Sang-Koog Kim

List of Publications by Year
in descending order

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117 papers	4,093 citations	126907 33 h-index	123424 61 g-index
118 all docs	118 docs citations	118 times ranked	2722 citing authors

#	Article	IF	Citations
1	Conceptual design of spin wave logic gates based on a Machâ€“Zehnder-type spin wave interferometer for universal logic functions. Journal of Applied Physics, 2008, 104, .	2.5	235
2	Physical Origin and Generic Control of Magnonic Band Gaps of Dipole-Exchange Spin Waves in Width-Modulated Nanostrip Waveguides. Physical Review Letters, 2009, 102, 127202.	7.8	226
3	Dynamic Origin of Vortex Core Switching in Soft Magnetic Nanodots. Physical Review Letters, 2008, 100, 027203.	7.8	200
4	Reliable low-power control of ultrafast vortex-core switching with the selectivity in an array of vortex states by in-plane circular-rotational magnetic fields and spin-polarized currents. Applied Physics Letters, 2008, 92, .	3.3	159
5	Strong Radiation of Spin Waves by Core Reversal of a Magnetic Vortex and Their Wave Behaviors in Magnetic Nanowire Waveguides. Physical Review Letters, 2007, 98, 087205.	7.8	151
6	A gigahertz-range spin-wave filter composed of width-modulated nanostrip magnonic-crystal waveguides. Applied Physics Letters, 2009, 95, .	3.3	141
7	Magnetic domain-wall motion by propagating spin waves. Applied Physics Letters, 2009, 94, .	3.3	134
8	Micromagnetic computer simulations of spin waves in nanometre-scale patterned magnetic elements. Journal Physics D: Applied Physics, 2010, 43, 264004.	2.8	118
9	Universal Criterion and Phase Diagram for Switching a Magnetic Vortex Core in Soft Magnetic Nanodots. Physical Review Letters, 2008, 101, 267206.	7.8	104
10	Ultrafast vortex-core reversal dynamics in ferromagnetic nanodots. Physical Review B, 2007, 76, .	3.2	96
11	Abnormal anticrossing effect in photon-magnon coupling. Physical Review B, 2019, 99, .	3.2	95
12	Soft-x-ray small-angle scattering as a sensitive probe of magnetic and charge heterogeneity. Physical Review B, 2001, 64, .	3.2	91
13	Modified Magnetism at a BuriedCo/PdInterface Resolved with X-Ray Standing Waves. Physical Review Letters, 2001, 86, 1347-1350.	7.8	90
14	Electric-current-driven vortex-core reversal in soft magnetic nanodots. Applied Physics Letters, 2007, 91, .	3.3	89
15	Tunable negligible-loss energy transfer between dipolar-coupled magnetic disks by stimulated vortex gyration. Scientific Reports, 2011, 1, 59.	3.3	88
16	Logic Operations Based on Magnetic-Vortex-State Networks. ACS Nano, 2012, 6, 3712-3717.	14.6	84
17	Spin engineering of CoPd alloy films via the inverse piezoelectric effect. Applied Physics Letters, 2003, 82, 2458-2460.	3.3	77
18	Spin waves in circular soft magnetic dots at the crossover between vortex and single domain state. Physical Review B, 2009, 79, .	3.2	76

