

Section 3-5. PHOTONICS AND INFORMATION OPTICS

Head of section - EVTIKHIEV N.N., professor, head of 37 department,
MANYKIN E.A., professor

Secretary of section - RODIN V.G., senior scientific researcher

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Meeting 1

Thursday, January 29, 2009, 10.00

Room 104

1. MAKSIMENKO V.A., DANILOVA E.V.
Far Eastern State Transport University, Khabarovsk, Russia
The selective photoinduced light scattering in doped lithium niobate crystals
2. KRISHTOP V.V., LITVINOVA M.N., KARPETS Yu.M.
Far Eastern State Transport University, Khabarovsk, Russia
The crystallographic axes directions determination of lithium niobate crystal by electro-optical method
3. DUBOVIK V.M., IVANOV Yu.B., FETISOV E.P., FIVEISKY Yu.D.
Moscow Engineering Physics Institute (State University)
On the transport of "fotonic flame" in opal crystals and opal nanocomposites
4. MOISEYENKO V.N.
Dnipropetrovsk National University, Ukraine
Synthesis, structure and optical phenomena in globular photonic crystals on the base dioxide silicon
5. DERGACHOV M.P., MOISEYENKO V.N., EVCHYK A.V.
Dnipropetrovsk National University, Ukraine
Reflection of globular photonic crystals infiltrated with dielectrics and metals
6. SKORYNIN A.A., BUSHUEV V.A., MANTSYZOV B.I.
Lomonosov Moscow State University
Spatial light localization at diffraction laser pulse splitting in a linear photonic crystal
7. BABICHEVA V.E., LOZOVIK Yu. E.¹
*Moscow Institute of Physics and Technology (State University),
¹Institute of Spectroscopy of the RAS, Troitsk, Moscow region*
Enhanced transmission of slit array in an thin metallic film
8. OZHENKO S.S., MAIMISTOV A.I.
Moscow Engineering Physics Institute (State University)
Electromagnetic waves propagation in a nonlinear oppositely directed coupler
9. NOVOSELOV E.V.
Scientific advisor – BESPALOV V.G.
St.-Petersburg State University of Information Technologies, Mechanics and Optics, Russia
Research of radiation spectra induced by femtosecond laser-induced breakdown in atmospheric air
10. MANYKIN E.A., OSHURKO V.B., ROPYANOY A.V., FEDOROV A.V.¹
*Moscow Engineering Physics Institute (State University),
¹Russian Research Center "Kurchatov institute", Moscow*

Balance of water structures under external field

11. SIVAK A.V., VELICHANSKY V.L.¹, VASIL'EV V.V.¹, ZIBROV S.A.¹
*Moscow Engineering Physics Institute (State University),
¹Lebedev Physical Institute of the RAS, Moscow*

Multielectron states realization in quantum dots under femtosecond and nanosecond optical pumping

12. KOVALEV D.K.¹, DUDKINA T.D.
*Moscow Engineering Physics Institute (State University),
1978 High School, Moscow*

The effect of phosphorus and vanadium on photoconductive properties of bismuth titanate

Meeting 2

Thursday, January 29, 2009, 14.00

Room 104

13. MASALSKY N.V.
Scientific Research Institute of System Researches of the RAS, Moscow
Evaluation of waveguide acoustooptic device performance by temperature influences
14. CHEKHLOVA T.K., KOLMENARES M.L.J., TIMAKIN A.G.
Peoples Friendship University of Russia, Moscow
Polarization properties optical waveguides fabricated by sol-gel technique
15. BICKEJEV O.N., GOROBETS A.P., KOLOSKOV M.I.
Peoples Friendship University of Russia, Moscow
Dispersion properties of a planar anisotropic optical waveguide
16. KULYA M.S.
Scientific advisor – BESPALOV V.G.
St.-Petersburg State University of Information Technologies, Mechanics and Optics, Russia
Diffraction of the femtosecond spectral supercontinuum formed in the micro-structured fiber
17. SITNIKOV N.N., SHELYAKOV A.V.
Moscow Engineering Physics Institute (State University)
Nanostructural shape memory alloys for optical devices
18. MAVRITSKII O.B., EGOROV A.N.¹, PECHENKIN A.A.¹
*Moscow Engineering Physics Institute (State University)
¹Specialized Electronic Systems, Moscow*
The role of non-linear multi-photon processes in non-equilibrium charge carriers' generation under ultrashort pulse laser irradiation of semiconductor materials and structures
19. FLORYA I.N.
Moscow State Pedagogical University
Ultrafast superconducting single-photon detector for optical applications
20. ELEZOV M.S., KORNEEV A.A., DIVOCHIY A.V., GOLTSMAN G.N.
Moscow State Pedagogical University
Superconductive single-photon detector with photon number resolving
21. PETROV N.V.

Scientific advisor – STASELKO D.I.

