

CURRICULUM VITAE

Igor P. Raevski

Research Institute of Physics, Faculty of Physics, Southern Federal University (former Rostov State University),

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Gender: male

Born: 16.08.1951 in Rostov-on-Don, Russia

Area of expertise:

relaxor ferroelectrics, ferroelectrics-semiconductors, multiferroics, functional materials (phase transitions, dielectric, piezoelectric, pyroelectric, magnetic properties, charge transport, applications)

Education:

1995 *Doctor nauk (Doctor of Science) in Physics*, Rostov State University, Russia. (It is the highest earned degree in Russia awarded by a special government commission; equivalent d'une These d'Etat)

Thesis title: "The effects due to ferroelectricity and semiconductivity interaction in oxides with phase transitions of different types"

1978 *Kandidat nauk (Candidate of Science) in Physics*, Rostov State University, Russia. (This degree is equivalent to a PhD).

Thesis title: "Electric and photoelectric properties of $A^{1+}B^{5+}O_3$ compounds with the perovskite structure "

1973 *Specialist diploma in Physics* (This degree is higher than BS but lower than MS), Rostov State University, Russia

Employment:

Since 1973 –present: member of staff at Rostov State University (since 2006 -Southern Federal University), Russia.

1996–present: Professor of Faculty of Physics, Rostov State University (since 2006 Southern Federal University)

Lectures and teaching duties in physics at the 1st and 2nd year University level. Supervision of Bchl., MS, PhD students.

1985–present: Head of laboratory of semiconductive properties of ferroelectrics (since 2013- laboratory of multiferroics) of Research Institute of Physics, Rostov State University (since 2006 Southern Federal University).

1978–1985: Senior Research Associate of Research Institute of Physics, Rostov State University

1973–1978: Junior Research Associate of Research Institute of Physics, Rostov State University

Work experience abroad

2003 NATO Senior Research Fellowship at the Laboratory of Condensed Matter Physics, University of Picardy, Amiens, France.

Dielectric and Raman studies of bulk and thin film relaxor ferroelectrics.

2004 , 2013, 2014, 2015, 2017 Guest researcher at the Institute of Physics of the Academy of Sciences of the Czech Rep., Prague, Czech Rep.

Studies of relaxor ferroelectrics and multiferroics.

- 2005 Guest researcher** at the Department of Ceramics and Glass, University of Aveiro, Portugal
Dielectric and Piezoresponce Force Microscopy studies of relaxor ferroelectrics.
- 2006 , 2011, 2012, 2013 Invited Professor** at the Laboratory of Condensed Matter Physics, University of Picardy, Amiens, France.
Dielectric and Raman studies of bulk and thin film relaxors and multiferroics .
- 2008, 2013, 2014, 2015, 2016 Guest researcher** at the Advanced Ceramic Laboratory, National Taiwan University of Science and Technology (NTUST), Taipei, Taiwan, Republic of China.
Studies of lead-free piezoelectric ceramics and multiferroics.
- 2009 Guest researcher** at the School of Materials Science, Banaras Hindu University, Varanasi, India.
Dielectric and polarization studies of ternary perovskite multiferroics.
- 2010, 2011 Visiting Professor** at the National Taiwan University of Science and Technology (NTUST), Taipei, Taiwan, Republic of China.
Lecture courses “Ferroelectric oxide ceramics for electronic applications” 36 hours and “Ferroelectric devices” 18 hours.
- 2012, 2013, 2014, 2015, 2016 Guest researcher** at the Institute of Applied Physics and Materials Engineering, Faculty of Science and Technology, University of Macau, Macau, China
Studies of relaxors and multiferroics

