



**Immanuel Kant  
Baltic Federal  
University**

Research and Education Center  
“Smart materials and biomedical applications”  
Institute of Physics, Mathematics and  
Information Technology  
Science and Technology park “Factory”  
Immanuel Kant Baltic Federal University

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## CURRICULUM VITAE

### Title, Name, Personal information:



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

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

### Education and Employment Experience

#### Education:

2001 – 2007 – master student, Faculty of Physics, 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:

2012 – PhD degree homologation in University of Basque Country (Bilbao, Spain);  
2010 – PhD degree in Lomonosov Moscow State University (Russia);  
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”.

## Employment Experience:

September 2020 – to date	Director of Research and Education Center “Smart materials and biomedical applications”, Science and Technology Park “Factory”, Institute of Physics, Mathematics and Information Technology, Immanuel Kant Baltic Federal University Kaliningrad, Russia;
June 2013 – September 2020	Head of Laboratory of Novel Magnetic Materials, Science and Technology Park “Factory”, Institute of Physics, Mathematics and Information Technology, Immanuel Kant Baltic Federal University Kaliningrad, Russia;
March 2014 – to date	Associate professor (part time), Institute of Physics, Mathematics and Information Technology (till Sept 2016 (former name) – Physics Department, Institute of Physics & Technology), Immanuel Kant Baltic Federal University Kaliningrad, Russia;
May 2017 – to date	Expert,
May 2015 – July 2016	Adjunct Researcher,
May 2014 – December 2014	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	Researcher,
March 2010 – December 2011	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	PostDoctoral Scientist (Researcher), 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

Junior 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, May 2021

h-index – 13; Number of articles – 106, Book chapter – 1,  
Citations – 759 (without self-citation – 577)

#### on the base of Scopus, May 2021

h-index – 13; Number of articles – 123, Book chapter – 1,  
Citations – 778

### Fields of expertise:

main field	magnetism, magnetic materials
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, Heusler alloys, exchange bias, uniaxial anisotropy, magnetic methods in biology, ecology and medicine, electromagnetic actuating.

### Visiting Experience:

May 2019,	Visiting Professor,
December 2017	Gdansk University of Technology, Nanotechnology Centre, Gdansk, Poland;
	Guest researcher,
September – November, 2009 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:

- Woman of the Year “In Science” – 2018, awarded by Kaliningrad region government;
- The L’Oréal-UNESCO For Women in Science Award in Russia – 2018;
- 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 – 2015;
- 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. **PI:** 2021-2024, Rub 32 mln/year “Development and investigation of multimaterials with magnetic nanoinclusions for additive 3d-5d technologies”, Russian Science Foundation (RSF), № 21-72-30032
2. **PI:** 2018-2020, Rub 6 mln, Complex research of the magnetoelectric effect in the developed and created triplee-component elastomers for their application for use as active biological interfaces, Russian Foundation for Basic Research (RFBR), 18-32-20219;
3. **PI:** 2017-2018, Rub 1.2 mln, Visualization of the stressed state of a metal nucleus of a glass-coated ferromagnetic microwire, the President of the Russian Federation grant, number MK-6182.2018.2;
4. **PI:** 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 №3.4168.2017/4.6;
5. **PI:** 2017-2019, Rub 18 mln, Physics fundamentals for the creation of electromagnetic actuators based on microwires, Russian Science Foundation №17-12-01569;
6. **PI:** 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);
7. **Host Scientific Advisor:** 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) № 17-32-50183, February-April 2018;
8. **Host Scientific Advisor:** mobility grant of Mrs. Lydmila Makarova from Lomonosov MSU, Development and creation of new types of multiferroics based on magnetorheological liquids, foams, elastomers and ferroelectric materials, investigation of their properties, Russian Foundation for Basic Research (RFBR) № 16-32-50102, July-December 2016;
9. **Host Scientific Advisor:** 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;
10. **PI:** 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;
11. **Host Scientific Advisor:** 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;

