

# Alexander G Popov

## List of Publications by Year in descending order

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#	ARTICLE	IF	CITATIONS
1	Magnetic Hysteresis Properties and Microstructure of High-Coercivity (Nd,Dy) $\text{FeB}$ Magnets with Dy less than 10 wt % and Low Oxygen. <i>Physics of Metals and Metallography</i> , 2022, 123, 145-154.	0.3	3
2	Magnetic properties of $\text{Sm}_{2+\delta}\text{Fe}_{17}\text{N}$ powders prepared from bulk and strip-cast alloys. <i>Journal of Magnetism and Magnetic Materials</i> , 2021, 518, 167416.	1.0	5
3	Control of the Properties of $\text{Sm-Fe-Co-Cu-Zr}$ Magnets by the Method of Mixtures of Powders. <i>Metal Science and Heat Treatment</i> , 2021, 62, 560-565.	0.2	1
4	Investigation of Magnetic Hysteresis Properties of $(\text{Sm}_{0.8}\text{Zr}_{0.2})(\text{Fe}_{0.72}\text{Co}_{0.24}\text{Ti}_{0.04})_{10}\text{M}$ Melt-Spun Ribbons. <i>Metal Science and Heat Treatment</i> , 2021, 62, 566-571.	0.2	2
5	Enhancement of the Coercive Force of $\text{Sm}_2\text{Fe}_{17}\text{N}_3$ Powders via Surfactant Added Mechanical Milling. <i>Physics of Metals and Metallography</i> , 2021, 122, 547-558.	0.3	2
6	Magnetics Hysteresis Properties and Microstructure of High-Energy (Nd,Dy) $\text{FeB}$ Magnets with Low Oxygen Content. <i>Physics of Metals and Metallography</i> , 2021, 122, 1173-1182.	0.3	7
7	Development of high-coercivity state in melt-spun $\text{Fe}_{41}\text{Pd}_{41}\text{B}_8\text{Si}_6\text{P}_4$ ribbons. <i>Rare Metals</i> , 2020, 39, 76-83.	3.6	1
8	Ab initio study of the magnetic properties of possible phases in binary Fe-Pd alloys. <i>Journal of Magnetism and Magnetic Materials</i> , 2020, 499, 166266.	1.0	12
9	Development of high-coercivity state in high-energy and high-temperature Sm-Co-Fe-Cu-Zr magnets upon step cooling. <i>Journal of Alloys and Compounds</i> , 2020, 820, 153103.	2.8	10
10	Embedded atom potential for $\text{Sm-Co}$ compounds obtained by force-matching. <i>Journal of Magnetism and Magnetic Materials</i> , 2019, 490, 165468.	1.0	2
11	Coercivity kinetics upon step annealing of sintered $\text{Sm}(\text{Co}_{0.88}\text{Fe}_{0.09}\text{Zr}_{0.03})_7$ magnets. <i>Journal of Rare Earths</i> , 2019, 37, 1059-1065.	2.5	13
12	Magnetic properties of melt-spun ribbons $(\text{Sm}_{1-x}\text{Zr}_x)(\text{Fe}_{0.92}\text{Ti}_{0.08})_{10}$ with $\text{ThMn}_{12}$ structure and their hydrides. <i>Journal of Rare Earths</i> , 2019, 37, 1066-1071.	2.5	13
13	Effect of short-range atomic order on macroscopic magnetic properties of equiatomic FePd alloy. <i>Philosophical Magazine</i> , 2019, 99, 2198-2219.	0.7	6
14	Effect of additions of phosphorous, boron, and silicon on the structure and magnetic properties of the melt-spun FePd ribbons. <i>Journal of Magnetism and Magnetic Materials</i> , 2019, 481, 212-220.	1.0	3
15	Effect of solid solution treatment and nitrogenation on magnetic properties of $\text{Sm}_{2+\delta}\text{Fe}_{17}\text{N}_x$ powders. <i>Journal of Physics: Conference Series</i> , 2019, 1389, 012125.	0.3	0
16	Structure and Magnetic Properties of Heat-Resistant $\text{Sm}(\text{Co}_{0.796-x}\text{Fe}_{0.177}\text{Cu}_x\text{Zr}_{0.027})_{6.63}$ Permanent Magnets with High Coercivity. <i>Jom</i> , 2019, 71, 559-566.	0.9	8