Fellowships and grants

- 2000 A grant of the Ministry of Education and Science of the Russian Federation
2001 A grant of Russian Foundation for Basic Research;
2003 NATO Senior Research Fellowship (France)
2005 A grant of Russian Foundation for Basic Research;
2005 A Joint Grant of Russian Foundation for Basic Research and Taiwan National Science Council
2007 A grant of Russian Foundation for Basic Research;
2008 A Joint Grant of Russian Foundation for Basic Research and Taiwan National Science Council
2009 A Joint Grant of Russian Foundation for Basic Research and Department of Science & Technology (DST), Govt. of India
2011 A Joint Grant of Russian Foundation for Basic Research and National Academy of Sciences, Ukraine
2012 A Joint Grant of Russian Foundation for Basic Research and National Academy of Sciences, Belarus
2013 A grant of Russian Foundation for Basic Research;
2014 A grant of the Ministry of Education and Science of the Russian Federation
2014 A Joint Grant of Russian Foundation for Basic Research and National Academy of Sciences, Belarus
2014 A Joint Grant of Russian Foundation for Basic Research and National Academy of Sciences, Ukraine
2016 A Joint Grant of Russian Foundation for Basic Research and National Academy of Sciences, Belarus
2017 A grant of Russian Foundation for Basic Research;
2017 A grant of the Ministry of Education and Science of the Russian Federation

Publications

-3 monographs (in Russian), 6 chapters in monographs, over 280 peer-reviewed papers and 50 Russian patents

List of publications and their citation data can be found at the Research Gate:

<https://scholar.google.ru/citations?user=eBINjLUAAAAJ&hl=ru&oi=ao&cstart=0&pagesize=20>

List of publications indexed in the Web of Science and their citation data can be found in the Researcher ID:

<http://www.researcherid.com/rid/E-2020-2011>

LIST OF RECENT PUBLICATIONS
of professor Igor P. RAEVSKI indexed in the Web of Science

