

## **Статьи опубликованные в зарубежных журналах в 2007 г.**

1. Aleksandrov K.S., Misyl S.V., Baturinets E.E. Symmetrical analysis of structural phase transitions in crystals with the Fm3m space group. *Ferroelectrics*. – 2007. – V. 354, p. 60-68.
2. Aleksandrov K.S., Vtyurin A.N., Gerasimova Ju.V., Krylov A.S., Laptash N.M., Voyt E.I., Kocharova A.G., and Surovtsev S.V. Raman Spectra and Ordering Processes in Alcaline-Tungsten Oxyfluorides // *Ferroelectrics*. – 2007. – V. 347. – P. 79-85.
3. Aleksandrovsky A., Vyunishev A., Zaitsev A., Zamkov A., Arkhipkin V. Detection of randomized nonlinear photonic crystal structure in a non-ferroelectric crystal // *Journal of Optics A: Pure and Applied Optics*. - 2007. – V.9. – S334–S338.
4. Aleksandrovsky A.S., Arkhipkin V.G., Kuzey I.E., Vyunishev A.M., Zaitsev A.I., Zamkov A.V. Nonlinear optical characterization of spontaneously grown domain structures in SBO crystals // *Proceedings of SPIE*. – 2007. – V.6729. – 67290L-8p.
5. Aleksandrovsky A.S., Zaitsev A.I., Zamkov A.V. Observation of spontaneously grown domain structure in SBO crystals via nonlinear diffraction // *Proc. of SPIE*. – 2007. – V. 6610. – P. 66100V-1 - 66100V-6.
6. Aleksandrovsky A., Vyunishev A., Zaitsev A., Zamkov A., Arkhipkin V. Detection of randomized nonlinear photonic crystal structure in a non-ferroelectric crystal // *Journal of Optics A: Pure and Applied Optics*. – 2007. – V. 9, p. S334-S338.
7. Arkhipkin V.G., Myslivets S.A., Timofeev I.V. Effect of electromagnetically induced transparency on spectrum of defect modes of PC // *Proceedings of SPIE*. – 2007. – V.6729. – 67292H 7p.
8. Avramov P., Naramoto H., Sakai S., Narumi K., Lavrentiev V., Maeda Y. Quantum Chemical Study of Atomic Structure Evolution of Cox/C60 ( $x \geq 2.8$ ) Composites // *J. Phys. Chem. A.*, 111, 2299-2306 (2007).
9. Avramov P.V., Chernozatonskii L.A., Sorokin P.B., Gordon M.S. Multiterminal Nanowire Junctions of Silicon: A Theoretical Prediction of Atomic Structure and Electronic Properties // *Nano Lett.*, 7, p. 2063-2067 (2007).
10. Avramov P.V., Kuzubov A.A., Fedorov A.S., Sorokin P.B., Tomilin F.N., Maeda Y. Density-functional theory study of the electronic structure of thin Si/SiO<sub>2</sub> quantum nanodots and nanowires // *Phys. Rev. B* 75, 205427 (2007).
11. Avramov P.V., Yakobson B.I. Interaction of Low-Energy Ions and Atoms of Light Elements with a Fluorinated Carbon Molecular Lattice // *J. Phys. Chem. A.* 111, 1508-1514 (2007).
12. Avramov Pavel V., Sorokin Pavel B., Fedorov Alexander S., Fedorov Dmitri G., Maeda Yoshihito. Band gap unification of partially Si-substituted single wall carbon nanotubes // *Phys. Rev. B* 74, 245417 (2006).
13. Balaev D.A., Dubrovskiy A.A., Shaykhutdinov K.A., Popkov S.I., Petrov M.I. Time relaxation of residual resistance of HTSC-based composites // *Physica C*. – 2007. – V. 460-462. - № 2. – P. 1309-1310.