17	Correlation of microstructure and magnetic properties in $\text{Sm}(\text{Co}_{0.1}\text{Cu}_{0.1}\text{Zr}_{0.033})_{6.93}$ magnets solution-treated at different temperatures. <i>Rare Metals</i> , 2019, 38, 20-28.	3.6	27
18	Peculiar Kinetics of Coercivity of Sintered $\text{Sm}(\text{Co}_{0.78}\text{Fe}_{0.10}\text{Cu}_{0.10}\text{Zr}_{0.02})_7$ Magnet Upon Slow Cooling. <i>IEEE Transactions on Magnetics</i> , 2018, 54, 1-7.	1.2	9

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19	Structure and Properties of Sm-Fe-Cu-Zr Magnets for High-Temperature Applications. Metal Science and Heat Treatment, 2018, 60, 498-503.	0.2	7
20	Structure and Properties of R (Fe, Co)-B (R = Nd, Dy, Ho) Permanent Magnets with Low Temperature Coefficient of Induction. Metal Science and Heat Treatment, 2018, 60, 528-533.	0.2	2
21	Mössbauer study of structural inhomogeneities formed upon the FCC-L10 transformation in equiatomic FePd alloy from different initial states. Philosophical Magazine, 2018, 98, 2380-2396.	0.7	5
22	Magnetic properties and structure of Fe50Pd50-Ni alloys (x=4 and 8) in the as-deformed and annealed state. Journal of Alloys and Compounds, 2017, 701, 892-900.	2.8	5
23	Enhanced method of magnetic powder alignment for production of PLP Nd-Fe-B magnets. Journal of Magnetism and Magnetic Materials, 2017, 428, 424-430.	1.0	8
24	High-power (Nd, Dy)-Fe-Co-B magnets with a low temperature coefficient of induction. Physics of Metals and Metallography, 2017, 118, 935-945.	0.3	9
25	Investigating aspects of the formation of structure in FePd alloy upon ordering. Bulletin of the Russian Academy of Sciences: Physics, 2017, 81, 822-826.	0.1	5
26	Effect of gallium alloying on the structure, the phase composition, and the thermoelastic martensitic transformations in ternary Ni-Mn-Ga alloys. Technical Physics, 2016, 61, 547-553.	0.2	7
27	Thermoelastic martensitic transformations in ternary Ni50Mn50-z Ga z alloys. Technical Physics Letters, 2016, 42, 75-78.	0.2	1
28	Effect of addition of esters of fatty acids on the microstructure and properties of sintered Nd-Fe-B magnets produced by PLP. Journal of Magnetism and Magnetic Materials, 2015, 386, 134-140.	1.0	9
29	Microstructure and Properties of Nd-Fe-B Alloys Produced by Strip Casting and of Permanent Magnets Fabricated from Them. Metal Science and Heat Treatment, 2015, 56, 585-590.	0.2	6
30	Pressless process in route of obtaining sintered Nd-Fe-B magnets. Journal of Magnetism and Magnetic Materials, 2015, 383, 226-231.	1.0	4
31	Mössbauer study of fine structure features of equiatomic FePd alloy after severe plastic deformation and ordering annealing. Journal of Alloys and Compounds, 2014, 583, 191-197.	2.8	13
32	Alignment of magnetic uniaxial particles in a magnetic field: Simulation. Journal of Magnetism and Magnetic Materials, 2014, 365, 64-69.	1.0	13
33	Model of formation of texture in A Nd-Fe-B alloy under severe plastic deformation. Metal Science and Heat Treatment, 2013, 55, 73-77.	0.2	0
34	Highly coercive sintered magnets from (Nd, Dy)-Fe-B alloys fabricated by the method of strip casting. Metal Science and Heat Treatment, 2013, 55, 78-82.	0.2	5