1. Yu. I Yuzyuk, I.P. Raevski, S. I Raevskaya, N. Lemée, M. G Karkut, W. Peng, M. El Marssi, H. Chen. Misfit strain-induced changes in the Fe-sublattice of multiferroic $\text{Pb}(\text{Fe}_{1/2}\text{Nb}_{1/2})\text{O}_3$ epitaxial nanofilm seen via Raman spectroscopy. *Journal of Alloys and Compounds*. -2017. - V. 695. -P.1821–1825.
2. Maryško M, Laguta V, Raevski I.P., Kuzian R.O., Olekhovich N.M; Pushkarev, A.V., Radyush Yu.V., Raevskaya S.I., Titov V.V., Kubrin S.P. Magnetic susceptibility of multiferroics and chemical ordering. // *AIP Advances*. 2017. V.7. P. 056409-1 - 056409-6.
3. V.V. Laguta, V.A. Stephanovich, I.P. Raevski, S.I. Raevskaya, V.V. Titov, V.G. Smotrakov, V.V. Eremkin. Magnetoelectric effect in antiferromagnetic multiferroic $\text{Pb}(\text{Fe}_{1/2}\text{Nb}_{1/2})\text{O}_3$ and its solid solutions with PbTiO_3 . // *Physical Review B*. 2017. V.95, No. 1. P. 014207-1 - 014207-13.
4. Y. Gagou, J. Belhadi, M. El Marssi, J-L Dellis, Yu I. Yuzyuk, I. P. Raevski, J.F. Scott. Intrinsic dead layer effects in relaxed epitaxial BaTiO_3 thin film grown by PLD technique // *Materials and Design*. 2017. V. 122, No. 5. P. 157–163.
5. V.A. Shuvaeva, I.P. Raevski, O.E. Polozhentsev, Y.V. Zubavichus, V.G. Vlasenko, S.I. Raevskaya, H. Chen. The Fe K-edge X-ray absorption study of the local structure of $\text{BaFe}_{0.5}\text{Nb}_{0.5}\text{O}_3$ // *Materials Chemistry and Physics*. 2017. V. 193, P. 260–266. (IF= 2.101, Q2). doi: 10.1016/j.matchemphys.2017.02.026. Accepted 18 February 2017. Published 1 June 2017. ISSN: 0254-0584. <http://dx.doi.org/10.1016/j.matchemphys.2017.02.026>
6. V.V. Laguta, A.N. Morozovska, E.I. Eliseev, I.P. Raevski, S. I. Raevskaya, E. I. Sitalo, S.A. Prosandeev, L. Bellaiche. Room-temperature paramagnetoelectric effect in magnetoelectric multiferroics $\text{Pb}(\text{Fe}_{1/2}\text{Nb}_{1/2})\text{O}_3$ and its solid solution with PbTiO_3 // *Journal of Materials Science*. 2016, V. 51, № 11. P. 5330-5342
7. M. Puri, S. Bahel, I.P. Raevski, S. B. Narang. Structure, Dielectric and Magnetic properties of $(\text{Pb}_{1-x}\text{Ca}_x)(\text{Fe}_{0.5}\text{Nb}_{0.5})\text{O}_3$ Solid Solution Ceramics // *Journal of Magnetism and Magnetic Materials*. 2016. V. 407. P. 195-200.
8. M. Puri, S. Bahel, I.P. Raevski, S. B. Narang. Dielectric and Impedance Studies of $(\text{Pb}_{1-x}\text{Ca}_x)(\text{Fe}_{0.5}\text{Nb}_{0.5})\text{O}_3$ Dielectric Ceramics // *Journal of Materials Science: Materials in Electronics*. 2016, V. 27, № 2. P. 1077-1086.
9. S.I. Raevskaya, V.V. Titov, I. P. Raevski, S.P. Kubrin, H. Chen, C.-C. Chou, D.A. Sarychev, S.I. Shevtsova, M.A. Malitskaya, I.N. Zakharchenko. Electron microscopy, XRD, Mossbauer and dielectric studies of $\text{Pb}(\text{Fe}_{0.5}\text{Nb}_{0.5})_{1-x}\text{Sn}_x\text{O}_3$ multiferroic ceramics // *Ferroelectrics*. 2016. V.496. No.1, P. 213-224.
10. A. M. Pugachev, V.K.Malinovsky, N.V. Surovtsev, Yu. M. Borzdov, I.P. Raevskii, S.I. Raevskaya, M.A. Malitskaya. Local residual stresses in pressure-treated barium titanate powders probed by inelastic light scattering // *Ferroelectrics* 2016. V.496. No.1, P. 225-230.
11. A.A. Gusev, S.I. Raevskaya, I. P. Raevski, V.P. Isupov, E.G. Avvakumov, S.P. Kubrin, H. Chen, V.V. Titov, T.A. Minasyan, C.-C. Chou, S.V. Titov, M.A. Malitskaya. Electron microscopy, XRD, dielectric and Mossbauer studies of Li-doped $\text{Pb}(\text{Fe}_{0.5}\text{Nb}_{0.5})\text{O}_3$ ceramics sintered from mechanically activated powders // *Ferroelectrics* *Ferroelectrics*. 2016. V.496. No.1, P. 250-260.
12. A.A. Gusev, S.I. Raevskaya, V.V. Titov, V.P. Isupov, E.G. Avvakumov, I. P. Raevski, H. Chen, C.-C. Chou, S.P. Kubrin, S.V. Titov, M.A. Malitskaya, D.A. Sarychev, V.V. Stashenko, S.I. Shevtsova. Electron microscopy, X-ray diffraction and Mossbauer studies of $\text{PbFe}_{0.5}\text{Nb}_{0.5}\text{O}_3$, $\text{PbFe}_{0.5}\text{Ta}_{0.5}\text{O}_3$ and $\text{BaFe}_{0.5}\text{Nb}_{0.5}\text{O}_3$ ceramics sintered from mechanoactivated nanopowders // *Ferroelectrics* 2016. V.496. No.1, P. 231-239.

