



Dr. Sci. Koledov Victor
Curriculum Vitae

Family Name: Koledov

First Name: Victor

Acad. Degrees: Dr. of Physics and Mathematics,
Ph. D.,

Business Address: Institute of Radio Engineering
and Electronics Russian Academy of Sciences,
Moscow part, (IRE RAS),
Laboratory of Laboratory of magnetic materials,
Kotelnikov IRE RAS, Mokhovaya 11-7, Moscow, 125009, Russia. Russia

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Education:

1962-1966 primary school

1966-1972 physics and mathematics gymnasia

1972-1978 Study of Moscow Institute of Physics and Technology (MIPT). (Technical University)

1977-1978 Diploma-work: "Properties of magnetic domain in single crystalline plates YIG [100]."

Supervisors: Dr. Ju. Sokolov. Institute of Radio Engineering and Electronics Russian Academy of Sciences (IRE RAS). .

1978 Dipl. Eng. in Physics and Electronics from the Moscow Institute of Physics and Technology (MIPT).

1979-1981 Thesis: "Optical Radiation Registration by Magnetic Heterogeneous Medium"*
Supervisors: (i) Prof. Dr. Monosov J.A Institute of Radio Engineering and Electronics Russian Academy of Sciences (IRE RAS).

- 1986 PhD (Solid State Physics).
2008 Doctor of Sciences thesis: "Phase transition and giant deformation in Heusler alloys in external fields." Kotelnikov Institute of Radio Engineering and Electronics Russian Academy of Sciences (Kotelnikov' IRE RAS).

Positions:

Science position:

- 1978-1981 Post graduate student Russian Academy of Sciences,
1982 Scientist in Institute of Radio Engineering and Electronics Russian Academy of Sciences (IRE RAS).
1986 Senior Scientist, Institute of Radio Engineering and Electronics Russian Academy of Sciences (IRE RAS)
2006 Leading scientist Institute of Radio Engineering and Electronics Russian Academy of Sciences (IRE RAS)

Teaching activity

- 2000-now Supervisor for students of Moscow State University, Moscow State Technical University, Moscow Institute of Steel and Alloys, Moscow Institute of Physics and Technology (MIPT)
2000-now Supervisor of Supervisor for post graduate student of Moscow State University.

Business and innovation position:

- 1987-1993 Patent expert Russian Federal Agency for Patent Expertise
1992-1997 founder, owner and director of SME "Terabit Communication Centre Ltd" Moscow.
2003-now scientific director of SME "Nanodent Ltd", Moscow.

Scientific Prizes and Awards, etc.:

Bronze medals prizewinner by Central Exhibition of USSR-achievements
invited speaker and chair of section in many international conferences (China, Spain, Russia). Supervisor of 10 post students,

Research

Experimental studies of magnetic properties, magneto-optics, ferromagnetic domains, semiconductor lasers, fiber optics, ferromagnetic shape memory alloys, functional materials, medical applications of functional materials, multiferroics, strong magnetic fields, giant magnetocaloric effect, micromechanics, nanomechanics.

Projects:

Scientific projects.

1. "Shape memory and reversible plasticity inter-metallic compound with magnetic order". Funded by Russian Foundation for Basic Research (RFBR).
http://www.rfbr.ru/eng/default.asp?section_id=0
2. "Shape memory in Heusler alloys with magnetic order: possibility of magnetic control of shape and size". Funded by Russian Foundation for Basic Research (RFBR).
3. "Magnetoacoustics of ferromagnetic shape memory alloy Ni-Mn-Ga". Funded by Russian Foundation for Basic Research (RFBR) and Belorussian Foundation for Basic Research (BFBR).
4. "Magnetic and crystal structure of ferromagnetic shape memory alloys with extremely high magnetic-field-controlled strains". Funded by Russian Foundation for Basic Research (RFBR).
5. "Giant magnetomechanical effects in quaternary alloy Ni-Mn-Fe-Ga in high magnetic fields". Funded by Chinese Academy of Sciences (CAS) and Russian Foundation for Basic Research (RFBR).
6. "Magnetoacoustoplastic and nonlinear acoustic phenomena in ferromagnetic shape memory materials". Funded by Russian Foundation for Basic Research (RFBR) and Belorussian Foundation for Basic Research (BFBR).
7. "Magnetic properties and coupled magnetostructural phase transitions in the novel ferromagnetic shape memory alloys". Funded by Japan Society for the Promotion of Science (JSPS) and Russian Foundation for Basic Research (RFBR).
8. "Composites based on films and melt spun ribbons of shape memory alloys". Funded by Russian Foundation for Basic Research (RFBR).
9. "Giant magnetocaloric effect in Heusler alloys and physical principles of thermodynamic machines on their basis". Funded by Russian Foundation for Basic Research (RFBR).
10. "The alloys with shape memory effect of NiMnGa system in nanocrystalline state". Funded by Russian Foundation for Basic Research (RFBR).
11. "Study of new intermetallic compounds promising for room-temperature magnetic refrigeration". Funded by Chinese Academy of Sciences (CAS) and Russian Foundation for Basic Research (RFBR).
12. "Creation of the production technology of energy-saving solid-state cooling device based on the principle of magnetic refrigeration". Funded by Russian Foundation for Basic Research (RFBR).
13. "Competition of exchange interactions and functional properties of novel metamagnetic shape memory alloys Ni-Mn-X (X = In, Sn, Sb)". Funded by

