Curriculum Vitae

Svetlana I. Raevskaya

Current Address

Research Institute of Physics, Southern Federal University,
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Biographical Data

Date of Birth: March 07, 1978, citizenship: Russian Federation;
Married, 1 child

Education and Degrees

2006 PhD degree from Rostov State University, Russia, in Physics & Mathematics (Solid State Physics) In the Russian Federation, equivalent of PhD degree is named *"Kandidat nauk"* (Candidate of Science).
PhD thesis: "Dielectric properties of sodium niobate-based solid solution single crystals and ceramics"
2006 *Diploma of Qualified Specialist* in Physics from Rostov State University
(In the Russian Federation, this degree is equivalent to a Master's degree)
2002 *Diploma of Qualified Specialist* in Medicine from Rostov State Medical University
(In the Russian Federation, this degree is equivalent to a Master's degree)

Employment History

2006 - present
Assistant Professor, Sothern Federal University (former Rostov State University, Russia

Languages

Russian (native), English

Research Interests

- Ferroelectric materials, relaxor ferroelectrics, multiferroics;
- Impedance spectroscopy ;
- Mossbauer spectroscopy;

Grants and awards

2010 Russian national L'OREAL-UNESCO fellowship "For Women in Science"

2012 A grant of Russian Foundation for Basic Research

Memberships

2015 Member of the scientific council at the Ministry of Science and Education of Russian Federation

Author and co-author of more than 90 peer-reviewed papers and 1 Russian patent.

Major Recent Peer Reviewed Journal Publications

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 $Pb(Fe_{1/2}Nb_{1/2})O_3$ epitaxial nanofilm seen via Raman spectroscopy. Journal of Alloys and Compounds. -2017. -V. 695. -P.1821–1825.
2. 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 $Pb(Fe_{1/2}Nb_{1/2})O_3$ and its solid solutions with $PbTiO_3$. // Physical Review B. 2017. V.95, No. 1. P. 014207. (13 pp).
3. 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 $Pb(Fe_{0.5}Nb_{0.5})_{1-x}Sn_xO_3$ multiferroic ceramics // Ferroelectrics. 2016. V.496. No.1, P. 213-224.
4. 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.
5. 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 $Pb(Fe_{1/2}Nb_{1/2})O_3$ and its solid solution with $PbTiO_3$ // Journal of Materials Science. 2016, V. 51, № 11. P. 5330-5342.
6. 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). (6pp.).
7. 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.
8. 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 mechanochemichally synthesized powders // Ferroelectrics. 2015, V.475, No.1. P.61-67.
9. 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.
10. 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 $Pb(Fe_{1/2}Nb_{1/2})O_3$ – $PbMO_3$ (M-Ti, Zr) multiferroic solid solutions. // Ferroelectrics. 2015, V.475, No.1. P.20-30.
11. 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 $PbFe_{0.5}Ta_{0.5}O_3$ – $PbTiO_3$ solid solution ceramics // Journal of Materials Science 2014, V. 49, No. 18, P. 6459-6466.
12. V.V. Laguta, V.A. Stephanovich, M. Savinov, M. Marysko, R.O. Kuzian, N.M. Olekhnovich, A.V. Pushkarev, Yu.V. Radyush, I.P. Raevski, S.I. Raevskaya, S.A. Prosandeev. Superspin glass phase and hierarchy of interactions in multiferroic $PbFe_{1/2}Sb_{1/2}O_3$: an analog of ferroelectric relaxors ? // New J. Phys. 2014. V.16, No.11. 11304 (19pp).