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19	Dynamic Origin of Azimuthal Modes Splitting in Vortex-State Magnetic Dots. Physical Review Letters, 2008, 101, 247203.	7.8	72
20	Wave modes of collective vortex gyration in dipolar-coupled-dot-array magnonic crystals. Scientific Reports, 2013, 3, 2262.	3.3	66
21	Atomically flat single-terminated SrTiO3 (111) surface. Applied Physics Letters, 2008, 92, .	3.3	65
22	Radiation of spin waves from magnetic vortex cores by their dynamic motion and annihilation processes. Applied Physics Letters, 2005, 87, 192502.	3.3	62
23	Gyrotropic linear and nonlinear motions of a magnetic vortex in soft magnetic nanodots. Applied Physics Letters, 2007, 91, 132511.	3.3	62
24	Memory-bit selection and recording by rotating fields in vortex-core cross-point architecture. Applied Physics Letters, 2011, 98, .	3.3	60
25	Two circular-rotational eigenmodes and their giant resonance asymmetry in vortex gyrotropic motions in soft magnetic nanodots. Physical Review B, 2008, 78, .	3.2	57
26	Radial-spin-wave-mode-assisted vortex-core magnetization reversals. Applied Physics Letters, 2012, 100, 172413.	3.3	54
27	Observation of coupled vortex gyrations by 70-ps-time- and 20-nm-space-resolved full-field magnetic transmission soft x-ray microscopy. Applied Physics Letters, 2010, 97, .	3.3	47
28	Structural and magnetic properties of Co-doped Gd2O3 nanorods. Journal of Magnetism and Magnetic Materials, 2016, 403, 155-160.	2.3	41
29	Robust magnon-photon coupling in a planar-geometry hybrid of inverted split-ring resonator and YIG film. Scientific Reports, 2017, 7, 11930.	3.3	40
30	Out-of-plane current controlled switching of the fourfold degenerate state of a magnetic vortex in soft magnetic nanodots. Applied Physics Letters, 2010, 96, 072507.	3.3	39
31	Alloy-like Co environment in Co/Pd multilayer films having perpendicular magnetic anisotropy. Journal of Applied Physics, 2001, 89, 3055-3057.	2.5	35
32	Voltage control of a magnetization easy axis in piezoelectric/ferromagnetic hybrid films. Journal of Magnetism and Magnetic Materials, 2003, 267, 127-132.	2.3	35
33	Quantitative understanding of magnetic vortex oscillations driven by spin-polarized out-of-plane dc current: Analytical and micromagnetic numerical study. Physical Review B, 2009, 79, .	3.2	34
34	Single-crystalline Gd-doped BiFeO₃ nanowires: R3c-to-Pn2₁a phase transition and enhancement in high-coercivity ferromagnetism. Journal of Materials Chemistry C, 2018, 6, 526-534.	5.5	33
35	A spin-wave frequency doubler by domain wall oscillation. Applied Physics Letters, 2009, 94, .	3.3	32
36	Evidence for diffuse interfaces and tensile in-plane strains in evaporated CoPd (1 1 1) multilayers and their role in perpendicular magnetic anisotropy. Journal of Magnetism and Magnetic Materials, 1997, 170, L7-L12.	2.3	30

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37	Understanding eigenfrequency shifts observed in vortex gyrotropic motions in a magnetic nanodot driven by spin-polarized out-of-plane dc current. Applied Physics Letters, 2008, 93, .	3.3	30
38	Normal modes of coupled vortex gyration in two spatially separated magnetic nanodisks. Journal of Applied Physics, 2011, 110, .	2.5	30
39	Coupled gyration modes in one-dimensional skyrmion arrays in thin-film nanostrips as new type of information carrier. Scientific Reports, 2017, 7, 45185.	3.3	30
40	Stress-induced magnetic properties of PLD-grown high-quality ultrathin YIG films. Journal of Applied Physics, 2018, 123, .	2.5	30
41	Wireless Control of Two- and Three-Dimensional Actuations of Kirigami Patterns Composed of Magnetic-Particlesâ€“Polymer Composites. ACS Nano, 2020, 14, 17589-17596.	14.6	30
42	Full vectorial spin-reorientation transition and magnetization reversal study in ultrathin ferromagnetic films using magneto-optical Kerr effects. Physical Review B, 2002, 65, .	3.2	29
43	Vector magnetization imaging in ferromagnetic thin films using soft x-rays. Applied Physics Letters, 2001, 78, 2742-2744.	3.3	28
44	Ultra-high rate of temperature increment from superparamagnetic nanoparticles for highly efficient hyperthermia. Scientific Reports, 2021, 11, 4969.	3.3	28
45	Experimental observation of magnetically dead layers in Ni/Pt multilayer films. Physical Review B, 2001, 64, .	3.2	27
46	Coupled breathing modes in one-dimensional Skyrmion lattices. Journal of Applied Physics, 2018, 123, .	2.5	26
47	Photon-magnon coupling: Historical perspective, status, and future directions. Solid State Physics, 2019, , 1-77.	0.5	26
48	Edge-Soliton-Mediated Vortex-Core Reversal Dynamics. Physical Review Letters, 2011, 106, 147201.	7.8	25
49	Layer-by-layer growth and growth-mode transition of SrRuO3 thin films on atomically flat single-terminated SrTiO3 (111) surfaces. Journal of Crystal Growth, 2009, 311, 3771-3774.	1.5	24
50	Emergence of Room-Temperature Magnetic Ordering in Artificially Fabricated Ordered-Double-Perovskite Sr₂FeRuO₆. Chemistry of Materials, 2011, 23, 2693-2696.	6.7	24
51	Comparison of atomic structure anisotropy between Co-Pd alloys and Co/Pd multilayer films. Physical Review B, 2000, 62, 3025-3028.	3.2	23
52	Anisotropic short-range structure of Co0.16Pd0.84 alloy films having perpendicular magnetic anisotropy. Applied Physics Letters, 1997, 71, 66-68.	3.3	20
53	ROLLED-UP PERMALLOY NANOMEMBRANES WITH MULTIPLE WINDINGS. Spin, 2013, 03, 1340001.	1.3	20
54	Voltage Control of Magnetization Easy-Axes: A Potential Candidate for Spin Switching in Future Ultrahigh-Density Nonvolatile Magnetic Random Access Memory. IEEE Transactions on Magnetics, 2004, 40, 2637-2639.	2.1	19