Department of Science & Technology DST India and Russian Foundation for Basic Research (RFBR).

14. "Giant strain effects in magnetic and non-magnetic intermetallic compounds with shape memory effect on micro-and nanodimensions". Funded by Russian Foundation for Basic Research (RFBR).
15. "Heusler alloys with enhanced sensitivity of magnetostructural transition to magnetic field for magnetic refrigerators". Funded by Russian Foundation for Basic Research (RFBR) and Ukraina Foundation for Basic Research (RFBR).
16. "Fundamental research of nature of nano-size effects for elaboration of new generation of types of smart nanomaterials.» Funded by Russian Academy of Sciences. http://www.ras.ru/index.aspx?_Language=en

Business projects.

17. "Functional Implant System based on Nanomaterials". Funded by Russian Foundation for SME. <http://sosed-online.ru/mesto/fond-sodejstvija-malyh-formam-predpriyatij-fond-bortnika-moskva/>
18. "The application of shape memory elements in combination with elastic aligners for orthodonty". Funded by privat businessman from Australia.
19. "New smart composite nanomaterials with shape memory". Funded by Russian Federal Agency for Science and Innovation. (ROSNAUKA) <http://www.fasi.gov.ru/map/>

Publications:

More than 100 papers, in international refereed journals, including reviews and invited contributions to books. More than 150 presentations given at international conferences or based on invitations to scientific invitations. 7 patent and licences.

Present Scientific Activities:

Recent years (since 2003) V.V. Koledov was and is project leader and member of many national and some international Projects. In the mean time he is leader of the next projects funded by international funding:

Some of last publication

1. A. D. Bozhko, A. N. Vasil'ev, V. V. Khovailo, I. E. Dikshtein, V. V. Koledov, S. M. Seletskii, A. A. Tulaikova, A. A. Cherechukin, V. G. Shavrov, V. D. Buchel'nikov. **Magnetic and structural phase transitions in the shape-memory ferromagnetic alloys $Ni_{2+x}Mn_{1-x}Ga$.** cit 6 Journal of Experimental and Theoretical Physics Volume 88, Number 5 / Mai 1999 p. 954-962.

