

# Nikolai A Usov

## List of Publications by Year in descending order

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132  
papers

2,868  
citations

218677

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197818

49  
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134  
all docs

134  
docs citations

134  
times ranked

1802  
citing authors

#	ARTICLE	IF	CITATIONS
1	Towards optimal thermal distribution in magnetic hyperthermia. Scientific Reports, 2022, 12, 3023.	3.3	15
2	Deconvolution of ferromagnetic resonance spectrum of magnetic nanoparticle assembly using genetic algorithm. Scientific Reports, 2022, 12, 3126.	3.3	4
3	Properties of assembly of superparamagnetic nanoparticles in viscous liquid. Scientific Reports, 2021, 11, 6999.	3.3	17
4	In situ giant- magnetoimpedance magnetometer measurement of weak magnetic fields produced by pitting corrosion on AISI 304 stainless steel surface. Surfaces and Interfaces, 2021, 23, 100993.	3.0	1
5	Heating ability of elongated magnetic nanoparticles. Beilstein Journal of Nanotechnology, 2021, 12, 1404-1412.	2.8	2
6	The heating of magnetic nanoparticles in a rotating magnetic field. Nanoscale and Microscale Thermophysical Engineering, 2020, 24, 20-28.	2.6	4
7	Cavitation Assisted Production of Assemblies of Magnetic Nanoparticles of High Chemical Purity. Jom, 2020, 72, 509-516.	1.9	0
8	Magnetostatic properties of assembly of magnetic vortices. Physica B: Condensed Matter, 2020, 582, 411964.	2.7	2
9	Quasistatic hysteresis loops of magnetic nanoparticles in a rotating magnetic field. Journal of Magnetism and Magnetic Materials, 2020, 499, 166260.	2.3	2
10	Application of Magnetosomes in Magnetic Hyperthermia. Nanomaterials, 2020, 10, 1320.	4.1	25
11	Equilibrium properties of assembly of interacting superparamagnetic nanoparticles. Scientific Reports, 2020, 10, 13677.	3.3	13
12	Multi-domain structures in spheroidal Co nanoparticles. Scientific Reports, 2020, 10, 10173.	3.3	16
13	Specific absorption rate of assembly of magnetic nanoparticles with uniaxial anisotropy. Journal of Physics: Conference Series, 2020, 1439, 012044.	0.4	8
14	Co-rich Amorphous Microwires with Improved Giant Magnetoimpedance Characteristics Due to Glass Coating Etching. Jom, 2019, 71, 3113-3118.	1.9	7
15	Iron Oxide Nanoparticles for Magnetic Hyperthermia. Spin, 2019, 09, .	1.3	10
16	Heating ability of magnetic nanoparticles with cubic and combined anisotropy. Beilstein Journal of Nanotechnology, 2019, 10, 305-314.	2.8	28
17	Dynamics of superparamagnetic nanoparticles in viscous liquids in rotating magnetic fields. Beilstein Journal of Nanotechnology, 2019, 10, 2294-2303.	2.8	7
18	Ferromagnetic resonance in thin ferromagnetic film with surface anisotropy. Journal of Magnetism and Magnetic Materials, 2019, 474, 118-121.	2.3	2

