

# Alexandr V Sadovnikov

## List of Publications by Year in descending order

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127  
papers

3,076  
citations

147726

31  
h-index

168321

53  
g-index

131  
all docs

131  
docs citations

131  
times ranked

1847  
citing authors

#	ARTICLE	IF	CITATIONS
1	The 2021 Magnonics Roadmap. Journal of Physics Condensed Matter, 2021, 33, 413001.	0.7	287
2	Magnonics: a new research area in spintronics and spin wave electronics. Physics-Uspexhi, 2015, 58, 1002-1028.	0.8	174
3	Nanoconstriction-based spin-Hall nano-oscillator. Applied Physics Letters, 2014, 105, .	1.5	165
4	Magnon Straintronics: Reconfigurable Spin-Wave Routing in Strain-Controlled Bilateral Magnetic Stripes. Physical Review Letters, 2018, 120, 257203.	2.9	131
5	Towards graded-index magnonics: Steering spin waves in magnonic networks. Physical Review B, 2015, 92, .	1.1	110
6	Toward nonlinear magnonics: Intensity-dependent spin-wave switching in insulating side-coupled magnetic stripes. Physical Review B, 2017, 96, .	1.1	95
7	Diameter-independent skyrmion Hall angle observed in chiral magnetic multilayers. Nature Communications, 2020, 11, 428.	5.8	89
8	Route toward semiconductor magnonics: Light-induced spin-wave nonreciprocity in a YIG/GaAs structure. Physical Review B, 2019, 99, .	1.1	88
9	Voltage-Controlled Spin-Wave Coupling in Adjacent Ferromagnetic-Ferroelectric Heterostructures. Physical Review Applied, 2017, 7, .	1.5	86
10	Directional multimode coupler for planar magnonics: Side-coupled magnetic stripes. Applied Physics Letters, 2015, 107, .	1.5	82
11	Spin-current nano-oscillator based on nonlocal spin injection. Scientific Reports, 2015, 5, 8578.	1.6	82
12	Magnonic beam splitter: The building block of parallel magnonic circuitry. Applied Physics Letters, 2015, 106, .	1.5	81
13	Manipulation of the Dzyaloshinskiiâ€Moriya Interaction in Co/Pt Multilayers with Strain. Physical Review Letters, 2020, 124, 157202.	2.9	74
14	Spin wave propagation in a uniformly biased curved magnonic waveguide. Physical Review B, 2017, 96, .	1.1	70
15	Pinning and hysteresis in the field dependent diameter evolution of skyrmions in Pt/Co/Ir superlattice stacks. Scientific Reports, 2017, 7, 15125.	1.6	61
16	Nonlinear spin wave coupling in adjacent magnonic crystals. Applied Physics Letters, 2016, 109, .	1.5	56
17	Spin-Wave Drop Filter Based on Asymmetric Side-Coupled Magnonic Crystals. Physical Review Applied, 2018, 9, .	1.5	55
18	Dipolar field-induced spin-wave waveguides for spin-torque magnonics. Applied Physics Letters, 2015, 106, .	1.5	52