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55	Information-signal-transfer rate and energy loss in coupled vortex-state networks. Applied Physics Letters, 2012, 101, 092403.	3.3	18
56	Resonantly excited precession motion of three-dimensional vortex core in magnetic nanospheres. Scientific Reports, 2015, 5, 11370.	3.3	18
57	Dynamics of Domain Walls in Soft Magnetic Nanostripes: Topological Soliton Approach. IEEE Transactions on Magnetics, 2008, 44, 3079-3082.	2.1	17
58	Origin, criterion, and mechanism of vortex-core reversals in soft magnetic nanodisks under perpendicular bias fields. Physical Review B, 2010, 82, .	3.2	17
59	Perpendicular-bias-field-dependent vortex-gyration eigenfrequency. Journal of Applied Physics, 2011, 109, .	2.5	17
60	Dynamical Origin of Highly Efficient Energy Dissipation in Soft Magnetic Nanoparticles for Magnetic Hyperthermia Applications. Physical Review Applied, 2018, 9, .	3.8	17
61	Intrinsic DMI-free skyrmion formation and robust dynamic behaviors in magnetic hemispherical shells. Scientific Reports, 2021, 11, 3886.	3.3	17
62	Influence of substrate roughness on spin reorientation transition of ultrathin Co films on Pd(111). Applied Physics Letters, 2001, 79, 93-95.	3.3	16
63	In situ magnetoelastic coupling and stress-evolution studies of epitaxial Co35Pd65 alloy films in the monolayer regime. Applied Physics Letters, 2001, 79, 3296-3298.	3.3	15
64	Spin engineering in ultrathin Co0.35Pd0.65 alloy films. Applied Physics Letters, 2001, 79, 1652-1654.	3.3	15
65	Low-Power Selective Control of Ultrafast Vortex-Core Switching by Circularly Rotating Magnetic Fields: Circularâ€“Rotational Eigenmodes. IEEE Transactions on Magnetics, 2008, 44, 3071-3074.	2.1	15
66	Azimuthal-spin-wave-mode-driven vortex-core reversals. Journal of Applied Physics, 2015, 117, .	2.5	15
67	Effects of isovalent substitution on structural and magnetic properties of nanocrystalline Y3â^'xGdxFe5O12 (0â€¯â‰¤â€¯xâ€¯â‰¤â€¯3) garnets. Journal of Magnetism and Magnetic Materials, 2018, 452, 48-54.	2.3	15
68	Growth and magnetic properties of ultrathin Co films on Pd(111) investigated by ultrahigh vacuum in situ surface magneto-optical Kerr effect and scanning tunneling microscope. Journal of Applied Physics, 2001, 89, 7147-7149.	2.5	14
69	Effect of misalignments of individual grainsâ€™ easy axis on magnetization-reversal process in granular NdFeB magnets: A finite-element micromagnetic simulation study. Journal of Magnetism and Magnetic Materials, 2019, 486, 165257.	2.3	14
70	Oppositely rotating eigenmodes of spin-polarized current-driven vortex gyrotropic motions in elliptical nanodots. Applied Physics Letters, 2008, 92, .	3.3	13
71	Polarization-selective vortex-core switching by tailored orthogonal Gaussian-pulse currents. Physical Review B, 2011, 83, .	3.2	13
72	Resonant amplification of vortex-core oscillations by coherent magnetic-field pulses. Scientific Reports, 2013, 3, 1301.	3.3	13

