Alexander S Samardak

List of Publications by Year
in descending order

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102	1,066	567144 15	501076 28
papers	citations	h-index	g-index

103	103	103	1292
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Magnetoresistive Sensor Development Roadmap (Non-Recording Applications). IEEE Transactions on Magnetics, 2019, 55, 1-30.	1.2	138
2	An investigation on the effect of surface morphology and crystalline texture on corrosion behavior, structural and magnetic properties of electrodeposited nanocrystalline nickel films. Applied Surface Science, 2014, 292, 795-805.	3.1	83
3	Skyrmionium â€“ high velocity without the skyrmion Hall effect. Scientific Reports, 2018, 8, 16966.	1.6	75
4	Noise-Controlled Signal Transmission in a Multithread Semiconductor Neuron. Physical Review Letters, 2009, 102, 226802.	2.9	38
5	Variation of magnetic anisotropy and temperature-dependent FORC probing of compositionally tuned Co-Ni alloy nanowires. Journal of Alloys and Compounds, 2018, 732, 683-693.	2.8	36
6	Enhanced interfacial Dzyaloshinskii-Moriya interaction and isolated skyrmions in the inversion-symmetry-broken Ru/Co/W/Ru films. Applied Physics Letters, 2018, 112, .	1.5	36
7	High-density nickel nanowire arrays for data storage applications. Journal of Physics: Conference Series, 2012, 345, 012011.	0.3	33
8	Refinement of electrodeposition mechanism for fabrication of thin nickel films on n-type silicon (111). Journal of Electroanalytical Chemistry, 2013, 690, 136-143.	1.9	29
9	Role of the Heavy Metalâ€™s Crystal Phase in Oscillations of Perpendicular Magnetic Anisotropy and the Interfacial Dzyaloshinskii-Moriya Interaction in <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:mi mathvariant="normal">W</mml:mi><mml:mo>/</mml:mo><mml:mi>Co</mml:mi><mml:mtext>â^’</mml:mtext><mml:mi>Fe</mml:mi><mml:mi mathvariant="normal">B</mml:mi><mml:mo>/</mml:mo><mml:mi>MgO</mml:mi></mml:mrow></mml:math> Films. Physical Review Applied, 2018, 9, .	1.5	29
10	Enhancement of perpendicular magnetic anisotropy and Dzyaloshinskiiâ€“Moriya interaction in thin ferromagnetic films by atomic-scale modulation of interfaces. NPG Asia Materials, 2020, 12, .	3.8	28
11	Origin of perpendicular magnetic anisotropy in epitaxial <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:mi>Pd</mml:mi><mml:mo>/</mml:mo><mml:mi>Co</mml:mi> trilayers. Physical Review B, 2017, 95, .	1.1	24
12	Conversion of magnetic anisotropy in electrodeposited Coâ€“Ni alloy nanowires. Journal of Magnetism and Magnetic Materials, 2015, 383, 94-99.	1.0	21
13	Vortex dynamics and frequency splitting in vertically coupled nanomagnets. Scientific Reports, 2017, 7, 1127.	1.6	17
14	Magnetization reversal of ferromagnetic nanosprings affected by helical shape. Nanoscale, 2018, 10, 20405-20413.	2.8	17
15	Magnetic Direct-Write Skyrmion Nanolithography. ACS Nano, 2020, 14, 14960-14970.	7.3	17
16	Structural Defectâ€Induced Bandgap Narrowing in Dopantâ€Free Anodic TiO₂ Nanotubes. ChemElectroChem, 2017, 4, 1227-1235.	1.7	15
17	Composite topological structure of domain walls in synthetic antiferromagnets. Scientific Reports, 2018, 8, 15794.	1.6	15
18	Enhancement of perpendicular magnetic anisotropy and coercivity in ultrathin Ru/Co/Ru films through the buffer layer engineering. Journal Physics D: Applied Physics, 2016, 49, 425302.	1.3	14

