Alexander G Khitun

List of Publications by Year
in descending order

87	3,241	186265 28	149698 56
papers	citations	h-index	g-index

88	88	88	2730
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Magnonic logic circuits. Journal Physics D: Applied Physics, 2010, 43, 264005.	2.8	519
2	The 2021 Magnonics Roadmap. Journal of Physics Condensed Matter, 2021, 33, 413001.	1.8	287
3	Nano scale computational architectures with Spin Wave Bus. Superlattices and Microstructures, 2005, 38, 184-200.	3.1	249
4	Spin Wave Magnetic NanoFabric: A New Approach to Spin-Based Logic Circuitry. IEEE Transactions on Magnetics, 2008, 44, 2141-2152.	2.1	199
5	Magnonic Holographic Read-Only Memory. IEEE Magnetics Letters, 2016, 7, 1-4.	1.1	155
6	Electric-field-induced spin wave generation using multiferroic magnetoelectric cells. Applied Physics Letters, 2014, 104, 082403.	3.3	144
7	Non-volatile magnonic logic circuits engineering. Journal of Applied Physics, 2011, 110, .	2.5	135
8	Modification of the lattice thermal conductivity in silicon quantum wires due to spatial confinement of acoustic phonons. Superlattices and Microstructures, 1999, 26, 181-193.	3.1	108
9	In-plane lattice thermal conductivity of a quantum-dot superlattice. Journal of Applied Physics, 2000, 88, 696-699.	2.5	94
10	Multi-frequency magnonic logic circuits for parallel data processing. Journal of Applied Physics, 2012, 111, .	2.5	74
11	Magnetoelectric spin wave amplifier for spin wave logic circuits. Journal of Applied Physics, 2009, 106, .	2.5	72
12	Pattern recognition with magnonic holographic memory device. Applied Physics Letters, 2015, 106, .	3.3	65
13	Graphene-based non-Boolean logic circuits. Journal of Applied Physics, 2013, 114, .	2.5	60
14	Feasibility study of logic circuits with a spin wave bus. Nanotechnology, 2007, 18, 465202.	2.6	56
15	Magnonic holographic devices for special type data processing. Journal of Applied Physics, 2013, 113, .	2.5	56
16	Thermoelectric figure of merit enhancement in a quantum dot superlattice. Nanotechnology, 2000, 11, 327-331.	2.6	50
17	Magnonic Holographic Memory. IEEE Transactions on Magnetics, 2015, 51, 1-5.	2.1	50
18	Optical phonons in self-assembled Ge quantum dot superlattices: Strain relaxation effects. Journal of Applied Physics, 2002, 92, 6804-6808.	2.5	39