12. **Host Scientific Advisor:** 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;
13. **PI:** 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;
14. **PI:** 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;
15. **Co-PI:** 2011-2013, Rub 4.6 mln, Preparation and investigation of the thin films-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;
16. **PI:** 2011-2013, Magnetic, magnetoelectric and magnetoelastic properties of nanocomposites based the magnetostrictive and piezoelectric materials, RFBR № 11-02-00906;
17. **PI:** 2011-2012, Physical principle investigation for information-processing devices based on multiferroic materials and structures, RFBR № 11-02-12170-офи-м-2011;
18. **PI:** 2011-2012, Investigation of the magnetic nanoparticles properties dependence on the morphology and environment, RFBR № 11-02-90493;
19. **PI:** 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. 2020, Constant magnetic field sensor based on a magnetoplasmon crystal, Russian patent, RU 2725650 C1 (Immanuel Kant Baltic Federal University, Belyaev V., Rodionova V., Frolov A., Grunin A., Fedyanin A.);
2. 2018, Microactuator based on bimagnetic coated core/shell microwires with asymmetric external shell and the use of it, Russian patent, № 2658108 (Immanuel Kant Baltic Federal University, V. Rodionova, I. Baaraban, K. Chichay, N. Perov, Consejo Superior de Investigaciones Cientificas, M.Vazquez, R. ElKammouni);
3. 2017, Microactuator based on bimagnetic coated core/shell microwires with asymmetric external shell and the use of it, Spain patent, EP17382418.6 (Immanuel Kant Baltic Federal University, V. Rodionova, I. Baaraban, K. Chichay, N. Perov, Consejo Superior de Investigaciones Cientificas, M.Vazquez, R. ElKammouni);
4. 2016, Ferromagnetic microwire-based manipulator, Russian patent, № 163031 (Immanuel Kant Baltic Federal University, V. Rodionova, N. Perov, V. Samsonova, K. Chichay);
5. 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);
6. 2012, System for Heusler Nanofilms production (Immanuel Kant Baltic Federal University, A. Grunin, A. Goikhman, V. Rodionova).

#### Plenary and Invited talks at conferences:

1. 4th International Summer School and Workshop "Complex and Magnetic Soft Matter Systems: Physico-Mechanical Properties and Structure" (West University of Timisoara,

Timisoara, Romania, April 19-23, 2021, Virtual Conference), Magnetolectric effect in polymer-based nano- and microcomposites for biomedical applications, Alexander Omelyanchik, Valentina Antipova, Christina Gritsenko, Valeria Kolesnikova, Davide Peddis, Kateryna Levada, Abdulkarim Amirov and Valeria Rodionova;

2. The 4a Jornada Franco-Brasileira Francisco Tourinho Conference (University of Brasilia, March 8-12, 2021 (online)), "Boosting magnetolectric effect in polymer-based nanocomposites", Alexander Omelyanchik, Valentina Antipova, Christina Gritsenko, Valeria Kolesnikova, Davide Peddis, Kateryna Levada, Abdulkarim Amirov, Valeria Rodionova;

3. XXV Symposium "Nanophysics and Nanoelectronics" (Nizhny Novgorod, March, 09-12, 2021 (online)), "Amorphous, nanocrystalline and partially crystalline microwires: properties and applications", Valeria Kolesnikova, Larissa Panina, Valeria Rodionova;

4. 65<sup>th</sup> Annual Conference on Magnetism and Magnetic Materials (MMM virtual conference, November 2 – 6, 2020), "Tunable Magnetic Anisotropy In Amorphous-Fiber-Based Structures For Multiferroic Applications", Valeria Rodionova;

5. SPIE Optics+Photonics (The Digital Forum, 24-28 August 2020), Blueprint for DC magnetic field sensing with magnetoplasmonic crystal, Belyaev V.K., Murzin D.V., Grunin A.A., Fedyanin A.A., Rodionova V.V.;

6. 5th International Conference on Nanoscience, Nanotechnology and Nanobiotechnology (Brasília, Brazil, December 8th to 12th, 2019), "Amorphous, partially crystalline and crystalline magnetic microwires: from fabrication and properties to practical applications", Valeria Rodionova;

7. SPIE Optics+Photonics (San Diego, California, United States, August 11-15, 2019), "Design of magnetoplasmonic crystal for DC magnetic field sensor", Belyaev V.K., Murzin D.V., Novosad V., Grunin A.A., Fedyanin A.A., Rodionova V.V.;

8. 10th International Conference on Fine Particle Magnetism (Gijon, Spain, May 26-31, 2019), "Control of magneto-static and -dynamic properties by stress tuning in Fe-Si-B amorphous microwires" Irina Baraban, Larisa Panina, Mikhail Vereshchagin, Sergey Leble, Valeria Rodionova;