35	On the effect of cobalt doping on thermoelastic martensitic transformations in ferromagnetic Heusler Ni50-xCo-xMn29Ga21 magnetically controlled shape memory alloys. Technical Physics Letters, 2013, 39, 737-740.	0.2	2
36	Effect of cobalt doping on thermoelastic martensitic transformations and physical properties of magnetic shape memory alloys Ni50-xCo-xMn29Ga21. Physics of the Solid State, 2013, 55, 2413-2421.	0.2	7

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37	Crystal structure and physical properties of magnetic shape memory alloys Ni <sub>50-x</sub> Cu <sub>x</sub> Mn <sub>29</sub> Ga <sub>21</sub> . Physics of the Solid State, 2013, 55, 2471-2478.	0.2	6
38	Discovery of metastable tetragonal disordered phase upon phase transitions in the equiatomic nanostructured FePd alloy. Acta Materialia, 2013, 61, 2560-2570.	3.8	21
39	Effect of additions of zinc stearate on the properties of sintered Nd-Fe-B magnets. Physics of Metals and Metallography, 2013, 114, 285-294.	0.3	8
40	Preparation of sintered Nd-Fe-B magnets by pressless process. Physics of Metals and Metallography, 2012, 113, 331-340.	0.3	13
41	Severe plastic deformation and hydrogenation of the titanium aluminides. Journal of Alloys and Compounds, 2011, 509, 9307-9311.	2.8	15
42	Thermally unstable hydrides of titanium aluminide Ti <sub>3</sub> Al. Physics of Metals and Metallography, 2011, 111, 353-360.	0.3	1
43	Effect of diffusion annealing on the hysteretic properties of sintered Nd-Fe-B magnets. Physics of Metals and Metallography, 2011, 111, 471-478.	0.3	16
44	Phase composition and magnetic properties of phases in Sm <sub>2</sub> (Fe <sub>1-x</sub> Al <sub>x</sub> ) <sub>17</sub> alloys (with 0 ≤ x ≤ 1). Journal of Applied Physics, 2010, 108, 023507.	0.3	2
45	Spin Reorientation Transition in Nanocrystalline (Pr,Sm)Fe <sub>8</sub> Ga <sub>3</sub> C Alloys. Solid State Phenomena, 2010, 168-169, 126-129.	0.3	0
46	Preparation of high-power permanent magnets from platelike Nd-Fe-B alloys. Physics of Metals and Metallography, 2010, 109, 238-246.	0.3	9
47	Thermomagnetic and Mössbauer studies of structural transformations caused in the amorphous Nd <sub>9</sub> Fe <sub>85</sub> B <sub>5</sub> alloy by severe plastic deformation and annealing. Physics of Metals and Metallography, 2010, 109, 505-513.	0.3	7
48	Phase composition and magnetic properties of nanocrystalline SmFe <sub>11-x</sub> Ga <sub>x</sub> C <sub>1.25</sub> (2 ≤ x ≤ 5) alloys. Physics of Metals and Metallography, 2010, 110, 13-23.	0.3	2
49	Ferroelastic domains and phases in ferromagnetic nanostructured FePd alloy. Physics of Metals and Metallography, 2010, 110, 449-463.	0.3	7
50	Optimization of the Magnetic Properties of FePd Alloys by Severe Plastic Deformation. Advanced Engineering Materials, 2010, 12, 708-713.	1.6	11
51	Determination of Texture Degree of NdFeB-Magnets by Means of Neutron Diffraction. Solid State Phenomena, 2010, 168-169, 161-164.	0.3	1
52	Crystal Structure and Magnetic Properties of Novel Compound PrFe <sub>8</sub> Ga <sub>3</sub> C. Solid State Phenomena, 2009, 152-153, 75-78.	0.3	5
53	Effect of severe plastic deformation and ultrarapid quenching on the properties of magnetic shape memory alloys near the Ni <sub>2</sub> MnGa composition. Bulletin of the Russian Academy of Sciences: Physics, 2009, 73, 948-951.	0.1	3