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19	Spin-wave intermodal coupling in the interconnection of magnonic units. Applied Physics Letters, 2018, 112, .	1.5	47
20	Multimode Propagation of Magnetostatic Waves in a Width-Modulated Yttrium-Iron-Garnet Waveguide. IEEE Magnetics Letters, 2014, 5, 1-4.	0.6	46
21	Frequency selective tunable spin wave channeling in the magnonic network. Applied Physics Letters, 2016, 108, .	1.5	46
22	Field-Controlled Phase-Rectified Magnonic Multiplexer. IEEE Transactions on Magnetics, 2015, 51, 1-4.	1.2	43
23	Spin wave steering in three-dimensional magnonic networks. Applied Physics Letters, 2018, 112, 122404.	1.5	40
24	Dielectric magnonics: from gigahertz to terahertz. Physics-Usppekhi, 2020, 63, 945-974.	0.8	40
25	Brillouin light scattering study of transverse mode coupling in confined yttrium iron garnet/barium strontium titanate multiferroic. Journal of Applied Physics, 2015, 118, .	1.1	39
26	Generation of propagating spin waves from regions of increased dynamic demagnetising field near magnetic antidots. Applied Physics Letters, 2015, 107, 162401.	1.5	39
27	Nonlinear Spin Wave Effects in the System of Lateral Magnonic Structures. JETP Letters, 2018, 107, 25-29.	0.4	38
28	All-Dielectric Nanophotonics Enables Tunable Excitation of the Exchange Spin Waves. Nano Letters, 2020, 20, 5259-5266.	4.5	38
29	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
30	Spatial frequency selection of magnetostatic waves in a two-dimensional magnonic crystal lattice. JETP Letters, 2016, 104, 563-567.	0.4	32
31	The electrodynamic characteristics of a finite-width metal/dielectric/ferroelectric/dielectric/metal layer structure. Journal of Communications Technology and Electronics, 2014, 59, 914-919.	0.2	31
32	Role of the Heavy Metal $\text{Fe}$ Crystal Phase in Oscillations of Perpendicular Magnetic Anisotropy and the Interfacial Dzyaloshinskii-Moriya Interaction in $\langle \text{mml:math} \text{xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"} \langle \text{mml:mrow} \langle \text{mml:mi} \text{mathvariant="normal"} \rangle W \langle \text{mml:mi} \rangle \langle \text{mml:mo} \rangle \langle \text{mml:mi} \rangle \text{Co} \langle \text{mml:mi} \rangle \langle \text{mml:mtext} \rangle \hat{a} \langle \text{mml:mi} \rangle \text{Fe} \langle \text{mml:mi} \rangle \langle \text{mml:mtext} \rangle \hat{c} \langle \text{mml:mi} \rangle B \langle \text{mml:mi} \rangle \langle \text{mml:mo} \rangle \langle \text{mml:mi} \rangle \text{MgO} \langle \text{mml:mi} \rangle \langle \text{mml:mrow} \rangle \langle \text{mml:math} \rangle \text{Films, Physical Review Applied, 2018, 9, .$	1.5	29
33	Dzyaloshinskii-Moriya interaction in symmetric epitaxial $\langle \text{mml:math} \text{xmlns:mml="http://www.w3.org/1998/Math/MathML" } \langle \text{mml:mrow} \langle \text{mml:mrow} \langle \text{mml:mi} \rangle \langle \text{mml:mi} \rangle \langle \text{mml:mo} \rangle \langle \text{mml:mi} \rangle \text{Co} \langle \text{mml:mi} \rangle \langle \text{mml:mo} \rangle \langle \text{mml:mi} \rangle \text{Pd} \langle \text{mml:mi} \rangle \langle \text{mml:mrow} \rangle \langle \text{mml:math} \rangle \text{superlattices with different numbers of Co/Pd bilayers. Physical Review B, 2019, 99, .$	1.5	29
34	Band gap formation and control in coupled periodic ferromagnetic structures. Journal of Applied Physics, 2016, 120, .	1.1	28
35	Enhancement of perpendicular magnetic anisotropy and Dzyaloshinskii-Moriya interaction in thin ferromagnetic films by atomic-scale modulation of interfaces. NPG Asia Materials, 2020, 12, .	3.8	28
36	Self-Generation of Chaotic Dissipative Soliton Trains in Active Ring Resonator With 1-D Magnonic Crystal. IEEE Transactions on Magnetics, 2011, 47, 3716-3719.	1.2	27



