keldysh Research Center, Moscow  
<sup>3</sup>National Research Nuclear University MEPhI (Moscow Engineering Physics Institute)  
**Liquid-crystal composites based on borosiloxane gels**
36. ZHEVAIKIN K.E., FOKINA M.I., DENISYUK I.Yu.  
 ITMO University, Saint Petersburg  
**Investigation of influence of photobleaching on intensity of SHG of organic nonlinear optic co-crystals aminopyridine-nitrophenol**
37. IONIN A.A., KINYAEVSKIY I.O., KLIMACHEV Yu.M., KOTKOV A.A., KOZLOV A.Yu., SAGITOVA A.M., SINITSYN D.V., BADIKOV D.V.<sup>1</sup>, BADIKOV V.V.<sup>1</sup>  
 Lebedev Physical Institute of the RAS, Moscow  
<sup>1</sup>Kuban State University, Krasnodar  
**CO laser with multi-stage intra- and extracavity broadband sum frequency generation in BaGa<sub>2</sub>GeSe<sub>6</sub> crystals (1.7–6.0 μm)**
38. ILINA K.B.<sup>1,2</sup>, BOIKOVA A.S.<sup>1,2</sup>, MARCHENKOVA M.A.<sup>1,2</sup>, KONAREV P.V.<sup>1,2</sup>, DYAKOVA Yu.A.<sup>2,1</sup>, PISAREVSKII Yu.V.<sup>1,2</sup>, KOVALCHUK M.V.<sup>2,1</sup>  
<sup>1</sup>Shubnikov Institute of Crystallography of FSRC «Crystallography and Photonics» of the RAS, Moscow  
<sup>2</sup>National Research Centre "Kurchatov Institute", Moscow  
**The influence of solvent replacement (from H<sub>2</sub>O to D<sub>2</sub>O) on the formation of oligomers in lysozyme solution under growth tetragonal crystals**
39. ANIKEEVA V.E.<sup>1,2</sup>, BOLDYREV K.N.<sup>2</sup>, SEMENOVA O.I.<sup>3</sup>  
<sup>1</sup>Lomonosov Moscow State University  
<sup>2</sup>Institute for Spectroscopy of the RAS, Troitsk  
<sup>3</sup>Rzhanov Institute of Semiconductor Physics SB RAS, Novosibirsk  
**Structural phase transitions in perovskite CH<sub>3</sub>NH<sub>3</sub>PbI<sub>3</sub> single crystals**
40. BOIKOVA A.S.<sup>1,2</sup>, ILINA K.B.<sup>1,2</sup>, MARCHENKOVA M.A.<sup>1,2</sup>, SEREGYN A.Yu.<sup>2,1</sup>, ROGACHEV A.V.<sup>2</sup>, DYAKOVA Yu.A.<sup>2,1</sup>, PISAREVSKII Yu.V.<sup>1,2</sup>, KOVALCHUK M.V.<sup>2,1</sup>  
<sup>1</sup>Shubnikov Institute of Crystallography of FSRC «Crystallography and Photonics» of the RAS, Moscow  
<sup>2</sup>National Research Centre "Kurchatov Institute", Moscow  
**Structural characteristics of lysozyme Langmuir layer grown on a liquid surface from an oligomeric mixture formed in the early stages of lysozyme crystallization**

Meeting 4

Wednesday, January 23, 2019, 16.00

Room 407

41. NIKOLAEV N.A.<sup>1,2</sup>, KUZNETSOV S.A.<sup>3,4</sup>  
<sup>1</sup>Institute of Automation and Electrometry SB RAS, Novosibirsk  
<sup>2</sup>Institute of Laser Physics SB RAS, Novosibirsk  
<sup>3</sup>Novosibirsk State University  
<sup>4</sup>Rzhanov Institute of Semiconductor Physics SB RAS, Novosibirsk Branch "TDIAM"  
**Terahertz metasurface with angle-sensitive resonance for submicron-thick film studies**
42. ZHUKOVA M.O., GRACHEV Ya.V., KOVALSKA E.<sup>1</sup>, HOGAN B.<sup>1</sup>, BALDYCHEVA A.<sup>1</sup>, TCYPKIN A.N.  
 ITMO University, Saint Petersburg  
<sup>1</sup>University of Exeter, Great Britain  
**Modified 2D materials for terahertz time-domain spectroscopy applications**
43. KHUSYAINOV D.I., BURYAKOV A.M., MISHINA E.D.  
 MIREA – Russian Technological University, Moscow  
**Effect of excess energy on generation of the terahertz radiation in InGaAs solid solution**
44. OSIPOV E.V., MARTYNOV I.L., KUZICHIN Yu.A., AKMALOV A.E., KOTKOVSKII G.E., CHISTYAKOV A.A.  
 National Research Nuclear University MEPhI (Moscow Engineering Physics Institute)  
**Optically controlled thermal desorption from the surface of porous silicon**
45. AVDEEVA A.Yu.<sup>1</sup>, VETROV S.Ya.<sup>1,2</sup>, TIMOFEEV I.V.<sup>1,2</sup>  
<sup>1</sup>Siberian Federal University, Krasnoyarsk  
<sup>2</sup>Kirensky Institute of Physics SB RAS, Krasnoyarsk  
**Hybrid states in confined by metal layer photonic crystal with nanocomposite defect**
46. AYVAZYAN H.L.<sup>1</sup>, HOVSEPYAN R.K.<sup>1,2</sup>  
<sup>1</sup>Russian-Armenian University, Yerevan, Armenia  
<sup>2</sup>Institute for Physical Research, Ashtarak, Armenia  
**Photoelectric properties of heterostructures based on zinc oxide**
47. ALIEV S.A., TROFIMOV N.S., CHEKHOVA T.K., ZAEV D.A.  
 Peoples' Friendship University of Russia (RUDN University), Moscow  
**Research of properties of modified titanium dioxide photocatalyzers**
48. KOMISSAR D.A., KRIVOVA G.M., YAKUBOVSKY D.I., STEBUNOV Yu.V., ARSENIN A.V.  
 Moscow Institute of Physics and Technology (State University), Dolgoprudny  
**Graphene oxide optical properties**
49. BACHININ S.V., LENTOVSKII V.V.  
 Baltic State Technical University «VOENMEH» named after D.F. Ustinov, Saint-Petersburg  
**Investigation of the possibility of initiation explosives by laser emission**
50. PERCHENKO E.M., SAVIN K.A., AMASEV D.V.<sup>1</sup>  
 Lomonosov Moscow State University  
<sup>1</sup>Prokhorov General Physics Institute of the RAS, Moscow  
**Experimental research and numerical modeling of impedance of polymeric systems with inorganic particles**
51. BUKHAROV D.N., ARAKELIAN S.M., GERKE M.N.  
 Vladimir State University named after Alexander and Nikolay Stoletovs  
**Modeling of the optical properties of island semiconductor PbTe film**
52. KOROLEVA A.V., ILIN A.S.  
 Lomonosov Moscow State University  
**Investigation of indium (III) oxide In<sub>2</sub>O<sub>3</sub>, zinc oxide ZnO and their composites by IR Fourier spectroscopy**

53. KONIN Yu.A., SHCHERBAKOVA V.A.<sup>1</sup>, GARANIN A.I., NURMUHAMETOV D.I., STARIKOV S.S.<sup>1</sup>  
Perm National Research Polytechnic University  
<sup>1</sup>Perm State University  
**Research sensitivity of the fiber-optic radiation scatterer to temperature changes**
54. STARYKH D.D.<sup>1,2</sup>, SHIKHALIEV I.I.<sup>2</sup>, NANII O.E.<sup>2,3</sup>, TRESHIKOV V.N.<sup>2</sup>  
<sup>1</sup>Moscow Institute of Physics and Technology (State University), Dolgoprudny  
<sup>2</sup>T8 Ltd, Moscow  
<sup>3</sup>Lomonosov Moscow State University  
**Effect of fiber parameters on maximum reach of fiber optical links**
55. BOGACHKOV I.V.  
Omsk State Technical University  
**Peculiarities of the Mandelstam-Brillouin scattering in erbium-doped optical fibers**
56. YANUKOVICH T.P., POLYAKOV A.V.  
Belarusian State University, Minsk  
**Numerical model of distributed optical fiber sensor of electric current based on deformation**
57. NIKOLAEV N.E., PAVLOV S.V., CHEKHLOVA T.K.  
Peoples' Friendship University of Russia (RUDN University), Moscow  
**Temperature properties of multilayer optical waveguides using sol-gel materials**
58. POPOV M.E., MITETEL N.V., MAMONOV E.A., ZHDANOVA K.D., MURZINA T.V.  
Lomonosov Moscow State University  
**Nonlinear-optical microscopy of organic waveguides**
59. YUSHKEVICH V.V., EGOROV A.N., MAVRITSKIY O.B., DIDENKO N.V.<sup>1</sup>  
National Research Nuclear University MEPhI (Moscow Engineering Physics Institute)  
<sup>1</sup>Lebedev Physical Institute of the RAS, Moscow  
**Femtosecond optical parametric amplifier for laser diagnostics of semiconductor structures**
60. LOTKOV E.S.<sup>1,2</sup>, BABURIN A.S., RYZHIKOV I.A.<sup>1,3</sup>, RODIONOV I.A.<sup>1,3</sup>, PANFILOV Yu.V.<sup>1</sup>  
<sup>1</sup>Bauman Moscow State Technical University  
<sup>2</sup>N.L. Dukhov All-Russian Research Institute of Automatics, Moscow  
<sup>3</sup>Institute for Theoretical and Applied Electrodynamics of the RAS, Moscow  
**Deposition of ultrathin ITO-films by electron beam evaporation for integrated infrared photonics**
61. SHAPIRO B.I., NEKRASOV A.D., MININA N.E.  
MIREA – Russian Technological University, Moscow  
**Synthesis of light-sensitive layers of metallocomplex aggregates of anionic polymethine dyes on transparent ITO-electrodes**
62. GANZHERLI N.M., GULYAEV S.N.<sup>1</sup>, MAURER I.A., KHAZVALIEVA D.R.<sup>1</sup>  
Ioffe Physical-Technical Institute of the RAS, Saint-Petersburg  
<sup>1</sup>Peter the Great Saint-Petersburg Polytechnic University  
**High frequency holographic gratings on layers of dichromated gelatin using in the processing of UV-radiation**
63. PICHUGIN I.S., IGNATIEV A.I., ORESHKINA K.V., NIKONOROV N.V.  
ITMO University, Saint Petersburg  
**Modification of photo-thermo-refractive glass matrix: technology, properties, applications**
64. KUZMIN D.V., ZHELEZNOV V.Yu., ODINOKOV S.B.  
Bauman Moscow State Technical University  
**Investigation of the exposure characteristics of photo-thermo-refractive glasses in the process of recording of holographic and diffraction elements by a pulses femtosecond laser in the near-infrared range**

## PLENARY 2

65. ALIEVA T., RODRIGO J.A., ANGULO M.  
Complutense University of Madrid, Spain  
**Polymorphic beam as a tool for optical manipulation in microworld**
66. TOLSTIK A.L., MELNIKOVA E.A., GORBACH D.V., BOBKOVA M.V., PEKAREVICH V.V.  
Belarusian State University, Minsk  
**Phase-polarization transformation of light beams by dynamic holograms and liquid-crystal elements**
67. SAZONOV S.V.  
National Research Centre "Kurchatov Institute", Moscow  
**To the theory of waveguide propagation of optical solitons**
68. KARPOV S.N., POSTI I.M., SHESTERIKOV A.V., GUBIN M.Yu., VORONOVA N.M., LEKSIN A.Yu., PROKHOROV A.V.  
Vladimir State University named after Alexander and Nikolay Stoletovs  
**Digital design and parameters optimization for plasmonic information processing circuits**