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19	Magnetic properties and the interfacial Dzyaloshinskii-Moriya interaction in exchange biased Pt/Co/NixOy films. Applied Surface Science, 2021, 543, 148720.	3.1	14
20	Spiking computation and stochastic amplification in a neuron-like semiconductor microstructure. Journal of Applied Physics, 2011, 109, .	1.1	13
21	Spontaneous nucleation and topological stabilization of skyrmions in magnetic nanodisks with the interfacial Dzyaloshinskiiâ€“Moriya interaction. Journal of Magnetism and Magnetic Materials, 2017, 429, 221-226.	1.0	13
22	Self-organization and FORC-based magnetic characterization of ultra-high aspect ratio epitaxial Co nanostrips produced by oblique deposition on an ordered step-bunched silicon surface. Nanotechnology, 2017, 28, 095708.	1.3	13
23	Morphology- and magnetism-controlled electrodeposition of Ni nanostructures on TiO2 nanotubes for hybrid Ni/TiO2 functional applications. Ceramics International, 2019, 45, 11258-11269.	2.3	13
24	Composition-driven crystal structure transformation and magnetic properties of electrodeposited Coâ€“W alloy nanowires. Journal of Alloys and Compounds, 2020, 843, 155902.	2.8	13
25	Effect of the crystal structure and interlayer exchange coupling on the coercive force in Co/Cu/Co films. Physics of the Solid State, 2003, 45, 907-910.	0.2	12
26	Linear and nonlinear collective modes in magnetic microstructures formed by coupled disks. Physical Review B, 2011, 83, .	1.1	12
27	Nanoscale control of perpendicular magnetic anisotropy, coercive force and domain structure in ultrathin Ru/Co/W/Ru films. Journal of Magnetism and Magnetic Materials, 2018, 454, 78-84.	1.0	12
28	Crystal texture-dependent magnetic and magnetotransport properties of half-metallic Fe3O4 films grown on oxidized Si substrates by reactive deposition. Journal of Alloys and Compounds, 2020, 815, 152398.	2.8	12
29	Magnetic Properties of Electrodeposited Nickel-Multiwall Carbon Nanotube Composite Films. IEEE Transactions on Magnetics, 2015, 51, .	1.2	11
30	Effective magnetic anisotropy manipulation by oblique deposition in magnetostatically coupled Co nanostrip arrays. Journal of Magnetism and Magnetic Materials, 2017, 422, 452-457.	1.0	11
31	Gradual magnetization switching via domain nucleation driven by spinâ€“orbit torque. Applied Physics Letters, 2021, 118, 032407.	1.5	11
32	3-D Architectural Approach for Manipulation of the Micromagnetic Configuration in Nanodisks. IEEE Transactions on Magnetics, 2012, 48, 4406-4408.	1.2	10
33	Influence of the properties of soft collective spin wave modes on the magnetization reversal in finite arrays of dipolarly coupled magnetic dots. Journal of Magnetism and Magnetic Materials, 2015, 384, 166-174.	1.0	10
34	Magnetic properties and geometry-driven magnetic anisotropy of magnetoplasmonic crystals. Journal of Magnetism and Magnetic Materials, 2019, 480, 150-153.	1.0	10
35	Synthesis and Sorption Characteristics of Magnetic Materials Based on Cobalt Oxides and Their Reduced Forms. Russian Journal of Inorganic Chemistry, 2020, 65, 820-828.	0.3	9
36	Topologically Nontrivial Spin Textures in Thin Magnetic Films. Physics of Metals and Metallography, 2022, 123, 238-260.	0.3	9

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37	Geometry Dependent Magnetic Properties of Ni Nanowires Embedded in Self-Assembled Arrays. Physics Procedia, 2011, 22, 549-556.	1.2	8