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55	Spatiotemporal dynamics of magnetostatic and spin waves in a transversely confined ferrite waveguide. Bulletin of the Russian Academy of Sciences: Physics, 2013, 77, 1429-1431.	0.1	11
56	Investigation of self-nucleated skyrmion states in the ferromagnetic/nonmagnetic multilayer dot. Applied Physics Letters, 2021, 118, .	1.5	11
57	Strain-mediated tunability of spin-wave spectra in the adjacent magnonic crystal stripes with piezoelectric layer. Applied Physics Letters, 2021, 118, .	1.5	11
58	Spin-Wave Transport Along In-Plane Magnetized Laterally Coupled Magnonic Stripes. IEEE Magnetics Letters, 2017, 8, 1-4.	0.6	9
59	Abrasive wear of Hilong BoTN hardfacings. IOP Conference Series: Materials Science and Engineering, 2018, 307, 012038.	0.3	8
60	Collective and localized modes in 3D magnonic crystals. Journal of Magnetism and Magnetic Materials, 2019, 492, 165647.	1.0	8
61	Spatial dynamics of hybrid electromagnetic spin waves in a lateral multiferroic microwaveguide. JETP Letters, 2017, 105, 364-369.	0.4	7
62	Modification of Magnetic Properties of a CoPt Alloy by Ion Irradiation. Physics of the Solid State, 2019, 61, 1646-1651.	0.2	7
63	Voltage-induced strain to control the magnetization of bi FeRh/PZT and tri PZT/FeRh/PZT layered magnetoelectric composites. AIP Advances, 2020, 10, .	0.6	7
64	Effect of Ion Irradiation on the Magnetic Properties of CoPt Films. Physics of the Solid State, 2021, 63, 386-394.	0.2	7
65	Spin-wave excitations in YIG films grown on corrugated substrates. Journal of Physics: Conference Series, 2019, 1389, 012140.	0.3	6
66	Vertical Spin-Wave Transport in Magnonic Waveguides With Broken Translation Symmetry. IEEE Magnetics Letters, 2019, 10, 1-5.	0.6	6
67	Spin-waves generation at the thickness step of yttrium iron garnet film. Applied Physics Letters, 2020, 117, .	1.5	6
68	Excitation of Terahertz Magnons in Antiferromagnetic Nanostructures: Theory and Experiment. Journal of Experimental and Theoretical Physics, 2020, 131, 71-82.	0.2	6
69	Studying the spectra of thermal magnons in composite materials with embedded magnetite nanoparticles using Brillouin light-scattering spectroscopy. Technical Physics Letters, 2013, 39, 715-718.	0.2	5
70	Magnetostatic surface waves in a ferriteâ€“ferromagnetic metal layered medium based on yttrium iron garnet epitaxial films and TbCo <sub>2</sub> /FeCo nanostructures. Journal of Communications Technology and Electronics, 2015, 60, 999-1005.	0.2	5
71	Spin-Wave Switching in the Side-Coupled Magnonic Stripes. IEEE Transactions on Magnetics, 2017, 53, 1-4.	1.2	5
72	Volume Magnetostatic Spin Waves in 3D Ferromagnetic Structures. Journal of Communications Technology and Electronics, 2018, 63, 1431-1438.	0.2	5