St.-Petersburg State University of Information Technologies, Mechanics and Optics, Russia

Analysis of velocity distribution of microparticles in gas flow

22. ELOEV E.N.¹, MELEKHOV A.P.

Moscow Engineering Physics Institute (State University),

¹North-Osetian State University, Vladikavkaz, Russia

Laser marker on basis of the two-coordinate acoustic optical deflector

23. KATSMAN V.D., NECHAEV A.V.

Moscow State University of Printing Arts

Possibility of manufacturing CTP forms by means of the IR laser analysis

24. MALOV A.N., NEUPOKOEVA A.V., ASAYENOK Y.A.¹, RYBAKOVA S.A.¹

Irkutsk Higher Air Force Engineer School (Military Institute), Russia,

¹Irkutsk branch of Moscow State Technical University of Civil Aviation, Russia

Hologram recording on a self-developed dichromated gelatin layers by radiation with wavelength 0.53 μm

Meeting 3

Friday, January 30, 2009, 10.00

Room 104

25. POPOV I.I., NIGMATULLINA V.T., KOKURIN M.Yu.

Mari State University, Yoshkar-Ola, Russia

Multiple photon echo and microprogrammed optical computations

26. GORODETSKY A.A., BESPALOV V.G.

St.-Petersburg State University of Information Technologies, Mechanics and Optics, Russia

Terahertz time-domain spectroscopy

27. AFANASIEV K.N.

Scientific advisor – VOLOSTNIKOV V.G.

Lebedev Physical Institute of the RAS, Samara Department, Russia

The use of astigmatic transform for light fields reconstruction

28. VLASOV N.G., KULISH S.M.

Moscow State University of Technology "Stankin"

Increase of sensitivity of a method of phase contrast

29. LOPAREV A.V., KRETUSHEV A.V., IGNATYEV P.S., IVANOV A.B.,

VYSHENSKAJA T.V., TYCHINSKY V.P.

Moscow State Institute of Radio-engineering, Electronics and Automation (Technical University)

Coherent phase microscopy: new method of phase images analysis for cell's structures identification

30. STOGOVO O.M., IVANOV A.B., KRETUSHEV A.V., TYCHINSKY V.P.

Moscow State Institute of Radio-engineering, Electronics and Automation (Technical University)

Measurements of refractive index of thin liquid films in the process of their evaporation using the dynamic phase microscopy method

31. VISHNYAKOV G.N., KORNISHEVA S.V.

Russian Research Institute for Optical and Physical Measurements, Moscow

Interferometric methods of refractive index measurement

32. WOLF I.E., MALOV A.N., BORODIN A.N.
Irkutsk Higher Air Force Engineer School (Military Institute), Russia
Semi-transparent objects research by means of multispectral speckle method
33. KOMOTSKII V.A., SOKOLOV Yu.M., ALEKSEEV A.N.
Peoples Friendship University of Russia, Moscow
Investigation of optoelectronic sensor of angular displacements with use of deep phase diffraction grating
34. KAYTUKOV Ch.B.
Scientific Technical Centre "Atlas", Moscow
Synthesizing of volumetric images on the basis of flat optics
35. KONNIK M.V., SEREZHKIN L.B., STARIKOV S.N.
Moscow Engineering Physics Institute (State University)
The use of iterative methods for image restoration in optical-digital system
36. BYKOVSKY A.Yu.¹, NIKIFOROV V.A.
*Moscow Engineering Physics Institute (State University),
¹Lebedev Physical Institute of the RAS, Moscow*
Pseudorandom numbers generation method for optoelectronic schemes with multiple-valued logic Data protection coding

Meeting 4

Friday, January 30, 2009, 14.00

Room 104

37. FEDOROV I.Yu., ANGERVAKS A.E.¹, SOKOLOV V.K., SHCHEULIN A.S.¹
*Baltic State Technical University "Voenmeh", Saint-Petersburg, Russia,
¹St.-Petersburg State University of Information Technologies, Mechanics and Optics, Russia*
Optical correlators based on CdF₂ dynamical holographic medium
38. KONNIK M.V., MANYKIN E.A., STARIKOV S.N.
Moscow Engineering Physics Institute (State University)
Application of spatially varying pixels exposure technique for increase of dynamic range of correlation signal's registration
39. ROMASHKO R.V., KULCHIN Yu.N., LEE HYUNG-MAN¹, LEE HAN-YOUNG¹
*Institute of Automation and Control Processes FEB RAS, Vladivostok, Russia,
¹Korea Electronics Technology Institute, Seongnam, Republic of Korea*
Study of periodical structures formed in LiNbO₃ crystals by means of digital holography
40. YANOVSKIY A.V.
Scientific Technical Centre "Atlas", Moscow
Methods of synthesizing of complex colors in the iridescent hologram
41. VERENIKINA N.M., GONCHAROV A.S., KUZNETSOV A.S., LUSHNIKOV D.S., MARKIN V.V., NIKOLAEV A.I., ODINOKOV S.B., PAVLOV A.Yu., USOVICH E.A.
Bauman Moscow State Technical University
Method of record of multiplex holograms on the thin registering environment for optico-holographic memory
42. VERENIKINA N.M., GONCHAROV A.S., KOVALEV M.S., ODINOKOV S.B., SAGATELYAN G.R., SOLOMASHENKO A.B., USOVICH E.A.

