Joo-Von Kim

List of Publications by Year
in descending order

130	6,674	53660	64668
papers	citations	45 h-index	79 g-index

130	130	130	4767
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Oxide spin-orbitronics: spinâ€“charge interconversion and topological spin textures. Nature Reviews Materials, 2022, 7, 258-274.	23.3	73
2	Measuring a population of spin waves from the electrical noise of an inductively coupled antenna. Physical Review B, 2022, 105, .	1.1	4
3	Stochastic Processes in Magnetization Reversal Involving Domain-Wall Motion in Magnetic Memory Elements. Physical Review Applied, 2021, 15, .	1.5	7
4	Analytical model of the deformation-induced inertial dynamics of a magnetic vortex. Journal of Applied Physics, 2021, 129, 053903.	1.1	2
5	Imaging non-collinear antiferromagnetic textures via single spin relaxometry. Nature Communications, 2021, 12, 767.	5.8	49
6	A magnetic domain wall Mackeyâ€“Glass oscillator. Applied Physics Letters, 2021, 118, .	1.5	6
7	Synchronization of chiral vortex nano-oscillators. Applied Physics Letters, 2021, 118, .	1.5	15
8	Spin-torque induced wall motion in perpendicularly magnetized discs: Ballistic versus oscillatory behavior. Physical Review B, 2021, 103, .	1.1	6
9	Nanocontact vortex oscillators based on <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:msub><mml:mi>Co</mml:mi><mml:mn>2</mml:mn></mml:msub> pseudo spin valves. Physical Review B, 2021, 103, .	1.1	2
10	The 2021 Magnonics Roadmap. Journal of Physics Condensed Matter, 2021, 33, 413001.	0.7	287
11	Entropy-reduced Retention Times in Magnetic Memory Elements: A Case of the Meyer-Neldel Compensation Rule. Physical Review Letters, 2020, 125, 107201.	2.9	28
12	Asymmetric skyrmion-antiskyrmion production in ultrathin ferromagnetic films. Physical Review B, 2020, 102, .	1.1	7
13	Path sampling for lifetimes of metastable magnetic skyrmions and direct comparison with Kramers' method. Physical Review B, 2020, 101, .	1.1	25
14	Determining Key Spin-Orbitronic Parameters via Propagating Spin Waves. Physical Review Applied, 2020, 13, .	1.5	3
15	Pattern generation and symbolic dynamics in a nanocontact vortex oscillator. Nature Communications, 2020, 11, 601.	5.8	10
16	Effects of delayed feedback on the power spectrum of spin-torque nano-oscillators. Journal Physics D: Applied Physics, 2020, 53, 495001.	1.3	3
17	On quantifying the topological charge in micromagnetics using a lattice-based approach. IOP SciNotes, 2020, 1, 025211.	0.4	14
18	Quantifying the Thermal Stability in Perpendicularly Magnetized Ferromagnetic Nanodisks with Forward Flux Sampling. Physical Review Applied, 2020, 14, .	1.5	4