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73	Modulation of interfacial magnetic relaxation timeframes by partially uncoupled exchange bias. Journal Physics D: Applied Physics, 2022, 55, 105001.	1.3	5
74	Strain-Tuned Spin-Wave Interference in Micro- and Nanoscale Magnonic Interferometers. Nanomaterials, 2022, 12, 1520.	1.9	5
75	Spatial and Temporal Dynamics of Dissipative Parametric Solitons in a Ferromagnetic Film Active Ring Resonator. IEEE Transactions on Magnetics, 2014, 50, 1-4.	1.2	4
76	Electrodynamical properties and modes of finite-width planar ferrite waveguide. Journal of Physics: Conference Series, 2014, 572, 012064.	0.3	4
77	Brillouin spectroscopy of nonlinear magnetoacoustic resonances in a layered YIG/GGG structure. Bulletin of the Russian Academy of Sciences: Physics, 2016, 80, 1242-1247.	0.1	4
78	Controlled Spin-Wave Transport in a Magnon-Crystal Structure with a One-Dimensional Array of Holes. JETP Letters, 2019, 110, 533-539.	0.4	4
79	Intensity and magnetization angle reconfigurable lateral spin-wave coupling and transport. Journal of Magnetism and Magnetic Materials, 2020, 500, 166344.	1.0	4
80	Ferromagnetic Resonance in Permalloy Metasurfaces. Applied Magnetic Resonance, 2021, 52, 749-758.	0.6	4
81	Zigzag domains caused by strain-induced anisotropy of the Dzyaloshinskii-Moriya interaction. Physical Review B, 2022, 105, .	1.1	4
82	Nonlinear Magnetostatic Wave Propagation through One Dimensional Finite Magnonic Crystals. Solid State Phenomena, 2014, 215, 394-399.	0.3	3
83	Splitting of Spin Waves in Strain Reconfigurable Magnonic Stripe. IEEE Transactions on Magnetics, 2017, 53, 1-4.	1.2	3
84	Coupled spin waves in magnetic waveguides induced by elastic deformations in YIG/piezoelectric structures. JETP Letters, 2017, 106, 465-469.	0.4	3
85	Nonlinear Lateral Spin-Wave Transport in Planar Magnonic Networks. IEEE Magnetics Letters, 2018, 9, 1-5.	0.6	3
86	Controlling the Properties of Spin-Wave Transport in a Semiring Magnon Microwaveguide. Technical Physics, 2019, 64, 1636-1641.	0.2	3
87	Band structure formation in magnonic Bragg gratings superlattice. Journal Physics D: Applied Physics, 2020, 53, 395002.	1.3	3
88	Multimode unidirectional spin-wave coupling in an array of non-identical magnonic crystals near band gap frequencies. Journal Physics D: Applied Physics, 2021, 54, 245001.	1.3	3
89	Skyrmion Formation in Nanodisks Using Magnetic Force Microscopy Tip. Nanomaterials, 2021, 11, 2627.	1.9	3
90	Spin wave filtration by resonances in the sidewalls of corrugated yttrium-iron garnet films. Journal of Magnetism and Magnetic Materials, 2022, 545, 168786.	1.0	3

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91	Space-Quasiperiodic and Time-Chaotic Parametric Patterns in a Magnonic Quasicrystal Active Ring Resonator. <i>Physical Review Applied</i> , 2021, 16, .	1.5	3
92	Nonlinear signal processing with magnonic superlattice with two periods. <i>Applied Physics Letters</i> , 2022, 120, 122407.	1.5	3
93	The influence of a metal on transverse characteristics of hybrid waves in a layered ferrite-ferroelectric structure. <i>Technical Physics Letters</i> , 2016, 42, 486-490.	0.2	2
94	Functional Magnetic Metamaterials for Spintronics. <i>Nanoscience and Technology</i> , 2018, , 221-245.	1.5	2
95	Tunable Fano Resonances in Irregular Magnonic Structure. <i>IEEE Transactions on Magnetism</i> , 2022, 58, 1-5.	1.2	2
96	Using Mandelstam-Brillouin Spectroscopy to Study Energy-Efficient Devices for Processing Information Signals on the Basis of Magnon Straintronics. <i>Bulletin of the Russian Academy of Sciences: Physics</i> , 2021, 85, 595-598.	0.1	2
97	Magnon straintronics for tunable spin-wave transport with YIG/GaAs and YIG/PZT structures. <i>AIP Conference Proceedings</i> , 2020, , .	0.3	2
98	Dzyaloshinskii-Moriya interaction determined from spin wave nonreciprocity and magnetic bubble asymmetry in Pt/Co/Ir/Co/Pt synthetic ferrimagnets. <i>Journal of Physics Condensed Matter</i> , 2022, 34, 085803.	0.7	2
99	Field-controlled phase-rectified magnonic multiplexor. , 2015, , .		1
100	Spin waves transport in 3D magnonic waveguides. <i>AIP Advances</i> , 2021, 11, 035024.	0.6	1
101	Surface Spin-Wave Propagation in the Orthogonal Transverse Junction of YIG-Based Magnonic Stripes. <i>IEEE Transactions on Magnetism</i> , 2022, 58, 1-4.	1.2	1
102	Coupled Spin Waves in Magnonic Waveguides. , 2017, , 47-76.		1
103	Analysis of the electromagnetic wave propagation in the nonlinear Bragg grating structure. , 2010, , .		0
104	The dynamics of the electromagnetic wave propagation in the nonlinear Bragg grating structure. <i>Proceedings of SPIE</i> , 2010, , .	0.8	0
105	Dynamics of electromagnetic wave propagation near band gap in nonlinear Bragg grating structure. , 2010, , .		0
106	Nonreciprocity of surface magnetostatic waves in 1D magnonic crystals with non-symmetrical load. , 2012, , .		0
107	Nanoconstriction-based spin-Hall oscillators. , 2015, , .		0
108	Application of color image processing and low-coherent optical computer tomography in evaluation of adhesive interfaces of dental restorations. , 2015, , .		0