54	Effect of the structural state of the FePd equiatomic alloy on the temperature dependence of the initial magnetic susceptibility and the curie temperature. Physics of Metals and Metallography, 2009, 107, 359-369.	0.3	9

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55	Structure and magnetic properties of iron-rich Sm-Fe-(V,W)-Ga alloys. <i>Physics of Metals and Metallography</i> , 2009, 108, 341-346.	0.3	0
56	Effect of gallium on the crystal structure and magnetic properties of $\text{PrFe}_{11-x}\text{Ga}_x$ compounds. <i>Physics of Metals and Metallography</i> , 2009, 108, 441-448.	0.3	1
57	Decomposition process in a FeAuPd alloy nanostructured by severe plastic deformation. <i>Journal of Materials Science</i> , 2008, 43, 7293-7298.	1.7	5
58	Use of mechanoactivation for obtaining hydrides of titanium aluminides. <i>Physics of Metals and Metallography</i> , 2008, 105, 460-470.	0.3	3
59	Martensitic transformations $\hat{\epsilon}$ ( $\pm$ ) and the shape-memory effect in aging high-strength manganese austenitic steels. <i>Physics of Metals and Metallography</i> , 2008, 106, 630-640.	0.3	4
60	Nanocrystallization and magnetic properties of amorphous Nd <sub>9</sub> Fe <sub>85</sub> B <sub>6</sub> subjected to high-pressure torsion deformation upon annealing. <i>Journal of Applied Physics</i> , 2008, 104, .	1.1	35
61	Controllable nanocrystallization in amorphous Nd <sub>9</sub> Fe <sub>85</sub> B <sub>6</sub> via combined application of severe plastic deformation and thermal annealing. <i>Applied Physics Letters</i> , 2007, 91, .	1.5	57
62	Microstructure and magnetic properties of R-Fe-B-Cu (R = Pr, Nd) alloys deformed by equal-channel angular pressing and subsequent hot upsetting. <i>Physics of Metals and Metallography</i> , 2007, 103, 51-57.	0.3	3
63	High-pressure-torsion deformation of melt-spun Nd <sub>9</sub> Fe <sub>85</sub> B <sub>6</sub> alloy. <i>Physics of Metals and Metallography</i> , 2007, 104, 238-247.	0.3	22
64	Effect of High-Pressure Torsion Deformation and Subsequent Annealing on Structure and Magnetic Properties of Overquenched Melt-Spun Nd <sub>9</sub> Fe <sub>85</sub> B <sub>6</sub> Alloy. <i>Journal of Iron and Steel Research International</i> , 2006, 13, 160-165.	1.4	22
65	Formation of a high-coercive state in sintered Nd-Fe-B-Ga magnets by thermocycling. <i>Physics of Metals and Metallography</i> , 2006, 101, 538-546.	0.3	8
66	Martensitic transformations and magnetic-field-induced strains in Ni <sub>50</sub> Mn <sub>50-x</sub> Ga <sub>x</sub> alloys. <i>Physics of Metals and Metallography</i> , 2006, 102, 140-148.	0.3	15
67	Nanocrystallization Induced by Severe Plastic Deformation of Amorphous Alloys. <i>Journal of Metastable and Nanocrystalline Materials</i> , 2004, 22, 21-26.	0.1	24
68	The use of severe deformations for preparing bulk nanocrystalline materials from amorphous alloys. <i>Doklady Physics</i> , 2004, 49, 519-521.	0.2	20
69	Abnormal temperature dependence of coercivity of Sm-Co-Fe-Cu-Zr alloys: history and current state. <i>Journal of Magnetism and Magnetic Materials</i> , 2004, 272-276, E1883-E1885.	1.0	5