38	An analogue sum and threshold neuron based on the quantum tunnelling amplification of electrical pulses. New Journal of Physics, 2008, 10, 083010.	1.2	7
39	An Influence of Boundary Effects and Spatial Symmetry on Magnetization Reversal of Nanodisk Arrays. IEEE Transactions on Magnetics, 2012, 48, 3651-3653.	1.2	7
40	Magnetic vortex state and multi-domain pattern in electrodeposited hemispherical nanogranular nickel films. Journal of Magnetism and Magnetic Materials, 2014, 371, 149-156.	1.0	7
41	Advanced Method for the Reliable Estimation of Spin-Orbit-Torque Efficiency in Low-Coercivity Ferromagnetic Multilayers. Physical Review Applied, 2019, 11, .	1.5	7
42	Current-Induced Manipulation of the Exchange Bias in a Pt/Co/NiO Structure. ACS Applied Materials & Interfaces, 2021, 13, 42258-42265.	4.0	7
43	Analyzer-free, intensity-based, wide-field magneto-optical microscopy. Applied Physics Reviews, 2021, 8, .	5.5	7
44	High-frequency switching of magnetic bistability in an asymmetric double disk nanostructure. Applied Physics Letters, 2014, 104, .	1.5	6
45	Dependence of the magnetic properties of nanocrystalline nickel films on grain size and surface morphology. Nanotechnologies in Russia, 2014, 9, 723-727.	0.7	6
46	Experimental evidence of skyrmion-like configurations in bilayer nanodisks with perpendicular magnetic anisotropy. Journal of Applied Physics, 2015, 117, 17B529.	1.1	6
47	Induced magnetic anisotropies dependent micromagnetic structure of epitaxial Co nanostrip arrays. Journal of Magnetism and Magnetic Materials, 2018, 459, 118-124.	1.0	6
48	Ferromagnetic resonance study of sputtered Pt/Co/Pt multilayers. Applied Surface Science, 2018, 461, 202-205.	3.1	6
49	Chirality-Reversible Multistate Switching via Two Orthogonal Spin-Orbit Torques in a Perpendicularly Magnetized System. Physical Review Applied, 2020, 13, .	1.5	6
50	Magnetic anisotropy of Co/Cu/Co films with indirect exchange coupling. Physics of the Solid State, 2004, 46, 1084-1087.	0.2	5
51	Behavior of magnetic and magnetoresistive properties of nanocrystalline Co/Cu/Co films during step-by-step annealing. Physics of Metals and Metallography, 2006, 101, 11-16.	0.3	5
52	Fabrication of high-resolution nanostructures of complex geometry by the single-spot nanolithography method. Beilstein Journal of Nanotechnology, 2015, 6, 976-986.	1.5	5
53	Vortex manipulation and chirality control in asymmetric bilayer nanomagnets. Journal of Applied Physics, 2015, 117, 17A317.	1.1	5
54	Electrodeposited Co93.2P6.8 nanowire arrays with core-shell microstructure and perpendicular magnetic anisotropy. Journal of Applied Physics, 2015, 117, 17E715.	1.1	5

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55	Size-dependent changeover in magnetization reversal mode of self-assembled one-dimensional chains of spherical Fe₃O₄ nanoparticles. Japanese Journal of Applied Physics, 2016, 55, 100303.	0.8	5
56	Macroporous Magnetic Iron Oxides and Their Composites for Liquid-Phase Catalytic Oxidation. Russian Journal of Inorganic Chemistry, 2020, 65, 1642-1653.	0.3	5
57	Engineering of optical, magneto-optical and magnetic properties of nickel-based one-dimensional magnetoplasmonic crystals. Japanese Journal of Applied Physics, 2020, 59, SEEA08.	0.8	5
58	Rudermanâ€“Kittelâ€“Kasuyaâ€“Yosida-type interfacial Dzyaloshinskiiâ€“Moriya interaction in heavy metal/ferromagnet heterostructures. Nature Communications, 2021, 12, 3280.	5.8	5