9. (plenary) XV International Science Conference "Youth in Science - 2.0'18" (Minsk, Belarus, October 29 - November 1, 2018), "Amorphous Ferromagnetic Microwires: Methods of Fabrication, Measurements of the Magnetic Properties and Applications" Valeria Rodionova;

10. 2018 IEEE 8th International Conference on Nanomaterials: Applications & Properties (Zatoka, Ukraine, September 9-14, 2018), «Nano- and microwire based architectures for practical applications» Valeria Rodionova;

11. CIMTEC 2018 - 14th International Conference on Modern Materials and Technologies, 8th Forum on New Materials (Perugia, Italy, June 10 - 14, 2018), «Effect of Stress Components on Magnetostatic and Magnetostrictive Properties of Amorphous Microwires» V. Rodionova, K. Chichay, I. Baaraban, A. Litvinova;

12. International Conference on Superconductivity and Magnetism (Turkey, Antalya, April 29 - May 4, 2018), «Magneto-statically- and Magnetoelastically Coupled Microwires-Based Systems for Fundamental Researches and Practical Applications» V. Rodionova, I. Baraban, K. Chichay, A. Litvinova, M. Gorshenkov, N. Andreev, M. Ipatov, V. Zhukova, N. Perov, M. Vazquez, A. Zhukov;

13. The 4th International Symposium on Advanced Magnetic Materials and Applications (ISAMMA 2017) (Phu Quoc, Vietnam, December 10-13, 2017), «Novel design of electromagnetic tweezers » Alexander Omelyanchik, Valentina Bessalova, Nikolai Perov, Junjia Ding, Sergi Lendinez, Ekaterina Levada, Valentine Novosad, Valeria Rodionova;

14. (plenary) 2017 IEEE 7th International Conference on Nanomaterials: Applications & Properties (Zatoka, Ukraine, September 10-15, 2017), «Magnetic microwires: from fabrication and properties to practical applications» Irina Baraban, Alyona Litvinova, Valeria Rodionova;
15. Phase transitions, critical and nonlinear phenomena in condensed matter physics (Makhachkala, Russia, September 6 – 9, 2017), «Influence of structural properties of ferromagnetic glass coated microwires on their magnetic characteristics» V.V. Rodionova, K.A. Chichai, I.A. Baraban, A.I. Litvinova, S.N. Shevyrtalov, M.V. Gorshenkov, N.S. Perov;
16. Moscow International Symposium on Magnetism (MISM) (Moscow, Russia, July 1-5, 2017) «Structural properties influence on magnetic characteristics of glass-coated microwires» V. Rodionova, I. Baraban, K. Chichay, S. Shevyrtalov, A. Litvinova, M. Gorshenkov, N. Perov;
17. 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;
18. International Conference on Applied Mineralogy & Advanced Materials (Castellaneta Marina, Italy, June 7-12, 2015), «Magneto-optical sensor based on maglasminic crystal» Viktor Belyaev, Andrey Grunin, Andrey Fedyanin, Valeria Rodionova;
19. 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;
20. 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;
21. 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;
22. 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;
23. 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.

## **Educational activities**

**Lecturer:**

- Since September 2014 Bachelor courses:  
Condensed matter physics;  
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:**

Since 2012 More than 10

- 2020 - Valery Savin “Study of the dynamics of the motion of a domain wall in a bistable ferromagnetic microwire”
- 2020 - Artyom Ignatov “Study of the influence of the size of the end domains of a bistable microwire on its hysteresis loop”
- 2019 - Dmitry Murzin “Enhancement of the transversal magneto-optical Kerr effect by excitation of longitudinal plasmon oscillations”
- 2019 - Valeria Kolesnikova “Magnetization process features of magnetostatically interacting microwires systems”
- 2017 - Nosan Mark “Magnetic properties of nanoparticles synthesized by the laser ablation in a liquid”
- 2017 - Farukh Umarov “Investigation of the exchange bias dependence in Si/Ta/NiFe/IrMn/NiFe/Ta thin film structures, on a value and configuration of a magnetic field applied during deposition”
- 2015 - Alyona Litvinova “Magnetostatic and magnetostrictive properties of magneto-bistable microwires”