70	High coercive states in Pr-Fe-B-Cu alloy processed by equal channel angular pressing. <i>Journal of Magnetism and Magnetic Materials</i> , 2002, 242-245, 1399-1401.	1.0	24
71	Equal-Channel Angular Pressing, Microstructure and Hysteresis Properties of Ultrafine - Grained Pr <sub>20</sub> Fe <sub>73.5</sub> B <sub>5</sub> Cu <sub>1.5</sub> - Alloy. <i>Materials Science Forum</i> , 2001, 373-376, 265-268.		1
72	Vortex pinning anisotropy in perfect YBCO films studied by transport current measurements. <i>Physica B: Condensed Matter</i> , 2000, 284-288, 831-832.	1.3	1

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73	Observation of proximity effect in YBCO/Au bilayer films by microwave surface resistance measurements. <i>Physica B: Condensed Matter</i> , 2000, 284-288, 915-916.	1.3	4
74	Critical current density of thin YBCO films on buffered sapphire substrates. <i>Superconductor Science and Technology</i> , 2000, 13, 209-214.	1.8	18
75	Metastable states in R2Fe14B-based alloys processed by severe plastic deformation. <i>Journal of Magnetism and Magnetic Materials</i> , 1999, 196-197, 166-168.	1.0	20
76	Critical current density in highly biaxially-oriented YBCO films: Can we control $J_c/(77\text{ K})$ and optimize up to more than $10^6\text{ amp/cm}^2$ ?. <i>IEEE Transactions on Applied Superconductivity</i> , 1999, 9, 1535-1538.	1.1	7
77	Structure evolution and changes in magnetic properties of severe plastic deformed Nd(Pr)FeB alloys during annealing. <i>Journal of Alloys and Compounds</i> , 1998, 281, 69-71.	2.8	35
78	Investigation of phase composition and remanence enhancement in rapidly quenched Nd <sub>9</sub> (Fe, Co) <sub>85</sub> B <sub>6</sub> alloys. <i>Journal of Alloys and Compounds</i> , 1996, 237, 101-107.	2.8	29
79	The structure and magnetic properties of rapidly quenched and annealed multi-phase nanocrystalline Nd <sub>9</sub> Fe <sub>91-x</sub> B <sub>x</sub> ribbons. <i>Journal of Alloys and Compounds</i> , 1996, 245, 119-124.	2.8	29
80	Method of formation of a high coercivity state in PrFeBCu alloy. <i>Journal of Magnetism and Magnetic Materials</i> , 1996, 157-158, 33-34.	1.0	11
81	X-ray emission spectra and phase-structure transitions of Pb <sub>2</sub> Sr <sub>2</sub> YCu <sub>3</sub> O <sub>8+δ</sub> ( $\delta = 0.19$ ). <i>Physica C: Superconductivity and Its Applications</i> , 1995, 252, 313-318.	0.6	0
82	The superconductivity of the Sb-doped Bi-Pb-Sr-Ca-Cu-O compounds. <i>Superconductor Science and Technology</i> , 1992, 5, 654-657.	1.8	9
83	Superconductivity and crystal structure of high $T_c$ Bi-Ca-Sr-Cu-O compounds. <i>IEEE Transactions on Magnetics</i> , 1989, 25, 2282-2284.	1.2	0
84	High $T_c$ superconductivity and crystal structure of Pb Sr Y,Ca Cu O system. <i>Physica C: Superconductivity and Its Applications</i> , 1989, 162-164, 534-535.	0.6	1
85	Superconducting NbN Film Treatments. , 1984, , 571-577.		1
86	Phase Transformations in Ferromagnetic Nanostructured FePd Alloy under Severe Plastic Deformation and Annealing. <i>Solid State Phenomena</i> , 0, 168-169, 392-395.	0.3	4
87	Disordering and Ordering in a Severely Deformed FePd Alloy. <i>Solid State Phenomena</i> , 0, 172-174, 703-708.	0.3	3