59	Role of an in-plane ferromagnet in a T-type structure for field-free magnetization switching. Applied Physics Letters, 2022, 120, .	1.5	5
60	FORC-Diagram Analysis for a Step-like Magnetization Reversal in Nanopatterned Stripe Array. Materials, 2021, 14, 7523.	1.3	5
61	Propagation and spatiotemporal summation of electrical pulses in semiconductor nerve fibers. Applied Physics Letters, 2007, 91, 073502.	1.5	4
62	Magnetic Properties of Nickel Nanowire Arrays Patterned by Template Electrodeposition. Solid State Phenomena, 2012, 190, 522-525.	0.3	4
63	Hybrid magnetic anisotropy [Co/Ni]/Cu/[Co/Pt] spin-valves. Journal of Magnetism and Magnetic Materials, 2018, 449, 271-277.	1.0	4
64	Mesophase micelle-assisted electrodeposition and magnetisation behavior of meso-porous nickel films for efficient electrochemical energy and magnetic device applications. Applied Surface Science, 2019, 471, 776-785.	3.1	4
65	Granulated media for nanoelectronic applications. Journal of Physics: Conference Series, 2012, 345, 012010.	0.3	3
66	Manipulation of magnetic vortex parameters in disk-on-disk nanostructures with various geometry. Beilstein Journal of Nanotechnology, 2015, 6, 697-703.	1.5	3
67	Micromagnetic Structure of Co Stripe Arrays With Tuned Anisotropy. IEEE Transactions on Magnetics, 2015, 51, 1-4.	1.2	3
68	Microstructure, composition and magnetic properties of Nd-(Fe1-xCox)-B oxide magnetic particles synthesized by Pechini-type chemical method. Advanced Powder Technology, 2021, 32, 3964-3979.	2.0	3
69	AC Electrodeposition of Amorphous CoP Nanowires Embedded in an Alumina Template. Journal of Spintronics and Magnetic Nanomaterials, 2012, 1, 23-27.	0.2	3
70	XMCD and ab initio study of interface-engineered ultrathin Ru/Co/W/Ru films with perpendicular magnetic anisotropy and strong Dzyaloshinskiiâ€“Moriya interaction. Physical Chemistry Chemical Physics, 2022, 24, 8225-8232.	1.3	3
71	The magnetic structure of nanodisks with a crown. Bulletin of the Russian Academy of Sciences: Physics, 2011, 75, 193-194.	0.1	2
72	An influence of mechanical deformations on crystal structure and spin configuration in magnetic nanowires. Journal of Applied Physics, 2013, 113, 17A334.	1.1	2

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73	Magnetoresistive properties of the â€œsmall disk on a big diskâ€•nanostructure. Journal of Applied Physics, 2013, 113, 17B527.	1.1	2
74	Photovoltage Spectroscopy of Dipolar Spin Waves in Dy Micromagnets. Solid State Phenomena, 0, 215, 400-406.	0.3	2
75	Crystal Structure and Coercivity of Electrodeposited Nickel Films. Solid State Phenomena, 2014, 215, 139-143.	0.3	2
76	High harmonic generation from spin resonance fluorescence. Physica E: Low-Dimensional Systems and Nanostructures, 2008, 40, 1223-1225.	1.3	1
77	Magnetic anisotropy and domain structure in spin-valves based on MTJ. Journal of Physics: Conference Series, 2011, 266, 012021.	0.3	1
78	Competition between Vortex and â€œSâ€•like States in Laterally Confined Magnetic Trilayers. Physics Procedia, 2011, 22, 157-162.	1.2	1
79	MTJ spin-valves based on thin films and nanowires. Physics Procedia, 2012, 23, 123-127.	1.2	1
80	Magnetic Behavior of Single Ni Nanowires and its Arrays Embedded in Highly Ordered Nanoporous Alumina Templates. Solid State Phenomena, 0, 215, 298-305.	0.3	1