## POSTERS 3

## POSTERS 4

69. TCYPKIN A.N.<sup>1</sup>, PONOMAREVA E.A.<sup>1</sup>, PUTILIN S.E.<sup>1</sup>, SMIRNOV S.V.<sup>1</sup>, SHTUMPF S.A.<sup>1</sup>, MELNICK M.V.<sup>1</sup>, YIWEN E.<sup>2</sup>, KOZLOV S.A.<sup>1</sup>, ZHANG X.-C.<sup>1,2,3</sup>  
<sup>1</sup>ITMO University, Saint Petersburg  
<sup>2</sup>University of Rochester, USA  
<sup>3</sup>Capital Normal University, Beijing, China  
**Investigation of terahertz generation by filamentation in liquids**
70. NOVIKOV V.B., MANTSYZOV B.I., MURZINA T.V.  
 Lomonosov Moscow State University  
**Optical second harmonic generation in the Laue geometry in 1D photonic crystals under diffraction-induced laser pulse-splitting effect**
71. MAIMISTOV A.I., LYASHKO E.I., ELYUTIN S.O.  
 National Research Nuclear University MEPhI (Moscow Engineering Physics Institute)  
**Modulation instability for the nonlinear waves on the surface of topological insulator**
72. PETROV N.I.  
 Scientific and Technological Center of Unique Instrumentation of the RAS, Moscow  
**Depolarization of light in graded-index fiber**
73. LVOV K.V.<sup>1,2</sup>, STREMOUKHOV S.Yu.<sup>1,2</sup>, POTEKIN F.V.<sup>1</sup>  
<sup>1</sup>Lomonosov Moscow State University  
<sup>2</sup>National Research Centre "Kurchatov Institute", Moscow  
**Influence of focusing conditions on supercontinuum generation under filamentation of femtosecond laser radiation**
74. VESELKOVA N.G., MASALAEVA N.I., SOKOLOV I.V.  
 Saint Petersburg State University  
**Cavity-assisted atomic Raman memories beyond the bad cavity limit: effect of four-wave mixing**
75. TSVETKOV D.M., BUSHUEV V.A., MANTSYZOV B.I.  
 Lomonosov Moscow State University  
**Optical pulse dynamics under quasi-PT symmetry in photonic crystals**
76. ESEEV M.K., MAKAROV D.N., MAKAROVA K.A.  
 Northern Arctic Federal University named after M.V. Lomonosov, Arkhangelsk  
**Scattering attosecond pulse of an electromagnetic field when interacting with a dynamic system that performs resonant overcharge of a proton on a hydrogen atom**
77. KAZANTSEVA E.V.  
 National Research Nuclear University MEPhI (Moscow Engineering Physics Institute)  
**Polarization dynamics of thin ferroelectric film, and ferroelectric layer in paraelectric subjected to the electric field of the ultrashort electromagnetic pulse**
78. MALIKOV R.F., RYZHOV I.V.<sup>1</sup>, MALYSHEV A.V.<sup>2,3</sup>, MALYSHEV V.A.<sup>4</sup>  
 Akmuallah State Pedagogical University of Bashkortostan, Ufa  
<sup>1</sup>Herzen State Pedagogical University of Russia, Saint-Petersburg  
<sup>2</sup>Complutense University of Madrid, Spain  
<sup>3</sup>Ioffe Physical-Technical Institute of the RAS, Saint-Petersburg  
<sup>4</sup>University of Groningen, The Netherlands  
**Nonlinear optical response of a monolayer of  $\Lambda$ -emitters: multistability and self-oscillations**
79. GOSHEV A.A., ESEEV M.K., MAKAROV D.N., YULKOVA V.M.  
 Northern Arctic Federal University named after M.V. Lomonosov, Arkhangelsk  
**Orientation effects in the interaction of the attosecond pulse of the electromagnetic field with molecular anions**
80. KOROLEV S.B., GOLUBEVA T.Yu., GOLUBEV Yu.M.  
 Saint Petersburg State University  
**Criteria of minimum squeezing for quantum cluster state generation**

81. KOLYADIN A.N., KOSOLAPOV A.F., BUFETOV I.A.  
 Fiber Optic Research Center of the RAS, Moscow  
**Laser induced fiber fuse effect in revolver hollow-core fibers**
82. ANANYEV V.A.<sup>1,2</sup>, DEMIDOV V.V.<sup>1</sup>, LEONOV S.O.<sup>3</sup>, ALAGASHEV G.K.<sup>4</sup>, YELISTRATOVA E.A.<sup>3</sup>, MATROSOVA A.S.<sup>1,2</sup>, NIKONOROV N.V.<sup>2</sup>  
<sup>1</sup>S.I. Vavilov State Optical Institute, Saint-Petersburg  
<sup>2</sup>ITMO University, Saint Petersburg  
<sup>3</sup>Bauman Moscow State Technical University  
<sup>4</sup>Fiber Optic Research Center of the RAS, Moscow  
**Single-mode hollow-core antiresonant fibers with a 50 micron core and a cladding formed by eight contiguous capillaries**
83. AGAFONOVA S.E.<sup>1,2</sup>, VOLOSHIN A.S.<sup>1</sup>, GORODNITSKIY A.S.<sup>1,2</sup>, SHITIKOV A.E.<sup>1,3</sup>, GORODETSKY M.L.<sup>1,3</sup>  
<sup>1</sup>Russian Quantum Centre, Skolkovo, Moscow region  
<sup>2</sup>Moscow Institute of Physics and Technology (State University), Dolgoprudny  
<sup>3</sup>Lomonosov Moscow State University  
**Self-injection locking and frequency comb generation in chip-scale  $\text{Si}_3\text{N}_4$  microresonator**
84. SOFIENKO G.S., KOLEGOV A.A., ZAGIDULIN A.V., BOCHKOV A.V., NESTEROV V.A.<sup>1</sup>  
 Zababakhin All-Russia research institute of technical physics, Snezhinsk, Chelyabinsk region  
**Single frequency fiber laser for interferometric measurements**
85. LEBEDEV V.F.<sup>1,2</sup>, PAVLOV K.V.<sup>2</sup>, BURKOVSKIY G.V.<sup>3</sup>, FEDIN A.V.<sup>3</sup>  
<sup>1</sup>Saint-Petersburg State University of Aerospace Instrumentation  
<sup>2</sup>ITMO University, Saint-Petersburg  
<sup>3</sup>Vladimir State University named after Alexander and Nikolay Stoletovs  
**Compact laser system based on a Nd:YAG-laser with self-phase conjugation for remote measurements by the LIBS-method**

86. SHITIKOV A.E.<sup>1,2</sup>, LOBANOV V.E.<sup>1</sup>, TERENCEV R.V.<sup>1,2</sup>, BILENKO I.A.<sup>1,2</sup>, GORODETSKY M.L.<sup>1,2</sup>  
<sup>1</sup>Russian Quantum Centre, Skolkovo, Moscow region  
<sup>2</sup>Lomonosov Moscow State University  
**Experimental investigation of platicons generation methods**
87. BURDUKOVA O.A.<sup>1,2</sup>, DOLOTOV S.M.<sup>3</sup>, PETUKHOV V.A.<sup>1,2</sup>, SEMENOV M.A.<sup>2</sup>  
<sup>1</sup>Moscow Institute of Physics and Technology (State University), Dolgoprudny  
<sup>2</sup>Lebedev Physical Institute of the RAS, Moscow  
<sup>3</sup>Mendeleev University of Chemical Technology of Russia, Moscow  
**Polymer dye laser pumped by 520 nm diodes**
88. BASTAMOVA M.A.<sup>1</sup>, LEONOV S.O.<sup>1</sup>, SIDOROV N.V.<sup>3</sup>, PALATNIKOVA M.N.<sup>3</sup>, GORELIK V.S.<sup>1,2</sup>  
<sup>1</sup>Bauman Moscow State Technical University  
<sup>2</sup>Lebedev Physical Institute of the RAS, Moscow  
<sup>3</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  
**Nonlinear modification of femtosecond radiation in LiTaO<sub>3</sub> ceramics**
89. ZHIGARKOV V.S., ZARUBIN V.P.<sup>1</sup>, MINAEV N.V., YUSUPOV V.I.  
Institute of Photonic Technologies – branch of FSRC «Crystallography and Photonics» of the RAS, Troitsk  
<sup>1</sup>National University of Science and Technology «MISIS», Moscow  
**Effects affecting survival of biological organisms in laser printing of gel micro-droplets**
90. SEMENOV V.G., MILIKOV E.A. A.V., MOROZOV A.D., TARASENKO A.B.  
Moscow Institute of Physics and Technology (State University), Dolgoprudny  
**Influence of internal parameters of four-frequency Zeeman laser gyro on characteristics of gas discharge**
91. ARSHINOVA I.D.<sup>1,2</sup>, BOBROV A.A.<sup>1</sup>, VILSHANSKAYA E.V.<sup>1,3</sup>, SAAKYAN S.A.<sup>1</sup>, SAUTENKOV V.A.<sup>1,4</sup>, ZELENER B.B.<sup>1,2,3</sup>  
<sup>1</sup>Joint Institute for High Temperatures of the RAS, Moscow  
<sup>2</sup>National Research Nuclear University MEPhI (Moscow Engineering Physics Institute)  
<sup>3</sup>National Research University "Moscow Power Engineering Institute"  
<sup>4</sup>Lebedev Physical Institute of the RAS, Moscow  
**Preparation of the ultra cold gas of calcium-40 atoms**
92. ZEMLYANOV A.A.<sup>1,2</sup>, TRIFONOVA A.V.<sup>1</sup>, RYAMBOV R.V.<sup>1</sup>  
<sup>1</sup>National Research Tomsk State University  
<sup>2</sup>V.E. Zuev Institute of Atmospheric Optics, SB RAS, Tomsk  
**Effect of plasmon resonance on the threshold of laser generation in an active medium with Au, Ag, Pt**

Meeting 8

Friday, January 25, 2019, 10.00

Room 406

93. VISHNYAKOV E.A.<sup>1</sup>, KOLESNIKOV A.O.<sup>1,2</sup>, RAGOZIN E.N.<sup>1</sup>, SHATOKHIN A.N.<sup>1,2</sup>  
<sup>1</sup>Lebedev Physical Institute of the RAS, Moscow  
<sup>2</sup>Moscow Institute of Physics and Technology (State University), Dolgoprudny  
**High-resolution VLS-spectrometers for soft X-ray radiation**
94. KOMOTSKII V.A., SOKOLOV Yu.M., SUETIN N.V., PAUYAC J.A.<sup>1</sup>  
Peoples' Friendship University of Russia (RUDN University), Moscow  
<sup>1</sup>University of Lima, Peru  
**Filtering properties of deep relief periodic reflective structure**
95. DENISOV D.G., LUY P.C.<sup>1</sup>  
Bauman Moscow State Technical University  
<sup>1</sup>Lytkarino Optical Glass Factory, Moscow region  
**Research of methodical and tool errors recovery of parameters subnanometer level profiles of optical parts**
96. DEGADNIKOVA L.A., OSINTSEV A.V.  
National Research Nuclear University MEPhI (Moscow Engineering Physics Institute)  
**Application of digital image correlation method to determine elastic constants of materials**
97. DENISOV D.G., PROSOVSKIY Yu.O., PROSOVSKIY O.F.<sup>1</sup>  
Bauman Moscow State Technical University  
<sup>1</sup>Obninsk Research and Production Enterprise Technologiya, Kaluga Region  
**Analysis of appearance perspective system direct optical broadband control of threaded thicknesses optical coatings**
98. MINAEV V.L., MINKOV K.N., VISHNYAKOV G.N., LEVIN G.G.  
All-Russian Research Institute for Optical and Physical Measurements, Moscow  
**Interference optical tomograph for measuring the spatial distribution of the optical fiber**
99. ZYKOVA L.A., BURMAK L.I.  
Scientific and Technological Center of Unique Instrumentation of the RAS, Moscow  
**Spectral interferometric module based on acousto-optic filtration for measuring the spatial distribution of the optical characteristics of objects**
100. TELESHEVSKI V.I., SKRYNNIK A.A.  
Moscow State University of Technology (Stankin)  
**Laser pulse interference system, working in the middle ir range for measuring the geometrical parameters of object**
101. PARSHIN V.A., EVTIKHIEVA O.A., BLIZNYUK V.V.  
National Research University "Moscow Power Engineering Institute"  
**Modeling of spatial-energy and polarization structure of radiation in the free space of single-mode laser diodes**
102. BUSURIN V.I., KOROBKOV V.V., MULIN P.V., WIN Y.N.  
Moscow Aviation Institute (National Research University)  
**Compensation of linear acceleration effect on the angular velocity transducer based on the optical tunneling effect**
103. SAPRONOV M.V., SKORNYAKOVA N.M.  
National Research University "Moscow Power Engineering Institute"  
**Three-dimensional visualization of light scattering indikatrixes within the framework of theory of Mie**
104. BUSURIN V.I., KUDRYAVTSEV P.S., LIU Zh.  
Moscow Aviation Institute (National Research University)  
**Investigation of the scanning rate effect on the quality of a non-contact profilometer**