14. Balaev D.A., Gokhfeld D.M., Popkov S.I., Shaykhutdinov K.A., Petrov M.I. Hysteretic behavior of the magnetoresistance and the critical current of bulk Y3/4Lu1/4Ba<sub>2</sub>Cu<sub>3</sub>O<sub>7</sub> + CuO composites in a magnetic field // *Physica C*. – 2007. – V. 460-462. - № 2. – P. 1307-1308.
15. Balaev D.A., Prus A.G., Shaykhutdinov K.A., Gokhfeld D.M., Petrov M.I. Study of dependence upon the magnetic field and transport current of the magnetoresistive effect in YBCO-based bulk composites // *Supercond. Sci. Technol.* – 2007. – V. 20. – P. 495 -499.
16. Barannik A.V., Prishchepa O.O., Parshin A.M., Shabanov A.V., Nazarov V.G., Zyryanov V.Y. Magneto and electro-optical measurements of Freedericksz threshold in PDNLC films // *Proceedings of SPIE*. – 2007. – V.6637. – 5p.

17. Berggren K.-F. and Sadreev A.F. Simulation of wave chaos using resonant electric network analogues // AIP Conf. Proc. 834, 307 (2006).
18. Berry F.J., Dmitrieva T.V., Ovanesyan N.S., Lyubutin I.S., Thomas M.F., Sarkisyan V.A., Ren X., Aminov T.G., Shabunina G.G., Rudenko V.V., Vorotynov A., and Dubinskaya Yu.L. Magnetic order in FeCr<sub>2</sub>S<sub>4</sub>-type chalcogenide spinels // J. Phys. Condens. Matter. 19 (2007) 266204 (12pp).
19. Brand J. and Kolovsky A.R. Emergence of superfluid transport in a dynamical system of ultra-cold atoms // Eur. Phys. J. D 41(2), 331-336 (2007).
20. Bulgakov E.N., Rotter I., and Sadreev A.F. Comment on "Bound-state eigenenergy outside and inside the continuum for unstable multilevel systems" // Phys. Rev. A 75, 67401 (2007).
21. Bulina N.V., Lopatin V.A., Vnukova N.G., Osipova I.V., Churilov G.N. Arc synthesis of silicon-doped heterofullerenes in plasma at atmospheric pressure // Fullerene, Nanotubes, and Carbon Nanostructures, 2007, V.15, P.395-400.
22. Churilov G.N., Fedorov A.S., Sorokin P.B., Novikov P.V., Bulina N.V., Marchenko S.A., Martinez Yu.S., Gedanken A. Theoretical study and experimental investigation of hydrogen absorption by carbon nanomaterials // Hydrogen material science and chemistry of carbon nanomaterials, 2007, V.3, P.127-132.
23. Fedorov A.S., Kuzubov A.A. New principle of hydrogen adsorption inside nanotubes // Phys. stat. sol. (b), 1-4 (2007) / DOI 10.1002/pssb.200776181.
24. Fedorov A.S., Novikov P.V., Martinez Yu.S., and Churilov G.N. Influence of Buffer Gas and Vibration Temperature of Carbon Clusters on Fullerene Formation in a Carbon Plasma // Journal of Nanoscience and Nanotechnology, Vol.7, 1-6, 2007.
25. Flerov I.N., Gorev M.V., Fokina V.D., Molokeev M.S. Phase transitions in oxides, fluorides and oxyfluorides with the ordered perovskite structure // Ferroelectrics. – 2007. – V. 346, p. 77-83.
26. Fokina V.D., Flerov I.N., Gorev M.V., Molokeev M.S., Vasiliev A.D., Laptash N.M. Effect of cationic substitution on ferroelectric and ferroelastic phase transitions in Oxyfluorides A<sub>2</sub>A'WO<sub>3</sub>F<sub>3</sub> (A, A': K, NH<sub>4</sub>, Cs) // Ferroelectrics. – 2007. – V. 347, p. 60-64.
27. Gavrilyuk A.P., Karpov S.V. The Model of Resonant Domain of Metal Nanoparticle Aggregates in Pulsed Laser Fields // Proceedings of SPIE. – 2007. – V.6728. - 67281T.