#	ARTICLE	IF	CITATIONS
19	Properties of polycrystalline nanoparticles with uniaxial and cubic types of magnetic anisotropy of individual grains. Journal of Magnetism and Magnetic Materials, 2018, 460, 278-284.	2.3	5
20	Magnetic Vortices as Efficient Nano Heaters in Magnetic Nanoparticle Hyperthermia. Scientific Reports, 2018, 8, 1224.	3.3	60
21	Magnetization reversal of thin ferromagnetic elements with surface anisotropy. Journal of Magnetism and Magnetic Materials, 2018, 453, 142-148.	2.3	2
22	Glass shell etching to control residual quenching stress in Co-rich amorphous ferromagnetic microwires. Journal of Alloys and Compounds, 2018, 731, 18-23.	5.5	7
23	Chemically Synthesized FeCo Powder for Advanced Applications. Journal of Superconductivity and Novel Magnetism, 2018, 31, 3371-3378.	1.8	3
24	Surface magnetic structures in amorphous ferromagnetic microwires. Journal of Magnetism and Magnetic Materials, 2017, 429, 334-338.	2.3	2
25	Giant Magneto-Impedance Effect in Amorphous Ferromagnetic Microwire with a Weak Helical Anisotropy. Springer Series in Materials Science, 2017, , 91-109.	0.6	0
26	Magnetic properties of polycrystalline cobalt nanoparticles. AIP Advances, 2017, 7, .	1.3	28
27	Influence of surface anisotropy on magnetization distribution in thin magnetic films. Journal of Applied Physics, 2017, 121, 133905.	2.5	8
28	Mechanical properties and internal quenching stresses in Co-rich amorphous ferromagnetic microwires. Journal of Alloys and Compounds, 2017, 707, 199-204.	5.5	14
29	Influence of surface anisotropy on domain wall dynamics in magnetic nanotube. Applied Surface Science, 2017, 421, 155-158.	6.1	1
30	Microstructure and Magnetic Properties of Bulk FeCo Alloys Fabricated from Mechanically Alloying and Chemically Synthesized Powders. Journal of Superconductivity and Novel Magnetism, 2017, 30, 1281-1286.	1.8	2
31	Interaction Effects in Assembly of Magnetic Nanoparticles. Nanoscale Research Letters, 2017, 12, 489.	5.7	62
32	Magnetoelastic properties of Co-based amorphous ferromagnetic microwires. Physica Status Solidi (A) Applications and Materials Science, 2016, 213, 368-371.	1.8	7
33	Universal behavior of dense clusters of magnetic nanoparticles. AIP Advances, 2016, 6, .	1.3	13
34	Soliton collisions in soft magnetic nanotube with uniaxial anisotropy. AIP Advances, 2016, 6, 055009.	1.3	1
35	A high-sensitivity scanning magnetometer based on the giant magneto-impedance effect for measuring local magnetic fields of corrosion currents. Technical Physics Letters, 2016, 42, 520-523.	0.7	4
36	Circular magnetization process in amorphous microwire with negative magnetostriction. Journal Physics D: Applied Physics, 2016, 49, 165001.	2.8	5

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37	Investigation of quasi-stationary magnetic fields of corrosion currents of zinc-copper cells using giant magneto-impedance magnetometer. <i>Corrosion Science</i> , 2016, 109, 257-262.	6.6	7
38	Measurement of weak magnetic field of corrosion current of isolated corrosion center. <i>AIP Advances</i> , 2015, 5, .	1.3	12
39	Investigation of the properties of Co-rich amorphous ferromagnetic microwires by means of small angle magnetization rotation method. <i>Journal of Magnetism and Magnetic Materials</i> , 2015, 387, 53-57.	2.3	12
40	Magnetic nanoparticle motion in external magnetic field. <i>Journal of Magnetism and Magnetic Materials</i> , 2015, 385, 339-346.	2.3	21
41	Magnetic porous composite material: Synthesis and properties. <i>Technical Physics Letters</i> , 2015, 41, 974-976.	0.7	3
42	The peculiarities of magnetization reversal process in magnetic nanotube with helical anisotropy. <i>Journal of Applied Physics</i> , 2014, 116, 133902.	2.5	4
43	Magnetization reversal process and peculiarities of giant magneto-impedance effect in amorphous ferromagnetic microwire with helical anisotropy. <i>Physica Status Solidi (A) Applications and Materials Science</i> , 2014, 211, 1055-1061.	1.8	4
44	Highly sensitive magnetometer based on the off-diagonal GMI effect in Co-rich glass-coated microwire. <i>Physica Status Solidi (A) Applications and Materials Science</i> , 2014, 211, 980-985.	1.8	94
45	Magnetostatic interactions in various magnetosome clusters. <i>Journal of Applied Physics</i> , 2013, 113, 023907.	2.5	17
46	Giant magneto-impedance effect in amorphous ferromagnetic wire with a weak helical anisotropy: Theory and experiment. <i>Journal of Applied Physics</i> , 2013, 113, .	2.5	29
47	AC Magnetic Technique to Measure Specific Absorption Rate of Magnetic Nanoparticles. <i>Journal of Superconductivity and Novel Magnetism</i> , 2013, 26, 857-860.	1.8	14
48	Properties of Dense Assemblies of Magnetic Nanoparticles Promising for Application in Biomedicine. <i>Journal of Superconductivity and Novel Magnetism</i> , 2013, 26, 1079-1083.	1.8	13
49	Hysteresis losses in a dense superparamagnetic nanoparticle assembly. <i>AIP Advances</i> , 2012, 2, .	1.3	34
50	Effective magnetic anisotropy of annealed FePt nanoparticles. <i>Applied Physics Letters</i> , 2012, 101, 172402.	3.3	8
51	Magnetic nanoparticles with combined anisotropy. <i>Journal of Applied Physics</i> , 2012, 112, .	2.5	37
52	Dynamics of magnetic nanoparticle in a viscous liquid: Application to magnetic nanoparticle hyperthermia. <i>Journal of Applied Physics</i> , 2012, 112, .	2.5	147
53	The influence of a demagnetizing field on hysteresis losses in a dense assembly of superparamagnetic nanoparticles. <i>Journal of Magnetism and Magnetic Materials</i> , 2012, 324, 3690-3694.	2.3	18
54	Numerical simulation of field-cooled and zero field-cooled processes for assembly of superparamagnetic nanoparticles with uniaxial anisotropy. <i>Journal of Applied Physics</i> , 2011, 109, .	2.5	28