105. BYKOVSKY A.Yu.  
*Lebedev Physical Institute of the RAS, Moscow*  
**Random oracle model in optoelectronic cryptography schemes**
106. PAVLOV A.V., ROZANOV A.M.  
*ITMO University, Saint Petersburg*  
**Cognitive disorders modeling by Fourier-holography technique**
107. BOLOTOVA A.A., PUTILIN A.N.<sup>1</sup>  
*MIREA – Russian Technological University, Moscow*  
<sup>1</sup>*Lebedev Physical Institute of the RAS, Moscow*  
**Field of view in augmented reality displays based on lightguides with picoprojection image source**
108. PISKUNOV D.E.<sup>1</sup>, NOSOV P.A.<sup>1</sup>, BATSHEV V.I.<sup>1,2</sup>, YABLOKOVA A.A.<sup>1</sup>  
<sup>1</sup>*Bauman Moscow State Technical University*  
<sup>2</sup>*Scientific and Technological Center of Unique Instrumentation of the RAS, Moscow*  
**Analysis of variostystems based on tunable-focus lenses**
109. RUSAKOVA M.S., VOLOSTNIKOV V.G.<sup>1</sup>, KOTOVA S.P.<sup>1</sup>, KISHKIN S.A.<sup>1</sup>  
*Samara National Research University*  
<sup>1</sup>*Samara Branch of the Lebedev Physical Institute of the RAS*  
**Cardiogram analysis by spiral beams mathematics**
110. BABANIN E.A., BLANK A.V., SUHAREVA N.A.  
*Lomonosov Moscow State University*  
**Control profile of the wave beam at the output of a decented optical system**
111. BELASHOV A.V.<sup>1,2</sup>, SHEVKUNOV I.A.<sup>1</sup>, NALEGAEV S.S.<sup>1</sup>, PUTILIN S.E.<sup>1</sup>, LIN Y.-C.<sup>3</sup>, CHANG C.-J.<sup>3</sup>, PETROV N.V.<sup>1</sup>  
<sup>1</sup>*ITMO University, Saint Petersburg*  
<sup>2</sup>*Ioffe Physical-Technical Institute of the RAS, Saint-Petersburg*  
<sup>3</sup>*National Taiwan Normal University, Taipei*  
**Numerical simulation of noncollinear degenerate phase modulation in the media with inhomogeneous nonlinear refractive index**
112. TALAIKOVA N.A.<sup>1,2</sup>, RYABUKHO V.P.<sup>1,2</sup>  
<sup>1</sup>*National Research Saratov State University named after N.G Chernyshevsky*  
<sup>2</sup>*Institute of Precision Mechanics and Control of the RAS, Saratov*  
**Optimal parameters modeling for reference wave forming in diffraction phase microscopy**
113. BABANIN E.A., BLANK A.V., BEKKIEV K.M., NASONOV A.A.  
*Lomonosov Moscow State University*  
**Differential geometry of the profile of the intensity distribution of single-mode and multi-mode wave beams**
114. BORODIN A.N.  
*Joint Institute of Nuclear Research, Dubna*  
**Scattered light decreasing of solar telescopes with siderostat**
115. US N.A., AVERSHIN A.A., ZHIGALOV V.A.  
*Air Force Academy named after prof. N.E. Zhukovsky and Yu.A Gagarin, Voronezh*  
**Matrix description of the optical scheme of the ring monoblock gyroscope**
116. GONCHAROV D.S., PONOMAREV N.M., STARIKOV R.S.  
*National Research Nuclear University MEPhI (Moscow Engineering Physics Institute)*  
**Phase SLM as an image input device in the invariant optical-digital correlator**

## Meeting 10

117. KAYTUKOV Ch.B., YANOVSKY A.V.  
*Scientific and Technical Centre «Atlas». Moscow*  
**The method of optoelectronic analysis of spatial Fourier spectrum for authentication of security holograms**
118. PUTILIN A.N.<sup>1</sup>, MOROZOV A.V.<sup>1,2</sup>, DRUZHIN V.V.<sup>2,3</sup>, MALININA P.I.<sup>2</sup>, BOLOTOVA A.A.<sup>4</sup>, KOPENKIN S.S.<sup>1,4</sup>, DUBYNIN S.E.<sup>1,2</sup>, BORODIN Yu.P.<sup>1,4</sup>, PEREVOZNIKOVA A.S.<sup>1,3</sup>, LVOVA K.I.<sup>3</sup>  
<sup>1</sup>*Lebedev Physical Institute of the RAS, Moscow*  
<sup>2</sup>*Samsung Research Center, Moscow*  
<sup>3</sup>*Bauman Moscow State Technical University*  
<sup>4</sup>*MIREA – Russian Technological University, Moscow*  
**AR-glasses optical system with large field of view based on holographic optical element**
119. AKIMOVA Ya.E., BRETSCO M.V., HALILOV S.I., TITOVA A.O., KUDRYAN N.V.  
*V.I. Vernadsky Crimean Federal University, Simferopol*  
**Measurements of a vortex spectrum via intensity moments**
120. PAVLOV P.V., WOLF I.E., MOSKVIN N.V.  
*Air Force Academy named after prof. N.E. Zhukovsky and Yu.A Gagarin, Voronezh*  
**Optical electronic complex NDT'S control of aircraft materials**
121. BORISOV V.N., LESNICHII V.V.<sup>1</sup>, DYURYAGINA A.B., SHURYGINA N.A., VENIAMINOV A.V.  
*ITMO University, Saint Petersburg*  
<sup>1</sup>*Albert-Ludwig University of Freiburg, Freiburg in Breisgau, Germany*  
**Combined multicomponent model of photopolymerization, diffusion and shrinkage processes during holographic recording**
122. MAHILNY U.V., STANKEVICH A.I.  
*Belarusian State University, Minsk*  
**Intensification of holographic relief gratings recorded in the layers of photo-crosslinking polymers**
123. DZHAMANKYZOV N.K., ISMANOV Yu.H.  
*Institute of Physical-Technical Problems and Material Science of NAS KR, Bishkek, Kyrgyz republic*  
**Temperature mode of development of the latent image of holographic recording on photothermoplastic media**

124. KAMENEV V.G., KAMENEVA N.A.  
N.L. Dukhov All-Russian Research Institute of Automatics, Moscow  
**Modeling with Zemax and experimental testing telecentric system for digital hologram registration**
125. IVANOV P.A.  
Yaroslavl State Technical University  
**Kalman correlation filters in problems of images recognition**
126. GONCHAROV D.S., PONOMAREV N.M., STARIKOV R.S.,  
National Research Nuclear University MEPhI (Moscow Engineering Physics Institute)  
**Investigation of binary representation of invariant correlation filters holograms in pattern recognition tasks**
127. SARYBAEVA A.A.  
Kyrgyz State Technical University named after I. Razzakov, Bishkek  
**Evaluation of optical image recognition methods effectiveness**
128. MINAEVA E.D., KRASNOV V.V., RODIN V.G., CHERYOMKHIN P.A., SHIFRINA A.V.  
National Research Nuclear University MEPhI (Moscow Engineering Physics Institute)  
**Analysis of phase diffraction optical elements synthesis methods for 3D-scenes reconstruction**

Posters 1

Wednesday, January 23, 2019, 12.00

129. SIDOROV N.V., PALATNIKOV M.N., BOBREVA L.A., KLIMIN S.A.<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  
<sup>1</sup>Institute for Spectroscopy of the RAS, Troitsk  
**Complex defects in the stoichiometric LiNbO<sub>3</sub> crystals**
130. SAVCHENKOV E.N., SHANDAROV S.M., MANDEL A.E., NORMATOV A.Zh., ERGASHEV Zh.T., 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  
**Bragg light diffraction on periodic domain structure with inclined domain walls in lithium niobate crystal**
131. ANTONYCHEVA E.A., SYUY A.V., SIDOROV N.V.<sup>1</sup>, PALATNIKOV M.N.<sup>1</sup>  
Far Eastern State Transport University, Khabarovsk  
<sup>1</sup>I.V. Tananaev Institute of Chemistry and Technology of Rare Elements and Mineral Raw Materials of Kola Science Center of the RAS, Apatity, Murmansk region  
**Photorefractive light scattering in lithium niobate crystals doped double impurities**
132. PIKOUL O.Yu., SIDOROV N.V.<sup>1</sup>, TEPLYAKOVA N.A.<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  
**Control of optical homogeneity of strongly doped LiNbO<sub>3</sub>:Zn crystals**
133. KOSTRITSKII S.M., KORKISHKO Yu.N., FEDOROV V.A., SEVOSTYANOV O.G.<sup>1</sup>, CHIRKOVA I.M.<sup>1</sup>, KOKANYAN E.P.<sup>2</sup>  
RPC Optolink Ltd, Zelenograd  
<sup>1</sup>Kemerovo State University  
<sup>2</sup>Armenian State Pedagogical University, Yerevan  
**Evaluation of phase composition of proton-exchanged waveguides in LiNbO<sub>3</sub> crystals**
134. POPOV V.V.<sup>1,2</sup>, MENUSHENKOV A.P.<sup>1</sup>, MOLOKOVA A.Yu.<sup>1</sup>, BOYKO N.V.<sup>1</sup>, KHRAMOV E.V.<sup>2</sup>, SHCHETININ I.V.<sup>3</sup>, ZHELEZNYI M.V.<sup>3</sup>,  
PONKRATOV K.V.<sup>4</sup>, KURILKIN V.V.<sup>5</sup>, TSARENKO N.A.<sup>6</sup>, ARZHATKINA L.A.<sup>6</sup>  
<sup>1</sup>National Research Nuclear University MEPhI (Moscow Engineering Physics Institute)  
<sup>2</sup>National Research Centre "Kurchatov Institute", Moscow  
<sup>3</sup>National University of Science and Technology "MISIS", Moscow  
<sup>4</sup>Renishaw plc, Moscow  
<sup>5</sup>Peoples' Friendship University of Russia (RUDN University), Moscow  
<sup>6</sup>Leading Scientific Research Institute of Chemical Technology, Moscow  
**Synthesis and investigation of crystal, local and electronic structures of europium titanates Eu<sub>2</sub>Ti<sub>2</sub>O<sub>7</sub> and EuTiO<sub>3</sub>**
135. BOLDYREV K.N.<sup>1</sup>, MOLCHANOVA A.D.<sup>1</sup>, KUZMIN N.N.<sup>1,2</sup>  
<sup>1</sup>Institute for Spectroscopy of the RAS, Troitsk  
<sup>2</sup>Lomonosov Moscow State University  
**Electron-vibrational spectra of CuB<sub>2</sub>O<sub>4</sub> monocystal**
136. KNIAZKOV A.V..  
Peter the Great Saint-Petersburg Polytechnic University  
**Determination of the orientation of the optical axis of the uniaxial crystals and stressed materials by reflect polarized light**
137. PERIN A.S.  
Tomsk State University of Control Systems and Radioelectronics  
**Generation of 1D bright spatial soliton in a bulk of lithium niobate due pyroelectric effect**
138. PROKOPIV N.N., SYUY A.V., SURITZ V.V.  
Far Eastern State Transport University, Khabarovsk  
**Automated installation for determination of electrooptic coefficients of lithium niobate crystals**
139. MAKSIMENKO V.A.  
Far Eastern State Transport University, Khabarovsk  
**Speckle in the pattern of the photoinduced light scattering in LiNbO<sub>3</sub>:Rh crystal**
140. KISTENEVA M.G., SIM E.S., SHANDAROV S.M., MEZENSEV R.V., KARGIN Yu.F.<sup>1</sup>  
Tomsk State University of Control Systems and Radioelectronics  
<sup>1</sup>Baikov Institute of Metallurgy and Material Sciences of the RAS, Moscow  
**Dynamics of photoinduced absorption of light in Bi<sub>12</sub>TiO<sub>20</sub>: Cd crystal**
141. MAMONOV E.A., RASPUTNYI A.V., KOPYLOV D.A., MURZINA T.V.  
Lomonosov Moscow State University  
**Study of bright squeezed vacuum generation in nonlinear crystals under intense femtosecond radiation**



