

# Volodymyr Kruglyak

## List of Publications by Year in descending order

Source: <https://exaly.com/author-pdf/769077/publications.pdf>

Version: 2024-02-01

119  
papers

5,393  
citations

94433

37  
h-index

85541

71  
g-index

131  
all docs

131  
docs citations

131  
times ranked

3073  
citing authors

#	ARTICLE	IF	CITATIONS
1	Magnonics. Journal Physics D: Applied Physics, 2010, 43, 264001.	2.8	1,293
2	The 2021 Magnonics Roadmap. Journal of Physics Condensed Matter, 2021, 33, 413001.	1.8	287
3	Advances in Magnetism Roadmap on Spin-Wave Computing. IEEE Transactions on Magnetics, 2022, 58, 1-72.	2.1	179
4	Ultrafast optical modification of exchange interactions in iron oxides. Nature Communications, 2015, 6, 8190.	12.8	164
5	Magnonics: Experiment to prove the concept. Journal of Magnetism and Magnetic Materials, 2006, 306, 191-194.	2.3	136
6	Magnonics. Journal Physics D: Applied Physics, 2010, 43, 260301.	2.8	134
7	Imaging Collective Magnonic Modes in 2D Arrays of Magnetic Nanoelements. Physical Review Letters, 2010, 104, 027201.	7.8	130
8	Towards graded-index magnonics: Steering spin waves in magnonic networks. Physical Review B, 2015, 92, .	3.2	110
9	Resonant microwave-to-spin-wave transducer. Applied Physics Letters, 2012, 100, .	3.3	101
10	Direct Excitation of Propagating Spin Waves by Focused Ultrashort Optical Pulses. Physical Review Letters, 2013, 110, 097201.	7.8	87
11	Picosecond magnetization dynamics in nanomagnets: Crossover to nonuniform precession. Physical Review B, 2005, 71, .	3.2	83
12	Nanoscale spin wave valve and phase shifter. Applied Physics Letters, 2012, 100, .	3.3	83
13	Magnon-fluxon interaction in a ferromagnet/superconductor heterostructure. Nature Physics, 2019, 15, 477-482.	16.7	83
14	Magnonic beam splitter: The building block of parallel magnonic circuitry. Applied Physics Letters, 2015, 106, .	3.3	81
15	Spin wave interferometer employing a local nonuniformity of the effective magnetic field. Journal of Applied Physics, 2007, 101, 113919.	2.5	80
16	Terahertz emission spectroscopy of laser-induced spin dynamics in $\text{TmFeO}_3$ and $\text{ErFeO}_3$ . Physical Review B, 2014, 90, .		
17	Time-resolved investigation of magnetization dynamics of arrays of nonellipsoidal nanomagnets with nonuniform ground states. Physical Review B, 2008, 78, .	3.2	70
18	Spin wave propagation in a uniformly biased curved magnonic waveguide. Physical Review B, 2017, 96, .	3.2	70