2. I.E.Dikshtein, V.V. Koledov, V.G. Shavrov, A.A. Tulaikova, A.A. Cherechukin, V.D. Buchelnikov, V.V. Khovailo, M. Matsumoto, T. Takagi, J. Tani. **Phase transitions in intermetallic compounds Ni-Mn-Ga with shape memory effect.** //IEEE Trans. Magn. 1999. V. 35. P.3811 - 3813. 16 cit
3. I. E. Dikshtein, D. I. Ermakov, V. V. Koledov, L. V. Koledov, T. Takagi, A. A. Tulaikova, A. A. Cherechukin, V. G. Shavrov. **Reversible structural phase transition in Ni-Mn-Ga alloys in a magnetic field.** JETP Letters, Volume 72, Number 7 / Oktober 2000 p. 373-376.
4. Cherechukin, A.A. Koledov, V.V. Shavron, V.G. Tulaykova, A.A. **Unidirectional self-sustained motion of magnetic domain boundaries in YIG plate in alternating magnetic field. Applications to digital optical sensors.** Applied Electromagnetism, 2000. Proceedings of the Second International Symposium of Trans Black Sea Region 2000, p(s): 43. Meeting Date: 06/27/2000 - 06/29/2000. Location: Xanthi, Greece
5. A.A.Cherechukin, I.E.Dikshtein, D.I.Ermakov, A.V.Glebov, V.V.Koledov, D.A.Krasnoperov, V.G.Shavrov, A.A.Tulaikova, E.P.Krasnoperov, T.Takagi. **Shape memory effect due to magnetic field induced thermoelastic martensitic transformation in polycrystalline Ni-Mn-Fe-Ga alloy.** //Phys. Lett.. A 291, 2001. P. 175-183. 58 cit
6. V.V.Koledov, E.P.Krasnoperov, V.G.Shavrov. **Progress in the investigation of magnetic-field-induced shape memory Heusler alloys.** //Proc. of the Fifth ISTC Scientific Advisory Committee Seminar "Nanotechnologies in the area of physics, chemistry and biotechnology". St.Petersburg, Russia. May 27-29, 2002. P. 65-71.
7. D.A.Filippov, V.V.Khovailo, V.V.Koledov, E.P.Krasnoperov, R.Z.Levitin, V.G.Shavrov, T.Takagi. **The magnetic field influence on magnetostructural phase transition in $\text{Ni}_{2.19}\text{Mn}_{0.81}\text{Ga}$.** //J. Magn. Magn. Mater. 2003. V. 258-259. P. 507-509. cit 14
8. V.Khovailo, T.Abe, V.Koledov, M.Matsumoto, H.Nakamura, R.Note, M.Ohtsuka, V.Shavrov, T.Takagi. **Influence of Fe and Co on phase transitions in Ni-Mn-Ga alloys.** //Materials Transactions. 2003. V. 44. № 12. P. 2509-2512. 25 cit
9. A.Aliev, A.Batdalov, S.Bosko, V.Buchelnikov, I.Dikshtein, V.Khovailo, V.Koledov, R.Levitin, V.Shavrov, T.Takagi. **Magnetocaloric effect and magnetization in a Ni-Mn-Ga Heusler alloy in the vicinity of magnetostructural transition.** //J. Magn. Magn. Mater. 2004. V. 272-276. P. 2040-2042. cit 14
9. V.Buchelnikov, I.Dikshtein, R.Grechishkin, V.Khovailo, T.Khudaverdyan, V.Koledov, Y.Kuzavko, I.Nazarkin, V.Shavrov, T.Takagi. **Ultrasound induced martensitic transition in ferromagnetic Ni-Mn-Ga shape memory alloy.** //JMMM. 2004. V. 272-276. V. 2025-2026.
10. R.M.Grechishkin, V.V.Koledov, V.G.Shavrov, I.E.Dikshtein, V.V.Khovailo, T.Takagi, V.D.Buchelnikov, S.V.Taskaev. // **Martensitic and magnetic domain structures in polycrystalline shape memory alloys $\text{Ni}_{2+x}\text{Mn}_{1-x}\text{Ga}$** //Intern. Journ. Appl. Electromagnetics and Mechanics. 2004. V.19. P. 175-178.