28. Gokhfeld D.M. Computation of current-voltage characteristics of the SNS junctions // Physica C. – 2007. – V. 460-462. - № 2. – P. 807-808.
29. Gokhfeld D.M. Description of hysteretic current-voltage characteristics of superconductor-normal metal-superconductor junctions // Supercond. Sci. Technol. – 2007. – V. 20. – P. 62 -66.
30. Goldner Ph., Guillot-Noël O., Petit J., Popova M., Bezmaternykh L. Light-induced absorption switching in a Nd<sup>3+</sup>:GdFe<sub>3</sub>(BO<sub>3</sub>)<sub>4</sub> single crystal // Phys. Rev. B76, 165102, 2007.
31. Gorev M., Bondarev V., Flerov I., Maglione M., Simon A. Heat capacity and thermal expansion study of Ba<sub>0.9</sub>Bi<sub>0.067</sub>(Ti<sub>1-x</sub>Zr<sub>x</sub>)O<sub>3</sub> ceramics // J.Phys.: Condens. Matter. – 2007. - V.19, №34, p. 346237-346245.
32. Gunyakov V.A., Myslivets S.A., Gerasimov V.P., Arkhipkin V.G., Zyryanov V.Y., Shabanov V.F., Vetrov S.Y., Kamaev G.N., Shabanov A.V. Control of transmission spectra of planar PC with LC defect // Proceedings of SPIE. – 2007. – V.6637. – 7p.
33. Ignatchenko V.A. and Laletin O.N. Magnetoelastic ground state and waves in ferromagnet – nonmagnetic dielectric multilayer structure // Phys. Rev. B. – 2007. – V. 76. – N. 10. – P. 104419-1-104419-11.
34. Ignatchenko V.A. and Mankov Yu.I. Partial restoration of the wave spectrum of a superlattice due to cross correlations between one- and three-dimensional inhomogeneities // Phys. Rev. B. – 2007. – V. 75. – N. 23. – P. 235422-1-235422-7.

35. Kadomtseva A.M., Zvezdin A. K., Pyatakov A. P., Kuvardin A. V., Vorob'e G. P.v, Popov Yu. F., Bezmaternykh L. N. Magnetoelectric interactions in rare-earth ferroborates // Journal of Experimental and Theoretical Physics, Volume 105, Number 1, July 2007 , pp. 116-119.
36. Kim P.D., Zidanic J., Volkov N.V., Patrin G.S., Song Y.Y., Yu S.C., Kim C.G., Yun J.H. Magnetoresistance oscillations in magnetic tunnel junction // JMMM -2007.-V.316.-P.236-239.
37. Kolovsky A.R. Semiclassical analysis of the Bogoliubov spectrum in the Bose-Hubbard model // Phys. Rev. E 76, 026207 (2007).
38. Kolovsky A.R. Semiclassical quantization of the Bogoliubov spectrum // Phys. Rev. Lett. 99, 020401 (2007).
39. Korshunov M.M., Eremin I., Shorikov A., Anisimov V.I. Electronic theory for itinerant in-plane magnetic fluctuations in  $\text{NaxCoO}_2$  // Pis'ma v ZhETF 84, №12, 769-774 (2006).
40. Korshunov M.M., Eremin I., Shorikov A., Anisimov V.I., M. Renner, W. Brenig. Itinerant in-plane magnetic fluctuations and many-body correlations in  $\text{NaxCoO}_2$  // Phys. Rev. B 75, 094511 (2007).
41. Korshunov M.M., Gavrichkov V.A., Ovchinnikov S.G., Nekrasov I.A., Kokorina E.E., Pchelkina Z.V. Dominance of many body effects over one-electron mechanism for band structure doping dependence in  $\text{Nd}_{2-x}\text{Ce}_x\text{CuO}_4$ : LDA+GTB approach // J. Phys. Cond. Matter. 19, 486203 (2007).