142. BUDKIN I.V.<sup>1,2</sup>, KLIMIN S.A.<sup>1</sup>, BADIKOV D.V.<sup>3</sup>, BADIKOV V.V.<sup>3</sup>  
<sup>1</sup>*Institute for Spectroscopy of the RAS, Troitsk*  
<sup>2</sup>*Moscow Institute of Physics and Technology (State University), Dolgoprudny*  
<sup>3</sup>*Kuban State University, Krasnodar*  
**IR-active phonons of BaGa<sub>2</sub>GeSe<sub>6</sub> nonlinear crystal**
143. IONIN A.A., KINYAEVSKIY I.O., KLIMACHEV Yu.M., KOZLOV A.Yu., KOTKOV A.A., SAGITOVA A.M., SELEZNEV L.V., SINITSYN D.V.  
*Lebedev Physical Institute of the RAS, Moscow*  
**Light emission with wavelength up to ~20 μm by frequency mixing of slab CO- and CO<sub>2</sub> lasers radiation in Pbn<sub>6</sub>Te<sub>10</sub> crystal**
144. ZOLINA K.A.<sup>1</sup>, GARIFULLIN A.I.<sup>1</sup>, GAINUTDINOV R.Kh.<sup>1,2</sup>, KHAMADEEV M.A.<sup>1,2</sup>  
<sup>1</sup>*Kazan Federal University*  
<sup>2</sup>*Institute of Perspective Researches of Tatarstan Academy of Sciences, Kazan*  
**Investigation of the band structure of photonic crystal based on metamaterial with ultrahigh refractive index**
145. PRUDNIKOV I.R.  
*Lomonosov Moscow State University*  
**Diffraction of differently polarized light waves in a 1D photonic crystal with embedded ultrathin layers**
146. ANDREEVA K.A.<sup>1</sup>, BIKMUHAMETOV R.I.<sup>1</sup>, GARIFULLIN A.I.<sup>1</sup>, GAINUTDINOV R.Kh.<sup>1,2</sup>, KHAMADEEV M.A.<sup>1,2</sup>  
<sup>1</sup>*Kazan Federal University, Kazan*  
<sup>2</sup>*Institute of Perspective Researches of Tatarstan Academy of Sciences, Kazan*  
**Transmission spectra of one-dimensional photonic crystals based on metamaterials with ultrahigh refractive index**
147. STROKOVA Yu.A., SVYAKHOVSKIY S.E., SALETSKY A.M.  
*Lomonosov Moscow State University*  
**Spectral and angular dependence of donor molecules luminescence decay kinetics in one-dimensional photonic crystal**
148. SITNIKOV N.N.<sup>1,2</sup>, SHELYAKOV A.V.<sup>1</sup>, Khabibullina I.A.<sup>2</sup>, SUNDEEV R.V.<sup>3</sup>  
<sup>1</sup>*National Research Nuclear University MEPhI (Moscow Engineering Physics Institute)*  
<sup>2</sup>*Keldysh Research Center, Moscow*  
<sup>3</sup>*Bardin Central Research Institute of Ferrous Metallurgy, Moscow*  
**Features of thermal crystallization of amorphous TiNiCu alloys with high copper content**
149. ANTONYCHEVA E.A., DOLGOPOLOV I.S., PETROVA M.S., PROKOPIV N.N., SYUY A.V.  
*Far Eastern State Transport University, Khabarovsk*  
**Automated installation for the study of the dependence of the birefringence of anisotropic optically active media from an external electric field**
150. ALIEV S.A., RAVIN A.R., PACHLAVONOVA K.D., TROFIMOV N.S., CHEKHLOVA T.K.  
*Peoples' Friendship University of Russia (RUDN University), Moscow*  
**Application for calculating optical parameters of three-layer thin film structure according to the results of wave-watered modes coefficients measurements**
151. VEKSHIN M.M., KUPLEVICH M.A., NIKITIN V.A., YAKOVENKO N.A.  
*Kuban State University, Krasnodar*  
**Study of single-mode at wavelength 1,55 μm optic waveguides in glass, fabricated by ion exchange K<sup>+</sup>-Na<sup>+</sup>**
152. PRZHIYALOVSKIY Ya.V.<sup>2,1</sup>, STAROSTIN N.I.<sup>1,2</sup>, GUBIN V.P.<sup>1,2</sup>, MORSHNEV S.K.<sup>1,2</sup>  
<sup>1</sup>*Fryazino Branch of Kotel'nikov Institute of Radioengineering and Electronics of RAS*  
<sup>2</sup>*SPC Profotech, Moscow*  
**The fiber optical sensor of current pulses**
153. GAVRUSHKO V.V., IONOV A.S.<sup>1</sup>, KADRIEV O.R., LASTKIN V.A.<sup>1</sup>  
*Yaroslavl-the-Wise Novgorod State University*  
<sup>1</sup>*OJSC «Planeta-OKB», Veliky Novgorod*  
**Current sensitivity of differential photo receivers based on silicon**
154. MORSHNEV S.K.<sup>1,2</sup>, STAROSTIN N.I.<sup>1,2</sup>, GUBIN V.P.<sup>1,2</sup>, PRZHIYALOVSKIY Ya.V.<sup>2,1</sup>, SAZONOV A.I.<sup>1,2</sup>  
<sup>1</sup>*Fryazino Branch of Kotel'nikov Institute of Radioengineering and Electronics of RAS*  
<sup>2</sup>*SPC Profotech, Moscow*  
**The contrast oscillation of a reflection fiber interferometer of a current sensor**
155. HALILOV S.I., RUBASS A.F., SOKOLENKO B.V., AKIMOVA Ya.E., BRETSCO M.V.  
*V.I. Vernadsky Crimean Federal University, Simferopol*  
**The vortex composition of the field wound low-mode fiber**
156. BOGACHKOV I.V., TRUKHINA A.I.  
*Omsk State Technical University*  
**The definition of the optical fiber type by analysis of the Brillouin backscatter spectrum**
157. UKOLOV D.S.<sup>1</sup>, CHERNIAK M.E.<sup>1,2</sup>, MOZHAEV R.K.<sup>1</sup>, PECHENKIN A.A.<sup>2</sup>  
<sup>1</sup>*National Research Nuclear University MEPhI (Moscow Engineering Physics Institute)*  
<sup>2</sup>*Specialized Electronic Systems, Moscow*  
**Study of gamma-ray induced attenuation of singlemode radiation hard optic fiber depending on the dose rate**
158. ALEXEYEV C.N., BARSHAK E.V., VIKULIN D.V., LAPIN B.P., YAVORSKY M.A.  
*V.I. Vernadsky Crimean Federal University, Simferopol*  
**The dispersion of higher order modes of the graded-index optical fibers**
159. BOGACHKOV I.V., TRUKHINA A.I.  
*Omsk State Technical University*  
**The early diagnostics of pre-emergency sections in optical fibers**
160. KHARASOV D.R.<sup>1,2</sup>, FOMIRYAKOV E.A.<sup>2,3</sup>, LUKASHOVA T.O.<sup>2,3</sup>  
<sup>1</sup>*Moscow Institute of Physics and Technology (State University), Dolgoprudny*  
<sup>2</sup>*T8 Ltd, Moscow*  
<sup>3</sup>*Lomonosov Moscow State University*  
**Phase-sensitive optical time domain reflectometer assisted by optimized distributed Raman amplifier**
161. BURDIN V.A., BOURDINE A.V.  
*Povolzhsky State University of Telecommunication and Informatics, Samara*  
**Dispersion characteristics of LP<sub>01</sub> and LP<sub>11</sub> modes of step-index optical fiber with Kerr nonlinearity**
162. MOROZOV O.G., KUZNETSOV A.A., NUREEV I.I., SAKHABUTDINOV A.J.  
*Kazan National Research Technical University named after A.N. Tupolev - KAI*  
**Address fiber gratings with a common Bragg wavelength**

163. CHAYMARDANOV P.A.  
*Bonch-Bruевич Saint-Petersburg State University of Telecommunications*  
**Development of software for simulation of fiber optic transmission systems**
164. BOGACHKOV I.V.  
*Omsk State Technical University*  
**Research Brillion reflectograms of optical fibers of different types with heated sections**
165. MAKOVETSKII A.A., ZAMYATIN A.A., RYAKHOVSKIY D.V.  
*Fryazino Branch of Kotel'nikov Institute of Radioengineering and Electronics of RAS*  
**Optical properties of multimode silica optical fiber with the scattering reflecting cover**
166. BYLINA M.S., GLAGOLEV S.F., DOTSENKO S.E.  
*Bonch-Bruевич Saint-Petersburg State University of Telecommunications*  
**Implementation of quasisoliton fiber optical communication systems**
167. ZOLOTOVSKII I.O., LAPIN V.A., SEMENSOV D.I.  
*Ulyanovsk State University*  
**Modulation instability of wave packets through a inhomogeneous fiber**
168. PETROV N.I.  
*Scientific and Technological Center of Unique Instrumentation of the RAS, Moscow*  
**Angular divergence of partially-coherent light beams**
169. SOKOLENKO B.V., SHOSTKA N.V., KARAKCHIEVA O.S., POLETAEV D.A., HALILOV S.I.  
*V.I. Vernadsky Crimean Federal University, Simferopol*  
**Evolution of phase singulars at three-beam off-axis interference of coherent light**
170. PROKLOV V.V., REZVOV Yu.G.<sup>1</sup>  
*Fryazino Branch of Kotel'nikov Institute of Radioengineering and Electronics of RAS*  
<sup>1</sup>*Novomoskovsk Institute of Mendeleev University of Chemical Technology, Tula region*  
**Condition for invariance of acousto-optical transmission function when changing acoustic drift in the plane of acousto-optic interaction**
171. VEKSHIN M.M., NIKITIN V.A., YAKOVENKO N.A.  
*Kuban State University, Krasnodar*  
**The reconstruction of parameters of ion-exchange process in glass K-8**
172. MOSENTOV S.N., OSMAKOV I.A.<sup>1</sup>  
*Bee Pitron Ltd, Saint-Petersburg*  
<sup>1</sup>*Burtsev laboratory Ltd, Saint-Petersburg*  
**Designing of the quasi-distributed spectrum analyzer**
173. IZMAILOV I.V.<sup>1</sup>, POIZNER B.N.<sup>1</sup>, SOSNIN E.A.<sup>1,2</sup>  
<sup>1</sup>*Tomsk State University of Control Systems and Radioelectronics*  
<sup>2</sup>*Institute of High Current Electronics SB RAS, Tomsk*  
**Optical signal form sets the transmission characteristics of the low-frequency nonlinear element**
174. ZEMTSOV D.S.<sup>1,2</sup>, ZLOKAZOV E.Yu.<sup>1</sup>, NEBAVSKIY V.A.<sup>1</sup>, STARIKOV R.S.<sup>1</sup>, KHAFIZOV I.Zh.<sup>1,2</sup>  
<sup>1</sup>*National Research Nuclear University MEPhI (Moscow Engineering Physics Institute)*  
<sup>2</sup>*Scientific and Technical Centre "Module", Moscow*  
**Using the microwave photonic downconverter for estimating the frequency of the broadband radio signal**
175. SHAROGLAZOVA V.V.<sup>1,2</sup>, ERMAKOV R.P.<sup>2</sup>, KUROCHKIN V.L.<sup>2</sup>, KUROCHKIN Yu.V.<sup>2</sup>  
<sup>1</sup>*National Research Nuclear University MEPhI (Moscow Engineering Physics Institute)*  
<sup>2</sup>*Russian Quantum Centre, Skolkovo, Moscow region*  
**Quantum random number generator based on vacuum fluctuation of the electromagnetic field in the cavity of pulsed laser diode**
176. PLJONKIN A.P., KURTISHOV I.A., NGUYEN B.H., ANTONTSOV M.A.  
*Southern Federal University, Taganrog*  
**Quantum key distribution in structured cable systems**
177. VORONTOVA I.O., MELNICK M.V., PUTILIN S.E., TCYPKIN A.N., KOZLOV S.A.  
*ITMO University, Saint Petersburg*  
**Analysis of the Z-scan method for few-cycle terahertz pulses**
178. VOLCOV V.G., GINDIN P.D.  
*JSC Moskovskij Zavod «Sapphir»*  
**Binoculars-action with remote image transmission**
179. VOLCOV V.G., GINDIN P.D.  
*JSC Moskovskij Zavod «Sapphir»*  
**Combination day / night sighting system**
180. AGRINSKY M.V., GOLITSIN A.V., STARTSEV V.V.<sup>1</sup>  
*Technological Center «Engineer», Tchekhov*  
<sup>1</sup>*Astrohn Experimental Design Bureau, Lytkarino*  
**The hyper spectral camera with application of optical liquid environments with the "special" course of dispersion**
181. VOLCOV V.G., GINDIN P.D.  
*JSC Moskovskij Zavod «Sapphir»*  
**Thermo vision TV binocular night vision**
182. KULCHITSKY N.A., NAUMOV A.V.<sup>1</sup>, STARTSEV V.V.<sup>1</sup>  
*JSC «Scientific and Production Association «Orion», Moscow*  
<sup>1</sup>*Astrohn Experimental Design Bureau, Lytkarino*  
**The development of world and Russian markets of uncooled microbolometres**