11. O.M.Korpusov, R.M. Grechishkin, V.V.Koledov, V.V.Khovailo, T.Takagi, V.G.Shavrov. **Simultaneous magnetooptic observation and thermomagnetic analysis of phase transitions in shape-memory Ni–Mn–Ga alloys.** //J. Magn. Magn. Mater. 2004. V. 272–276. P. 2035–2037.
12. O.M.Korpusov, R.M. Grechishkin, V.V.Koledov, V.V.Khovailo, T.Takagi, V.G.Shavrov. **Simultaneous magnetooptic observation and thermomagnetic analysis of phase transitions in shape-memory Ni–Mn–Ga alloys.** //J. Magn. Magn. Mater. 2004. V. 272–276. P. 2035–2037.
13. G Benke, V.V. Koledov A Górski **Tissue Engineering for Reconstructive Orthopaedic Surgery Challenges and Perspectives.** Ann Transplant 2004; 9(Sup 1A):119-120.
14. V. V. Khovaylo, V. D. Buchelnikov, R. Kainuma, V. V. Koledov, M. Ohtsuka, V. G. Shavrov, T. Takagi, S. V. Taskaev, A. N. Vasiliev. **Phase transitions in Ni_{2+x}Mn_{1-x}Ga with a high Ni excess** cit 5. Phys. Rev. B 72, 224408 (2005).
15. V. S. Doev, V. V. Koledov, A. Y. Kuklin. **Parallel optical transmission of information by single semiconductor laser coupled to external multimirror cavity.** Proc. SPIE, Vol. 2051, 877 (1994); 10 May 2005. International Conference on Optical Information Processing, Monday 02 August 1993, St. Petersburg, Russia
16. F. Albertini, S. Besseghini, A. S. Bugaev, R. M. Grechishkin, V. V. Koledov, L. Pareti, M. Pasquale, V. G. Shavrov, D. S. Yulenkov. **Melt-Spun Ribbons of Shape-Memory Ferromagnets: Structure, Magnetic and Thermomechanical Behavior and Prospects for Application in the Sensor and Actuator Technology.** Journal of Communications Technology and Electronics Vol. 50, No. 6, June 2005, pp. 638-646.
17. I.D. Borisenko, V.V. Koledov, V.V. Khovailo, V.G. Shavrov. **Martensitic and magnetic phase transitions in ternary ferromagnetic alloys Ni–Mn–Ga.** Journal of Magnetism and Magnetic Materials Volume 300, Issue 1, May 2006, Pages e486-e488 The third Moscow International Symposium on Magnetism 2005.
18. R.M. Grechishkin, T.A. Lograsso, D.L.Schlagel, V.V. Koledov, A.B. Zalyotov, S.A. Chigirinsky. **Martensite and magnetic domain structure in ferromagnetic shape memory single- and polycrystals** Proceedings of the Third Moscow International Symposium on Magnetism (2005)
19. R. N. Imashev , V. V. Koledov, Kh. Ya. Mulyukov, I. Z. Sharipov, V. G. Shavrov. **Thermal expansion of a Ni_{2.14}Mn_{0.81}Fe_{0.05}Ga alloy in coarse-grained, submicron, and nanocrystalline states.** Physics of the Solid State Volume 47, Number 10 / Oktober 2005 p. 1944-1947.
20. N. I. Kourov, A. V. Korolev, V. G. Pushin, V. V. Koledov, V. G. Shavrov, V. V. Khovailo. **Electrical and Magnetic Properties of the Rapidly Quenched Ni_{2.16}Mn_{0.84}Ga Alloy with the Shape-Memory Effect.** Physics of Metals and Metallography Vol. 99, No. 4, April 2005, pp. 376-382
21. R. N. Imashev , Kh. Ya. Mulyukov, I. Z. Sharipov, V. G. Shavrov, V. V. Koledov. **Martensitic transformation and electrical properties of a Ni_{2.14}Mn_{0.81}Fe_{0.05}Ga alloy in its different structural states.** Physics of the Solid State, Volume 47, Number 3 / März 2005, p.556-559