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19	Unidirectional spin-wave channeling along magnetic domain walls of Bloch type. Physical Review B, 2019, 100, .	1.1	34
20	Modulation and phase-locking in nanocontact vortex oscillators. Physical Review B, 2019, 100, .	1.1	5
21	Chaos in Magnetic Nanocontact Vortex Oscillators. Physical Review Letters, 2019, 123, 147701.	2.9	24
22	Chaotic dynamics in a macrospin spin-torque nano-oscillator with delayed feedback. Applied Physics Letters, 2019, 114, .	1.5	24
23	Paths to annihilation of first- and second-order (anti)skyrmions via (anti)meron nucleation on the frustrated square lattice. Physical Review B, 2019, 99, .	1.1	36
24	Domain-wall motion and interfacial Dzyaloshinskii-Moriya interactions in <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:mi>Pt</mml:mi><mml:mo>/</mml:mo><mml:mi>Co</mml:mi><mml:m multilayers. Physical Review B, 2019, 99, .	1.1	69
25	Material Developments and Domain Wall-Based Nanosecond-Scale Switching Process in Perpendicularly Magnetized STT-MRAM Cells. IEEE Transactions on Magnetics, 2018, 54, 1-9.	1.2	22
26	Thermal stability of metastable magnetic skyrmions: Entropic narrowing and significance of internal eigenmodes. Physical Review B, 2018, 98, .	1.1	66
27	Trochoidal motion and pair generation in skyrmion and antiskyrmion dynamics under spinâ€“orbit torques. Nature Electronics, 2018, 1, 451-457.	13.1	66
28	Nonreciprocal flexural dynamics of Dzyaloshinskii domain walls. Physical Review B, 2018, 98, .	1.1	1
29	Skyrmion Gas Manipulation for Probabilistic Computing. Physical Review Applied, 2018, 9, .	1.5	148
30	Nanocontact based spin torque oscillators with two free layers. Journal Physics D: Applied Physics, 2017, 50, 085002.	1.3	5
31	Current-driven skyrmion dynamics in disordered films. Applied Physics Letters, 2017, 110, .	1.5	107
32	Spin transfer and spin-orbit torques in in-plane magnetized (Ga,Mn)As tracks. Physical Review B, 2017, 95, .	1.1	11
33	Real-space imaging of non-collinear antiferromagnetic order with a single-spin magnetometer. Nature, 2017, 549, 252-256.	13.7	203
34	Current-driven skyrmion expulsion from magnetic nanostrips. Physical Review B, 2017, 95, .	1.1	29
35	Spin Waves on Spin Structures: Topology, Localization, and Nonreciprocity. , 2017, , 219-260.		2
36	Exchange stiffness in ultrathin perpendicularly magnetized CoFeB layers determined using the spectroscopy of electrically excited spin waves. Journal of Applied Physics, 2016, 120, .	1.1	36

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37	Role of spin-transfer torques on synchronization and resonance phenomena in stochastic magnetic oscillators. Journal of Applied Physics, 2016, 120, 093902.	1.1	3
38	Spin wave amplification using the spin Hall effect in permalloy/platinum bilayers. Applied Physics Letters, 2016, 108, .	1.5	34
39	Spinâ€Wave Eigenmodes of Dzyaloshinskii Domain Walls. Advanced Electronic Materials, 2016, 2, 1500202.	2.6	21
40	Probing the Dzyaloshinskii-Moriya interaction in CoFeB ultrathin films using domain wall creep and Brillouin light spectroscopy. Physical Review B, 2016, 94, .	1.1	84
41	Direct measurement of interfacial Dzyaloshinskii-Moriya interaction in<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:mi>X</mml:mi><mml:mo>|</mml:mo></mml:mrow><mml:m with a scanning NV magnetometer<mml:math		

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55	Siphoning spins. Nature, 2014, 511, 418-419.	13.7	3
56	Spin torque nanodevices for bio-inspired computing. , 2014, , .		8
57	Breathing modes of confined skyrmions in ultrathin magnetic dots. Physical Review B, 2014, 90, .	1.1	140
58	Nonreciprocal spin-wave channeling along textures driven by the Dzyaloshinskii-Moriya interaction. Physical Review B, 2014, 89, .	1.1	94
59	Nanoscale imaging and control of domain-wall hopping with a nitrogen-vacancy center microscope. Science, 2014, 344, 1366-1369.	6.0	158
60	Strain-controlled magnetic domain wall propagation in hybrid piezoelectric/ferromagnetic structures. Nature Communications, 2013, 4, 1378.	5.8	237
61	Low depinning fields in Ta-CoFeB-MgO ultrathin films with perpendicular magnetic anisotropy. Applied Physics Letters, 2013, 103, 182401.	1.5	90
62	Damping of CoxFe80â^'xB20 ultrathin films with perpendicular magnetic anisotropy. Applied Physics Letters, 2013, 102, .	1.5	126
63	Material parameters and thermal stability of synthetic ferrimagnet free layers in magnetic tunnel junction nanopillars. Journal of Applied Physics, 2012, 112, 053922.	1.1	1
64	Magnetic Vortex Core Oscillations in Multi Point Contact Spin Valve Stacks. IEEE Transactions on Magnetics, 2012, 48, 3811-3813.	1.2	5
65	Domain wall motion in nanopillar spin-valves with perpendicular anisotropy driven by spin-transfer torques. Physical Review B, 2012, 86, .	1.1	9
66	Understanding Nanoscale Temperature Gradients in Magnetic Nanocontacts. Physical Review Letters, 2012, 109, 267205.	2.9	21
67	Spin-Torque Oscillators. Solid State Physics, 2012, , 217-294.	1.3	50
68	Perpendicular-magnetic-anisotropy CoFeB racetrack memory. Journal of Applied Physics, 2012, 111, .	1.1	111
69	Commensurability and chaos in magnetic vortex oscillations. Nature Physics, 2012, 8, 682-687.	6.5	91
70	Compact Modeling of Perpendicular-Anisotropy CoFeB/MgO Magnetic Tunnel Junctions. IEEE Transactions on Electron Devices, 2012, 59, 819-826.	1.6	330
71	Vortex Nucleation Phase in Spin Torque Oscillators Based on Nanocontacts. IEEE Transactions on Magnetics, 2011, 47, 1595-1598.	1.2	5
72	Fast magnetization switching in GaMnAs induced by electrical fields. Applied Physics Letters, 2011, 99, .	1.5	6