#	ARTICLE	IF	CITATIONS
19	Optically induced magnetization dynamics and variation of damping parameter in epitaxial Co <sub>2</sub> MnSi Heusler alloy films. <i>Physical Review B</i> , 2010, 81, .	3.2	63
20	Imaging the dephasing of spin wave modes in a square thin film magnetic element. <i>Physical Review B</i> , 2004, 69, .	3.2	59
21	Propagation and scattering of spin waves in curved magnonic waveguides. <i>Applied Physics Letters</i> , 2012, 101, .	3.3	57
22	Anisotropy, damping, and coherence of magnetization dynamics in a 10 <sup>14</sup> m square Ni <sub>81</sub> Fe <sub>19</sub> element. <i>Applied Physics Letters</i> , 2003, 82, 3065-3067.	3.3	52
23	Spin-wave spectrum of a magnonic crystal with an isolated defect. <i>Journal of Applied Physics</i> , 2006, 99, 08C906.	2.5	52
24	Spin waves in a periodically layered magnetic nanowire. <i>Journal of Applied Physics</i> , 2005, 98, 014304.	2.5	49
25	Excitation of propagating spin waves with global uniform microwave fields. <i>Applied Physics Letters</i> , 2011, 98, 122506.	3.3	46
26	Ultrafast inverse Faraday effect in a paramagnetic terbium gallium garnet crystal. <i>Physical Review B</i> , 2012, 86, .	3.2	46
27	INFLUENCE OF LONGITUDINAL MAGNETIC FIELD ON THE FLUCTUATION CONDUCTIVITY IN SLIGHTLY <font>Al</font>-DOPED <font>YBa</font><sub>2</sub><font>Cu</font><sub>3-z</sub><font>Al</font><sub>z</sub><font>O</font><sub>7-Î</sub> SINGLE CRYSTALS WITH A GIVEN TOPOLOGY OF PLANE DEFECTS. <i>Modern Physics Letters B</i> , 2011, 25, 2131-2136.	3.3	46
28	Spectrum of spin waves propagating in a periodic magnetic structure. <i>Physica B: Condensed Matter</i> , 2003, 339, 130-133.	2.7	43
29	Field-Controlled Phase-Rectified Magnonic Multiplexer. <i>IEEE Transactions on Magnetics</i> , 2015, 51, 1-4.	2.1	43
30	Terahertz modulation of the Faraday rotation by laser pulses via the optical Kerr effect. <i>Nature Photonics</i> , 2016, 10, 111-114.	31.4	43
31	Measurement of hot electron momentum relaxation times in metals by femtosecond ellipsometry. <i>Physical Review B</i> , 2005, 71, .	3.2	42
32	Graded-index magnonics. <i>Low Temperature Physics</i> , 2015, 41, 760-766.	0.6	40
33	A Luneburg lens for spin waves. <i>Applied Physics Letters</i> , 2018, 113, .	3.3	40
34	Damping of spin waves in a real magnonic crystal. <i>Journal of Magnetism and Magnetic Materials</i> , 2004, 272-276, 302-303.	2.3	39
35	Spin wave spectrum of a magnonic crystal with an internally structured defect. <i>Physica B: Condensed Matter</i> , 2005, 370, 73-77.	2.7	39
36	Negative permeability due to exchange spin-wave resonances in thin magnetic films with surface pinning. <i>Physical Review B</i> , 2010, 82, .	3.2	39

#	ARTICLE	IF	CITATIONS
37	Generation of propagating spin waves from regions of increased dynamic demagnetising field near magnetic antidots. <i>Applied Physics Letters</i> , 2015, 107, 162401.	3.3	39
38	Dynamic configurational anisotropy in nanomagnets. <i>Physical Review B</i> , 2007, 75, .	3.2	37
39	Spectrum and reflection of spin waves in magnonic crystals with different interface profiles. <i>Physical Review B</i> , 2010, 81, .	3.2	37
40	Collective magnonic modes of pairs of closely spaced magnetic nano-elements. <i>Journal of Applied Physics</i> , 2011, 109, 07B912.	2.5	37
41	Theory of linear spin wave emission from a Bloch domain wall. <i>Physical Review B</i> , 2017, 96, .	3.2	37
42	Micromagnetic Simulations in Magnonics. <i>Topics in Applied Physics</i> , 2013, , 101-115.	0.8	36
43	Optical ferromagnetic resonance studies of thin film magnetic structures. <i>Journal Physics D: Applied Physics</i> , 2003, 36, 2183-2192.	2.8	33
44	Broadband conversion of microwaves into propagating spin waves in patterned magnetic structures. <i>Applied Physics Letters</i> , 2017, 111, .	3.3	33
45	Magnetization boundary conditions at a ferromagnetic interface of finite thickness. <i>Journal of Physics Condensed Matter</i> , 2014, 26, 406001.	1.8	32
46	Mapping the magnonic landscape in patterned magnetic structures. <i>Physical Review B</i> , 2017, 96, .	3.2	32
47	Precessional dynamics in microarrays of nanomagnets. <i>Journal of Applied Physics</i> , 2005, 97, 10A706.	2.5	31
48	Ultrafast optical modification of magnetic anisotropy and stimulated precession in an epitaxial Co <sub>2</sub> MnAl thin film. <i>Journal of Applied Physics</i> , 2007, 101, 09C106.	2.5	31
49	Towards high-frequency negative permeability using magnonic crystals in metamaterial design. <i>Physical Review B</i> , 2012, 86, .	3.2	31
50	Investigation of spin wave damping in three-dimensional magnonic crystals using the plane wave method. <i>Physical Review B</i> , 2012, 86, .	3.2	30
51	Micromagnetic method of s-parameter characterization of magnonic devices. <i>Journal of Applied Physics</i> , 2011, 109, .	2.5	29
52	Spin-wave spectrum of an ideal multilayer magnet upon modulation of all parameters of the Landau-Lifshitz equation. <i>Physics of the Solid State</i> , 2004, 46, 867-871.	0.6	28
53	Phenomenological description of the nonlocal magnetization relaxation in magnonics, spintronics, and domain-wall dynamics. <i>Physical Review B</i> , 2015, 92, .	3.2	28
54	Asymmetry of spin wave dispersions in a hexagonal magnonic crystal. <i>Applied Physics Letters</i> , 2013, 102, .	3.3	27