22. R N Imashev, Kh Ya Mulyukov, V V Koledov, V G Shavrov. **Thermoelastic martensitic transition and magnetic properties of the Ni_{2.14}Mn_{0.81}Fe_{0.05}Ga alloy in different structural states** Phys.: Condens. Matter 17. 2129-2135, 2005.
23. Imashev, R.Mulyukov, Kh.; Koledov, V.; Shavrov, V. **Effect of the structure of the Ni_{2.14}Mn_{0.81}Fe_{0.05}Ga alloy on the temperature dependence of magnetization.** Source: Doklady Physics, Volume 50, Number 1, January 2005 , pp. 28-31(4)
24. V. V. Runov , Yu. P. Chernenkov, M. K. Runova, V. G. Gavrilyuk, N. I. Glavatska, A. G. Goukasov, V. V. Koledov, V. G. Shavrov, V. V. Khovailo. **Spin correlations and a mesoscopic structure in Ni-Mn-Ga.** Journal of Experimental and Theoretical Physics, Volume 102, Number 1 / Januar 2006, p. 102-113
25. V. Khovaylo, V. Koledov, V. Shavrov, M. Ohtsuka, H. Miki, T. Takagi, V. Novosad **Influence of cobalt on phase transitions in Ni₅₀Mn₃₇Sn₁₃.** Materials Science and Engineering: A Volumes 481-482, 25 May 2008, Pages 322-325. Proceedings of the 7th European Symposium on Martensitic Transformations, ESOMAT 2006
26. V. G. Pushin, N. I. Kourov, A. V. Korolev, V. A. Kazantsev, L. I. Yurchenko, V. V. Koledov, V. G. Shavrov, V. V. Khovailo. **Effect of Rapid Quenching on the Physical Properties of the Ni₅₄Mn₂₁Ga₂₅ Alloy.** Physics of Metals and Metallography Vol. 99, No. 4, April 2005, pp. 401-410. Scientific session of the Physical Sciences Division of the Russian Academy of Sciences, March 2006).
27. V. D. Buchel'nikov, A N Vasiliev, V V Koledov, S V Taskaev, V V Khovaylo, V G Shavrov. **Magnetic shape-memory alloys: phase transitions and functional properties.** PHYS-USP, Volume 49 Number 8 Pages 871-877, (2006)
28. V.D. Buchelnikov, S.A.Taskaev, A.M.Aliev, A.B.Batdalov, A.M.Gamzatov, A.V.Korolev, N.I.Kourov, V.G.Pushin, V.V.Koledov, V.V.Khovailo, V.G.Shavrov, R.M.Grechishkin. **Magnetocaloric effect in Ni_{2.19}Mn_{0.81}Ga Heusler alloy.** //Int. Journ. Appl. Electromagnetics and Mechanics. 2006. V. 23, P.65-69.
29. V.D. Buchelnikov, S.V. Taskaev, M.A. Zagrebin, D.I. Ermakov, V.V. Koledov, V.G. Shavrov, T. Takagi. **The phase diagrams of Ni–Mn–Ga alloys in the magnetic field.** Journal of Magnetism and Magnetic Materials Volume 313, Issue 2, June 2007, Pages 312-316.
30. R.M. Gizatullin, V.V.Koledov et al. **Physical properties and biological adaptability of porous composite materials based on nickel titanium shape memory alloy for application in dentistry.** Proc. 13th Int. Symp. Appl. Electromagn. Mech. (ISEM 2007), East Lansing, MI, USA, Sept. 9-12, 2007, pp. 43-44.
31. R.M.Gizatullin, V.V.Koledov et al. **Application of nickel titanium implants with shape memory effect and composite materials to modern dental practice.** Proc. 13th Int. Symp. Appl. Electromagn. Mech. (ISEM 2007), East Lansing, MI, USA, Sept. 9-12, 2007, pp. 71-72.
32. V.Khovaylo, V.Koledov, V.Shavrov, M.Ohtsuka, H.Miki, T.Takagi, V.Novosad. **Influence of cobalt on phase transition in Ni₅₀Mn₃₇Sn₁₃.** //Materials Science and Engineering A. 2008. V.481-482, P. 322-325.