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Wednesday, January 23, 2019, 12.00

183. DYAGILEVA D.V.<sup>1</sup>, KRIVENKOV V.A.<sup>1</sup>, SAMOKHVALOV P.S.<sup>1</sup>, NABIEV I.R.<sup>1,2</sup>, RAKOVICH Yu.P.<sup>1,3,4</sup>  
<sup>1</sup>*National Research Nuclear University MEPhI (Moscow Engineering Physics Institute)*  
<sup>2</sup>*University of Reims Champagne-Ardenne, France*  
<sup>3</sup>*Basque University, San Sebastian, Spain*  
<sup>4</sup>*Basque Foundation for Science, Bilbao, Spain*  
**Photoluminescence properties of hybrid material based on semiconductor nanocrystals and gold nanorods under two-photon excitation**

184. AGAFONOVA D.A., BABKINA A.N., FOKINA M.I., SOBOLEV D.I., NURYEV R.K.  
*ITMO University, Saint Petersburg*  
**Effect of lithium on the luminescent properties of borate glass ceramics with chromium**
185. ALEKSEEV Yu.L., BELOV P.A.  
*MIREA – Russian Technological University, Moscow*  
**Research on the linkage between luminescence and blood oxygen content in a pulse oximeter**
186. ORESHKINA K.V., DUBROVIN V.D., IGNATIEV A.I., PICHUGIN I.S.  
*ITMO University, Saint Petersburg*  
**Spectral-luminescent properties of chloride photo-thermo-refractive glasses with various alkaline ions**
187. KUCHERENKO M.G., NALBANDYAN V.M.  
*Orenburg State University*  
**Transformation of the luminescence spectra of quantum dots near plasmon nanoparticles in a magnetic field**
188. VOITSEKHOVSKII A.V., DZYADUKH S.M., KOKHANENKO A.P., DIRKO V.V., LOZOVY K.A.  
*National Research Tomsk State University*  
**Electrophysical and radiation properties of OLED structures with emission layer Alq3**
189. OVECHENKO D.S., BOYCHENKO A.P.  
*Kuban State University, Krasnodar*  
**Electrochemiluminescence of metal anodes in distilled water**
190. PAVLOVA M.D., LAMKIN I.A., TARASOV S.A.  
*Saint-Petersburg State Electrotechnical University "LETI"*  
**Investigation of the effect of thickness of active layers on the spectrum of photosensitivity of structures based on the system ZnPc:C<sub>60</sub>**
191. DMITRIEV A.D., SALETSKY A.M.  
*Lomonosov Moscow State University*  
**Surface plasmon coupled emission from nickel thin films**
192. CHERNOV A.I.<sup>1,2</sup>, FEDOTOV P.V.<sup>1</sup>, OBRAZTSOVA E.D.<sup>1,3</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>*Moscow Institute of Physics and Technology (State University), Dolgoprudny*  
**Optical absorption of cobalt phthalocyanine molecules encapsulated inside single-walled carbon nanotubes**
193. MJAGOTIN A.V., IVANOVA G.D.  
*Far Eastern State Transport University, Khabarovsk*  
**Light induced thermodiffusion in two-component liquid**
194. EGORYSHEVA A.V.<sup>1</sup>, DUDKINA T.D., RYABOCHKINA P.A.<sup>2</sup>, GOLODUKHINA S.V.<sup>1</sup>, KHRUSHCHALINA S.A.<sup>2</sup>, YURLOV I.A.<sup>2</sup>, TARATYNOVA A.D.<sup>2</sup>  
*National Research Nuclear University MEPhI (Moscow Engineering Physics Institute)*  
<sup>1</sup>*Kumakov Institute of General and Inorganic Chemistry of the RAS, Moscow*  
<sup>2</sup>*Ogarev Mordovia State University, Saransk*  
**New optical materials based on LnGa<sub>0.5</sub>Sb<sub>1.5</sub>O<sub>6</sub> complex oxides with rosiite structure**
195. DRONOVA M.G., SEMENCHA A.V.  
*Peter the Great Saint-Petersburg Polytechnic University*  
**Influence of Se on properties of (As<sub>33</sub>S<sub>33</sub>)<sub>(1-x)</sub>-Se<sub>x</sub> glass for immersion MID-IR LEDs lenses**
196. VASINA M.V., LAVROV S.D., AVDIZHIYAN A.Yu., KUDRYAVTSEV A.V., SHESTAKOVA A.P., MISHINA E.D.  
*MIREA – Russian Technological University, Moscow*  
**Research of the optical properties in multilayer semiconductor heterostructures based on two-dimensional transition metal dichalcogenides**
197. KRIVOVA G.M., KOMISSAR D.A., YAKUBOVSKY D.I., STEBUNOV Yu.V., ARSEININ A.V.  
*Moscow Institute of Physics and Technology (State University), Dolgoprudny*  
**Thin graphene oxide films deposition using spraycoating technique**
198. ROMANOV N.R.<sup>1,2</sup>, ZOLOTOV P.I.<sup>1,2,3</sup>, SMIRNOV K.V.<sup>1,2,3</sup>  
<sup>1</sup>*Moscow State University of Education*  
<sup>2</sup>*LLC «SCONTEL», Moscow*  
<sup>3</sup>*National Research University Higher School of Economics, Moscow*  
**Development of disordered ultra-thin superconducting vanadium nitride films**
199. ANTONOV E.A., KALUGIN A.I., PONOMAREV A.G.  
*Kalashnikov Izhevsk State Technical University*  
**Optical spectra of FeCl<sub>3</sub> intercalated graphite**
200. CHICHEVA P.A., LEVCHENKO K.S., CHUDOV K.A., POROSHIN N.O., SHMELIN P.S.<sup>1</sup>, GREBENNIKOV E.P.<sup>1</sup>  
*MIREA – Russian Technological University, Moscow*  
<sup>1</sup>*JSC «CSRIT «Technomash», Moscow*  
**Synthesis and investigation of electrochemical properties of polymeric microspheres modified with electrochromic compounds**
201. AVDIZHIYAN A.Yu., LAVROV S.D., SHESTAKOVA A.P.  
*MIREA – Russian Technological University, Moscow*  
**Exciton states properties of two-dimensional transition metal dichalcogenides alloys**
202. JEENBAEV N.J., DORJUEVA G.D., NURSEITOVA A.M.  
*Academician J. Jeenbaev Institute of Physical and Technical Problems and Material Science of NAS of the Kyrgyz Republic, Bishkek, Kyrgyz Republic*  
**Gold concentration determination by the method of scintillation analysis in two-jets plasmatron**
203. MASHKO A.M.<sup>1,2</sup>, MEYSTERSON A.A.<sup>1,3</sup>, AFANASIEV A.E.<sup>1</sup>, MELENTIEV P.N.<sup>1</sup>, BALYKIN V.I.<sup>1</sup>  
<sup>1</sup>*Institute for Spectroscopy of the RAS, Troitsk*  
<sup>2</sup>*National Research University Higher School of Economics, Moscow*  
<sup>3</sup>*Moscow Institute of Physics and Technology (State University), Dolgoprudny*  
**Spectroscopy of cold atoms localized by a femtosecond pulsed laser field**
204. MAKIN V.S., LOGACHEVA E.I., MAKIN R.S.<sup>1</sup>  
*Institute for Nuclear Energetic, Sosnovy Bor, Leningrad region*  
<sup>1</sup>*National Research Nuclear University MEPhI (Moscow Engineering Physics Institute)*  
**ZnO ordered resonant relief hierarchy under the ultrashort pulses of linear polarized laser radiation**
205. CHMEREVA T.M., KUCHERENKO M.G.  
*Orenburg State University*  
**Energy relaxation of quantum dots with the involvement of surface plasmons**

206. KONDRATENKO T.S., ZVYAGIN A.I., PEREPELTSIA A.S., SMIRNOV M.S., OVCHINNIKOV O.V.  
Voronesh State University  
**Nonlinear absorption and refraction in colloidal quantum dots Ag<sub>2</sub>S**
207. TEPLIAKOV N.V., BAIMURATOV A.S., BARANOV A.V., FEDOROV A.V., RUKHLENKO I.D.  
ITMO University, Saint Petersburg  
**Optical properties of quantum dots with chiral shapes**
208. VOLODIN D.O.<sup>1</sup>, ZVAIGZNE M.A.<sup>1</sup>, ALEXANDROV A.E.<sup>1,2</sup>, SAMOKHVALOV P.S.<sup>1</sup>, NABIEV I.R.<sup>1,3</sup>  
<sup>1</sup>National Research Nuclear University MEPhI (Moscow Engineering Physics Institute)  
<sup>2</sup>Frumkin Institute of Physical chemistry and Electrochemistry of the RAS, Moscow  
<sup>3</sup>University of Reims Champagne-Ardenne, France  
**Thin CdSe/ZnS/CdS/ZnS quantum dots films for led manufacturing**
209. RUSINOV A.P.  
Orenburg State University  
**Definition of nonlinear optical properties of water solutions of CdSe quantum dots**
210. SKOBELKINA A.V., KASHAEV F.V., KOLCHIN A.V., HILOV A.V.<sup>1</sup>, KURAKINA D.A.<sup>1</sup>  
Lomonosov Moscow State University  
<sup>1</sup>Institute of Applied Physics of the RAS, Nizhny Novgorod  
**Application of silicon nanoparticles produced by laser ablation of porous silicon in biophotonics**
211. ZHUMABAY N.D., SELIVERSTOVA E.V., IBRAYEV N.Kh.  
Buketov Karaganda State University, Kazakhstan  
**Influence of plasmon resonance of metal nanoparticles on the photonics of rhodamine dye in nanosized films**
212. SYRNIKOV D.A., KURKOTOV A.D., KRYLOV V.I.  
Far Eastern State Transport University, Khabarovsk  
**Deposition of nanoparticles under the influence of a light pressure**
213. IBRAYEV N.Kh., AIMUKHANOV A.K.  
Buketov Karaganda State University, Kazakhstan  
**Effect of Ag nanoparticles on the properties of stimulated emission of 5973 in alcohol**
214. ZABALUEVA Z.A., NEPOMNYASCHAYA E.K., VELICHKO E.N.  
Peter the Great Saint-Petersburg Polytechnic University  
**Parameters of the cross-correlation scattering scheme for estimating the nanoparticle sizes**
215. KOLCHIN A.V., KASHAEV F.V., SKOBELKINA A.V., SHULEIKO D.V., KAMINSKAYA T.P., PAVLIKOV A.V.  
Lomonosov Moscow State University  
**Structural properties of nanoparticles formed via pulsed laser ablation of silicon carbide in liquids**
216. SAPARINA S.V., KHARINCEV S.S.  
Kazan Federal University, Kazan  
**Characterization of carbon nanolayer of optical fibers via a new class of hybrid tip-enhanced Raman scattering methods**
217. USTINOV A.S.<sup>1</sup>, OSMINKINA L.A.<sup>1</sup>, EFIMOVA A.I.<sup>1</sup>, ZABOTNOV S.V.<sup>1,2,3</sup>, GOLOVAN L.A.<sup>1</sup>  
<sup>1</sup>Lomonosov Moscow State University  
<sup>2</sup>National Research Centre "Kurchatov Institute", Moscow  
<sup>3</sup>Moscow Institute of Physics and Technology (State University), Dolgoprudny  
**Anisotropy of the third harmonic generated in silicon nanowire ensembles**
218. MOSHKOVA M.A.<sup>1,2</sup>, DIVOCHIY A.V.<sup>2</sup>, MOROZOV P.V.<sup>2</sup>, ANTIPOV A.V.<sup>2</sup>, VACHTOMIN Yu.B.<sup>2,3</sup>, SMIRNOV K.V.<sup>1,2,3</sup>  
<sup>1</sup>National Research University Higher School of Economics, Moscow  
<sup>2</sup>LLC «SCONTEL», Moscow  
<sup>3</sup>Moscow State University of Education  
**Characterization of topologies of superconducting photon number resolving detectors**
219. NEYASOV P.P., ALIMBEKOV I.R., KUCHERENKO M.G.  
Orenburg State University  
**Formation of pulses of cross-annihilation delayed fluorescence of molecules in nanoreactors with magnetite particles**
220. KUZNETSOVA O.B., SAVCHENKO E.A., VELICHKO E.N.  
Peter the Great Saint-Petersburg Polytechnic University  
**Visualization of single molecules by the method of total internal reflection fluorescent microscopy**
221. GERASIMOV V.S.<sup>1,2</sup>, ERSHOV A.E.<sup>1,2</sup>, BIKBAEV R.G.<sup>2</sup>, RASSKAZOV I.L.<sup>3</sup>  
<sup>1</sup>Siberian Federal University, Krasnoyarsk  
<sup>2</sup>Kirensky Institute of Physics SB RAS, Krasnoyarsk  
<sup>3</sup>University of Rochester, USA  
**The manifestation of Rayleigh anomalies in hybrid plasmon-photonic structures**
222. PEN'KOV S.A., KUCHERENKO M.G.  
Orenburg State University  
**Optically detected magnetic resonance of mobile triplet states in nanocavity with paramagnetic centers**
223. BILYK V.R., BURYAKOV A.M., MISHINA E.D., GALIEV G.B.<sup>1</sup>, KLIMOV E.A.<sup>1</sup>, MALTSEV P.P.<sup>1</sup>, PUSHKAREV S.S.<sup>1</sup>  
MIREA – Russian Technological University, Moscow  
<sup>1</sup>Institute of Ultra-High-Frequency Semiconductor Electronics of the RAS, Moscow  
**Plasmonic structure based on low-temperature GaAs as generator and detector THz-radiation**
224. AKMALOV A.E., KOZLOVSKII K.I., KOTKOVSKII G.E., KRIUKOVA I.S., MARTYNOV I.L., OSIPOV E.V. A.A., PLEKHANOV A.A., CHISTYAKOV A.A.  
National Research Nuclear University MEPhI (Moscow Engineering Physics Institute)  
**An investigation of the terahertz reflection spectra of structures based on porous silicon layers**
225. GORBATOVA A.V., VASINA M.V., KHUSYAINOV D.I., BURYAKOV A.M., MISHINA E.D.  
MIREA – Russian Technological University, Moscow  
**Surface terahertz radiation generated by bulk and monolayer WSe<sub>2</sub>**
226. MAKIN V.S., MAKIN R.S.<sup>1</sup>  
Institute for Nuclear Energetic, Sosnovy Bor, Leningrad region  
<sup>1</sup>National Research Nuclear University MEPhI (Moscow Engineering Physics Institute)  
**Universality of powerful polarized terahertz radiation interaction with condensed matter**
227. KUCHERENKO M.G., CHMEREVA T.M., NALBANDYAN V.M.  
Orenburg State University  
**Magnetic circular dichroism spectra of composite nanoparticles with excitonogeneous components**

