



**Immanuel Kant
Baltic Federal
University**



FunMagMa

Interdisciplinary Reference Centre:
Functionalized Magnetic Materials
for Energy and Biomedical Applications



**LABORATORY OF
Novel Magnetic Materials**

Laboratory of novel magnetic materials,
Centre for Functionalized Magnetic Materials
Science and Technology park "Factory",
Immanuel Kant Baltic Federal University

Telephone: +7 9003468482 (mobile)
E-mail: rodionova@lnmm.ru
Web: lnmm.ru
<http://eng.kantiana.ru/5-100/FunMagMa/>

Address: Gaidara 6, Kaliningrad 236000 Russia

CURRICULUM VITAE

Title, Name, Personal information:

**Assoc. Prof., Dr.
VALERIA RODIONOVA**

01 September 1984,
Sarov city,
Nizhniy Novgorod region, USSR



Education and Employment Experience

Higher Education:

2001 – 2007 – student, Faculty of Physics, M.V. Lomonosov Moscow State University;
Title of the Master Thesis „Magnetostatic and magnetoimpedance properties of amorphous glass-coated microwires and their dependence on the sample sizes”.

Scientific Education:

2007 – 2010 – PhD student, Magnetism Division, Faculty of Physics,
Lomonosov Moscow State University; under supervision of Prof. Nikolai Perov
The title of the PhD Thesis: „Static and dynamic magnetic properties of amorphous microwires and their arrays”.

2010 – PhD degree in Lomonosov Moscow State University (Russia).

2012 – PhD degree homologation in University of Basque Country (Bilbao, Spain).

Employment Experience:

June 2013 – to date	Head of Laboratory of novel magnetic materials, Science and Technology Park “Factory”, Immanuel Kant Baltic Federal University Kaliningrad, Russia;
March 2014 – to date	Associate professor (part time), Physics Department, Institute of Physics & Technology, Immanuel Kant Baltic Federal University Kaliningrad, Russia;
September 2016 – to date	Director representative, Centre for Functionalized Magnetic Materials, Immanuel Kant Baltic Federal University Kaliningrad, Russia;
May 2015 – July 2016 May 2014 – December 2014	Adjunction Researcher, Research and Education Centre of Energy efficiency, National University of Science and Technology MISiS, Moscow, Russia;
February 2016 – June 2016	Vice-director for Science, Institute of Physics & Technology, Immanuel Kant Baltic Federal University, Kaliningrad, Russia;
December 2011 – February 2014 March 2010 – December 2011	Researcher Engineer Magnetism Department, Faculty of Physics, Lomonosov Moscow State University, Moscow, Russia;
June 2011 – June 2013	Head of research department, Research and Education Centre “Functional nanomaterials”, Innovation park, Immanuel Kant Baltic Federal University, Kaliningrad, Russia;
February 2012 – January 2013	Researcher (PostDoc), Group of Magnetic Materials, Departamento Física de Materiales, Facultad de Químicas, Universidad del País Vasco/Euskal Herriko Unibertsitatea, San Sebastián, Spain;
March 2005 – March 2010	Researcher (Staff member), Institute for Theoretical and Applied Electrodynamics of the Russian Academy of Sciences, Moscow, Russia.

Scientific activities

Main numbers (on the base of WoSc, September 2016):

h-index – 8; Number of articles – 44,
Citations – 158, Book chapter – 1.

Fields of expertise:

- (1) main field: magnetism, magnetic materials
(2) other fields: solid state physics
(3) current research interests: films and nanostructures, amorphous and soft magnetic materials, biphasic magnetic microwires, layered structures, domain wall dynamics, magnetic properties of wires, high-frequency properties of amorphous materials, giant magnetic impedance, non-linear magnetoimpedance, Heusler alloys, exchange bias, uniaxial anisotropy, magnetic methods in biology, ecology and medicine, magnetic actuating.

Research skills:

The equipment setup: spectrum analyzer HP 4395A, other GMI measurements, Vibrating Sample Magnetometer (room, high, low temperatures), Vibrating Sample Anisometer, Physical Properties Measurements System, the dynamic (induction) measurement of the magnetic properties, set-up for measurement of distribution of domain wall nucleation, set-up for measurements of domain wall velocity;

The technological equipment: quenching of amorphous glass-coated microwires, annealing and cooling treatment, sputtering and electro chemical techniques.

Visiting Experience:

September –November, 2009	Guest researcher,
October – December, 2008	Group of Magnetic Materials, Departamento Física de Materiales, Facultad de Químicas, Universidad del País Vasco/Euskal Herriko Unibertsitatea, San Sebastián, Spain;
December, 2008	Guest researcher, Instituto de Ciencia de Materiales, CSIC, Madrid, Spain.

Honours, Awards, Fellowships, Travel grants:

- Best scientific report of IKBFU projects (award is in the form of additional financial stimulation from Ministry) in the framework of government assignment of Ministry of Education and Science of the Russian Federation;
- Leading scientist in BFU in 2014-2016 years (under financial support of The Ministry of Education and Science of RF in the framework of government assignment);
- Travel grant for participation in "Joint European Magnetic Symposia 2012" (Parma, Italy, 2012), Russian Foundation for Basic Research (RFBR) grant № 12-02-09551;
- Travel grant for participation in "8th European Conference on Magnetic Sensors & Actuators" and satellite "International Workshop on Magnetic Wires" (Bodrum, Turkey, 2010), supported by The Russian Foundation for Basic Research (RFBR) grant № 10-02-09442;
- The best U.M.N.I.K. (PARTICIPANT OF YOUTH SCIENTIFIC-INNOVATION COMPETITION) 2010 award;

- The best Lomonosov MSU Faculty of Physics young scientists award 2010;
- Travel grant for participation in "19th Soft Magnetic Materials Conference" (Torino, Italy, 2009), RFBR grant № 09-02-09524;
- International conference of students, post-graduates and research assistants Lomonosov – 2006 (April 2006, Moscow, Russia), oral presentation “Magnetic and magnetoimpedance properties of glass-coated Fe-rich amorphous microwires” was marked as the best;
- International conference of students, post-graduates and research assistants Lomonosov – 2005 (April 2005, Moscow, Russia), oral presentation “Features of magnetic properties of soft magnetic films Fe-Zr-N and Fe-Ni” was marked as one of the best.