#	ARTICLE	IF	CITATIONS
55	Calculation of high-frequency permeability of magnonic metamaterials beyond the macrospin approximation. <i>Physical Review B</i> , 2012, 86, .	3.2	26
56	Generation of Propagating Spin Waves From Edges of Magnetic Nanostructures Pumped by Uniform Microwave Magnetic Field. <i>IEEE Transactions on Magnetics</i> , 2016, 52, 1-4.	2.1	26
57	Dispersion of collective magnonic modes in stacks of nanoscale magnetic elements. <i>Physical Review B</i> , 2011, 84, .	3.2	23
58	Magnetodynamical response of large-area close-packed arrays of circular dots fabricated by nanosphere lithography. <i>Physical Review B</i> , 2013, 87, .	3.2	23
59	Static and dynamic magnetic properties of densely packed magnetic nanowire arrays. <i>Physical Review B</i> , 2013, 87, .	3.2	23
60	Electric-field control of spin-wave power flow and caustics in thin magnetic films. <i>Physical Review B</i> , 2018, 98, .	3.2	23
61	Time resolved studies of edge modes in magnetic nanoelements (invited). <i>Journal of Applied Physics</i> , 2006, 99, 08F306.	2.5	22
62	Imaging small-amplitude magnetization dynamics in a longitudinally magnetized microwire. <i>Physical Review B</i> , 2008, 77, .	3.2	22
63	Top-down design of magnonic crystals from bottom-up magnetic nanoparticles through protein arrays. <i>Nanotechnology</i> , 2017, 28, 155301.	2.6	22
64	Acquisition of vector hysteresis loops from micro-arrays of nano-magnets. <i>Journal of Magnetism and Magnetic Materials</i> , 2006, 306, 298-301.	2.3	21
65	Spin waves in a magnonic crystal with sine-like interfaces. <i>Journal of Magnetism and Magnetic Materials</i> , 2006, 307, 48-52.	2.3	21
66	Broadband injection and scattering of spin waves in lossy width-modulated magnonic crystal waveguides. <i>Journal Physics D: Applied Physics</i> , 2013, 46, 135003.	2.8	21
67	Ultrafast magnetization dynamics of spintronic nanostructures. <i>Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences</i> , 2011, 369, 3115-3135.	3.4	19
68	Formation of the band spectrum of spin waves in 1D magnonic crystals with different types of interfacial boundary conditions. <i>Journal Physics D: Applied Physics</i> , 2017, 50, 094003.	2.8	18
69	Graded index lenses for spin wave steering. <i>Physical Review B</i> , 2019, 100, .	3.2	18
70	Chiral magnonic resonators: Rediscovering the basic magnetic chirality in magnonics. <i>Applied Physics Letters</i> , 2021, 119, 200502.	3.3	18
71	Time- and vector-resolved magneto-optical Kerr effect measurements of large angle precessional reorientation in a $2\text{\AA}-2\frac{1}{4}\text{m}^2$ ferromagnet. <i>Journal of Applied Physics</i> , 2009, 105, 07D308.	2.5	17
72	Spectroscopic study of optically induced ultrafast electron dynamics in gold. <i>Physical Review B</i> , 2007, 75, .	3.2	16