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19	Variable-temperature inelastic light scattering spectroscopy of nickel oxide: Disentangling phonons and magnons. Applied Physics Letters, 2017, 110, .	3.3	37
20	Magnetoelectric Spin Wave Modulator Based On Synthetic Multiferroic Structure. Scientific Reports, 2018, 8, 10867.	3.3	37
21	Transport study of a single bismuth nanowire fabricated by the silver and silicon nanowire shadow masks. Applied Physics Letters, 2006, 89, 141503.	3.3	36
22	Transistor-Less Logic Circuits Implemented With 2-D Charge Density Wave Devices. IEEE Electron Device Letters, 2018, 39, 1449-1452.	3.9	36
23	Two-Dimensional Oscillatory Neural Network Based on Room-Temperature Charge-Density-Wave Devices. IEEE Nanotechnology Magazine, 2017, 16, 860-867.	2.0	33
24	Reversible magnetic logic gates based on spin wave interference. Journal of Applied Physics, 2018, 123, .	2.5	32
25	Magnonic Holographic Memory: From Proposal to Device. IEEE Journal on Exploratory Solid-State Computational Devices and Circuits, 2015, 1, 67-75.	1.5	30
26	Magnonic interferometric switch for multi-valued logic circuits. Journal of Applied Physics, 2017, 121, .	2.5	30
27	A Magnetometer Based on a Spin Wave Interferometer. Scientific Reports, 2017, 7, 11539.	3.3	29
28	Coplanar waveguide radio frequency ferromagnetic parametric amplifier. Applied Physics Letters, 2008, 93, .	3.3	28
29	Inductively Coupled Circuits with Spin Wave Bus for Information Processing. Journal of Nanoelectronics and Optoelectronics, 2008, 3, 24-34.	0.5	28
30	Enhancement of the thermoelectric figure of merit of Si1â˜'xGex quantum wires due to spatial confinement of acoustic phonons. Physica E: Low-Dimensional Systems and Nanostructures, 2000, 8, 13-18.	2.7	25
31	The effect of the long-range order in a quantum dot array on the in-plane lattice thermal conductivity. Superlattices and Microstructures, 2001, 30, 1-8.	3.1	25
32	Magnetic cellular nonlinear network with spin wave bus for image processing. Superlattices and Microstructures, 2010, 47, 464-483.	3.1	25
33	Prime factorization using magnonic holographic devices. Journal of Applied Physics, 2016, 120, .	2.5	22
34	A Three-Terminal Spin-Wave Device for Logic Applications. Journal of Nanoelectronics and Optoelectronics, 2010, 4, 394-397.	0.5	22
35	Modification of the three-phonon Umklapp process in a quantum wire. Applied Physics Letters, 2001, 79, 851-853.	3.3	21
36	Tunable normal incidence Ge quantum dot midinfrared detectors. Journal of Applied Physics, 2004, 96, 773-776.	2.5	20

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37	Biological cell manipulation by magnetic nanoparticles. AIP Advances, 2016, 6, .	1.3	20
38	Spin wave excitation in sub-micrometer thick Y3Fe5O12films fabricated by pulsed laser deposition on garnet and silicon substrates: A comparative study. Journal of Applied Physics, 2017, 122, 123904.	2.5	19
39	Efficiency of Spin-Wave Bus for Information Transmission. IEEE Transactions on Electron Devices, 2007, 54, 3418-3421.	3.0	17
40	Spin waves in YIG based magnonic networks: Design and technological aspects. Journal of Magnetism and Magnetic Materials, 2022, 545, 168754.	2.3	17
41	Determining wave vector and material property from the phase-shift of spin-wave propagation. Europhysics Letters, 2008, 84, 27009.	2.0	16
42	On the modeling of lattice thermal conductivity in semiconductor quantum dot superlattices. Applied Physics Letters, 2004, 84, 1762-1764.	3.3	15
43	Biological cell positioning and spatially selective destruction via magnetic nanoparticles. Applied Physics Letters, 2012, 101, 013701.	3.3	15
44	Spin wave interference in YIG cross junction. AIP Advances, 2017, 7, .	1.3	15
45	The discrete noise of magnons. Applied Physics Letters, 2019, 114, .	3.3	15
46	Cellular Nonlinear Network Based on Semiconductor Tunneling Nanostructure. IEEE Transactions on Electron Devices, 2005, 52, 183-189.	3.0	14
47	Parallel database search and prime factorization with magnonic holographic memory devices. Journal of Applied Physics, 2015, 118, .	2.5	14
48	Realization of spin wave switch for data processing. AIP Advances, 2018, 8, .	1.3	12
49	Nonreciprocity of backward volume spin wave beams excited by the curved focusing transducer. Applied Physics Letters, 2018, 113, .	3.3	12
50	Nano Logic Circuits with Spin Wave Bus. , 2006, , .		11
51	Multi-functional edge driven nano-scale cellular automata based on semiconductor tunneling nano-structure with a self-assembled quantum dot layer. Superlattices and Microstructures, 2005, 37, 55-76.	3.1	10
52	Spin Wave Logic Circuit on Silicon Platform. , 2008, , .		10
53	Magnonic holographic imaging of magnetic microstructures. Journal of Magnetism and Magnetic Materials, 2017, 428, 348-356.	2.3	9
54	Quantum computing without quantum computers: Database search and data processing using classical wave superposition. Journal of Applied Physics, 2021, 130, .	2.5	9