Grants and contracts participation:

1. **Director:** 2017-2019, Rub 15 mln, Trapping, pinning and injecting of domain wall in wire with cylindrical symmetry with diameters from submicron to few microns and control of domain wall propagation dynamics, Ministry of Education and Science of the Russian Federation in the framework of government assignment №3.4168.2017/ПЧ;
2. **Director:** 2017-2019, Rub 15 mln, Physics fundamentals for the creation of electromagnetic actuators based on microwires, Russian Science Foundation №17-12-01569;
3. **Director:** 2014-2016, Rub 15 mln, Physics fundamentals for the creation of Magnetic actuator based on magnetically bi-phase microwires, Ministry of Education and Science of the Russian Federation in the framework of government assignment (No. 3.2582.2014/309 K);
4. **Host Doctor, Scientific Director:** mobility grant of Mrs. Lydmila Makarova from Lomonosov MSU, Study of magnetoelectrical interaction mechanisms and features of physical properties of the elastomers-based bulk multiferroics, Russian Foundation for Basic Research (RFBR) № 16-32-50102, July-December 2016;
5. **Host Doctor, Scientific Director:** mobility grant of Mrs. Anna Chlenova from Ural Federal University, Investigation of the features of low-temperature deposition of the carbon coating on the surface of the permalloy films in contact with aromatic solvents under normal conditions: Focus on biosensor applications, RFBR № 15-32-50365, July-December 2015;
6. 2013-2015, Influence of thermal treatment and chemical composition on superelastic properties of novel ferromagnetic shape memory alloys FeMnAlNi, project №14-03-00758A supported by RFBR, 2014 – 2015;
7. **Host Doctor, Scientific Director:** mobility grant of Mr. Andrey Grunin from Lomonosov MSU, Creation and investigation of magnetic and magneto-optical properties of iron and nickel-based magnetoplasmons nanostructures for optical sensors development, RFBR № 14-32-50920, September-December 2014;
8. **Host Doctor, Scientific Director:** mobility grant of Mrs. EL KAMMOUNI Rhimou from Instituto de Ciencia de Materiales, CSIC, Madrid, Spain, Effect of magnetic, magnetostrictive and structural properties of ferromagnetic phases of layered composite materials on the magnetostatic and magnetoelastic properties of composite structures, RFBR № 13-02-90920; October-November 2013;
9. **Director:** 2012, Rub 2,7 mln, Research effort for development of domestic mobility in the scientific field of "Physics and astronomy" - physical materials science, Ministry of education and science of the Russian Federation, № 14.A18.21.0236;
10. **Director:** 2012, Rub 2,4 mln, Research works in the field of experimental diagnostics of nanomaterials and modeling of nanodevices, Ministry of education and science of the Russian Federation, № 14.A18.21.2053;
11. **Scientific Director:** 2011-2013, Rub 4.6 mln, Preparation and investigation of the thin film-like and microwires-like nanostructures based on Ni-Mn-In and Ni-Mn-Ga alloys and thin films

structure based on multiferroics, Ministry of education and science of the Russian Federation, №2011-16.513.11.3073;

12. 2011-2013, Magnetic, magnetoelectric and magnetoelastic properties of nanocomposites based on the magnetostrictive and piezoelectric materials, RFBR № 11-02-00906;
13. 2011-2012, Physical principle investigation for information-processing devices based on multiferroic materials and structures, RFBR № 11-02-12170-офи-м-2011;
14. 2011-2012, Investigation of the magnetic nanoparticles properties dependence on the morphology and environment, RFBR № 11-02-90493;
15. 2011-2012, The peculiarities of the topochemical transformations of iron groups metallic nanoparticles and their compounds, The Russian Foundation for Basic Research (RFBR) №11-03-00501-a.

Patents:

1. 2016, Ferromagnetic microwire-based manipulator, № 163031 (Immanuel Kant Baltic Federal University, V. Rodionova, N. Perov, V. Samsonova, K. Chichay)
2. 2013, Carbonaceous microsensors device for determination of dopamine concentration for long-term implantation in the mammalian brain (Lomonosov Moscow State University, P. Chernykh, V. Osedlo, V. Rodionova, A. Zhukov, V. Zhukova, L. Yavich);
3. 2012, System for Heusler Nanofilms production (Immanuel Kant Baltic Federal University, A. Grunin, A. Goikhman, V. Rodionova).

Invited talks at conferences:

1. 6th Zing Bionanomaterials Conference 2016 (Varna, Bulgaria, May 8 – 11, **2016**), «New approaches in the design of magnetic tweezers–current magnetic tweezers» Valentina Bessalova, **Valeria Rodionova** and Nikolai Perov;
2. International Conference on Applied Mineralogy & Advanced Materials (Castellaneta Marina, Italy, June 7-12, **2015**), «Magneto-optical sensor based on maglasminic crystal» VICTOR BELYAEV, GRUNIN ANDREY, FEDYANIN ANDREY, **VALERIA RODIONOVA**;
3. International Conference on Superconductivity and Magnetism (Turkey, Antalya, April 27-May 2, **2014**), «Tailoring of magnetic properties of amorphous ferromagnetic microwires» **V. Rodionova**, K. Chichay, V. Zhukova, M. Ipatov, N. Perov, A. Zhukov;
4. Donostia International Conference on Nanoscaled Magnetism and Applications (Spain, San Sebastian, September 09-13, **2013**), «Manipulation of domain wall dynamics in magnetically bistable amorphous ferromagnetic glass-coated microwires by annealing» **V. Rodionova**, K. Chichay, V. Zhukova, M. Ipatov, A. Zhukov;
5. International Conference on Superconductivity and Magnetism (Istanbul, Turkey, April 29 – May 4 **2012**), “Magnetic properties of Ni-Mn-Ga AND Ni-Mn-In Heusler Alloys thin films and microwires”, **V. Rodionova**, M. Ilyn, L. Fetisov, A. Grunin, A. Goikhman, N. Perov, G. Abrosimova, A. Aronin, A. Torcunov, A. Granovsky, A. Zhukov;
6. International Workshop on Magnetic Wires (Bodrum, Turkey, July 8-9 **2010**), “Domain wall propagation in single and coupled bistable glass-coated microwires”, **Rodionova Valeria**, Ilyn Maxim, Ipatov Mihail, Zhukova Valentina, Perov Nikolay, Gonzalez Julian, Zhukov Arcady;
7. 8th European Conference on Magnetic Sensors & Actuators (Bodrum, Turkey, July 4-7 **2010**) “Spectral characteristics of the arrays of magnetically coupled glass-covered microwires”, Ilyn M., **Rodionova V.**, Ipatov M., Zhukova V., Perov N., Gonzalez J., Zhukov A.

Participation in conferences: more than 20 contributed oral talks, 30 posters since 2005.

Educational activities

Lecturer:

- Since September 2014 Bachelors courses:
Condensed matter physics (for bachelors);
Physics of low-dimensional and disordered systems.
- Since September 2015 Master courses:
Problems of condensed matter physics;
Magnetic phenomena;
Phase transitions and dimensional structure.
- PhD courses:
Modern problems of the physics of magnetic phenomena.

Advisor of the students group:

- 2010-2014 3-6 years students of Magnetic Department, Faculty of Physics, Lomonosov Moscow State University.

Supervisor of the diploma thesis (specialists):

- 2011 - Nikita Kudinov "Interaction of bistable glass-coated microwires in different positional relationship";
- Alexander Nikoshin "External factors influence on the magnetic properties of the glass-coated amorphous ferromagnetic CoFeNiBSiMo microwires".

Supervisor of the bachelor students:

- 2012 - Svetlana Medvedeva "Study of the exchange bias in FM/AFM thin films structures",
2015 - Alena Litvinova "Magnetostatic and magnetoelastic properties of biphasic microwires".

Supervisor of Master students:

- 2013 - Anna Mialicheva "Enhancement of the exchange bias in FM/AFM, FM/AFM and AFM/FM/AFM thin films structures",
- Elena Yushina "Magnetic properties of FeGa thin films",
- Yana Anekho "Magnetization process in Fe- and FeCo-based microwires",
2015 - Irina Machay "High temperature magnetic properties of biphasic microwires",
current - Alena Litvinova "Magnetostatic and magnetoelastic properties of biphasic microwires",

Supervisor of PhD students:

- current
- Kseniya Chichay “Domain wall dynamics tunable through micromagnetic structure modification”,
 - Viktor Belyaev “Plasmon-induced magneto-optical effects in ferromagnetic nanostructures”,
 - Sergey Shevyrtalov “Control of structural and magnetic properties by internal stresses in Ni-Mn-Ga based Heusler alloys in form of magnetic microwires and thin films”,
 - Kristina Gritsenko “Enhancement of the exchange bias in FM/AFM, AFM/ FM and FM/AFM/FM thin films structures by varying technological and structural parameters of samples”,
 - Irina Machay “Magnetostatic, magnetostrictive and magnetoelectric properties of the composite structures based on the amorphous glass covered microwires”,
 - Alexander Omelianchik “Core/shell nanoparticles for biomed applications”.

Organizing, reviewing and editorial activities

Participation in the organization of the international conference:

1. Chair of International Baltic Conference on Magnetism: focus on biomedical aspects (Svetlogorsk, Russia, August 30- September 03, 2015);
2. Co-organizer of the session “HF PROPERTIES, APPLICATIONS AND GMI” of Donostia International Conference on Nanoscaled Magnetism and Applications (San Sebastian, Spain, September 09-13, 2013);
3. Member of the Publication Committee of Donostia International Conference on Nanoscaled Magnetism and Applications (San Sebastian, Spain, September 09-13, 2013);
4. Chair of the organizing committee of International Baltic School on Solid State and Magnetism Phenomena (Svetlogorsk, Kaliningrad region, Russia, August 11-18, 2012);
5. Secretary of Moscow International Symposium on Magnetism (MISM'11) Program committee (Russia, Moscow, August 21-25, 2011);
6. Moscow International Symposium on Magnetism (MISM'08) – member of local organizing committee and co-editor of book of abstract (Russia, Moscow, June 20-25, 2008);
7. Moscow International Symposium on Magnetism (MISM'05) – member of local organizing committee (Russia, Moscow, June 25-30, 2005).

Served as an editor

1. Guest editor of Physics Procedia, Vol. 82, 2016 - the proceedings of International Baltic Conference on Magnetism: focus on biomedical aspects;
2. Guest editor of Journal of Magnetism and Magnetic Materials, Vol. 415, 2016 – the proceedings of International Baltic Conference on Magnetism: focus on biomedical aspects;
3. Guest editor of Journal of Magnetism and Magnetic Materials, Vol. 324, Iss. 21, 2012 – the proceedings of Moscow International Symposium on Magnetism – 2011;
4. Guest editor of the Solid State Phenomena's volume 190, 2012 – the proceedings of Moscow International Symposium on Magnetism – 2011;
5. The member of the editorial board of Journal of Basic and Applied Physics (JBAP), 2011-2013.