13. A.M. Pugachev, I.V. Zaitseva, V.I. Kovalevskii, V.K. Malinovsky, N.V. Surovtsev, Yu. M. Borzdov, I.P. Raevskii, S.I. Raevskaya, M.A. Malitskaya. Local residual stresses in pressure-treated barium titanate powders probed by second harmonic generation // *Ferroelectrics* 2016, V. 501, No.1. P.9-14.
14. O.A. Bunina, Yu.A. Kuprina, I.P. Raevski, Ya.S. Knyazeva, S.I. Raevskaya, H. Chen, C.-C. Chou, V.V. Titov, D. Mezzane, E.I. Sitalo. X-Ray and Dielectric Studies of Hot-Pressed $K_2Sr_4Nb_{10}O_{30}$ Ceramics // *Ferroelectrics* 2016, V. 501, No.1. P.145-153. (IF=0.469). <http://dx.doi.org/10.1080/00150193.2016.1203641>. Received 13 September 2015. Accepted 23 January 2016. ISSN: 0015-0193.
15. I.P. Raevski, A.V. Pushkarev, S.I. Raevskaya, N.M. Olekhovich, Yu.V. Radyush, S.P. Kubrin, H. Chen, C.-C. Chou, D.A. Sarychev, V.V. Titov, M.A. Malitskaya. Structural, Dielectric and Mossbauer Studies of $PbFe_{0.5}Sb_{0.5}O_3$ Ceramics with Differing Degree of Compositional Ordering // *Ferroelectrics* 2016, V. 501, No.1. P.154–164.
16. S. Prosandeev, A. Malashevich, I.P. Raevski, L. Bellaiche. Dynamical magnetoelectric effects associated with ferroelectric domain walls. // *Phys.Rev. B.* 2015. V.91, № 10. P.100101(R) (5pp).
17. S. A. Prosandeev, I. P. Raevski, S. I. Raevskaya, H. Chen. Influence of epitaxial strain on clustering of iron in $Pb(Fe_{1/2}Nb_{1/2})O_3$ thin films // *Phys. Rev. B.* 2015. V.92, No 22. P.220419(R). 1-6.
18. K.-C. Feng, C.-C. Chou, C.-Y. Tsao, L.-W. Chu, I. P. Raevski and H. Chen. A novel phase-controlling-sintering route for improvement of diopside-based microwave dielectric materials. // *Ceramics International.* 2015 V. 41, Supplement 1, P. S526–S529.
19. K. Kouril, V. Chlan, H. Štěpánková, R. Rezníček, K. Ulicná, V.V. Laguta, and I.P. Raevski. NMR Study of Multiferroic Iron Niobate Perovskites. // *Acta Physica Polonica A.* 2015. V. 127. No.2. P. 234-236.
20. A. M. Pugachev, V. I. Kovalevskii, V. K. Malinovskii, M. A. Malitskaya, S. I. Raevskaya, I. P. Raevskii, and N. V. Surovtsev. Second Harmonic Generation Study of Local Polar Inhomogeneities in $Pb_3(MgNb_2)O_9$ // *Physics of the Solid State*, 2015, Vol. 57, No. 3, pp. 472–475.
21. S.I. Raevskaya, V.V. Titov, I.P. Raevski, A.G. Lutokhin, Yu. N. Zakharov, V.Yu. Shonov, A.V. Blazhevich, E.I. Sitalo, H. Chen, C.-C. Chou, S.A. Kovrigina, M.A. Malitskaya. Bias field effect on the dielectric and pyroelectric response of $Pb(Fe_{0.5}Ta_{0.5})O_3$ relaxor multiferroic ceramics. // *Ferroelectrics.* 2015, V.475, No.1. P.31-40.
22. A.A. Gusev, I. P. Raevski, E.G. Avvakumov, V.P. Isupov, S.I. Raevskaya, H. Chen, V.V. Titov, C.-C. Chou, S.P. Kubrin, S.V. Titov, M.A. Malitskaya. Dielectric properties of undoped and Li-doped $Pb(Fe_{1/2}Nb_{1/2})O_3$ ceramics sintered from mechanochemically synthesized powders // *Ferroelectrics.* 2015, V.475, No.1. P.61-67.
23. I.P. Raevski, M.S. Molokeev, S.V. Misyul, E.V. Eremin, A.V. Blazhevich, S.P. Kubrin, H. Chen, C.-C. Chou, S.I. Raevskaya, V.V. Titov, D.A. Sarychev, M.A. Malitskaya. Studies of Ferroelectric and Magnetic Phase Transitions in Multiferroic $PbFe_{0.5}Ta_{0.5}O_3$ *Ferroelectrics.* 2015, V.475, No.1. P.52-60.
24. A.A. Gusev, S.I. Raevskaya, V.V. Titov, E.G. Avvakumov, V.P. Isupov, I. P. Raevski, H. Chen, C.-C. Chou, S.P. Kubrin, S.V. Titov, M.A. Malitskaya, A.V. Blazhevich, D.A. Sarychev, V.V. Stashenko, S.I. Shevtsova. Dielectric and Mossbauer studies of $Pb(Fe_{1/2}Ta_{1/2})O_3$ multiferroic ceramics sintered from mechanoactivated powders. // *Ferroelectrics.* 2015, V.475, No.1. P.41-51.
25. I. P. Raevski, S.P. Kubrin, V.V. Laguta, M. Marysko, H. Chen, S.I. Raevskaya, V.V. Titov, C.-C. Chou, A.V. Blazhevich, E.I. Sitalo, D.A. Sarychev, T.A. Minasyan, A.G. Lutokhin, Yu.N. Zakharov, L.A. Pustovaya, I.N. Zakharchenko, M.A. Malitskaya.