42. Korshunov M.M., Ovchinnikov S.G. Doping dependent evolution of low-energy excitations and quantum phase transitions within an effective  $t-t'-t''-J^*$  model for high-TC copper oxides // Europ J.Physics B57, 271-278 (2007).
43. Korshunov M.M., Ovchinnikov S.G. LDA + GTB (generalized tight-binding) method for the electronic structure calculations of strongly correlated electron systems: Application for the band structure calculations of p-type cuprates // Physica C, 460-462, 1018-1019 (2007).
44. Kveglis L.I., Zhigalov V.S. Directional crystallization and self-assembling initiated by mechanical shock or electron beam in nanocrystalline Co-C and Fe-C films // Surface Science.-2007,- V. 601, No. 13.- P. 2873-2875.
45. Lavrentiev V., Naramoto H., Narumi K., Sakai S., Avramov P. Planar doping of crystalline fullerene with cobalt // Chem. Phys. Lett. 423, 366-370 (2006).
46. Maksimov D.N. and Sadreev A.F. Gaussian random waves in elastic media // Письма в ЖЭТФ, 86, 670 (2007).
47. Maksimov D.N. and Sadreev A.F. Phase correlation function of complex random Gaussian fields // Eur. Phys. Lett., 80, 50003 (2007).
48. Malakhovskii A.V., Edelman I.S., Sokolov A.E., Temerov V.L., Gnatchenko S.L., Kachur I.S., and Piryatinskaya V.G. Low temperature absorption spectra of  $\text{Tm}^{3+}$  ion in  $\text{TmAl}_3(\text{BO}_3)_4$  crystal // Journal of Alloys and Compounds, (2007) JALCOM-D-07-01478R1
49. Martyanov O., Yudanov V., Lee R., Volkov N., and Sablina K. A tool to investigate the spatial magnetic phase separation phenomena in manganites // Phys. Stat. Sol. (RRL), 1, No. 1, R22–R24 (2007).
50. Molokeev M.S., Vasiliev A.D., Kochanova A.G. Crystal structures of room- and low-temperature phases in oxyfluoride  $(\text{NH}_4)_2\text{KWO}_3\text{F}_3$  // Powder Diffraction. – 2007. – V. 22, №3, p. 227-231.
51. Myagkov V.G., Zhigalov V.S., Bykova L.E., Bondarenko G.N. Structural and magnetic features of solid synthesis and martensitic transformations in  $\text{Ni}/\text{Fe}/\text{Mg}$  (001) thin films. // JMMM.-2007.-V.310.-P.126-130.
52. Nazarov V.G., Parshin A.M., Zyryanov V.Y., Shabanov V.F., Lapanik V.I., Bezborodov V.S. Aligning effect of magnetic field on PDLC films during the phase separation // Proceedings of SPIE. – 2007. – V.6637. – 5p.
53. Nénert G., Bezmaternykh L. N., Vasiliev A. N., and Palstra T. M. Magnetic, structural, and dielectric properties of  $\text{CuB}_2\text{O}_4$  // Phys. Rev. B76, 144401, 2007.

54. Ovchinnikov S.G., Shneyder E.I. The effective Hamiltonian for cuprates at different energy scales // JMMM 310 (2), e93-e95 (2006).
55. Patrin G.S., Yakovchuk V.Yu., Velikanov D.A. Influence of semimetal spacer on magnetic properties in NiFe/Bi/NiFe trilayer films // Phys.Lett.A.-2007.-V.363.-P.164-167.
56. Petrov M.I., Balaev D.A., Gokhfeld Yu.S., Dubrovskiy A.A., Shaykhutdinov K.A. Enhancement of pinning in cerium doped Y(1-x)CeBa<sub>2</sub>Cu<sub>3</sub>O<sub>7</sub> HTSC // Physica C 2007,V. 460-462, P.1192-1193.