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55	Evaluation of use of magnetically bistable microwires for magnetic labels. Physica Status Solidi (A) Applications and Materials Science, 2011, 208, 526-529.	1.8	11
56	Domain structure of magnetic nanotube with transverse anisotropy. Physica Status Solidi (A) Applications and Materials Science, 2011, 208, 535-539.	1.8	3
57	Low frequency hysteresis loops of superparamagnetic nanoparticles with uniaxial anisotropy. Journal of Applied Physics, 2010, 107, .	2.5	114
58	Ground state magnetization distribution and characteristic width of head to head domain wall in Fe-rich amorphous microwire. Physica Status Solidi (A) Applications and Materials Science, 2009, 206, 613-617.	1.8	61
59	Influence of applied tensile stress on the magnetic behaviour of Co-rich amorphous microwires. Physica Status Solidi (A) Applications and Materials Science, 2009, 206, 625-629.	1.8	4
60	Differentiation of magnetic composites in terms of their nanostructural organization. Doklady Chemistry, 2009, 426, 96-100.	0.9	6
61	Hysteresis loops of an assembly of superparamagnetic nanoparticles with uniaxial anisotropy. Journal of Applied Physics, 2009, 106, .	2.5	77
62	Superparamagnetic relaxation time of a single-domain particle with a nonaxially symmetric double-well potential. Journal of Applied Physics, 2009, 105, .	2.5	22
63	Magnetostatic properties of Co-rich amorphous microwires: theory and experiment. Physica Status Solidi (A) Applications and Materials Science, 2008, 205, 1800-1804.	1.8	12
64	Local nucleation fields of Fe-rich microwires and their dependence on applied stresses. Physica B: Condensed Matter, 2008, 403, 379-381.	2.7	49
65	Nucleation field of a soft magnetic nanotube with uniaxial anisotropy. Journal of Applied Physics, 2008, 104, .	2.5	12
66	Influence of surface anisotropy on magnetization distribution in a single-domain particle. Journal of Applied Physics, 2008, 104, 043903.	2.5	11
67	Single-domain particle with random anisotropy. Journal of Non-Crystalline Solids, 2007, 353, 796-798.	3.1	6
68	Modeling of magnetization processes in exchange coupled fluoride bilayers. Journal of Magnetism and Magnetic Materials, 2007, 316, 143-146.	2.3	0
69	Equilibrium magnetization states in magnetic nanotubes and their evolution in external magnetic field. Journal of Magnetism and Magnetic Materials, 2007, 316, e317-e319.	2.3	38
70	Domain walls and magnetization reversal process in soft magnetic nanowires and nanotubes. Journal of Magnetism and Magnetic Materials, 2007, 316, 255-261.	2.3	47
71	Measurements of stray magnetic fields of amorphous microwires using scanning microscope based on superconducting quantum interference device. Journal of Magnetism and Magnetic Materials, 2007, 316, 188-191.	2.3	14
72	Domain-wall dynamics in glass-coated magnetic microwires. Journal of Magnetism and Magnetic Materials, 2007, 316, 337-339.	2.3	17