13. 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.).
14. 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 $Pb(Fe_{1/2}Nb_{1/2})O_3$ // Phys.Rev.B. 2013. V.87, No. 6, 064403 (8pp.).
15. V.V. Shvartsman, A.L. Kholkin, I.P. Raevski, S.I. Raevskaya, F.I.Savenko, A.S. Emelyanov. Macroscopic and local piezoelectric properties of $Pb(Mg_{1/3}Nb_{2/3})O_3$ - $PbTiO_3$ single crystals exhibiting giant piezoelectric response // J. Appl.Phys. 2013. V.113, No 18, 187208 (4pp.).
16. 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.
17. I. P. Raevski, S. P. Kubrin, S. I. Raevskaya, D. A. Sarychev, S. A. Prosandeev, and M. A. Malitskaya, Magnetic Properties of $PbFe_{1/2}Nb_{1/2}O_3$: Mossbauer Spectroscopy and First Principles Calculations // Phys.Rev.B. 2012. V.85, No. 22, 224412. 1-5.
18. S.I. Raevskaya, A.G. Lutokhin, A. M. Pugachev, I.P. Raevski, V.V. Titov, Yu.N.Zakharov, D.V. Suzdalev, E.M. Panchenko, S. A. Prosandeev. Bias field effect on the dielectric and pyroelectric response of single crystal of uniaxial relaxor $Sr_{0.75}Ba_{0.25}Nb_2O_6$ //Ferroelectrics 2012. V.440. No.1. P.59-66.
19. R.A. Shakhovoy, S.I. Raevskaya, L.A. Shakhovaya, D.V. Suzdalev, I.P. Raevski, Yu.I. Yuzyuk, A.F. Semenchev and M. El Marssi. Ferroelectric Q-phase in oxygen-deficient single crystals of antiferroelectric $NaNbO_3$: dielectric, dilatometric and micro-Raman studies // Journal of Raman Spectroscopy. 2012. V.43, № 8, P.1141–1145.
20. 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 $PbFe_{0.5}Nb_{0.5}O_3$. // IEEE Trans. Ultrason. Ferroelect. Freq. Contr. 2012. V.59, No.9. P. 1872-1878.
21. 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 $PbFe_{1/2}Nb_{1/2}O_3$–$PbTiO_3$ Ceramics From the Morphotropic Phase Boundary Compositional Range // IEEE Transactions on Ultrasonics, Ferroelectrics and Frequency Control, 2011, v.58, No.9. P. 1914 – 1919.
22. I.P. Raevski, S.P. Kubrin, S.A. Kovrigina, S.I. Raevskaya, V.V. Titov, A.S. Emelyanov, M.A. Malitskaya and I.N. Zakharchenko. The Effect of PbO Nonstoichiometry on Dielectric and Semiconductive Properties of $PbFe_{0.5}Nb_{0.5}O_3$ -Based Ceramics // Ferroelectrics. 2010. V. 397. p.96-101.
23. Yu.N.Zakharov, S.I. Raevskaya, A.G. Lutokhin, V.V. Titov, I.P. Raevski, V.G. Smotrakov, V. V. Eremkin, A. S. Emelyanov, A.A. Pavelko. Field-induced enhancement of pyroelectric response of $PbMg_{1/3}Nb_{2/3}O_3$-$PbTiO_3$ and $PbFe_{1/2}Nb_{1/2}O_3$ -$PbTiO_3$ solid solution ceramics // Ferroelectrics. 2010. V. 399. p.20-26.
24. S.I. Raevskaya, V.V. Titov, M.A. Malitskaya, I.P. Raevski, L.A. Reznichenko, L.A. Shilkina. Structural and dielectric studies of $NaNbO_3$-$A_{0.5}Bi_{0.5}TiO_3$ (A-Li,Na,K) solid solutions // Ferroelectrics. 2010. V. 399. p.27-34.
25. I. P. Raevski, S. P. Kubrin, S. I. Raevskaya, V. V. Titov, D. A. Sarychev, M. A. Malitskaya, I. N. Zakharchenko, and S. A. Prosandeev. Experimental evidence of the crucial role of nonmagnetic Pb cations in the enhancement of the Néel temperature in perovskite $Pb_{1-x}Ba_xFe_{1/2}Nb_{1/2}O_3$ // Phys. Rev. B 2009. V.80, № 2. P.024108-1 -024108-6.

26. V. V. Titov, V. A. Shuvaeva, S. I. Raevskaya, I. P. Raevskii, and S. I. Shevtsova. Optical and Dielectric Studies of Phase Transitions in Single Crystals of $NaNbO_3$–$Gd_{1/3}NbO_3$ Solid Solutions // Physics of the Solid State, 2009, V.51, N. 7, pp. 1473-1474.
27. I.P. Raevski, S.A. Kuropatkina, S.P. Kubrin, S.I. Raevskaya, V.V. Titov, D.A. Sarychev, M.A. Malitskaya, A.S. Bogatin, I.N. Zakharchenko. Dielectric and Mössbauer studies of high-permittivity $BaFe_{1/2}Nb_{1/2}O_3$ ceramics with cubic and monoclinic perovskite structures // Ferroelectrics. 2009. V. 379. P.48-54.
28. E.I. Sitalo, Yu.N. Zakharov, A.G. Lutokhin, S.I. Raevskaya, I.P. Raevski, M.S. Panchelyuga, V.V. Titov, L.E. Pustovaya, I.N. Zakharchenko, A.T. Kozakov, A.A. Pavelko. Bias Field Effect on Dielectric and Pyroelectric Properties of $(1\text{-}x)Pb(Fe_{1/2}Nb_{1/2})O_3$–$xPbTiO_3$ // Ferroelectrics. 2009. V. 389. P.107-113.
29. S. I. Raevskaya, Yu. N. Zakharov, A. G. Lutokhin, A. S. Emelyanov, I. P. Raevski, M. S. Panchelyuga, V. V. Titov, and S. A. Prosandeev. Critical nature of the giant field-induced pyroelectric response in $Pb(Mg_{1/3}Nb_{2/3})O_3$–$xPbTiO_3$ single crystals // Appl. Phys. Lett. 2008. V.93. № 4.- P. 042903.1-3.
30. V.V. Titov, V.A. Shuvaeva, S.I. Raevskaya, A.F. Semenchev, A.M. Glazer, S.I. Shevtsova, I.P. Raevski. Studies of domain and twin patterns in NaNbO3 - Gd1/3NbO3 solid solution crystals // Ferroelectrics -2008. V.374.
31. S. Prosandeev. M. Panchelyuga, S. Raevskaya, I. Raevski, Theory of the dielectric nonlinearity in ferroelectric relaxors in the vicinity of the Vogel-Fulcher temperature under dc bias fields // Appl. Phys. Lett. 2007. V.91. № 24.- P. 242904.1-3.
32. S. I. Raevskaya, A. S. Emelyanov, F. I. Savenko, M. S. Panchelyuga, I. P. Raevski, S. A. Prosandeev, Eugene V. Colla, Haydn Chen, S. G. Lu, R. Blinc, Z. Kutnjak, P. Gemeiner, B. Dkhil, L. S. Kamzina. Quasivertical line in the phase diagram of single crystals of $PbMg_{1/3}Nb_{2/3}O_3$−$(x)PbTiO_3$ (x=0.00, 0.06, 0.13 and 0.24) with a giant piezoelectric effect //Phys.Rev.B. 2007. V.76. 060101. 1-4.