Served as a referee, reviewing papers submitted to

1. The journal IEEE Magnetic letters;
2. Physics Procedia, proceedings of International Baltic Conference on Magnetism: focus on biomedical aspects (Russia, Svetlogorsk, Kaliningrad region, August 30 – September 03, 2015);
3. IEEE Transactions on Magnetics, proceedings of IEEE International Magnetics Conference (INTERMAG Beijing, China, May 11-15, 2015);
4. Solid State Phenomena, proceedings of Moscow International Symposium on Magnetism (MISM-2014, Moscow, Russia, June 29- July 03, 2014);
5. IEEE Transactions on Magnetics, proceedings of IEEE International Magnetics Conference (INTERMAG Europe 2014, Dresden, Germany, May 4-8, 2014);
6. Physica Status Solidi A, proceedings of Donostia International Conference on Nanoscaled Magnetism and Applications (Spain, San Sebastian, September 09-13, 2013);
7. Solid State Phenomena, proceedings of Moscow International Symposium on Magnetism (MISM-2011, Moscow, Russia, August 21-25 2011);
8. Sensor Letters, proceedings of 8th European Conference on Magnetic Sensors & Actuators (EMSA, Bodrum, Turkey, July 4-7 2010).

Full list of publications

(the maiden name of **Rodionova** till 2010 year was **Samsonova**)

Book chapter:

1. Manuel Vázquez, Rhimou ElKammouni, Galina V. Kurlyandskaya, **Valeria Rodionova**, and Ludek Kraus, Bimagnetic Microwires, Magnetic Properties, and High-Frequency Behavior" **Chapter 7** in Novel Functional Magnetic Materials, **Springer Series in Materials Science** 231, A. Zhukov ed. (Springer, 2016) 279-310, DOI [10.1007/978-3-319-26106-5_7](https://doi.org/10.1007/978-3-319-26106-5_7);

Papers:

2017

1. **V. Rodioniva**, I. Baraban, K. Chichay, A. Litvinova, N. Perov, The stress components effect on the Fe-based microwires magnetostatic and magnetostrictive properties, **Journal of Magnetism and Magnetic Materials**, 422 (2017) 216–220, doi: [10.1016/j.jmmm.2016.08.082](https://doi.org/10.1016/j.jmmm.2016.08.082);

2016

2. Christina Gritsenko, Irina Dzhun, Georgy Babaytsev, Nikolai Chechenin, **Valeria Rodionova**, Exchange bias and coercivity fields as a function of the antiferromagnetic layer thickness in bi- and tri- layered thin-films based on IrMn and NiFe, **Physics Procedia**, 82 (2016) 51 – 55, doi: [10.1016/j.phpro.2016.05.010](https://doi.org/10.1016/j.phpro.2016.05.010);
3. V. Bessalova, N. Perov, **V. Rodionova**, New approaches in the design of magnetic tweezers - current magnetic tweezers, **Journal of Magnetism and Magnetic Materials**, 415 (2016) 66–71, doi: [10.1016/j.jmmm.2016.03.038](https://doi.org/10.1016/j.jmmm.2016.03.038);
4. Vladimir V. Khovaylo, **Valeria V. Rodionova**, Sergey V. Taskaev, Anna Kosogor, Damping Properties of Magnetically Ordered Shape Memory Alloys, **Materials Science Forum**, 845 (2016) 77-82, doi: [10.4028/www.scientific.net/MSF.845.77](https://doi.org/10.4028/www.scientific.net/MSF.845.77);