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73	Hydrothermal synthesis, structural analysis and room-temperature ferromagnetism of Y2O3:Co2+ nanorods. Journal of Magnetism and Magnetic Materials, 2016, 408, 67-72.	2.3	13
74	Roadmap for photon-magnon coupling and its applications. Solid State Physics, 2020, , 39-71.	0.5	13
75	Interaction of spin waves propagating along narrow domain walls with a magnetic vortex in a thin-film-nanostrip cross-structure. Journal of Applied Physics, 2020, 127, 183906.	2.5	13
76	Highly efficient heat-dissipation power driven by ferromagnetic resonance in MFe2O4 (Mâ€‰=â€‰Fe, Mn, Ni) ferrite nanoparticles. Scientific Reports, 2022, 12, 5232.	3.3	13
77	In situ vectorial magnetization reversal study of ultrathin Co films on Pd (111) using magneto-optical Kerr effects. Applied Physics Letters, 2002, 81, 91-93.	3.3	12
78	Optimizing machine learning models for granular NdFeB magnets by very fast simulated annealing. Scientific Reports, 2021, 11, 3792.	3.3	12
79	Synthesis and multiferroic properties of high-purity CoFe2O4â€“BiFeO3 nanocomposites. Journal of Alloys and Compounds, 2021, 867, 159008.	5.5	12
80	In situ observation of wet oxidation kinetics on Si(100) via ambient pressure x-ray photoemission spectroscopy. Journal of Applied Physics, 2008, 103, 044104.	2.5	11
81	Enhanced gyration-signal propagation speed in one-dimensional vortex-antivortex lattices and its control by perpendicular bias field. Applied Physics Letters, 2014, 105, 222410.	3.3	10
82	Stability of skyrmion formation and its abnormal dynamic modes in magnetic nanotubes. Physical Review B, 2020, 102, .	3.2	10
83	Broadband photonâ€“magnon coupling using arrays of photon resonators. Journal of Applied Physics, 2021, 129, .	2.5	10
84	Layer-by-layer growth of SrFeO3- thin films on atomically flat single-terminated SrRuO3/SrTiO3 (111) surfaces. Journal of Crystal Growth, 2010, 312, 621-623.	1.5	8
85	Resonant vortex-core reversal in magnetic nano-spheres as robust mechanism of efficient energy absorption and emission. Scientific Reports, 2016, 6, 31513.	3.3	8
86	Magnetization reversal mechanism and coercivity enhancement in three-dimensional granular Nd-Fe-B magnets studied by micromagnetic simulations. Journal of Applied Physics, 2017, 122, .	2.5	8
87	Channeling of spin waves in antiferromagnetic domain walls. Physical Review B, 2021, 103, .	3.2	8
88	Excited eigenmodes in magnetic vortex states of soft magnetic half-spheres and spherical caps. Journal of Applied Physics, 2014, 116, 223902.	2.5	7
89	Lee, Han, and Kim Reply:. Physical Review Letters, 2013, 111, 149702.	7.8	6
90	Nutation-like-mode excitation of coupled vortex cores in magnetic spherical shells. Journal of Applied Physics, 2017, 122, 233903.	2.5	5