33. Khovaylo, V. Kirilin, A. Koledov, V. Lebedev, G. Pushin, V. Shavrov, V. Tulaykova, A. **New composite shape memory functional material for nano and microengineering application.** Nano/Micro Engineered and Molecular Systems, 2008. NEMS 2008. 3rd IEEE International Conference 6-9 Jan. 2008 p: 1231-1236 Location: Sanya.
34. V. D. Buchelnikov, M. A. Zagrebin, S. V. Taskaev, V. G. Shavrov, V. V. Koledov, V. V. Khovaylo. **New Heusler alloys with a metamagnetostructural phase transition.** Bulletin of the Russian Academy of Sciences: Volume 72, Number 4 / April 2008 p.564-568.
35. V. G. Shavrov, V. D. Buchelnikov, A. N. Vasilev, V. V. Koledov, S. V. Taskaev, V. V. Khovaylo. **Magnetic shape memory and giant magnetocaloric effect in Heusler alloys.** Bulletin of the Russian Academy of Sciences: Physics Volume 72, Number 4 / April 2008. p.527-528.
36. V. V. Khovaylo, K. P. Skokov, Yu. S. Koshkid'ko, V. V. Koledov, V. G. Shavrov, V. D. Buchelnikov, S. V. Taskaev, H. Miki, T. Takagi, A. N. Vasiliev. **Adiabatic temperature change at first-order magnetic phase transitions: Ni_{2.19}Mn_{0.81}Ga as a case study.** Phys. Rev. B 78, 060403(R), 2008.
37. 10. Kourov, N.I., Pushin, V.G., Korolev, A.V., Koledov, V.V., Shavrov, V.G., Khovaylo, V.V., Knyazev, Yu.V., Popov, A.G. **Effect of severe plastic deformation and ultrarapid quenching on the properties of magnetic shape memory alloys near the Ni₂MnGa composition.** Bulletin of the Russian Academy of Sciences: Physics 73 (7), (2009) pp. 948-951.
38. Ari-Gur, Prina; Garlea, V. Ovidiu; Coke, Ashley; Koledov V. et al. **NEUTRON DIFFRACTION STUDY OF A NON-STOICHIOMETRIC NI-Mn-Ga MSM ALLOY.** Materials Science Forum Volume: 738-739 Pages: 103-107 DOI: 10.4028/www.scientific.net/MSF.738-739.103 Published: 2013
39. Kostromitin, K. I.; Buchelnikov, V. D.; Sokolovskiy, V. V., V.V.Koledov et al **Theoretical study of magnetic properties and multiple twin boundary motion in Heusler Ni-Mn-Ga shape memory alloys using first principles and Monte Carlo method.** Materials Science Forum Volume: 738-739 Pages: 461-467 DOI: 10.4028/www.scientific.net/MSF.738-739.461 Published: 2013.
40. Gonzalez-Legarreta, L.; Sanchez, T.; Rosa, W. O.; V. Koledov et al. **Annealing Influence on the Microstructure and Magnetic Properties of Ni-Mn-In Alloys Ribbons** JOURNAL OF SUPERCONDUCTIVITY AND NOVEL MAGNETISM Volume: 25 Issue: 7 Pages: 2431-2436 DOI: 10.1007/s10948-012-1632-z Published: OCT 2012.
41. Sanchez, T.; Sato Turtelli, R.; Groessinger, R.; V.Koledov et al. **Exchange bias behavior in Ni_{50.0}Mn_{35.5}In-14.5 ribbons annealed at different temperatures.** JOURNAL OF MAGNETISM AND MAGNETIC MATERIALS Volume: 324 Issue: 21 Pages: 3535-3537 DOI: 10.1016/j.jmmm.2012.02.083 Published: OCT 2012.
42. Chatterjee, S.; Giri, S.; Majumdar, S.; V. Koledov et al. **Effect of Sn doping on the martensitic and premartensitic transitions in Ni₂MnGa.** JOURNAL OF MAGNETISM AND MAGNETIC MATERIALS Volume: 324 Issue: 11 Pages: 1891-1896 DOI: 10.1016/j.jmmm.2012.01.018 Published: JUN 2012.

43. Zakharov, Dmitry; Lebedev, Gor; Irzhak, Artemy; V.Koledov et al. **Submicron-sized actuators based on enhanced shape memory composite material fabricated by FIB-CVD.** SMART MATERIALS AND STRUCTURES Volume: 21 Issue: 5 Article Number: 052001 DOI: 10.1088/0964-1726/21/5/052001 Published: MAY 2012.
44. Akatyeva, K.; Afonina, V.; Albertini, F.; V. Koledov et al. **Shape Memory Effect in Microsized Samples of Rapidly Quenched Ferromagnetic Alloy Ni-Mn-Ga** MAGNETISM AND MAGNETIC MATERIALS V Book Series: Solid State Phenomena Volume: 190 Pages: 295-298 DOI: 10.4028/www.scientific.net/SSP.190.295 Published: 2012.
45. Gonzalez, L.; Garcia, J.; Nazmunnahar, M.; V.Koledov et al. **Magnetic field and annealing influence on the martensitic transition in Ni_{45.8}Mn_{42.6}In_{11.6} shape memory alloy ribbons.** MAGNETISM AND MAGNETIC MATERIALS V Book Series: Solid State Phenomena Volume: 190 Pages: 307-310 DOI: 10.4028/www.scientific.net/SSP.190.307 Published: 2012.
46. Chatterjee, S.; Majumdar, S.; Koledov, V. **Large Magnetoresistance in Ni-Mn-In Alloy.** SOLID STATE PHYSICS, PTS 1 AND 2 Book Series: AIP Conference Proceedings Volume: 1447 Pages: 1161-1162 DOI: 10.1063/1.4710421 Published: 2012.
47. Mulyukov, Kh. Ya.; Musabirov, I. I.; Mulyukov, R. R.; V.V.Koledov et al. **Effect of magnetic field on the morphology and fine structure of low-temperature martensite phase in a ferromagnetic Ni_{2.08}Mn_{0.96}Ga_{0.96} alloy.** PHYSICS OF METALS AND METALLOGRAPHY Volume: 112 Issue: 5 Pages: 488-494 DOI: 10.1134/S0031918X11050255 Published: NOV 2011.
48. Shelyakov, A. V.; Sitnikov, N. N.; Menushenkov, A. P.; V.Koledov et al. **Nanostructured thin ribbons of a shape memory TiNiCu alloy.** THIN SOLID FILMS Volume: 519 Issue: 15 Special Issue: SI Pages: 5314-5317 DOI: 10.1016/j.tsf.2011.01.118 Published: MAY 31 2011.
49. Musabirov, I. I.; Mulyukov, Kh. Ya.; Koledov, V. V.; et al. **Thermal expansion of Ni_{2.08}Mn_{0.96}Ga_{0.96} alloy.** TECHNICAL PHYSICS Volume: 56 Issue: 3 Pages: 423-426 DOI: 10.1134/S1063784211030145 Published: MAR 2011.
50. Buchelnikov, V. D.; Drobosyuk, M. O.; Smyshlyaev, E. A.; V. Koledov et al. **The Magnetocaloric Effect in Ni-Mn-X (X=Ga, In) Heusler Alloys and Manganites with Magnetic Transition Close to Room Temperature.** TRENDS IN MAGNETISM Book Series: Solid State Phenomena Volume: 168-169 Pages: 165-168 DOI: 10.4028/www.scientific.net/SSP.168-169.165 Published: 2011.
51. Aliev, A. M.; Batdalov, A. B.; Kamilov, I. K.; et al. **Magnetocaloric effect in ribbon samples of Heusler alloys Ni-Mn-M (M=In, Sn).** APPLIED PHYSICS LETTERS Volume: 97 Issue: 21 Article Number: 212505 DOI: 10.1063/1.3521261 Published: NOV 22 2010.
52. Irzhak, A. V.; Zakharov, D. I.; Kalashnikov, V. S.; V. Koledov et al. **Actuators based on composite material with shape-memory effect.** JOURNAL OF COMMUNICATIONS TECHNOLOGY AND ELECTRONICS Volume: 55 Issue: 7 Pages: 818-830 DOI: 10.1134/S1064226910070120 Published: JUL 2010.