5. Gaspare Varvaro, Davide Peddis, Gianni Barucca, Paolo Mengucci, **Valeria Rodionova**, Ksenia Chichay, Alberto Maria Testa, Elisabetta Agostinelli, and Sara Laureti, Highly Textured FeCo Thin Films Deposited by Low Temperature Pulsed Laser Deposition, **ACS Appl. Mater. Interfaces**, 7 (40) (2015) 22341–22347, DOI: [10.1021/acsami.5b06030](https://doi.org/10.1021/acsami.5b06030);
6. Ch. Gritsenko¹, I. Dzhun, N. Chechenin, G. Babaytsev, **V. Rodionova**, Dependence of the exchange bias on the thickness of antiferromagnetic layer in the trilayered NiFe/IrMn/NiFe thin-films, 75 (2015) 1066–1071, **Physics Procedia**, doi: [10.1016/j.phpro.2015.12.176](https://doi.org/10.1016/j.phpro.2015.12.176);
7. Konstantin P. Skokov, Yury G. Pastushenkov, Sergey V. Taskaev, **Valeria V. Rodionova**, Micromagnetic analysis of spin-reorientation transitions. The role of magnetic domain structure, **Physica B: Condensed Matter**, 478 (2015) 12-16, doi: [10.1016/j.physb.2015.08.044](https://doi.org/10.1016/j.physb.2015.08.044);
8. S. Shevyrtalov, K. Chichay, P. Ershov, V. Khovaylo, A. Zhukov, V. Zhukova, **V. Rodionova**, Temperature Dependent Magnetic and Structural Properties of Ni-Mn-Ga Heusler Alloy Glass-Coated Microwires, **Acta Physica Polonica A**, 127 (2) (2015) 603-605, DOI: [10.12693/APhysPolA.127.603](https://doi.org/10.12693/APhysPolA.127.603);
9. K. Chichay, **V. Rodionova**, M. Ipatov, V. Zhukov, A. Zhukov, Effect of Temperature and Time of Stress Annealing on Magnetic Properties of Amorphous Microwires, **Acta Physica Polonica A**, 127 (2) (2015) 600-602, DOI: [10.12693/APhysPolA.127.600](https://doi.org/10.12693/APhysPolA.127.600);
10. I. Iglesias, R. El Kammouni, K. Chichay, N. Perov, M. Vazquez, **V. Rodionova**, Magnetic Properties of CoFeSiB/CoNi, CoFeSiB/FeNi, FeSiB/CoNi, FeSiB/FeNi Biphasic Microwires in the Temperature Range 295-1200 K, **Acta Physica Polonica A**, 127 (2) (2015) 591-593, DOI: [10.12693/APhysPolA.127.591](https://doi.org/10.12693/APhysPolA.127.591);
11. I. Dzhun, N. Chechenin, K. Chichay, **V. Rodionova**, Dependence of Exchange Bias Field on Thickness of Antiferromagnetic Layer in NiFe/IrMn Structures, **Acta Physica Polonica A**, 127 (2) (2015) 555-557, DOI: [10.12693/APhysPolA.127.555](https://doi.org/10.12693/APhysPolA.127.555);
12. V. Belyaev, A. Grunin, K. Chichay, S. Shevyrtalov, A. Fedyanin, **V. Rodionova**, Magnetic Properties of Magnetoplasmonic Crystals Based on Commercial Digital Discs, **Acta Physica Polonica A**, 127 (2) (2015) 546-548, DOI: [10.12693/APhysPolA.127.546](https://doi.org/10.12693/APhysPolA.127.546);
13. V. Rodionov, **V. Rodionova**, M. Annaorazov, Phase Transitions in Fe-Rh Alloys Induced by Temperature, **Acta Physica Polonica A**, 127 (2) (2015) 445-447, DOI: [10.12693/APhysPolA.127.445](https://doi.org/10.12693/APhysPolA.127.445);
14. Rodionov V.V., **Rodionova V.V.**, Annaorazov M.P., Heat pumping scheme based on inducement of the F-AF transition in FeRh by pressure, **Solid State Phenomena**, 233-234 (2015) 192-195, DOI: [10.4028/www.scientific.net/SSP.233-234.192](https://doi.org/10.4028/www.scientific.net/SSP.233-234.192);
15. IGLESIAS Irene, EL KAMMOUNI Rhimou, CHICHAY Ksenia, VAZQUEZ Manuel, **RODIONOVA Valeria**, High temperature properties of CoFe/CoNi and Fe/CoNi biphasic microwires, **Solid State Phenomena**, 233-234 (2015) 265-268, DOI: [10.4028/www.scientific.net/SSP.233-234.265](https://doi.org/10.4028/www.scientific.net/SSP.233-234.265);
16. Ksenia Chichay, **Valeria Rodionova**, Mihail Ipatov, Valentina Zhukova, Arkady Zhukov, Manipulation of magnetic properties and domain wall dynamics of amorphous ferromagnetic Co_{68.7}Fe₄Ni₁B₁₃Si₁₁Mo_{2.3} microwire by changing of annealing temperature, **Solid State Phenomena**, 233-234 (2015) 269-272, DOI: [10.4028/www.scientific.net/SSP.233-234.269](https://doi.org/10.4028/www.scientific.net/SSP.233-234.269);
17. **Rodionova V.**, Dzhun I., Chichay K., Shevyrtalov S., Chechenin N., Enhancement of exchange bias in NiFe/IrM, IrMn/NiFe and NiFe/IrMn/NiFe structures with different thickness of antiferromagnetic layer, **Solid State Phenomena**, 233-234 (2015) 427-430, DOI: [10.4028/www.scientific.net/SSP.233-234.427](https://doi.org/10.4028/www.scientific.net/SSP.233-234.427);

18. **Rodionova V.**, Shevyrtalov S., Chichay K., Okubo A., Kainuma R., Umetsu R. Y., Ohtsuka M., Bozhko A., Golub V., Gorshenkov M., Lyange M., Khovaylo V., Temperature dependent magnetic and structural properties of Co₂(Fe, Ti)Ga thin films, **Solid State Phenomena**, 233-234 (2015) 674-677, DOI: [10.4028/www.scientific.net/SSP.233-234.674](https://doi.org/10.4028/www.scientific.net/SSP.233-234.674);
19. Victor Belyaev, Andrey Grunin, Andrey Fedyanin, **Valeria Rodionova**, Magnetic and Magneto-Optical Properties of Magnetoplasmonic Crystals, **Solid State Phenomena**, 233-234 (2015) 599-602, DOI: [10.4028/www.scientific.net/SSP.233-234.599](https://doi.org/10.4028/www.scientific.net/SSP.233-234.599);
20. A. I. Grunin, A. Yu. Goikhman, **V. V. Rodionova**, S. S. Medvedeva, Features of the phase formation in Ni-Mn-In Heusler alloy thin films, **Journal of Surface Investigation. X-ray, Synchrotron and Neutron Techniques**, 9 (3) (2015) 451-456, DOI: [10.1134/S1027451015030064](https://doi.org/10.1134/S1027451015030064);