Bauman Moscow State Technical University

Application of holograms on the photopolymer carrier for nano - and microimages formation in ultra-violet nanolithography

43. VOROBYOV S.P., KRIVENKOVA K.V.
Holography Studio at All-Russian Exhibition Center, Moscow
Using of the laser diodes for recording of applied holograms
44. GRICHUK E.S., KUZMINA M.G.¹, MANYKIN E.A.
*Moscow Engineering Physics Institute (State University),
¹Keldysh Institute of Applied Mathematics of the RAS, Moscow*
Separation of visual scene fragments via oscillatory network method
45. EVTIKHIEV N.N., SEVALNEV M.A., STARIKOV R.S.
Moscow Engineering Physics Institute (State University)
Measurement of invariant features for neural network image recognition in diffractive optical sampling scheme
46. EVTIKHIEV N.N., ZLOKAZOV E.Yu., STARIKOV R.S., STARIKOV S.N.
Moscow Engineering Physics Institute (State University)
Influence of hologram's dynamic range limitations on characteristics of invariant filters for Vander Lugt correlator
47. ALEKSEEV A.M.
St.-Petersburg State University of Information Technologies, Mechanics and Optics, Russia
The dependence of response of holographic correlator on the distortion of the spectrum and transfer function of holographic recording media
48. BEKYASHEVA Z.S., VOSTRIKOV A.A., PAVLOV A.V.
St.-Petersburg State University of Information Technologies, Mechanics and Optics, Russia
Holographic predictor for stochastic processes: on the dependence of the predictor characteristics on the nonlinear recording media properties

Posters

49. EVTIKHIEV N.N., SOLYAKIN I.V., STARIKOV S.N., SHAPKARINA E.A.
Moscow Engineering Physics Institute (State University)
The synthesis of Fourier holograms for diffractive correlators with illumination of different spatial coherence
50. KONNIK M.V., RODIN V.G., STARIKOV S.N.
Moscow Engineering Physics Institute (State University)
The synthesis of computer generated holographic filters for dispersive correlators
51. IVANOV V.I., KUZIN A.A., REKUNOVA N.N.
Far Eastern State Transport University, Khabarovsk, Russia
The thermocapillary mechanism of the IR-visualization
52. IVANOV V.I., KUZIN A.A., OVSEPIJAN A.S., SYUY T.S.
Far Eastern State Transport University, Khabarovsk, Russia
The thermocapillary optical trap
53. IVANOV V.I., LIVASHVILI A.I., BRJUHANOVA T.N.¹
*Far Eastern State Transport University, Khabarovsk, Russia,
¹Pacific National University, Khabarovsk, Russia*

- The concentration amplitude holograms in nanoparticle liquid**
54. OKISHEV K.N., IVANOV V.I., KUZIN A.A.
Far Eastern State Transport University, Khabarovsk, Russia
- The modulation of radiation in the optical connector by thermodiffusion**
55. YAN D.T.
Far Eastern State Transport University, Khabarovsk, Russia
- Optical properties of thin layers of porous silicon P-type(100)**
56. SETEIKIN A.Yu., KHRAMTSOV I.I.
Amur State University, Blagoveshensk, Russia
- Laser ablation simulation of the tooth on the basis of thermal model**
57. MIRONOV B.M., KUZNETSOV V.A.
Irkutsk Higher Air Force Engineer School (Military Institute), Russia
- Automatic objects recognition in coherent radar images**
58. MALOV A.N., NIBABIN O.O.
Irkutsk Higher Air Force Engineer School (Military Institute), Russia
- Sub surface objects visualization by means of impulse instrumental function synthesis method**
59. PAVLOV P.V., WOLF I.E., BORODIN A.N., MALOV A.N.
Irkutsk Higher Air Force Engineer School (Military Institute), Russia
- Speckl-diagnostics with spiral and singular probing beams**
60. LEGANKIN B.V., MALOV A.N., MALISOV N.P.
Irkutsk Higher Air Force Engineer School (Military Institute), Russia
- Radar image processing on the basis of homogeneous areas segmentation**
61. MALOV A.N., ONATCKYI A.N., SYTNYUK D.S.
Irkutsk Higher Air Force Engineer School (Military Institute), Russia
- Infra-red and laser air reconnaissance systems complexing**
62. VAGENIN A.A., BORODIN A.N., MALOV A.N.,
Irkutsk Higher Air Force Engineer School (Military Institute), Russia
- A sliding falling light diffraction in imaging system characteristics control**
63. BORODIN A.N., SITCHEVSKY A.V.¹, MALOV A.N.
*Irkutsk Higher Air Force Engineer School (Military Institute), Russia,
¹Irkutsk State Medical University, Russia*
- Speckle image modulations normalization**
64. BORODIN A.N., SITCHEVSKY A.V.¹, MALOV A.N.
*Irkutsk Higher Air Force Engineer School (Military Institute), Russia,
¹Irkutsk State Medical University, Russia*
- Digital holograms limiting record distances estimation**