#	ARTICLE	IF	CITATIONS
73	Low-temperature time-domain terahertz spectroscopy of terbium gallium garnet crystals. Physical Review B, 2013, 87, .	3.2	16
74	Controlling acoustic waves using magneto-elastic Fano resonances. Applied Physics Letters, 2019, 115, .	3.3	16
75	Ultrafast third-order optical nonlinearity of noble and transition metal thin films. Journal of Optics, 2005, 7, S235-S240.	1.5	15
76	Structural and magnetic properties of electrodeposited Cobalt nanowire arrays. Solid State Communications, 2009, 149, 1650-1653.	1.9	15
77	Spatial mapping of torques within a spin Hall nano-oscillator. Physical Review B, 2018, 98, .	3.2	15
78	Dependence of non-reciprocity in spin wave excitation on antenna configuration. Journal of Applied Physics, 2018, 124, .	2.5	15
79	Use of the Faraday optical transformer for ultrafast magnetization reversal of nanomagnets. Journal of Nanophotonics, 2007, 1, 013502.	1.0	14
80	An effect of the curvature induced anisotropy on the spectrum of spin waves in a curved magnetic nanowire. Low Temperature Physics, 2013, 39, 163-166.	0.6	14
81	Spin-wave control using dark modes in chiral magnonic resonators. Physical Review B, 2021, 104, .	3.2	13
82	Dependence of anisotropy and damping on shape and aspect ratio in micron sized Ni <sub>81</sub> Fe <sub>19</sub> elements. Journal of Applied Physics, 2004, 95, 6998-7000.	2.5	12
83	Generation of femtosecond current pulses using the inverse magneto-optical Faraday effect. Technical Physics Letters, 2005, 31, 1047-1048.	0.7	12
84	Excitation and Imaging of Precessional Modes in Soft-Magnetic Squares. IEEE Transactions on Magnetics, 2008, 44, 3083-3086.	2.1	12
85	Magnetic interfaces as sources of coherent spin waves. Physical Review B, 2018, 98, .	3.2	12
86	Characterization of spin valves fabricated on opaque substrates by optical ferromagnetic resonance. Applied Physics Letters, 2002, 81, 1468-1470.	3.3	11
87	Role of boundaries in micromagnetic calculations of magnonic spectra of arrays of magnetic nanoelements. Physical Review B, 2013, 87, .	3.2	11
88	Role of magnons and the size effect in heat transport through an insulating ferromagnet/insulator interface. Physical Review B, 2018, 98, .	3.2	11
89	Time resolved imaging of the non-linear bullet mode within an injection-locked nano-contact spin Hall nano-oscillator. Applied Physics Letters, 2018, 113, .	3.3	10
90	Influence of nonmagnetic dielectric spacers on the spin-wave response of one-dimensional planar magnonic crystals. Physical Review B, 2019, 100, .	3.2	10