2014

21. K. Chichay, **V. Rodionova**, V. Zhukova, S. Kaloshkin, M. Churyuknova, A. Zhukov, Investigation of the magnetostriction coefficient of amorphous ferromagnetic glass coated microwires, **Journal of Applied Physics**, 116 (2014) 173904, <http://dx.doi.org/10.1063/1.4900481>.
22. A. Zhukov, K. Chichay, A. Talaat, **V. Rodionova**, J.M. Blanco, M. Ipatov and V. Zhukova, Manipulation of magnetic properties of glass-coated microwires by annealing, **Journal of Magnetism and Magnetic Materials** 00 (2014) 000—000, [10.1016/j.jmmm.2014.10.003](https://doi.org/10.1016/j.jmmm.2014.10.003);
23. R. El Kammouni, I. Iglesias, K. Chichay, P. Svec, **V. Rodionova**, M. Vazquez, High-temperature magnetic behavior of soft/soft and soft/hard Fe and Co-based biphasic microwires, **Journal of Applied Physics**, 116 (2014) 093902, <http://dx.doi.org/10.1063/1.4894618>;
24. Vladimir Khovaylo, **Valeria Rodionova**, Maria Lyange, Ksenia Chichay, Elena Gan'shina, Andrey Novikov, Georgy Zykov, Alexei Bozhko, Makoto Ohtsuka, Rie Y. Umetsu, Akinari Okubo, Ryosuke Kainuma, Magnetic, magneto-optical and magnetotransport properties of Ti-substituted Co₂FeGa thin films, **Proc. of SPIE** 9172 (2014) 91720M, [doi: 10.1117/12.2061650](https://doi.org/10.1117/12.2061650);
25. Vladimir V. Khovaylo, **Valeria V. Rodionova**, Sergey N. Shevyrtalov, and Val Novosad, Magnetocaloric effect in “reduced” dimensions: Thin films, ribbons, and microwires of Heusler alloys and related compounds, **Phys. Status Solidi B**, 251 №10 (2014) 2104-2113, DOI: [10.1002/pssb.201451217](https://doi.org/10.1002/pssb.201451217);
26. **V. Rodionova**, K. Chichay, V. Zhukova, N. Perov, M. Ipatov, P. Umnov, V. Molokanov, A. Zhukov, Tailoring of magnetic properties of amorphous ferromagnetic microwires, **Journal of Superconductivity and Novel Magnetism** (2014), DOI [10.1007/s10948-014-2777-8](https://doi.org/10.1007/s10948-014-2777-8);
27. Valentina Zhukova, **Valeria Rodionova**, Leonid Fetisov, Alexey Grunin, Alexander Goikhman, Alexandr Torcunov, Alexandr Aronin, Galina Abrosimova, Alexandr Kiselev, Nikolai Perov, Alexandr Granovsky, Tomas Ryba, Stefan Michalik, Rastislav Varga, and Arcady Zhukov, Magnetic Properties of Heusler-Type Microwires and Thin Films, **IEEE TRANSACTIONS ON MAGNETICS**, (2014) DOI: [10.1109/TMAG.2014.2324494](https://doi.org/10.1109/TMAG.2014.2324494);
28. A.I. Grunin, I.I. Lyatun, P.A. Ershov, **V.V. Rodionova**, A.Yu. Goikhman, Optimization of technologies of Heusler alloy Ni-Mn-In thin films formation by pulsed laser deposition, **Bulletin of the I. Kant Baltic Federal University**, 4 (2014) 18—23 (in Russian);
29. N.G. Chechenin, P.N. Chernykh, S.A. Dushenko, I.O. Dzhun, A.Y. Goikhman, **V.V. Rodionova**, Asymmetry of Magnetization Reversal of Pinned Layer in NiFe/Cu/NiFe/IrMn Spin-Valve Structure, **Journal of Superconductivity and Novel Magnetism** 27 (2014) 1547–1552, DOI [10.1007/s10948-013-2473-0](https://doi.org/10.1007/s10948-013-2473-0);
30. K. Chichay, **V. Rodionova**, V. Zhukova, M. Ipatov, A. Zhukov, Manipulation of magnetic properties and domain wall dynamics in amorphous ferromagnetic microwires by annealing

under applied stress, **Solid State Phenomena**, 215 (2014) 432-436, [doi:10.4028/www.scientific.net/SSP.215.432](http://dx.doi.org/10.4028/www.scientific.net/SSP.215.432);

31. V. Zhukova, J.M. Blanco, **V. Rodionova**, M. Ipatov, A. Zhukov, Fast magnetization switching in Fe-rich amorphous microwires: effect of magnetoelastic anisotropy and role of defects, **Journal of Alloys and Compounds**, 586 (2014) S287–S290, <http://dx.doi.org/10.1016/j.jallcom.2012.09.039>;

2013

32. **V. Rodionova**, M. Ilyn, A. Granovsky, N. Perov, V. Zhukova, G. Abrosimova, A. Aronin, A. Kiselev, and A. Zhukov, Internal stress induced texture in Ni-Mn-Ga based glass-covered microwires, **Journal of Applied Physics**, 114, 123914 (2013) <http://dx.doi.org/10.1063/1.4822168>;
33. A. Zhukov, J. M. Blanco, A. Chizhik, M. Ipatov, **V. Rodionova**, and V. Zhukova, Manipulation of domain wall dynamics in amorphous microwires through domain wall collision, **Journal of Applied Physics**, 114, 043910 (2013) <http://dx.doi.org/10.1063/1.4816560>;
34. A. Zhukov, **V. Rodionova**, M. Ilyn, A.M. Aliev, R. Varga, S. Michalik, A. Aronin, G. Abrosimova, A. Kiselev, M. Ipatov, V. Zhukova, Magnetic properties and magnetocaloric effect in Heusler-type glass-coated NiMnGa microwires, **Journal of Alloys and Compounds**, 575 (2013) 73–79 <http://dx.doi.org/10.1016/j.jallcom.2013.04.083>;
35. K. Chichay, V. Zhukova, **V. Rodionova**, M. Ipatov, A. Talaat, J. M. Blanco, J. Gonzalez, and A. Zhukov, Tailoring of domain wall dynamics in amorphous microwires by annealing, **Journal of Applied Physics**, 113, 17A318 (2013) <http://dx.doi.org/10.1063/1.4795617>;
36. **V. Rodionova**, M. Ilyn, M. Ipatov, V. Zhukova, N. Perov, J. Gonzalez, and A. Zhukov, Spectral Characteristics of the Arrays of Magnetically Coupled Glass-Covered Microwires, **SENSOR LETTERS**, Vol. 11 (2013) 115–118;
37. J. M. Blanco, A. Chizhik, M. Ipatov, V. Zhukova, J. Gonzalez, A. Talaat, **V. Rodionova**, A. Zhukov, Manipulation of Domain Wall Dynamics in Microwires by Transverse Magnetic Field, **Journal of the Korean Physical Society**, Vol. 62, No. 10, (2013) 1363-1367;
38. A.I. Novikov, I.S. Dubenko, A.I. Grunin, A.Yu. Goikhman, P.A. Ershov, **V.V. Rodionova**, E.A. Ganshina, A. Zhukov, V. Zhukova, A.B. Granovskiy, Magnetic and magneto-optical properties of Ni-Mn-In Heusler alloys films produced by pulsed laser deposition method, **Materialovedenie (Materials Science)** №7 (2013) 11-14 (in Russian);
39. Samsonova V.V., Karpenko O.I., Koptsik S.V., Perov N.S., **Rodionova V.V.**, Benediktova A.I., Investigation of the soils magnetic properties in the surroundings of the “Severonikel”, **Physical Problems in Ecology (Ecological Physics)** № 19 (2013) 442-447 (in Russian);