228. ZADOROZHNY O.F., DAVYDOV V.N.  
*Tomsk State University of Control Systems and Radioelectronics*  
**Energy spectrum of triangular quantum well with composite profile**
229. JEENBAEV N.J., RYSKUL KYZY G., NURSEITOVA A.M..  
*Academician J. Jeenbaev Institute of Physical and Technical Problems and Material Science of NAS of the Kyrgyz Republic, Bishkek, Kyrgyz Republic*  
**Highly sensitive emission spectrometer for determination of matter's small content**
230. AGAFONOVA D.A., BABKINA A.N., ZYRYANOVA K.S.  
*ITMO University, Saint Petersburg*  
**The study of the spectral properties of borate glasses doped with chromium ions**
231. GRIGORIEVA A.A., GORBYAK V.V., SIDOROV A.I.  
*ITMO University, Saint Petersburg*  
**Raman spectroscopy of photothermorefractive silver silicate glasses: the influence of ultraviolet irradiation and heat treatment**
232. BABKINA A.N., AGAFONOVA D.A., KULJPINA E.V., ZYRYANOVA K.S., ORESHKINA K.V.  
*ITMO University, Saint Petersburg*  
**Terbium and cerium-doped magneto-optical phosphate glasses**
233. NAZAROVA D.A., NEMTSEV A.I., SIDOROV A.I.<sup>1</sup>, PODSVIROV O.A., YURINA U.V.  
*Peter the Great Saint-Petersburg Polytechnic University*  
<sup>1</sup>*ITMO University, Saint Petersburg*  
**Electron-beam modification of optical properties of phosphate glasses with high concentration of silver**
234. NGO D.T., NGO V.V., SIDOROV A.I.  
*ITMO University, Saint Petersburg*  
**Raman spectroscopy of phosphate silver-containing glasses**
235. NGO V.V., NGO D.T., SIDOROV A.I.  
*ITMO University, Saint Petersburg*  
**Formation and optical properties of oriented silver spheroids in glass**
236. ASHUROV M.S., EREMINA E.A., LAPTINSKAYA T.V., KLIMONSKY S.O.  
*Lomonosov Moscow State University*  
**The formation of two-level diffraction structures from polystyrene microspheres**

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Thursday, January 24, 2019, 15.00

237. KHALYAPIN V.A., BUGAY A.N.<sup>1</sup>  
*Kaliningrad State Technical University*  
<sup>1</sup>*Joint Institute of Nuclear Researches, Dubna*  
**Tunnel ionization and suppression of intrapulse Raman scattering**
238. YAKUSHENKOV P.O.<sup>1,2</sup>  
<sup>1</sup>*Lebedev Physical Institute of the RAS, Moscow*  
<sup>2</sup>*JCK «Angstrom -T», Zelenograd*  
**Permittivity in terms of general relativity theory**
239. AVERBUKH B.B., AVERBUKH I.B.  
*Pacific State University, Khabarovsk*  
**Propagation of a plane electromagnetic wave in a medium from linear electric quadruples**
240. MITYUREVA A.A., SMIRNOV D.V.  
*Saint Petersburg State University*  
**Excitation by electron impact of radioactive levels of  $4p^55p$  krypton atom configuration**
241. HOPERSKY A.N., NADOLINSKY A.M., SUKHORUKOVA O.B., KONEEV R.V.  
*Rostov State Transport University, Rostov-on-Don*  
**Quadrupole emission in the scattering of two photons by an atom**
242. BOROVYKH S.V., SMIRNOV V.V.  
*Saint Petersburg State University*  
**Evaluation of the diffraction pattern degradation in the high-power ultrashort X-ray radiation for the hydrogen molecule**
243. LIVASHVILI A.I., KRISHTOP V.V., VINOGRADOVA P.V., YASHCHUK O.I.  
*Far Eastern State Transport University, Khabarovsk*  
**Nonlinear response of nanofluids to the effect of the light field**
244. ARKHIPOV D.N., BOROVYKH S.V., KOZHINA A.S., MITYUREVA A.A., SMIRNOV V.V.  
*Saint Petersburg State University*  
**Evaluation of the probabilities of photoionization of the lithium atom in ultrashort laser field**
245. SEMENOVA L.E.  
*Prokhorov General Physics Institute of the RAS, Moscow*  
**The hyper-Raman scattering of light by LO-phonons under two-photon excitation near the absorption edge in a CdS crystal**
246. BEZRUKOV A.D., OKISHEV K.N.  
*Far Eastern State Transport University, Khabarovsk*  
**Thermal lens response of thin-film mirrors**
247. ASTASHKEVICH S.A.  
*Saint Petersburg State University*  
**Exact numerical analysis of the Heisenberg uncertainty relation for lower  $2\Sigma$  electronic states of the  $H_2^+$  molecule**
248. SIMAKOV S.R., IVANOVA G.D., OVSEYCHOOK O.O.  
*Far Eastern State Transport University, Khabarovsk*  
**Modeling of nonlinear multiwave interactions in medium with relief nonlinearity**
249. ASTASHKEVICH S.A., MITYUREVA A.A., SMIRNOV V.V.  
*Saint Petersburg State University*  
**Calculation of the photoionization probability of  $H_2$  under the action of ultrashort radiation**
250. OGLUZDIN V.E.  
*Prokhorov General Physics Institute of the RAS, Moscow*  
**Axions in optical experiments**

251. TUROVTSEV V.V.<sup>1,2</sup>, ORLOV Yu.D.<sup>1</sup>, KAPLUNOV I.A.<sup>1</sup>  
<sup>1</sup>Tver State University  
<sup>2</sup>Tver State Medical University  
**Transition intensities of torsional vibrations**
252. ZEMLYANOV A.A.<sup>1,2</sup>, TRIFONOVA A.V.<sup>1</sup>, RYAMBOV R.V.<sup>1</sup>  
<sup>1</sup>National Research Tomsk State University  
<sup>2</sup>V.E. Zuev Institute of Atmospheric Optics, SB RAS, Tomsk  
**Influence of concentrations of aluminated Al and Ag nanoparticles on the threshold of secondary generation**
253. TARASOV A.P., BRISKINA Ch.M., MARKUSHEV V.M., ZADOROZHNYAYA L.A.<sup>1</sup>, LAVRIKOV A.S.<sup>1</sup>  
Kotel'nikov Institute of Radioengineering and Electronics of RAS, Moscow  
<sup>1</sup>Shubnikov Institute of Crystallography of FSRC «Crystallography and Photonics» of the RAS, Moscow  
**Lasing modes in ZnO tetrapods grown by carbothermal synthesis**
254. IONIN A.A., KINYAEVSKIY I.O., KLIMACHEV Yu.M., KOZLOV A.Yu., SAGITOVA A.M., SINITSYN D.V., CHEBOTAREV I.A.  
Lebedev Physical Institute of the RAS, Moscow  
**Broadband selection of lasing on high vibrational transitions for Q-switched CO laser by an optical filter**
255. VLASOVA K.V., MAKAROV A.I., ANDREEV N.F., KONOVALOV A.N.<sup>1</sup>, KOZHEVATOV I.E., SILIN D.E.  
Institute of Applied Physics of the RAS, Nizhny Novgorod  
<sup>1</sup>LLC «Quartz technology», Shilovo, Ryazan region  
**Synthetic crystal quartz as a material for output stages of high-power laser systems**
256. BLINOV I.Yu., VOSKANOV M.L., KHATYREV N.P.  
All-Russian Scientific Research Institute of Physical-Technical and Radiotechnical Measurements, Mendeleevo, Moscow region  
**About the problems and prospective of creating standard lasers with a wave length of 0.633 μm with increased frequency stability**
257. FEDIN A.V.  
Vladimir State University named after Alexander and Nikolay Stoletovs  
**Stabilization of the generating spectrum of a solid-state pulsed Nd-YAG-laser with a multy-loop cavity**
258. GALUSHKIN M.G., GRISHAEV R.V.  
Institute on Laser and Information Technologies – branch of FSRC «Crystallography and Photonics» of the RAS, Shatura  
**Energy parameters of double-pass planar amplifiers based on diode-pumped YAG:Yb<sup>3+</sup>**
259. KOZHEVNIKOV V.A., PRIVALOV V.E.  
Peter the Great Saint-Petersburg Polytechnic University  
**The geometrical effect of an active element cross-section on the laser gain**
260. BAZZAL Kh., VOROPAY E.S., ZAJOGIN A.P., LICHKOVSKIY V.V.  
Belarusian State University, Minsk  
**Study of the influence of inter-pulse interval on the processes of formation of AlN when exposed to aluminum target by double laser pulses**
261. NGUYEN Q.D., SHAKHNO E.A., ZAKOLDAEV R.A., SINEV D.A., LUONG V.C.  
ITMO University, Saint Petersburg  
**Features of interference thermochemical recording on thin titanium films under the influence of picosecond laser**
262. MELEKHOV A.P., VOVCHENKO E.D., KOMARESKY V.M., RAMAKOTI R.S.  
National Research Nuclear University MEPhI (Moscow Engineering Physics Institute)  
**High-speed optical registration of the formation of radiating terahertz vacuum spark**
263. GETMANOV Ya.V.<sup>1</sup>, DOROKHOV V.L.<sup>1</sup>, ZAROVSKY A.I., KOMELKOV A.S., KURKIN G.Ya.<sup>1</sup>, PELIPENKO V.I.  
Prokhorov General Physics Institute of the RAS, Moscow  
<sup>1</sup>Budker Institute of Nuclear Physics of SB RAS, Novosibirsk  
**Picosecond dissector with crossed sweep**
264. NEUPOKOEVA A.V., NEBOGIN S.A.<sup>1</sup>  
Irkutsk State Medical University  
<sup>1</sup>Irkutsk National Research Technical University  
**Probe microscopy of crystallogram under laser modification of organic solutions**
265. ROGALIN V.E., KRIMSKY M.I.<sup>1</sup>, KOLCHIN S.S.<sup>2</sup>, ARANCHII S.M.<sup>3</sup>, KAPLUNOV I.A.  
Tver State University  
<sup>1</sup>Moscow Institute of Physics and Technology (State University), Dolgoprudny  
<sup>2</sup>Scientific and Production Corporation «Systems of Precision Instrument Making», Moscow  
<sup>3</sup>MEV-Technologies, Moscow  
**CO<sub>2</sub> laser apparatus for cupping of chronic pain syndrome**
266. MASLOVA G.T., BULOICHIK J.I., ZAJOGIN A.P., MAVRICHEV A.S.<sup>1</sup>, DERZHAVETS L.A.<sup>1</sup>, TRUBETSKAYA A.S., TITOVA A.V.  
Belarusian State University, Minsk  
<sup>1</sup>RRPC of Oncology and Medical Radiology, Minsk, Belarus  
**Application of laser atomic emission spectrometry the dried drops of blood plasma in the diagnosis of brain tumors**
267. KRASNIKOV I.V., SETEIKIN A.Yu., KOVTANYUK A.E.<sup>1</sup>, TROFIKOVA O.N.<sup>2</sup>, PROKHOROV I.V.<sup>1</sup>, KIM J.G.<sup>3</sup>  
Amur State University, Blagoveshchensk  
<sup>1</sup>Institute for Applied Mathematics FEB RAS, Vladivostok  
<sup>2</sup>Far Eastern Federal University, Vladivostok  
<sup>3</sup>Institute of Science and Technology, Gwangju, South Korea  
**Temperature distribution in skin with inclusion of nanoparticles under the laser irradiation**
268. KOVALENKO A.A.<sup>1</sup>, YAROSLAVSKIY I.V.<sup>3</sup>, SOBOL E.N.<sup>3</sup>, ALTSHULER G.B.<sup>3</sup>, EVTIKHIEV N.N.<sup>1,2</sup>  
<sup>1</sup>IRE-Polus Corporation, Fryazino  
<sup>2</sup>National Research Nuclear University MEPhI (Moscow Engineering Physics Institute)  
<sup>3</sup>IPG Medical, Marlborough, USA  
**Evaluation of thermal effect of laser interaction with cartilage tissue**
269. TIMCHENKO P.E., TIMCHENKO E.V., DOLGYSHKIN D.A.<sup>1</sup>, VOLOVA L.T.<sup>1</sup>, LAZAREV V.A.<sup>1</sup>, MARKOVA M.D., TIKHOMIROVA G.P., LOMKINA A.V.  
Samara National Research University  
<sup>1</sup>Samara State Medical University  
**Optical assessment of the quality of the restoration of the armed surface of the knee joint of rabbits after chondroplastic**
270. BUKHARINA A.B., PENTO A.V., ABLIZEN R.S., SIDOROV A.I.<sup>1</sup>, KRAVETS K.Yu.<sup>2</sup>  
Prokhorov General Physics Institute of the RAS, Moscow  
<sup>1</sup>National Research Nuclear University MEPhI (Moscow Engineering Physics Institute)  
<sup>2</sup>V.I. Vernadsky Institute of Geochemistry and Analytical Chemistry of the RAS, Moscow  
**Ionization by laser plasma radiation in the atmospheric-pressure mass spectrometry of biological objects**