53. Khovaylo, V. V.; Skokov, K. P.; Gutfleisch, O.; V. Koledov et al. **Peculiarities of the magnetocaloric properties in Ni-Mn-Sn ferromagnetic shape memory alloys.** PHYSICAL REVIEW B Volume: 81 Issue: 21 Article Number: 214406 DOI: 10.1103/PhysRevB.81.214406 Published: JUN 7 2010.

54. Irzhak, A. V.; Kalashnikov, V. S.; Koledov, V. V.; et al. **Giant reversible deformations in a shape-memory composite material.** TECHNICAL PHYSICS LETTERS Volume: 36 Issue: 4 Pages: 329-332 DOI: 10.1134/S1063785010040127 Published: APR 2010.

55. Khovaylo, Vladimir; Lebedev, Gor; Zakharov, Dmitry; V. Koledov et al. **Imprinting Bias Stress in Functional Composites.** JAPANESE JOURNAL OF APPLIED PHYSICS Volume: 49 Issue: 10 Article Number: 100212 DOI: 10.1143/JJAP.49.100212 Published: 2010.

56. Belyaev, S. P.; Istomin-Kastrovskiy, V. V.; Koledov, V. V.; et al. **The Structure and Functional Properties of Ti(2)NiCu Alloy Rapidly Quenched Ribbons with Different Fractions of Crystalline Phase.** Physics Procedia Volume: 10 Pages: 39-43 DOI: 10.1016/j.phpro.2010.11.072 Published: 2010.

57. Zakharov, D.; Lebedev, G.; Koledov, V.; et al. **An enhanced composite scheme of shape memory actuator for smart systems.** Physics Procedia Volume: 10 Pages: 58-64 DOI: 10.1016/j.phpro.2010.11.075 Published: 2010.

Patents

A.N.Vasilev, A.V.Glebov, I.E.Dikshtein, V.V. Koledov et.al, Method for control of form of working element. Russian Patent No 2221076, Jan.10.2004.

P.M Grechishkin, V.V. Koledov et al. Actuator, system of actuator and method for thier preparation. Russian Patent No . №2305874, 10.09.2007.

R.M Gisatullin, Koledov et al. Endodont-endossal implant with shape memory. Russian Patent No №2299704, 27.05.2007.

M Gisatullin, Koledov et al. Holder for microtools for osteotomie maxilla bone. Russian Patent № 58331. 11.05.2006.