2012

40. **V. Rodionova**, M. Ilyn, M. Ipatov, V. Zhukova, N. Perov and A. Zhukov, Spectral properties of electromotive force induced by periodic magnetization reversal of arrays of coupled magnetic glass-covered microwires, **Journal of Applied Physics** 111 07E735 (2012) <http://dx.doi.org/10.1063/1.3680529>;
41. V. Zhukova, J.M. Blanco, **V. Rodionova**, M. Ipatov and A. Zhukov, Domain wall propagation in micrometric wires: Limits of single domain wall regime, **Journal of Applied Physics** 111 07E311 (2012) <http://dx.doi.org/10.1063/1.3672076>;
42. Arcady Zhukov, Carlos Garcia, Maxim Ilyn, Rastislav Varga, Juan Jose del Val, Alexander Granovsky, **Valeria Rodionova** and Valentina Zhukova, Magnetic and transport properties of granular and Heusler-type glass-coated microwires, **Journal of Magnetism and Magnetic Materials** 324 (2012) 3558–3562 <http://dx.doi.org/10.1016/j.jmmm.2012.02.089>;

43. A. Grunin, A. Goikhman, **V. Rodionova**, N. Shusharina, Optimization of thin films formation of Ni-Mn-In Heusler alloy prepared by pulsed laser deposition, **Advanced materials** (Russian journal, in Russian) № 4 (2012) 77-81;
44. A.V. Anisimov, A.Yu. Goikhman, G.S. Kupriyanova, V.N. Nevolin, A.P. Popov, **V.V. Rodionova**, Change in the magnetic properties of polycrystalline thin-film magnetite upon introduction of an iron sublayer, **Physics of the Solid State** 54 No. 6 (2012) 1153–1159;
45. A. Grunin, A. Goikhman, **V. Rodionova**, Ni-Mn-In Heusler Alloy Thin Films Grown by Pulsed Laser Deposition, **Solid State Phenomena** 190 (2012) 311-314;
46. Arcady Zhukov, Juan Maria Blanco, Mihail Ipatov, **Valeria Rodionova** and Valentina Zhukova, Magnetoelastic effects and distribution of defects in micrometric amorphous wires, **IEEE Transactions on Magnetics** 48 (4) (2012) 1324 - 1326;
47. Samsonova V.V., Koptsik S.V., Perov N.S., **Rodionova V.V.**, Magnetic properties of the polluted soils in the surroundings of the “Pechenganikel” smelter on Kola Peninsula, **Physical Problems in Ecology (Ecological Physics)** № 18 (2012) 353-356 (in Russian);
48. **V. Rodionova**, V. Zhukova, M. Ilyn, M. Ipatov, N. Perov, A. Zhukov, The defects influence on domain wall propagation in bistable glass-coated microwires, **Physica B** 407 (9) (2012) 1446-1449;
49. **V. Rodionova**, N. Kudinov, A. Zhukov, N. Perov, Interaction of bistable glass-coated microwires in different positional relationship, **Physica B** 407 (9) (2012) 1438-1441;

2007-2011

50. **Valeria Rodionova**, Alexander Nikoshin, Jacob Torrejón, Giovanni A. Badini-Confalonieri, Nikolai Perov and Manuel Vazquez, Temperature dependent magnetic properties of magnetically biphasic microwires, **IEEE Transactions on Magnetics**, 47, № 10 (2011) 3787-3790;
51. Samsonova V.V., Norina S.B., Perov N.S., **Rodionova V.V.**, Ecological magnetic monitoring of the plankton of the natural reservoir and the rock lichen, **Physical Problems in Ecology** № 17 (2011) 387-392 (in Russian);
52. **Rodionova V.**, Ipatov M., Ilyn M., Zhukova V., Perov N., Gonzalez J., Zhukov A., Tailoring of Magnetic Properties of Magnetostatically-Coupled Glass-Covered Magnetic Microwires, **Journal of Superconductivity and Novel Magnetism** 24 1-2 (2011) 541-547 DOI: 10.1007/s10948-010-0989-0;
53. **V. Rodionova**, M. Ipatov, M. Ilyn, V. Zhukova, N. Perov, L. Panina, J. Gonzalez, and A. Zhukov, Magnetostatic interaction of glass-coated magnetic microwires, **Journal of Applied Physics** 108 016103 (2010) <http://dx.doi.org/10.1063/1.3429245>;
54. **V. Rodionova**, M. Ipatov, M. Ilyn, V. Zhukova, N. Perov, J. Gonzalez, and A. Zhukov, Design of magnetic properties of arrays of magnetostatically coupled glass-covered magnetic microwires, **Phys. Status Solidi A** 207 № 8 (2010) 1954-1959 / DOI 10.1002/pssa.200925497;
55. Khomenko E.V., Chechenin N.G. Dzhun I.O., Perov N.S., **Samsonova V.V.**, Goikhman A.Yu., Zenkevich A.V., Magnetic anisotropy in IrMn/Co structures with an alternative sequence of deposition of antiferromagnetic and ferromagnetic layers, **Physics of the Solid State**, 52 (8) (2010) 1701-1708;
56. Iakubov I.T., Lagarkov A.N., Maklakov S.A., Osipov A.V., Rozanov K.N., Ryzhikov I.A., **Samsonova V.V.**, Sboychakov A.O., Microwave and static magnetic properties of multi-layered iron-based films, **Journal of Magnetism and Magnetic Materials** 321 (2009) 726-729 <http://dx.doi.org/10.1016/j.jmmm.2008.11.036>;