- Comparative studies of ferroelectric and magnetic phase transitions in $\text{Pb}(\text{Fe}_{1/2}\text{Nb}_{1/2})\text{O}_3 - \text{PbMO}_3$ (M-Ti, Zr) multiferroic solid solutions. // *Ferroelectrics*. 2015, V.475, No.1. P.20-30.
26. S.A. Prosandeev, D.D. Khalyavin, I.P. Raevski, A.N. Salak, N.M. Olekhovich, A.V. Pushkarev, and Y.V. Radyush. Complex antipolar $\sqrt{2} \times 4 \times 2\sqrt{2}$ structure with Pnma symmetry in BiFeO_3 and $\text{BiFe}_{1/2}\text{Sc}_{1/2}\text{O}_3$: First-principles calculations. // *Phys. Rev. B*. 2014, V.90, 054110 (6pp.).
 27. M. V. Gorev, V. S. Bondarev, S. I. Raevskaya, M. P. Ivliev, I. P. Raevskii, and I. N. Flerov. Studies of the Heat Capacity and Thermal Expansion of the $\text{Na}_{0.95}\text{K}_{0.05}\text{NbO}_3$ Solid Solution // *Physics of the Solid State*, 2014, V. 56, No. 2, pp. 367–372.
 28. I.P. Raevski, V.V. Titov, M.A. Malitskaya, E.V. Eremin, S.P. Kubrin, A.V. Blazhevich, H. Chen, C.-C. Chou, S.I. Raevskaya, I.N. Zakharchenko, D.A. Sarychev, S.I. Shevtsova. Studies of ferroelectric and magnetic phase transitions in multiferroic $\text{PbFe}_{0.5}\text{Ta}_{0.5}\text{O}_3 - \text{PbTiO}_3$ solid solution ceramics // *Journal of Materials Science* 2014, V. 49, No. 18, P. 6459-6466.
 29. V.V. Laguta, V.A. Stephanovich, M. Savinov, M. Marysko, R.O. Kuzian, N.M. Olekhovich, A.V. Pushkarev, Yu.V. Radyush, I.P. Raevski, S.I. Raevskaya, S.A. Prosandeev. Superspin glass phase and hierarchy of interactions in multiferroic $\text{PbFe}_{1/2}\text{Sb}_{1/2}\text{O}_3$: an analog of ferroelectric relaxors ? // *New J. Phys.* 2014. V.16, No.11. 11304 (19pp).
 30. J. Belhadi, M. El Marssi, Y. Gagou, Yu. I. Yuzyuk, I. P. Raevski. Giant increase of ferroelectric phase transition temperature in highly strained ferroelectric $[\text{BaTiO}_3]_{0.7\Lambda}/[\text{BaZrO}_3]_{0.3\Lambda}$ superlattice // *Europhys. Lett.* 2014. V.106. 17004 (5pp.).
 31. D. D. Khalyavin, A. N. Salak, N. M. Olekhovich, A. V. Pushkarev, Yu. V. Radyush, P. Manuel, I. P. Raevski, M. L. Zheludkevich, and M. G. S. Ferreira. Polar and antipolar polymorphs of metastable perovskite $\text{BiFe}_{0.5}\text{Sc}_{0.5}\text{O}_3$. // *Phys. Rev. B*. 2014. V.89 174414 (11pp.).