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109	Conversion of magnetostatic spin waves propagating through a junction of magnonic waveguides. , 2015, , .		0
110	Band gap control in periodic structure with magnonic crystal and ferroelectric. , 2015, , .		0
111	Influence of periodic ferroelectric layer on band gap's width in periodic ferrite " Periodic ferroelectric structure. , 2016, , .		0
112	Directional RF coupler with dual tunability based on laterally coupled multiferroic structure. , 2016, , .		0
113	Tunable RF coupler based on laterally coupled magnetic microwaveguides. , 2016, , .		0
114	Integrated magnonic networks based on the lateral magnonic stripes and magnonic crystals.. , 2018, , .		0
115	Interface roughness driven magnetic anisotropy and Dzyaloshinskii- Moriya interaction in thin films with broken structural inversion symmetry. , 2018, , .		0
116	3D magnonic crystals.. , 2018, , .		0
117	Spin wave coupling in strain-tuned magnonic waveguide and reconfigurable magnonic crystals.. , 2018, , .		0
118	Nonlinear magneto-optical Kerr effect in Co/Pt and Co/Ta bilayer films. Journal of Physics: Conference Series, 2019, 1389, 012105.	0.3	0
119	Functional Magnon Network Blocks Based on Structures with Translational Symmetry Violation. Technical Physics, 2019, 64, 1615-1621.	0.2	0
120	Dynamic testing equipment for evaluation of time consumption for the forms of reasoning of a human-operator. AIP Conference Proceedings, 2019, , .	0.3	0
121	Voltage-controlled spin-wave intermodal coupling in lateral ensembles of magnetic stripes with patterned piezoelectric layer. AIP Advances, 2021, 11, 035316.	0.6	0
122	Tunable Spin Wave Propagation in YIG/Fe-Rh Stripe. IEEE Transactions on Magnetics, 2022, 58, 1-4.	1.2	0
123	Nonlinear spin-wave propagation in the nonidentical magnonic structures. Izvestiya Vysshikh Uchebnykh Zavedeniy Prikladnaya Nelineynaya Dinamika, 2018, 26, 59-67.	0.1	0
124	Modification of the Interfacial Dzyaloshinskii" Moriya Interaction in Cobalt/Heavy Metal Films Irradiated with Helium Ions. Physics of the Solid State, 2021, 63, 1373-1377.	0.2	0
125	Electric-Field-Controlled Spin-Wave Coupling in Lateral Ensembles of Magnetic Microstructures. Physics of the Solid State, 2021, 63, 1356-1360.	0.2	0
126	Lateral Spin-Wave Transport in a System of Nonidentical Magnonic-Crystal Microwave Guides. Physics of the Solid State, 2021, 63, 1361-1365.	0.2	0



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127	Magnon-Phonon Interaction in the Transition Layer of an Epitaxial YIG Film. Physics of the Solid State, 2021, 63, 1569-1573.	0.2	0