81	Crystal structure and magnetic properties of wafer-size Co nanostrip arrays self-organized on a step-bunched surface of Si(111)-5.55â€Ã—â€5.55-Cu/(Cu, Cu2Si, W-O) buffers. Materials Characterization, 2020, 160, 110077.	1.9	1
82	Photovoltage detection of spin excitation of a ferromagnetic stripe and disk at low temperature. Japanese Journal of Applied Physics, 2020, 59, SEED02.	0.8	1
83	Inhomogeneous magnetic properties characterized by simultaneous electrical and optical detection of spin-torque ferromagnetic resonance. Applied Physics Letters, 2021, 119, 192409.	1.5	1
84	Coincidence detection and spike regeneration in artificial neurons. Physica Status Solidi (A) Applications and Materials Science, 2008, 205, 2651-2654.	0.8	0
85	Analogue summation of electrical spike trains in semiconductor nerve fibres. Physica E: Low-Dimensional Systems and Nanostructures, 2008, 40, 2214-2216.	1.3	0
86	Noise induced amplification of sub-threshold pulses in multi-thread excitable semiconductor â€neuronsâ€™. Physica E: Low-Dimensional Systems and Nanostructures, 2010, 42, 2853-2856.	1.3	0
87	Regular pulsing induced by noise in a monolithic semiconductor neuron. , 2010, , .		0
88	The Remagnetization Process Feature of Trilayer Nanodisks. Solid State Phenomena, 0, 168-169, 249-252.	0.3	0
89	Magnetization Reversal and Domain Structure Ð¾f Magnetic Tunnel Junctions. Solid State Phenomena, 2010, 168-169, 253-256.	0.3	0
90	Effect of the number of nanodisks in two-dimensional arrays on magnetization reversal processes. Physics of the Solid State, 2013, 55, 768-772.	0.2	0

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91	The Improved Magneto-Optical Kerr Effect Method of Magnetic Anisotropy Measurements in Thin Films and Nanostructures. Solid State Phenomena, 0, 215, 445-447.	0.3	0
92	Temperature Dependence of Magnetic Saturation in Electrodeposited Nanocrystalline Nickel Films. Solid State Phenomena, 0, 215, 292-297.	0.3	0
93	Spot Electron-Beam Lithography as a Novel Method of High Resolution Pattern Nanofabrication. Solid State Phenomena, 0, 215, 459-461.	0.3	0
94	Magnetic Bistability of the â€œSmall Disk on Big Diskâ€•Structure. Solid State Phenomena, 0, 215, 499-502.	0.3	0
95	Peculiarities in the measurements of magnetic anisotropy in thin films and nanostructures by the magnetooptical Kerr effect. Nanotechnologies in Russia, 2014, 9, 457-460.	0.7	0
96	Investigation of the Co Films Growth on Si (111) Surface with Copper Silicide Nanostructures. Solid State Phenomena, 0, 215, 204-207.	0.3	0
97	Composition-dependent reorientation of magnetic anisotropy in electrodeposited CoNi nanowire arrays. , 2015, , .		0
98	Magnetic properties of electrodeposited nickel-MWCNT nanocomposite films. , 2015, , .		0
99	Micromagnetic structure of Co stripe arrays with tuned anisotropy. , 2015, , .		0
100	Interface roughness driven magnetic anisotropy and Dzyaloshinskii- Moriya interaction in thin films with broken structural inversion symmetry. , 2018, , .		0
101	Preparation and Structure of Oxide and Reduced Nd(Fe_{1-x}Co_x)B Nanoparticles. Solid State Phenomena, 0, 312, 288-294.	0.3	0
102	Crystal Structure and Magnetic Properties of Epitaxial Cobalt Thin Films and Single-Crystal Nanostrips Grown on a Stepped Surface Si(111)-5.55Ã—5.55-Cu with a Cu(111) Buffer Layer. Journal of Superconductivity and Novel Magnetism, 2022, 35, 2099-2106.	0.8	0