#### **Supervisor of Master students:**

Since 2013 More than 15

- 2021 - Valeria Kolesnikova “Micromagnetic structure and magnetic properties of ferromagnetic microwires”
- 2021 - Dmitry Murzin “Three-dimensional magnetic field mapping with magnetoplasmonic crystal-based sensor”
- 2019 - Natalia Perova “Permalloy-based magnetoplasmonic crystal as a highly sensitive magnetic field sensor”



- 2019 - Christina Gritsenko “Temperature-dependent magnetization reversal in exchange bias NiFe/IrMn/NiFe structures”
- 2017 - Alyona Litvinova “Investigation of internal stresses on the magnetostatic and magnetostrictive properties of amorphous microwires Fe<sub>77.5</sub>Si<sub>7.5</sub>B<sub>15</sub>”
- 2015 - Irina Baraban “Magnetic properties of fully and partially covered biphasic microwires”
- 2014 - Yana Anekho “External factors influence on magnetostatic properties magnetically one-phase and bi-phase microwires”
- 2014 - Anna Mialicheva “Investigation of exchange bias of thin film structures ferromagnetic/antiferromagnetic depending on growth conditions and system parameters”
- 2014 - Elena Iushina “Investigation of magnetic anisotropy of FeGa thin films”

### Supervisor of PhD students:

- |         |  |
|---------|--|
| current | <ul style="list-style-type: none"> <li>- Viktor Belyaev “Plasmon-induced magneto-optical effects in ferromagnetic nanostructures”</li> <li>- 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”,</li> <li>- Alena Litvinova “Fast domain wall propagation in stressed amorphous ferromagnetic microwires”</li> <li>- Irina Baraban “Magnetostatic, magnetostrictive and magnetoelectric properties of the composite structures based on the amorphous glass covered microwires”,</li> <li>- Alexander Omelianchik “Core/shell nanoparticles for biomed applications”.</li> <li>- Kirill Sobolev “Study of magnetic and transport properties of chromium-containing MAX phases”</li> <li>- Alexander Rudakov “Development of a hardware and software complex for the 5D printing system”</li> </ul> |
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### Supervisor of PhD:

- Christina Gritsenko “Peculiarities of magnetization reversal processes in magnetostatically and exchange-coupled Permalloy-based thin-film structures”, December 2018;
- Kseniya Chichay “Domain wall dynamics tunable through micromagnetic structure modification”, June 2017.

## Organizing, reviewing and editorial activities

### Participation in the organization of the international conference:

1. Chair of IV International Baltic Conference on Magnetism: focus on nanobiomedicine and smart materials (Svetlogorsk, Kaliningrad region, Russia, August 29 – September 2, 2021);
2. Chair of III International Baltic Conference on Magnetism: focus on nanobiomedicine and smart materials (Svetlogorsk, Kaliningrad region, Russia, August 18 - 22, 2019);
3. Member of International Scientific Committee - the 2018 IEEE 8th International Conference on "Nanomaterials: Applications & Properties", Zatoka, Odesa Region, Ukraine, Sept. 9 - 14, 2018;

4. Chair of the session “Micromagnetism and domain structure” at Conference “Novel in magnetism and magnetic materials”, Moscow, Russia, June 30 - July 5, 2018;
5. Co-chair of the poster session “AS. Nanoparticles and Nanostructured Arrays” at Intermag 2018 (Singapore, April 23-27 2018);
6. Member of the Program Committee of Intermag 2018 (Singapore, April 23-27 2018), Session “Structured materials session” (Co-chairs: Profa Dra Fanny Béron and Ming Liu, Ph.D. Professor of Electrical Engineering);
7. Chair of International Baltic Conference on Magnetism: focus on functionalized magnetic structures for energy and biotechnology (Svetlogorsk, Kaliningrad region, Russia, August 20 - 24, 2017);
8. Member of the Program Committee of Moscow International Symposium on Magnetism (MISM’17) (Moscow, Russia, July 01-05, 2017);
9. Chair of International Baltic Conference on Magnetism: focus on biomedical aspects (Svetlogorsk, Kaliningrad region, Russia, August 30- September 03, 2015);
10. 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);
11. Member of the Publication Committee of Donostia International Conference on Nanoscaled Magnetism and Applications (San Sebastian, Spain, September 09-13, 2013);
12. Chair of the organizing committee of International Baltic School on Solid State and Magnetism Phenomena (Svetlogorsk, Kaliningrad region, Russia, August 11-18, 2012);
13. Secretary of Moscow International Symposium on Magnetism (MISM’11) Program committee (Russia, Moscow, August 21-25, 2011);
14. Member of local organizing committee and co-editor of book of abstract of Moscow International Symposium on Magnetism (MISM’08) (Russia, Moscow, June 20-25, 2008);
15. Member of local organizing committee of Moscow International Symposium on Magnetism (MISM’05) (Russia, Moscow, June 25-30, 2005).