 32. M. Marysko, V.V. Laguta, I.P. Raevski. Details of magnetic properties in $\text{Pb}(\text{Fe}_{1/2}\text{Nb}_{1/2})\text{O}_3$. *Acta Physica Polonica A*. 2014. V.126, No.1. P. 386-387.
 33. J. Belhadi, M. El Marssi, Y. Gagou, Yu. I. Yuzyuk, Y. El Mendili, I. P. Raevski, H. Bouyanfif, and J. Wolfman. Highly constrained ferroelectric $[\text{BaTiO}_3]_{(1-x)\Lambda}/[\text{BaZrO}_3]_{x\Lambda}$ superlattices // *J. Appl. Phys.* 2014. V. 116. P. 034108(7pp).
 34. V.I. Aleshin, I.P. Raevski. Anisotropy of the piezoelectric properties of domain-engineered pseudotetragonal ferroelectric relaxor- PbTiO_3 single crystals // *Journal of Alloys and Compounds*. 2014. V. 587, P. 138-142.
 35. V.V. Laguta, M.D. Glinchuk, M. Maryško, R.O. Kuzian, S.A. Prosandeev, S.I. Raevskaya, V.G. Smotrakov, V.V. Eremkin, I.P. Raevski. Effect of the Ba and Ti-doping on the magnetic properties of multiferroic $\text{Pb}(\text{Fe}_{1/2}\text{Nb}_{1/2})\text{O}_3$ // *Phys. Rev. B*. 2013. V.87, No. 6, 064403 (8pp.).
 36. S. Prosandeev, I. P. Raevski, M. A. Malitskaya, S. I. Raevskaya, H. Chen, C.-C. Chou, and B. Dkhil. Condensation of the atomic relaxation vibrations in lead-magnesium-niobate at $T = T^*$ // *J. Appl. Phys.* 2013. V. 114, No 12, 124103 (9pp.).
 37. V.I. Aleshin, I.P. Raevski. Piezoelectric anisotropy of orthorhombic ferroelectric single crystals // *J. Appl. Phys.* 2013. V.113, No. 22, 224105(9pp).
 38. A.T. Kozakov, O.E. Polozhentsev, A.V. Soldatov, K.A. Googlev, A.V. Nikolsky I.P. Raevski. X-ray photoelectron study and first principle calculations of the electronic structure of $\text{PbFe}_{1/2}\text{Nb}_{1/2}\text{O}_3$ single crystal in the ferroelectric and paraelectric phases // *Journal of Alloys and Compounds*. 2013. V.579, P.401-405.
 39. I.P. Raevski, N.M. Olekhovich, A.V. Pushkarev, Y.V. Radyush, S.P. Kubrin, S.I. Raevskaya, M.A. Malitskaya, V.V. Titov, V.V. Stashenko. Mössbauer studies of $\text{PbFe}_{0.5}\text{Nb}_{0.5}\text{O}_3 - \text{PbFe}_{0.5}\text{Sb}_{0.5}\text{O}_3$ multiferroic solid solutions // *Ferroelectrics*. 2013. V. 444, No. 1, P. 47-52.
 40. S.A. Gridnev, M.Yu. Voskoboinik, I.P. Raevski. Magnetodielectric Effect in Relaxor Ceramic $\text{Pb}(\text{In}_{0.5}\text{Nb}_{0.5})\text{O}_3$. *Ferroelectrics*. 2013. V. 444, No. 1, P. 60-66.