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55	Interconnects for nanoelectronics. , 0, , .		8
56	Parallel Read-Out and Database Search With Magnonic Holographic Memory. IEEE Transactions on Magnetics, 2016, 52, 1-4.	2.1	5
57	Brillouin-Mandelstam spectroscopy of standing spin waves in a ferrite waveguide. AIP Advances, 2018, 8, .	1.3	5
58	Effects of the magnetic field variation on the spin wave interference in a magnetic cross junction. AIP Advances, 2018, 8, 056619.	1.3	5
59	A spin-wave magnetometer with a positive feedback. Journal of Magnetism and Magnetic Materials, 2020, 514, 167046.	2.3	5
60	Spin wave interference detection via inverse spin Hall effect. Applied Physics Letters, 2021, 118, .	3.3	4
61	On Logic Circuits With Spin Wave Bus. Journal of Nanoelectronics and Optoelectronics, 2006, 1, 71-73.	0.5	4
62	Nanoscale modules with full spin-wave interconnectivity. Journal of Experimental Nanoscience, 2007, 2, 73-86.	2.4	3
63	Perpendicularly magnetized YIG-film resonators and waveguides with high operating power. AIP Advances, 2017, 7, .	1.3	3
64	Interference of Spin Waves in Arrays of Microwaveguides Based on Yttrium-Iron Garnet Films. Technical Physics, 2019, 64, 1622-1628.	0.7	3
65	Optimization of the thermoelectric properties of low-dimensional structures via phonon engineering. , 0, , .		2
66	A Nano-Scale Crossbar with Spin Waves. , 2006, , .		2
67	Magnetic cellular nonlinear network with spin wave bus. , 2010, , .		2
68	Spin wave phase logic. , 2014, , 359-378.		2
69	Brillouin-Mandelstam spectroscopy of stress-modulated spatially confined spin waves in Ni thin films on piezoelectric substrates. Journal of Magnetism and Magnetic Materials, 2020, 501, 166440.	2.3	2
70	Micro magnet location using spin waves. Journal of Applied Physics, 2022, 132, .	2.5	2
71	Thermal conductivity of Si/Ge quantum dot superlattices. , 0, , .		1
72	Graphene nanoribbon crossbar nanomesh. , 2011, , .		1

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73	Magnonic holographic co-processor: An approach to energy-efficient complementary logic circuitry. , 2015, , .		1
74	Parallel data processing with Magnonic Holographic Co-Processor. , 2016, , .		1
75	An entertaining physics: On the possibility of energy storage enhancement in electrostatic capacitors using the compensational inductive electric field. Applied Physics Letters, 2020, 117, 153903.	3.3	1
76	Thermoelectric figure of merit enhancement in Si and SiGe quantum wires due to spatial confinement of acoustic phonons. , 0, , .		0
77	In-plane Thermal and Electronic Transport in Quantum Dot Superlattice. Materials Research Society Symposia Proceedings, 2001, 677, 491.	0.1	0
78	A Nano-Scale Crossbar with Spin Waves. , 0, , .		0
79	Cellular Nonlinear Network with Spin Wave Bus. , 2007, , .		0
80	Coplanar waveguide radio frequency ferromagnetic parametric amplifier. , 2008, , .		0
81	A magnetic amplifier for amplifying spin-wave signal. , 2009, , .		0
82	Nonreciprocal amplification of spin-wave signals. , 2010, , .		0
83	Energy dissipation in magnonic logic circuits. , 2012, , .		0
84	10.1063/1.4942090.1. , 2016, , .		0
85	Spin Waves Focused Beams in YIG Films. , 2020, , .		0
86	Prime factorization using coupled oscillators with positive feedback. AIP Advances, 2022, 12, 045307.	1.3	0
87	Period finding and prime factorization using classical wave superposition. Journal of Applied Physics, 2022, 131, 153901.	2.5	0