271. PATAPOVICH M.P., ZAJOGIN A.P., MINKO A.A., PAVLUKOVEC S.A.  
*Belarusian State University, Minsk*  
**Retrospective estimation of the essential elements content in the hair of mother and child by the atomic-emission spectrometry methods**
272. TIMCHENKO E.V., TIMCHENKO P.E., PISAREVA E.V., FEDOROVA Ya.V., SUBATOVICH A.N.  
*Samara National Research University*  
**Spectral analysis of the effectiveness of treatment of bones of rats after ovariectomy with gidroksiapatit**
273. STARTSEVA E.D.<sup>1,2</sup>, ANDREEVA V.A.<sup>1</sup>, EVTIKHIEV N.N.<sup>1,2</sup>  
<sup>1</sup>*IRE-Polus Corporation, Fryazino*  
<sup>2</sup>*National Research Nuclear University MEPhI (Moscow Engineering Physics Institute)*  
**Investigation of thermal fields in kidney stones during thulium fiber laser lithotripsy**
274. GRIGORIEV R.O., KUZIKOVA A.V., KURASOVA A.P., KHODZITSKY M.K., DEMCHENKO P.S., ZAKHARENKO A.A.<sup>1</sup>, KHAMID A.H.<sup>1</sup>, SENYUK A.V.<sup>1</sup>  
*ITMO University, Saint Petersburg*  
<sup>1</sup>*Pavlov First Saint-Petersburg State Medical University*  
**Investigation of optical properties and spectral characteristics of the human stomach in the terahertz frequency range for intraoperative cancer diagnosis**
275. RUBASS A.F., ONIKIENKO E.V., VDOVICHENKO A.N.  
*V.I. Vernadsky Crimean Federal University, Simferopol*  
**Analysis of thyroid tissue state by stokes polarimetry method**
276. TIMCHENKO P.E., TIMCHENKO E.V., VOLOVA L.T.<sup>1</sup>, FROLOV O.O., TIHOV I.S., YUGOFAROVA E.F.  
*Samara National Research University*  
<sup>1</sup>*Samara State Medical University*  
**Spectral analysis of bioimplants for dentistry**
277. KRUPINA N.V., VERINA E.V., KHNYKINA K.A.  
*Southern Ural State University, Chelyabinsk*  
**The investigation of the spectrum of Raman scattering light of glucose**
278. GALIAKHMETOVA D.I., GALIMULLIN D.Z.<sup>1</sup>, SIBGATULLIN M.E.  
*Kazan Federal University*  
<sup>1</sup>*Kazan Innovative University named after V.G. Timiryasov*  
**The separation of complex spectra by artificial immune system**
279. VASIL'EV S.V., DAUKSHA A.Yu., IVANOV A.Yu.  
*Y. Kupala Grodno State University, Belarus*  
**Software to calculate electron density field of steam-plasma cloud**
280. PENTO A.V.<sup>1</sup>, MUKHAMATNUROVA A.R.<sup>1,2</sup>, KUZMIN I.I.<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>*V.I. Vernadsky Institute of Geochemistry and Analytical Chemistry of the RAS, Moscow*  
**351 and 263 nm pulsed laser desorption of organic compound ions from a nanostructured silicon surface**
281. TERENCEV R.V.<sup>1,2</sup>, SHITIKOV A.E.<sup>1,2</sup>, BILENKO I.A.<sup>1,2</sup>, GORODETSKY M.L.<sup>1,2</sup>  
<sup>1</sup>*Russian Quantum Centre, Skolkovo, Moscow region*  
<sup>2</sup>*Lomonosov Moscow State University*  
**Application of electric heating element for fiber tapering**
282. FEDOROV D.O.<sup>1</sup>, KORENSKY M.Yu., LAPSHIN K.E., GANIN D.V., KORYSTOV D.Yu.<sup>1</sup>, VARTAPETOV S.K.  
*Prokhorov General Physics Institute of the RAS, Moscow*  
<sup>1</sup>*Optosystems Ltd., Moscow*  
**High speed optical scanning system featuring Dove prism**
283. DUDOVA D.S., GANIN D.V.<sup>1</sup>, SHAVKUTA B.S., KUPRIYANOVA O.S.<sup>2</sup>, MINAEV N.V.  
*Institute of Photonic Technologies, – branch of FSRC "Crystallography and Photonics" of the RAS, Troitsk*  
<sup>1</sup>*Prokhorov General Physics Institute of the RAS, Moscow*  
<sup>2</sup>*Baikal Institute of Nature Management SB of RAS, Ulan-Ude*  
**Laser fabrication of optical polymer elements prototypes by ultrashort laser pulses**
284. AKHMETOV A.R., LYUBIMOV A.I.  
*State Institute of Applied Optics, Kazan*  
**Study on diffraction gratings deformation by nanopulsed laser radiation**
285. AVERIN S.V., KUZNETZOV P.I., ZHITOV V.A., ZAKHAROV L.Yu., KOTOV V.M.  
*Fryazino Branch of Kotel'nikov Institute of Radioengineering and Electronics of RAS*  
**Two-color visible detector on the base of Bragg reflector ZnS/ZnSe**
286. IVANOV V.I., SIMAKOV S.R.  
*Far Eastern State Transport University, Khabarovsk*  
**Modeling photosensitivity mechanisms of the chalcogenide films**
287. ZAVGORODNIY A.V., AHATOVA Zh.Zh.  
*Buketov Karaganda State University, Kazakhstan*  
**Photoelectric characteristics of solid phthalocyanine copper film**
288. GORYAEV M.A.  
*Herzen State Pedagogical University of Russia, Saint Petersburg*  
**Dye sensitization of photoeffect in monocrystalline silicon**
289. GORYAEV M.A., SMIRNOV A.P.  
*Herzen State Pedagogical University of Russia, Saint Petersburg*  
**Dye sensitization of photoprocesses in dielectric – semiconductor system**
290. TEMIRBAYEVA D.A.<sup>1</sup>, AFANASYEV D.A.<sup>1,2</sup>, IBRAYEV N.Kh.<sup>1</sup>  
<sup>1</sup>*Buketov Karaganda State University, Kazakhstan*  
<sup>2</sup>*Institute of Applied Mathematics, Karaganda, Kazakhstan*  
**Electron phototransfer from dye to TiO<sub>2</sub> semiconductor**
291. FILATOV A.L.<sup>1</sup>, PETROV O.A.<sup>1,2</sup>, ELISEEV M.A.<sup>1,2</sup>  
<sup>1</sup>*Fryazino Branch of Kotel'nikov Institute of Radioengineering and Electronics of RAS*  
<sup>2</sup>*MIREA – Russian Technological University, Moscow*  
**Automatic control of an MDR-23 monochromator using standart netduino platform by way of photoluminescent gerostructures investigations**

292. SHTAREVA A.V.<sup>1,2</sup>, SYUY A.V.<sup>1</sup>, SHTAREV D.S.<sup>2</sup>, NASHCHOCHIN E.O.<sup>1</sup>  
<sup>1</sup>Far Eastern State Transport University, Khabarovsk  
<sup>2</sup>Institute of Tectonics and Geophysics named after Yu.A. Kosygin of the FEB RAS, Khabarovsk  
**Photocatalytic activity of heterostructures containing of two different strontium bismuthates**
293. SADYKOVA A.E., SELIVERSTOVA E.V., IBRAYEV N.Kh.  
 Buketov Karaganda State University, Kazakhstan  
**Research of photocatalytic properties of TiO<sub>2</sub>**
294. ZHUMABEKOV A.Zh., IBRAYEV N.Kh., SADYKOVA A.E., SELIVERSTOVA E.V.  
 Buketov Karaganda State University, Kazakhstan  
**Research of photocatalytic properties of TiO<sub>2</sub>-GO nanocomposite**
295. ROMASHKO R.V.<sup>1,2</sup>, LO I.<sup>3</sup>, SHIH C.-H.<sup>3</sup>, KOLCHINSKIY V.A.<sup>1</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>National Sun Yat-sen University, Kaohsiung, China  
**Investigation of photochrome properties of gallium nitride doped by iron and copper**
296. FILATOV A.L.  
 Fryazino Branch of Kotelnikov Institute of Radioengineering and Electronics of RAS  
**Novel nonlinearity model for photorefractive effect in silicon that is caused by change of semiconductors transport parameters under different intensities of a pump beam**
297. ROMASHKO R.V.<sup>1,2</sup>, LIAW D.J.<sup>3</sup>, KOLCHINSKIY V.A.<sup>1</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>National Taiwan University of Science & Technology, Taipei  
**Study of electrochromine properties of new functional polymers**
298. SHESTAKOVA A.P., LAVROV S.D., EFIMENKOV Yu.R.  
 MIREA – Russian Technological University, Moscow  
<sup>1</sup>JSC «RPE «Pulsar», Moscow  
**Highly sensitive photodetector based on MoS<sub>2</sub> monolayers: technological process**