#### **Served as an editor**

1. Guest editor of Journal of Magnetism and Magnetic Materials, the proceedings of the International workshop on magnetic wires, 2020;
2. The member of the Editorial Board of Journal of Magnetism and Magnetic Materials from 2019 till 2021;
3. The Member of the Editorial Review Board of IEEE Magnetics Letters, since 2019;
4. Guest editor of Journal of Magnetism and Magnetic Materials, the proceedings of 2018 IEEE 8th International Conference on Nanomaterials: Applications & Properties;
5. Guest editor of Journal of Magnetism and Magnetic Materials, the proceedings of International Baltic Conference on Magnetism: focus on biomedical aspects, Vol. 470, 2019;
6. Guest editor of Physics Procedia, Vol. 82, 2016 - the proceedings of International Baltic Conference on Magnetism: focus on biomedical aspects;
7. Guest editor of Journal of Magnetism and Magnetic Materials, Vol. 415, 2016 – the proceedings of International Baltic Conference on Magnetism: focus on biomedical aspects;
8. Guest editor of Journal of Magnetism and Magnetic Materials, Vol. 324, Iss. 21, 2012 – the proceedings of Moscow International Symposium on Magnetism – 2011;
9. Guest editor of the Solid State Phenomena’s volume 190, 2012 – the proceedings of Moscow International Symposium on Magnetism – 2011;
10. 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. The Journal of magnetism and Magnetic Materials;
3. Physics Procedia, proceedings of International Baltic Conference on Magnetism: focus on biomedical aspects (Russia, Svetlogorsk, Kaliningrad region, August 30 – September 03, 2015);
4. IEEE Transactions on Magnetics, proceedings of IEEE International Magnetics Conference (INTERMAG Beijing, China, May 11-15, 2015);
5. Solid State Phenomena, proceedings of Moscow International Symposium on Magnetism (MISM-2014, Moscow, Russia, June 29- July 03, 2014);
6. IEEE Transactions on Magnetics, proceedings of IEEE International Magnetics Conference (INTERMAG Europe 2014, Dresden, Germany, May 4-8, 2014);
7. Physica Status Solidi A, proceedings of Donostia International Conference on Nanoscaled Magnetism and Applications (Spain, San Sebastian, September 09-13, 2013);
8. Solid State Phenomena, proceedings of Moscow International Symposium on Magnetism (MISM-2011, Moscow, Russia, August 21-25 2011);
9. 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, **Springe 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:

**2021**

1. Tunable spin wave propagation in YIG/Fe-Rh stripe Transactions on Magnetics
2. Iuliia Alekhina, Valeria Kolesnikova, Aleksei Komlev, Marat Khajrullin, Liudmila Makarova, **Valeria Rodionova**, Nikolai Perov, Radial dependence of circular magnetic permeability of amorphous magnetic microwires, **Journal of Magnetism and Magnetic Materials**;
3. S. A. Odintsov, E. I. Salomatova, A. P. Kamantsev, A. A. Amirov, **V. V. Rodionova**, S. E. Sheshukova, A. V. Sadovnikov, Directional control of spin-wave transport in tunable spin-phonic YIG/Fe-Rh bilayer structure for signal processing, **Proc. SPIE** 11847, Saratov Fall Meeting 2020: Computations and Data Analysis: from Molecular Processes to Brain Functions, 118470I (4 May 2021); <https://doi.org/10.1117/12.2590207>;
4. Kirill Sobolev, Mikhail Gorshenkov, Pietro Manfrinetti, Davide Peddis, Anna Pazniak, **Valeria Rodionova**, Synthesis of phase-pure highly-doped MAX-phase  $(\text{Cr}_{1-x}\text{Mn}_x)_2\text{AlC}$ , **Ceramics International**, <https://doi.org/10.1016/j.ceramint.2021.04.109>;

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