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91	Hetero-interface effect on Gilbert damping in nonmagnetic metal/permalloy/nonmagnetic metal trilayers. Journal of Magnetism and Magnetic Materials, 2018, 465, 399-405.	2.3	5
92	Tunable specific-loss power of magnetic nano-spheres in vortex state for high-efficiency hyperthermia bio-applications: A theoretical and simulation study. Journal of Applied Physics, 2019, 125, 063901.	2.5	5
93	Reservoir computing using photon-magnon coupling. Applied Physics Letters, 2021, 119, .	3.3	4
94	Soft x-ray polarizer for optical productions of any orthogonal state of the linear and circular polarization modes. Applied Physics Letters, 2006, 88, 181109.	3.3	3
95	Spin-wave duplexer studied by finite-element micromagnetic simulation. Scientific Reports, 2018, 8, 16511.	3.3	3
96	Spin-wave excitation and critical angles in a hybrid photon-magnon-coupled system. Journal of Applied Physics, 2019, 126, 163902.	2.5	3
97	Fabrication, Structure, and Magnetic Properties of Pure-Phase BiFeOâ‚ƒ and MnFeâ‚‚Oâ‚„ Nanoparticles and their Nanocomposites. Journal of Magnetics, 2020, 25, 140-149.	0.4	3
98	Robust formation of skyrmion and skyrmionium in magnetic hemispherical shells and their dynamic switching. Physical Review B, 2021, 104, .	3.2	3
99	In situ vectorial magnetization study of ultrathin magnetic films using a surface magneto-optical Kerr effect measurement system. IEEE Transactions on Magnetics, 2001, 37, 2773-2775.	2.1	2
100	Reversible spin-reorientation transition in Co0.35 Pd0.65/Pd multilayer films. Journal of Magnetism and Magnetic Materials, 2002, 240, 543-545.	2.3	2
101	Charge-transfer-induced 2D ferromagnetism and realization of thermo-remnant memory effect in ultrathin ÃŸ-NiOOH-encapsulated graphene. Nanotechnology, 2021, 32, 385705.	2.6	2
102	Annealing effect of sputter-grown Pt/Ni80Fe20/Pt sandwich trilayer films on Gilbert damping. Journal of Applied Physics, 2020, 128, 223901.	2.5	2
103	Magnetization switching of CoPd alloy film on piezoelectric substrate via inverse piezoelectric effect. IEEE Transactions on Magnetics, 2003, 39, 2782-2784.	2.1	1
104	Giant asymmetry of soft x-ray magnetic scattering between opposite circular polarizations near the Brewster angle. Physical Review B, 2008, 78, .	3.2	1
105	Temperature effect on vortex-core reversals in magnetic nanodots. Journal of Applied Physics, 2015, 117, 173910.	2.5	1
106	Reset-set latch logic operation using vortex-gyration-coupled modes and its driven switching in magnetic-dot networks: A micromagnetic simulation study. AIP Advances, 2019, 9, 055028.	1.3	1
107	Conceptual design of magnonic majority-logic gate based on channeling of spin waves in domain walls. Journal of Applied Physics, 2020, 128, .	2.5	1
108	Conceptual design of demultiplexer using coupled-gyration-mode signals in vortex-state disk arrays. Journal of Applied Physics, 2021, 130, 013901.	2.5	1

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109	Macroscopic-Scale Periodic Arrays of Partially Spherical Magnetic Nanodots Fabricated by Pulsed-Laser-Induced Dewetting. Journal of Physical Chemistry C, 2021, 125, 18071-18076.	3.1	1
110	Robust finite-temperature magnetization dynamics in ferrimagnetic Gd (FeCo)1â^' (xÂ=Â0Ââ^¼Â0.44) nanospheres across angular-momentum and magnetization compensation points: An atomistic model simulation. Journal of Magnetism and Magnetic Materials, 2022, 542, 168583.	2.3	1
111	Magnetic-vortex Dynamic Quasi-crystal Formation in Soft Magnetic Nano-disks. Journal of Magnetics, 2017, 22, 29-33.	0.4	1
112	Structural and Magnetic Properties of Gd-Ni-co-doped BiFeOâ‚ƒ Nanoparticles. Journal of Magnetics, 2019, 24, 371-378.	0.4	1
113	Spin engineering of ferromagnetic films via inverse piezoelectric effect. , 0, , .		0
114	Soft X-Ray Resonant Kerr Effect as a Depth-Sensitive Probe of Heteromagnetic Nanostructures. IEEE Transactions on Magnetics, 2004, 40, 2185-2187.	2.1	0
115	Vortex-antivortex pair driven magnetization dynamics. , 2005, , .		0
116	Vortex-State Nanoparticles for Bio-Imaging and Magnetic Hyperthermia. , 2016, , .		0
117	Recursive evolution of spin-wave multiplets in magnonic crystals of antidot-lattice fractals. Scientific Reports, 2021, 11, 22604.	3.3	0