57. Popkov S.I., Balaev D.A., Shaihutdinov K.A., Petrov M.I. Crossover from S-I-S to S-F-S junctions in composites Y<sub>3</sub>/4Lu<sub>1</sub>/4Ba<sub>2</sub>Cu<sub>3</sub>O<sub>7</sub>+Y<sub>3</sub>(Al<sub>1</sub>\_xFex)5O<sub>12</sub> // Physica C. – 2007. – V. 460-462. - № 2. – P. 1311-1312.
58. Popov K., Myslivets S. A., George T. F., Shalaev V. M. Four-wave mixing, quantum control, and compensating losses in doped negative-index photonic metamaterials // Optics Letters, Vol. 32, Issue 20, 3044-3046 (2007).
59. Popova E., Tristan N., Hess C., Klingeler R., Büchner B., Bezmaternykh L., Temerov V., Vasil'ev A. Magnetic and thermal properties of single-crystal NdFe<sub>3</sub>(BO<sub>3</sub>)<sub>4</sub> // Journal of Experimental and Theoretical Physics, Volume 105, Number 1, July 2007 , pp. 105-107.
60. Popova E.A., Volkov D.V., Vasiliev A.N., Demidov A.A., Kolmakova N.P., Gudim I.A., Bezmaternykh L.N., Tristan N., Skourski Yu., Buechner B., Hess C., and Klingeler R. Magnetization and specific heat of TbFe<sub>3</sub>(BO<sub>3</sub>)<sub>4</sub>: Experiment and crystal field calculations // Phys. Rev. B 75, 224413 (2007).
61. Popova M. N., Chukalina E. P., Stanislavchuk T. N., Malkin B. Z., Zakirov A. R., Antic-Fidancev E., Popova E. A., Bezmaternykh L. N., and Temerov V. L. Optical spectra, crystal-field parameters, and magnetic susceptibility of multiferroic NdFe<sub>3</sub>(BO<sub>3</sub>)<sub>4</sub> // Phys. Rev. B75, 224435 (2007).
62. Ritter C., Balaev A., Vorotynov A., Petrakovski G., Velikanov D., Temerov V. and Gudim I. Magnetic structure, magnetic interactions and metamagnetism in terbium iron borate TbFe<sub>3</sub> (BO<sub>3</sub>)<sub>4</sub> : a neutron diffraction and magnetization study // J.Phys.: Condens.Matter, - 2007, - V.19, - P.196227.
63. Rotter I. and Sadreev A.F. Singularities caused by coalesced complex eigenvalues of an effective Hamilton operator // Intern. J. of Theor. Phys. 46(8), 1914-1928 (2007).
64. Sadreev A.F. and Davlet-Kildeev K.I. Electron transmission through an ac biased quantum point contact // Phys. Rev. B75, 235309-6 (2007).
65. Sakai S., Yakushiji K., Mitani S., Sugai I., Takanashi K., Naramoto H., Avramov P.V., Lavrentiev V., Narumi K., Maeda Y. Magnetic and Magnetotransport Properties in Nanogranular Co/C<sub>60</sub>-Co Film with High Magnetoresistance // Materials Transactions 48, 754-758 (2007).
66. Sakai S., Yakushiji K., Mitani S., Takanashi K., Naramoto H., Avramov P.V., Narumi K., Lavrentiev V., Maeda Y. Tunnel magnetoresistance in Co nanoparticle/Co-C<sub>60</sub> compound hybrid system // Appl. Phys. Lett. 89, 113118 (2006).
67. Shaykhutdinov K.A., Balaev D.A., Popkov S.I., Vasilyev A.D., Martyanov O.N., Petrov M.I. Thermally activated dissipation in a novel foamed Bi-based oxide superconductor in magnetic fields // Supercond. Sci. Technol. – 2007. – V. 20. – P. 491 -494.