#	ARTICLE	IF	CITATIONS
91	Temperature dependence of the magnon-phonon energy relaxation time in a ferromagnetic insulator. <i>Physical Review B</i> , 2019, 100, .	3.2	10
92	Spin-wave wells revisited: From wavelength conversion and MÃ¶bius modes to magnon valleytronics. <i>Physical Review B</i> , 2021, 103, .	3.2	9
93	Observation of incoherent picosecond magnetisation dynamics in micron sized Ni81Fe19 elements by time resolved scanning Kerr effect microscopy. <i>IET Science, Measurement and Technology</i> , 2003, 150, 260-263.	0.7	8
94	Ultrafast time-evolution of chiral NÃ©el magnetic domain walls probed by circular dichroism in x-ray resonant magnetic scattering. <i>Nature Communications</i> , 2022, 13, 1412.	12.8	7
95	Shape-dependent anisotropy and damping of picosecond magnetisation dynamics in a micron sized Ni81Fe19 element. <i>Journal of Magnetism and Magnetic Materials</i> , 2004, 272-276, 2121-2122.	2.3	6
96	Dependence of spatial coherence of coherent suppression of magnetization precession upon aspect ratio in Ni81Fe19 microdots. <i>Journal of Applied Physics</i> , 2005, 97, 10A710.	2.5	6
97	Scattering of exchange spin waves from a helimagnetic layer sandwiched between two semi-infinite ferromagnetic media. <i>Physical Review B</i> , 2020, 102, .	3.2	6
98	Spin Seebeck effect and phonon energy transfer in heterostructures containing layers of a normal metal and a ferromagnetic insulator. <i>Physical Review B</i> , 2019, 99, .	3.2	5
99	Hybrid magnetoacoustic metamaterials for ultrasound control. <i>Applied Physics Letters</i> , 2020, 117, .	3.3	5
100	Use of microscale coplanar striplines with indium tin oxide windows in optical ferromagnetic resonance measurements. <i>Journal of Applied Physics</i> , 2005, 97, 10R304.	2.5	4
101	Spectrum of spin waves in a magnonic crystal with a structure defect. <i>Physics of Metals and Metallography</i> , 2006, 101, 513-518.	1.0	4
102	Magnonic band spectrum of spin waves in an elliptical helix. <i>Royal Society Open Science</i> , 2018, 5, 172285.	2.4	4
103	Bloch oscillations of backward volume magnetostatic spin waves. <i>Physical Review B</i> , 2020, 102, .	3.2	4
104	Chirality of exchange spin waves exposed: Scattering and emission from interfaces between antiferromagnetically coupled ferromagnets. <i>Journal of Applied Physics</i> , 2021, 130, .	2.5	4
105	Optical excitation of a coherent transverse optical phonon in a polycrystalline Zr metal film. <i>Physical Review B</i> , 2007, 76, .	3.2	3
106	Current-induced picosecond magnetization dynamics in a Ta/CoFeB/MgO hall bar. <i>Journal Physics D: Applied Physics</i> , 2019, 52, 355003.	2.8	3
107	Emission of coherent spin waves from a magnetic layer excited by a uniform microwave magnetic field. <i>Journal Physics D: Applied Physics</i> , 2019, 52, 135001.	2.8	3
108	Wannier-Stark ladder spectrum of Bloch oscillations of magneto-dipole spin waves in graded 1D magnonic crystals. <i>Low Temperature Physics</i> , 2020, 46, 830-835.	0.6	3

#	ARTICLE	IF	CITATIONS
109	Scattering of spin waves by the interface of biaxial ferromagnets.. Journal of Radio Electronics, 2018, , .	0.1	3
110	Simple theory of hot electron dynamics observed by femtosecond ellipsometry. Journal of Applied Physics, 2006, 99, 08P903.	2.5	2
111	Resonant enhancement of damping within the free layer of a microscale magnetic tunnel valve. Journal of Applied Physics, 2015, 117, .	2.5	2
112	Field-controlled phase-rectified magnonic multiplexor. , 2015, , .		1
113	Collective magnonic modes of pairs of closely spaced magnetic nano-elements. , 0, .		1
114	Effect of transverse and longitudinal magnetic field on the excess conductivity of $\text{YBa}_2\text{Cu}_3\text{-zAlzO}_7\text{-}\hat{\Gamma}$ single crystals with a given topology of plane defects. Functional Materials, 2013, 20, 208-216.	0.1	1
115	Generation of femtosecond electromagnetic pulses at the nanoscale. , 2006, , .		0
116	Conversion of magnetostatic spin waves propagating through a junction of magnonic waveguides. , 2015, , .		0
117	10.1063/1.5049470.8. , 2018, , .		0
118	NON-UNIFORM MAGNETIZATION DYNAMICS IN ULTRA-SMALL FERROMAGNETIC PLANAR ELEMENTS. , 0, , 81-114.		0
119	Nonreciprocity of Propagation of Exchange-Dipole Spin Waves in Two-Layer Magnetic Films with Crossed Magnetization of the Layers. Journal of Experimental and Theoretical Physics, 2022, 134, 615-629.	0.9	0