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73	Internal stress influence on FMR in amorphous glass-coated microwires. Journal of Magnetism and Magnetic Materials, 2007, 316, e890-e892.	2.3	16
74	Effect of Interaction on Giant Magnetoimpedance Effect in a System of Few Thin Wires. Sensor Letters, 2007, 5, 10-12.	0.4	12
75	Remanent magnetization states of soft magnetic nanowires. , 2006, , .		0
76	Remanent Magnetization States in Soft Magnetic Nanowires. IEEE Transactions on Magnetics, 2006, 42, 3063-3065.	2.1	9
77	Numerical simulation of magnetization process in antiferromagnetic-ferromagnetic bilayer with compensated interface. Journal of Magnetism and Magnetic Materials, 2006, 300, 164-169.	2.3	11
78	SQUID-measurements of relaxation time of Fe <sub>3</sub> O <sub>4</sub> superparamagnetic nanoparticle ensembles. Journal of Magnetism and Magnetic Materials, 2006, 300, e294-e297.	2.3	9
79	Magnetic structure of a nanoparticle in mean-field approximation. Journal of Magnetism and Magnetic Materials, 2005, 290-291, 727-730.	2.3	26
80	Magnetization patterns of permalloy networks. IEEE Transactions on Magnetics, 2005, 41, 953-955.	2.1	6
81	Magnetization processes in single domain elliptical permalloy thin films. Journal of Magnetism and Magnetic Materials, 2004, 272-276, E563-E564.	2.3	5
82	The metastable states in submicron elliptical thin films. Journal of Magnetism and Magnetic Materials, 2004, 272-276, E1331-E1332.	2.3	4
83	Magnetization reversal process at low applied magnetic field in a Co-rich amorphous wire. Physica B: Condensed Matter, 2004, 343, 369-373.	2.7	6
84	Nonuniform micromagnetic states in thin circular dots. Journal of Magnetism and Magnetic Materials, 2004, 282, 11-14.	2.3	4
85	Nonuniform magnetization reversals in elliptical permalloy dots. Journal of Magnetism and Magnetic Materials, 2004, 282, 135-138.	2.3	4
86	Magnetization Reversals in Elliptical Permalloy Particles. IEEE Transactions on Magnetics, 2004, 40, 2107-2109.	2.1	3
87	Micromagnetics of nanostructures. Journal of Magnetism and Magnetic Materials, 2003, 258-259, 6-10.	2.3	8
88	Magnetic properties of Fe-based nanoparticle assembly. Journal of Magnetism and Magnetic Materials, 2003, 258-259, 54-56.	2.3	10
89	Effect of applied stress on remagnetization and magnetization profile of Co-Si-B amorphous wire. Journal of Magnetism and Magnetic Materials, 2003, 258-259, 189-191.	2.3	10
90	Hysteretic properties of array of soft cylindrical particles. Journal of Applied Physics, 2003, 93, 4810-4819.	2.5	4

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91	Magnetization patterns of permalloy square frames. Journal of Applied Physics, 2003, 93, 7426-7428.	2.5	9
92	Recording potential of a single-domain particle. Applied Physics Letters, 2003, 83, 3749-3751.	3.3	6
93	Thickness dependence of magnetization reversal in a soft cylindrical particle. Journal of Applied Physics, 2003, 94, 6649-6654.	2.5	4
94	Nonuniform micromagnetic states in thin permalloy disk. IEEE Transactions on Magnetics, 2003, 39, 2675-2677.	2.1	5
95	Buckling instability in thin soft elliptical particles. Physical Review B, 2002, 66, .	3.2	23
96	Length effect in a Co-rich amorphous wire. Physical Review B, 2002, 65, .	3.2	66
97	Effective single-domain diameter of a fine non-ellipsoidal particle. Journal Physics D: Applied Physics, 2002, 35, 2081-2085.	2.8	7
98	Evolution of vortex states under external magnetic field. Journal of Magnetism and Magnetic Materials, 2002, 239, 1-4.	2.3	20
99	Non-uniform micromagnetic structures in asymmetrical ellipsoidal particles. Journal of Magnetism and Magnetic Materials, 2002, 242-245, 1009-1011.	2.3	5
100	Magnetodynamics of vortex in thin cylindrical platelet. Journal of Magnetism and Magnetic Materials, 2002, 242-245, 1005-1008.	2.3	41
101	Study of amorphous ferromagnetic microwires using a scanning SQUID microscope. Physica C: Superconductivity and Its Applications, 2002, 372-376, 271-273.	1.2	3
102	Stress distribution and domain structure in amorphous ferromagnetic wires. Journal of Magnetism and Magnetic Materials, 2002, 249, 3-8.	2.3	22
103	Nonuniform magnetization structures in thin soft type ferromagnetic elements of elliptical shape. Journal of Applied Physics, 2001, 89, 7591-7593.	2.5	41
104	Equilibrium magnetization patterns in network nanostructures. IEEE Transactions on Magnetics, 2001, 37, 2132-2134.	2.1	4
105	Remagnetization process in magnetically soft amorphous wire under the influence of magnetic field of alternating current. Journal of Magnetism and Magnetic Materials, 2000, 215-216, 545-547.	2.3	2
106	Residual quenching stresses in glass-coated amorphous ferromagnetic microwires. Journal Physics D: Applied Physics, 2000, 33, 1161-1168.	2.8	220
107	Residual quenching stresses in amorphous ferromagnetic wires produced by an in-rotating-water spinning process. Journal Physics D: Applied Physics, 1999, 32, 1788-1794.	2.8	26
108	Magnetic properties and magneto-impedance of cold-drawn permalloy-copper composite wires. IEEE Transactions on Magnetics, 1999, 35, 3640-3642.	2.1	17