68. Stanislavchuk T.N., E.P. Chukalina, M.N. Popova, L.N. Bezmaternykh, I.A. Gudim, "Investigation of the iron borates DyFe<sub>3</sub>(BO<sub>3</sub>)<sub>4</sub> and HoFe<sub>3</sub>(BO<sub>3</sub>)<sub>4</sub> by the method of Er<sup>3+</sup> spectroscopic probe // Phys. Lett. A, 368 (2007) 408-411.
69. Udom L. V., Sablina K. A., and Ivanov Yu. N. NMR-Study of the Crystalline and Amorphous CuB<sub>2</sub>O<sub>4</sub> // Journal of Superconductivity and Novel Magnetism, - 2007, - Vol. 20, - No. 2, -pp.183-186.
70. Val'kov V.V., Golovnya A.A. The description of the superconductivity in atomic representation for t-t'-t"-J\* model // JMMM, 310, 104-106 (2007).

71. Vasiliev A.D., Antonova A.B., Chudin O.S.,  $\mu$ -Carbonyl-1:2 $\kappa$ C-carbonyl-1  $\kappa$ C-(1 $\eta$ 5-cyclopentadienyl) ( $\mu$ -phenyl-vinylidene)bis(triphenylphosphine-2 $\kappa$ P)manganeseplatinum(Mn–Pt) // Acta Crystallographica. – 2007. – E63, m2097.
72. Vasiliev A.D., Chudin O.S., Antonova A.B.,  $\mu$ -Carbonyl-1:2 $\kappa$ C-carbonyl-1  $\kappa$ C-(1 $\eta$ 5-cyclopentadienyl)(  $\mu$ -phenyl-vinylidene)bis(triphenylphosphine-2 $\kappa$ P)rheniumplatinum(Re–Pt) diethyl ether hemisolvate // Acta Crystallographica. – 2007. – E63, m2272.
73. Vetrov S. Ya., Timofeev I. V., and Shabanov A. V. Influence of cubic nonlinearity on laser radiation transmission in a photonic crystal with spatially modified media properties // Phys. Stat. Sol. (RRL) 1, No. 3, p. 92–94 (2007).
74. Volkov D.V., Popova E.A., Kolmakova N.P., Demidov A.A., Tristan N., Skourski Yu., Buechner B., Gudim I.A., Bezmaternykh L.N. Magnetic properties of TbFe<sub>3</sub>(BO<sub>3</sub>)<sub>4</sub> // JMMM, 316 (2007), e717-e720.
75. Volkov N., Petrakovskii G., Boni P., Clementyev E., Patrin K., Sablina K., Velikanov D., Vasiliev A. Intrinsic magnetic inhomogeneity of Eu substituted La<sub>0.7</sub>Pb<sub>0.3</sub>MnO<sub>3</sub> single crystals // JMMM, - 2007, - V. 309, - P. 1-6.
76. Yasuda Y., Nakamura H., Fujii Y., Kikuchi H., Chiba M., Yamamoto Y., Hori H., Petrakovskii G., Popov M., Bezmaternikh L. Magnetic successive phase transitions of CuB<sub>2</sub>O<sub>4</sub> probed by <sup>11</sup>B-NMR technique // JMMM, - 2007, - V. 310, - № 2, - P. 1392-1393.
77. Yasuda Y., Nakamura H., Fujii Y., Kikuchi H., Chiba M., Yamamoto Y., Hori H., Petrakovskii G., Popov M., Bezmaternikh L. <sup>11</sup>B-NMR study of low-temperature phase transition in CuB<sub>2</sub>O<sub>4</sub>. // J. Phys.: Condens. Matter, - 2007, - V. 19, - P. 145277.
78. Zinenko V.I., Sofronova S.N. The nonempirical calculations of the cation ordering and lattice dynamics in the solid solution of PbSc<sub>1/2</sub>Nb<sub>1/2</sub>O<sub>3</sub> and PbSc<sub>1/2</sub>Ta<sub>1/2</sub>O<sub>3</sub> // Sol. St. Phen. – 2006. – V. 115, p. 305-311.