41. A. Belboukhari, Z. Abkhar, E. Choukri, Y. Gagou, N. Abdelmoula, R. Elmoznine, D. Mezzane, H. Khemakhem, A. Razumnaya, I. Raevski, I. Luk'yanchuk. Synthesis, and diffuse phase transition studies of ferroelectric solid solution $\text{Pb}_{1-x}\text{K}_{2x}\text{Nb}_2\text{O}_6$ ($x=0.1, 0.2, 0.25$ and 0.3) // *Ferroelectrics* 2013. V. 444, No. 1, P. 116-124.
42. V. S. Bondarev, A. V. Kartashev, M. V. Gorev, I. N. Flerov, E. I. Pogorel'tsev, M. S. Molokeev, S. I. Raevskaya, D. V. Suzdalev, I. P. Raevskii, Thermal and physical properties of sodium niobate ceramics over a wide temperature range // *Physics of the Solid State*. 2013, V. 55, No. 4, pp 821-828.
43. V.V. Shvartsman, A.L. Kholkin, I.P. Raevski, S.I. Raevskaya, F.I.Savenko, A.S. Emelyanov. Macroscopic and local piezoelectric properties of $\text{Pb}(\text{Mg}_{1/3}\text{Nb}_{2/3})\text{O}_3$ - PbTiO_3 single crystals exhibiting giant piezoelectric response // *J. Appl.Phys.* 2013. V.113, No 18, 187208 (4pp.).
44. A.M. Pugachev, V.I. Kovalevskii, N.V. Surovtsev, S.Kojima, S.A. Prosandeev, I.P. Raevski, and S.I. Raevskaya, Broken Local Symmetry in Paraelectric BaTiO_3 Proved by Second Harmonic Generation // *Phys.Rev.Lett.* 2012. V. 108, No. 24, 247601. 1-5.
45. I. P. Raevski, S. P. Kubrin, S. I. Raevskaya, D. A. Sarychev, S. A. Prosandeev, and M. A. Malitskaya, Magnetic Properties of $\text{PbFe}_{1/2}\text{Nb}_{1/2}\text{O}_3$: Mossbauer Spectroscopy and First Principles Calculations // *Phys.Rev.B.* 2012. V.85, No. 22, 224412. 1-5.
46. I.P. Raevski, S.P. Kubrin, S.I. Raevskaya, S.A. Prosandeev, M.A. Malitskaya, V.V. Titov, D. A. Sarychev, A.V. Blazhevich, and I.N. Zakharchenko. Dielectric and Mossbauer Studies of Ferroelectric and Magnetic Phase Transitions in A-Site and B-Site Substituted Multiferroic $\text{PbFe}_{0.5}\text{Nb}_{0.5}\text{O}_3$. // *IEEE Trans. Ultrason. Ferroelect. Freq. Contr.* 2012. V.59, No.9. P. 1872-1878.
47. V. I. Aleshin, and I. P. Raevski. Negative Poisson's ratio and piezoelectric anisotropy of tetragonal ferroelectric single crystals // *J. Appl.Phys.*..2012. V.111, 114101(8 pp).
48. J.Zhai, H. Chen, C.C. Chou, S.I. Raevskaya, S.A. Prosandeev, I.P. Raevski. Peculiarities of Temperature and Field Dependence of Tunability in $\text{Ba}_{0.6}\text{Sr}_{0.4}\text{TiO}_3$ Ceramics with Differing Grain Sizes // *J. of Alloys and Compounds*, 2011. V.509, No 20. P.6113-6116.
49. S. I. Raevskaya, C. C. Chou, A. G. Lutokhin, D. V. Suzdalev, Yu. N. Zakharov, E. M. Panchenko, V. V. Titov, I. P. Raevskii, L. A. Reznichenko, and M. A. Malitskaya. Effect of a Bias Electric Field on the Dielectric Properties of Lead-Free $(\text{Na},\text{Sr},\text{Li})\text{NbO}_3$ Ceramics with Diffuse Phase Transition // *Bulletin of the Russian Academy of Sciences. Physics*, 2011, Vol. 75, No. 5, pp. 677–679.
50. I. K. Bdikin, J. Gracio, D. A. Kiselev, I. P. Raevski, S. I. Raevskaya, S.A.Prosandeev, A. L. Kholkin. Engineering of local domains in relaxor $0.77\text{PbMg}_{1/3}\text{Nb}_{2/3}\text{O}_3$ - $0.23\text{PbSc}_{1/2}\text{Nb}_{1/2}\text{O}_3$ single crystals // *J. Appl.Phys.* 2011. Vol.110, № 5. P. 052002. 1-5.
51. E.I.Sitalo, I.P. Raevski, A.G. Lutokhin, A.V. Blazhevich, S.P. Kubrin, S.I. Raevskaya, Yu.N. Zakharov, M.A. Malitskaya, V.V. Titov, I.N. Zakharchenko Dielectric and Piezoelectric Properties of $\text{PbFe}_{1/2}\text{Nb}_{1/2}\text{O}_3$ – PbTiO_3 Ceramics From the Morphotropic Phase Boundary Compositional Range // *IEEE Transactions on Ultrasonics, Ferroelectrics and Frequency Control*, 2011, v.58, No.9. P. 1914 – 1919.
52. S. A. Prosandeev, M. S. Panchelyuga, S. I. Raevskaya, and I. P. Raevskii. Quantum-Mechanical Calculations and Analysis of Vibrational Modes in Lead Magnoniobate // *Physics of the Solid State*, 2011, Vol. 53, No. 1, pp. 147–150.