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109	Magnetic properties of short amorphous microwires. Journal of Magnetism and Magnetic Materials, 1999, 196-197, 385-387.	2.3	18
110	GMI spectra of amorphous wires with different types of magnetic anisotropy in the core and the shell regions. Journal of Magnetism and Magnetic Materials, 1999, 203, 108-110.	2.3	18
111	Magnetization curling in soft type ferromagnetic particles with large aspect ratios. Journal of Magnetism and Magnetic Materials, 1999, 203, 277-279.	2.3	17
112	Theory of giant magneto-impedance effect in amorphous wires with different types of magnetic anisotropy. Journal of Magnetism and Magnetic Materials, 1998, 185, 159-173.	2.3	216
113	Stress dependence of the hysteresis loops of Co-rich amorphous wire. Journal of Physics Condensed Matter, 1998, 10, 2453-2463.	1.8	22
114	Influence of the residual quenching stresses on the magnetization distribution in amorphous ferromagnetic wires. European Physical Journal Special Topics, 1998, 08, Pr2-207-Pr2-210.	0.2	2
115	Theory of giant magneto-impedance effect in composite amorphous wire. Journal of Magnetism and Magnetic Materials, 1997, 171, 64-68.	2.3	48
116	The features of GMI effect in amorphous wires at microwaves. Physica A: Statistical Mechanics and Its Applications, 1997, 241, 420-424.	2.6	23
117	Possible origin for the bamboo domain structure in Co-rich amorphous wire. Journal of Magnetism and Magnetic Materials, 1997, 174, 127-132.	2.3	42
118	Theoretical hysteresis loops for single-domain particles with cubic anisotropy. Journal of Magnetism and Magnetic Materials, 1997, 174, 247-260.	2.3	50
119	High-frequency giant magneto-impedance in multilayered magnetic films. Physica A: Statistical Mechanics and Its Applications, 1997, 241, 414-419.	2.6	36
120	Structure of 90° domain wall in Co-based amorphous wire. Physica A: Statistical Mechanics and Its Applications, 1997, 241, 425-428.	2.6	16
121	Angular dependence of nucleation field of a prolate spheroid. Journal of Magnetism and Magnetic Materials, 1995, 147, L235-L239.	2.3	1
122	Flower state micromagnetic structures in a fine parallelepiped and a flat cylinder. Journal of Magnetism and Magnetic Materials, 1994, 135, 111-128.	2.3	17
123	Flower state micromagnetic structure in fine cylindrical particles. Journal of Magnetism and Magnetic Materials, 1994, 130, 275-287.	2.3	46
124	Magnetization curling in a fine cylindrical particle. Journal of Magnetism and Magnetic Materials, 1993, 118, L290-L294.	2.3	184
125	On the concept of a single-domain nonellipsoidal particle. Journal of Magnetism and Magnetic Materials, 1993, 125, L7-L13.	2.3	7
126	Criterion for stability of a nonuniform micromagnetic state. European Physical Journal B, 1992, 87, 183-189.	1.5	8



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127	Modeling of equilibrium magnetization structures in fine ferromagnetic particles with uniaxial anisotropy. Journal of Magnetism and Magnetic Materials, 1992, 110, L1-L5.	2.3	23
128	Microdispersive superconductors in ceramic and polymeric matrix. Bulletin of Materials Science, 1991, 14, 257-261.	1.7	1
129	New topological invariant for the problem of quantum hall effect in a two-dimensional periodic potential. Solid State Communications, 1988, 68, 943-946.	1.9	2
130	Theory of hopping conduction in two-dimensional impurity band under strong magnetic field. Solid State Communications, 1982, 43, 475-477.	1.9	3
131	Effect of long-wavelength phonon-photon coupling on the stability of the Wigner lattice. Physics Letters, Section A: General, Atomic and Solid State Physics, 1981, 86, 309-310.	2.1	0
132	On the radiation from inhomogeneous Josephson junction. Solid State Communications, 1979, 30, 783-784.	1.9	7