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299. STOYKOVA E., NAZAROVA D., IVANOV B.  
 Institute of optical materials and technologies, Bulgarian Academy of Sciences, Sofia, Bulgaria  
**Monitoring of processes by dynamic laser speckle analysis**
300. MAKSIMOVA L.A.<sup>1</sup>, MYSINA N.Yu.<sup>1</sup>, RYABUKHO P.V.<sup>1,2</sup>, LYAKIN D.V.<sup>1</sup>, RYABUKHO V.P.<sup>1,2</sup>  
<sup>1</sup>Institute of Precision Mechanics and Control of the RAS, Saratov  
<sup>2</sup>National Research Saratov State University named after N.G. Chernyshevsky  
**Longitudinal coherence and instantaneous speckle- patterns in optical wave field with wide frequency and angular spectra**
301. ADAMOV A.A., BARANOV M.S., KHRAMOV V.N.  
 Volgograd State University  
**Variations of the modified laser triangulation method**
302. ISMAILOV Sh.M.<sup>1,2</sup>, KAMENEV V.G.<sup>2</sup>  
<sup>1</sup>National Research Nuclear University MEPhI (Moscow Engineering Physics Institute)  
<sup>2</sup>N.L. Dukhov All-Russian Research Institute of Automatics, Moscow  
**Four-channel system for recording the coherent backscattering effect of dispersed media**
303. SHOSTKA N.V., KARAKCHIEVA O.S., SOKOLENKO B.V., SHOSTKA V.I.  
 V.I. Vernadsky Crimean Federal University, Simferopol  
**Formation of the optical traps system**
304. EFIMOVA K.V.<sup>1,2</sup>, KISHKIN S.A.<sup>1</sup>, KOTOVA S.P.<sup>1</sup>, PROKOPOVA D.V.<sup>1,2</sup>  
<sup>1</sup>Samara Branch of the Lebedev Physical Institute of the RAS  
<sup>2</sup>Samara National Research University  
**Hardware-software complex for calculation and formation of spiral beams of light**
305. ABROSIMOV I.N., ANDRUSHAK E.A., KUZNETSOV V.V.  
 MIREA – Russian Technological University, Moscow  
**Wave processes compatible with transformations in active optics**
306. PECHINSKAYA O.V.  
 National Research University "Moscow Power Engineering Institute"  
**Effectiveness estimate of the use scheimpflug adapter in optical measuring systems**
307. BUSURIN V.I., ZHEGLOV M.A.<sup>1</sup>, KOROBKOV K.A., BULYCHEV R.P.  
 Moscow Aviation Institute (National Research University)  
<sup>1</sup>JSC «GosNIIP», Moscow  
**Development of the method of «roughly-accurate» information processing in the accelerated converter with optical reading**
308. DENISOV D.G., MOROZOV A.B.<sup>1</sup>  
 Bauman Moscow State Technical University  
<sup>1</sup>Lytkarino Optical Glass Factory, Moscow region  
**Feature of method for determining local deflections of nanometer level in the settings spatial-frequency profile range of optical surfaces**
309. BAZYKIN S.N., BAZYKINA N.A. V.O., SAMOKHINA K.S.  
 Penza State University  
**Opto-electronic device for measuring linear displacements of objects**
310. SHNYREV S.L., KONDRASHOV A.A., DOLIN A.A., KOLESNICHENKO A.A.  
 National Research Nuclear University MEPhI (Moscow Engineering Physics Institute)  
**Analysis of modern methods and means of serometer connecting compounds monitoring**
311. POLYAKOV A.V., SAKHONCHIK D.G.  
 Belarusian State University, Minsk  
**Analysis of the recirculation period short-term fluctuations in closed fiber optical systems**



312. SHACHNEVA E.A., MURASHKINA T.I.  
*Penza State University*  
**Features of determination of constructive and technological parameters of the mechanical conversion of fiber optical sensor of parameters of liquid**
313. KAMENEV O.T.<sup>1,2</sup>, PETROV Yu.S.<sup>2</sup>, KOLCHINSKIY V.A.<sup>2</sup>, PODLESNYKH A.A.<sup>1</sup>  
<sup>1</sup>*Far Eastern Federal University, Vladivostok*  
<sup>2</sup>*Institute of Automation and Control Processes of FEB RAS, Vladivostok*  
**Underground mine tests of fiber strain sensor with passive stabilization**
314. PARFENTYEVA V.B.<sup>1,2</sup>, KAMYNNIN V.A.<sup>2</sup>, TRIKSHEV A.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*  
**Measurement of dispersion characteristics of optical fibers based on using the Michelson interferometer**
315. MOSTOVAYA E.I., BELONENKO M.B.  
*Volgograd State University*  
**Three-dimensional chirped light bullets in carbon nanotubes**
316. IVANOV D.M., RUZHITSKAYA D.D., RYZHIKOV S.B., RYZHIKOVA Yu.V.  
*Lomonosov Moscow State University*  
**Stability analysis of dendritic type system characteristics**
317. ANTONOV A.I.  
*Penza State University of Architecture and Construction*  
**Definition of the fourier coefficients decomposition of the dielectric permeability of thin layers of sawtooth microstructures within the framework of the RCWA**
318. SHOSTKA V.I., SHOSTKA N.V.  
*V.I. Vernadsky Crimean Federal University, Simferopol*  
**Identification of fractal cluster structures in the surface layer of water**
319. AVLASEVICH N.T., ANUFRUK S.S., LYALIKOV A.M.  
*Y. Kupala Grodno State University, Belarus*  
**Application of the muar effect for visualization of macrodefects of dynamic periodic structures**
320. BOYCHENKO A.P., SHAYTANOV D.V.  
*Kuban State University, Krasnodar*  
**Electrical field visualization on X-ray photomaterials with expiration date**
321. DONENKO I.L.  
*V.I. Vernadsky Crimean Federal University, Simferopol*  
**Modification of the night vision apparatus by methods of fractal optoelectronics**
322. AVEROCHKIN E.P., RYZHIKOV S.B., RYZHIKOVA Yu.V.  
*Lomonosov Moscow State University*  
**Optical properties of approximants of fractal-like multilayer structures with metamaterials**
323. MAHILNY U.V., STANKEVICH A.I.  
*Belarusian State University, Minsk*  
**Novel polymer material for photo-stimulated orientation of LC**
324. KUDINOV O.B., BELASHOV A.V.<sup>1,2</sup>, PETROV N.V.<sup>1</sup>, KHURCHAK A.P.  
*Marine Hydrophysical Institute of the RAS, Sebastopol*  
<sup>1</sup>*ITMO University, Saint Petersburg*  
<sup>2</sup>*Ioffe Physical-Technical Institute of the RAS, Saint-Petersburg*  
**Spatial light modulator based on liquid crystal display ELT240320ATP and Arduino**
325. EZHOV V.A., KOMPANETS I.N.<sup>1</sup>  
<sup>1</sup>*Lebedev Physical Institute of the RAS, Moscow*  
<sup>2</sup>*National Research Nuclear University MEPhI (Moscow Engineering Physics Institute)*  
**Distant binocular f/c filter for naked-eye observing the stereoscopic images of millisecond duration**
326. MAKSIMOVA L.A.<sup>1</sup>, DYACHENKO A.A.<sup>1,2</sup>, MYSINA N.Yu.<sup>1</sup>  
<sup>1</sup>*Institute of Precision Mechanics and Control of the RAS, Saratov*  
<sup>2</sup>*National Research Saratov State University named after N.G Chernyshevsky*  
**Formation of the interference microscopic images of thin layers at large numerical aperture of illuminating field**
327. PEREVOZNIKOVA A.S.<sup>1,3</sup>, DUBYNIN S.E.<sup>2,3</sup>, BORODIN Yu.P.<sup>3,4</sup>, PUTILIN A.N.<sup>3</sup>, MOROZOV A.V.<sup>2,3</sup>, KOPENKIN S.S.<sup>3,4</sup>  
<sup>1</sup>*Bauman Moscow State Technical University*  
<sup>2</sup>*Samsung Research Center, Moscow*  
<sup>3</sup>*Lebedev Physical Institute of the RAS, Moscow*  
<sup>4</sup>*MIREA – Russian Technological University, Moscow*  
**Measurements of phase shift on LCoS, operating in tilted beam, by Mach-Zehnder interferometer**
328. IL'INA N.S., POROYKOV A.Yu.  
*National Research University "Moscow Power Engineering Institute"*  
**Selection of laser interferometer scheme for measuring the form of diffuse reflective surface with high dynamic range**
329. GRIZBIL B.A.<sup>1,2</sup>, SAKHADZHI G.V.<sup>3</sup>, ZHURAVLEV S.D.<sup>3</sup>, BOGACHEV R.Yu.<sup>3</sup>, RYABUKHO V.P.<sup>1,2</sup>  
<sup>1</sup>*National Research Saratov State University named after N.G Chernyshevsky*  
<sup>2</sup>*Institute of Precision Mechanics and Control of the RAS, Saratov*  
<sup>3</sup>*JSC «RPE «Almaz», Saratov*  
**Laser speckle interferometry of relative temperature displacement of scattering objects**
330. LUKAKHIN P.O., PAVLOV I.N., RASKOVSKAYA I.L.  
*National Research University "Moscow Power Engineering Institute"*  
**Application of a laser refractive method for measuring the contact wetting angle of a drop laying on a non-transparent substrate**
331. ZAKHAROV S.M.  
*Institute of Electronic Control Machines named after I.S. Brook, Moscow*  
**Photoplethysmogram and arterial pressure measurements in real time**
332. ZAKHAROV S.M.  
*Institute of Electronic Control Machines named after I.S. Brook, Moscow*  
**Arterial pressure variability on small time intervals**
333. ISMANOV Yu.H., TYNYSHOVA T.D.  
*Institute of Physical-Technical Problems and Material Science of NAS KR, Bishkek, Kyrgyz republic*  
**Reducing the volume of input data during computer processing of interferograms**

334. IZOTOVA O.A.<sup>1</sup>, RYABUKHO V.P.<sup>1,2</sup>  
<sup>1</sup>National Research Saratov State University named after N.G Chernyshevsky  
<sup>2</sup>Institute of Precision Mechanics and Control of the RAS, Saratov  
**Interference microscope with spatial filtration of image field in spatially coherent light**
335. BELASHOV A.V.<sup>1,2</sup>, ZHIKHOREVA A.A.<sup>1</sup>, BELYAEVA T.N.<sup>3</sup>, KORNILOVA E.S.<sup>3</sup>, SALOVA A.V.<sup>3</sup>, SEMENOVA I.V.<sup>1</sup>, VASUTINSKII O.S.<sup>1</sup>  
<sup>1</sup>Ioffe Physical-Technical Institute of the RAS, Saint-Petersburg  
<sup>2</sup>ITMO University, Saint Petersburg  
<sup>3</sup>Institute of Cytology of the RAS, Russia  
**Holographic investigation of cellular membrane rupture as a result of photodynamic treatment**
336. LVOVA K.I.<sup>1</sup>, PEREVOZNIKOVA A.S.<sup>1,2</sup>, MOROZOV A.V.<sup>2,3</sup>, PUTILIN A.N.<sup>2</sup>, MALINOVSKAYA E.G.<sup>3</sup>  
<sup>1</sup>Bauman Moscow State Technical University  
<sup>2</sup>Lebedev Physical Institute of the RAS, Moscow  
<sup>3</sup>Samsung Research Center, Moscow  
**Eye tracking device optical system based on waveguide and dispersive properties of diffractive optical element**
337. DZHAMANKYZOV N.K., ISMANOV Yu.H.  
Institute of Physical-Technical Problems and Material Science of NAS KR, Bishkek, Kyrgyz republic  
**On the effect of the temperature gradient of a photothermoplastic film on the process of hologram development**
338. VORZOBOVA N.D., SOKOLOV P.P.  
ITMO University, Saint Petersburg  
**Formation of three-dimensional objects by the method of holographic 3D printing**
339. PEN E.F.  
Institute of Automation and Electrometry SB RAS, Novosibirsk  
**Holographic gratings as passive trackers of solar radiation**
340. PEREVOZNIKOVA A.S.<sup>1,2</sup>, LVOVA K.I.<sup>1</sup>, KOPENKIN S.S.<sup>2,3</sup>, DRUZHIN V.V.<sup>1</sup>  
<sup>1</sup>Bauman Moscow State Technical University  
<sup>2</sup>Lebedev Physical Institute of the RAS, Moscow  
<sup>3</sup>MIREA – Russian Technological University, Moscow  
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