57. Antonov A.S., Buznikov N.A., D'yachkov A.L., Furmanova T.A., Rakhmanov A.A., **Samsonova V.V.**, Influence of Glass Coating Thickness on Magnetoimpedance Ratio in Co-Based Amorphous Microwires, **Solid State Phenomena** 152-153 (2009) 317-320;
58. Antonov A.S., Buznikov N.A., Rakhmanov A.A., **Samsonova V.V.**, Surface domain structure and off-diagonal magnetoimpedance in amorphous glass-coated microwires, **Technical Physics Letters**, 35 № 1 (2009) 89-91;
59. Antonov A.S., Buznikov N.A., D'yachkov A.A., Rakhmanov A.A., **Samsonova V.V.**, Furmanova T.A., Glass-coat thickness influence on magnetoimpedance of amorphous microwires, **Radiotechnic and Electronics** 54 (11) (2009) 1387-1390 (in Russian);
60. **Samsonova V.V.**, Sboychakov A.O., The magnetization model of multilayered composite thin films: Beyond the effective-medium theories, **Journal of Magnetism and Magnetic Materials**, 321 (18) (2009) 2707-2711 <http://dx.doi.org/10.1016/j.jmmm.2009.03.077>;
61. **Samsonova V.V.**, Antonov A.S., Buznikov N.A., Rakhmanov A.A., Zhukov A.P., Experimental study of surface domain structure effects on off-diagonal magnetoimpedance in glass-coated Co-based microwires, **Journal of Physics: Conference Series** 98 (2008) /doi:10.1088/1742-6596/98/6/062004;
62. **Samsonova V.**, Antonov A., Iakubov I., Nastasjuk A., Perov N., Rakhmanov A., Dynamic magnetic charges of domain walls and their influence on microwire magnetoimpedance, **Journal of Non-Crystalline Solids** 353 (8-10) (2007) 938-940.

Proceedings:

63. Akmal'dinov K., **Samsonova V.**, Perov N., Magnetostatic magnetization of Co-microwires arrays, Proceedings of International conference New in Magnetism and Magnetic Materials, June 28-July 4, 2009, Moscow, Russia, pp. 864-866 (in Russian);
64. Prudnikov V.N., Perov N.S., **Samsonova V.**, "Set of practical exercises for magnetism specialization students based «LAKESHORE»VSM", Proceedings of International conference New in Magnetism and Magnetic Materials, June 28-July 4, 2009, Moscow, Russia, pp. 864-866 (in Russian);
65. Prudnikov V.N., Perov N.S., **Samsonova V.**, "Set of practical exercises for magnetism specialization students based experimental set-up «Kinetics»", Proceedings of International conference New in Magnetism and Magnetic Materials, June 28-July 4, 2009, Moscow, Russia, pp. 353 (in Russian);
66. **Samsonova V.**, Samsonova V. (Jn), Ipatov M., Ilyn M., Zhukova V., Zhukov A., Tailoring of hysteresis loop shape of glass-coated microwires arrays, Proceedings of International conference New in Magnetism and Magnetic Materials, June 28-July 4, 2009, Moscow, Russia, pp. 357-359 (in Russian);
67. **Samsonova V.V.**, Ipatov M.P., Ilyn M.I., Zhukova V.A., Perov N.S., Zhukov A.P., "Applied aspects of non-linear magnetic response in magnetostatically-coupled microwires», Proceedings of International conference «Fundamental and application aspect of innovation projects of Department of Physics, Moscow State University», November 18-19, 2009, Moscow, Russia, pp. 125-126;
68. **Samsonova V.**, Perov N., Ymnov P., Molokanov V., Dependence magnetic and magnetoimpedance properties of amorphous Fe-based alloys on their forms. Thickness of glass-coat influence for microwire, Proceedings of International scientific-technical conference "Materials for passive radio-electronic components", September 18-21, 2007, Penza, Russia, pp. 95-105 (in Russian);

69. Belousova V., **Samsonova V.**, Tereshuna I., Magnetic properties of low dimension Fe-based structures, Proceedings of International conference “Materials with special physical properties and magnetic systems”, October 1-5, 2007, Suzdal, Russia, pp. 102-111 (in Russian);
70. **Samsonova V.**, Rakhmanov A., Nastasuk A., Iakubov I., Antonov A., Static and dynamic demagnetization field influence on magnetoimpedance properties in Co-based microwires, Proceedings of International school-workshop New Magnetic Materials of Microelectronics, June 12-16, 2006, Moscow, Russia, pp. 444-446 (in Russian);
71. Rakhmanov A., **Samsonova V.**, Antonov A., Perov N., Peculiarities of magnetic and magnetoimpedance properties of amorphous Fe-based class-coated microwires, Proceedings of International school-workshop New Magnetic Materials of Microelectronics, June 12-16, 2006, Moscow, Russia, pp. 814-816 (in Russian).