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73	Spin-torque switching window, thermal stability, and material parameters of MgO tunnel junctions. Applied Physics Letters, 2011, 98, 162502.	1.5	18
74	Frequency shift keying in vortex-based spin torque oscillators. Journal of Applied Physics, 2011, 109, 083940.	1.1	36
75	Nanocontact size dependence of the properties of vortexâ€based spin torque oscillators. Physica Status Solidi (B): Basic Research, 2011, 248, 1615-1618.	0.7	5
76	Configuration and temperature dependence of magnetic damping in spin valves. Journal of Applied Physics, 2011, 110, .	1.1	20
77	Non-adiabatic spin-torques in narrow magnetic domain walls. Nature Physics, 2010, 6, 17-21.	6.5	194
78	Free layer versus synthetic ferrimagnet layer auto-oscillations in nanopillars processed from MgO-based magnetic tunnel junctions. Physical Review B, 2010, 81, .	1.1	17
79	Direct experimental measurement of phase-amplitude coupling in spin torque oscillators. Applied Physics Letters, 2010, 97, .	1.5	41
80	Vortex nucleation in spin-torque nanocontact oscillators. Applied Physics Letters, 2010, 97, 072512.	1.5	21
81	Influence of oscillation modes on the line width of rf emissions in MgO based nanopillars. Journal of Applied Physics, 2010, 108, 023917.	1.1	0
82	Quantized spin-wave modes in magnetic tunnel junction nanopillars. Physical Review B, 2010, 81, .	1.1	63
83	Influence of magnetic viscosity on domain wall dynamics under spin-polarized currents. Physical Review B, 2009, 80, .	1.1	19
84	Time-resolved zero field vortex oscillations in point contacts. Applied Physics Letters, 2009, 95, .	1.5	50
85	Auto-oscillation and narrow spectral lines in spin-torque oscillators based on MgO magnetic tunnel junctions. Journal of Applied Physics, 2009, 106, 103921.	1.1	25
86	Direct measurement of current-induced fieldlike torque in magnetic tunnel junctions. Journal of Applied Physics, 2009, 105, .	1.1	11
87	Auto-oscillation threshold and line narrowing in MgO-based spin-torque oscillators. Europhysics Letters, 2009, 87, 57001.	0.7	17
88	Agility of vortex-based nanocontact spin torque oscillators. Applied Physics Letters, 2009, 95, .	1.5	60
89	Spin-wave contributions to current-induced domain wall dynamics. Physical Review B, 2009, 79, .	1.1	44
90	Dynamics of the exchange field supplied by MnIr layers studied by network analyzer ferromagnetic resonance. Journal of Applied Physics, 2009, 106, 063918.	1.1	13

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91	Current-driven vortex oscillations in metallic nanocontacts: zero-field oscillations and training effects. Journal Physics D: Applied Physics, 2009, 42, 245001.	1.3	7
92	Effect of patterning on the saturation magnetization in MgO based nanopillars. Journal of Applied Physics, 2009, 105, .	1.1	14
93	Experimental study of current-driven vortex oscillations in magnetic nanocontacts. Proceedings of SPIE, 2009, , .	0.8	5
94	Electronics free of charge. Nature Physics, 2008, 4, 837-838.	6.5	20
95	Temperature dependence of nonlinear auto-oscillator linewidths: Application to spin-torque nano-oscillators. Physical Review B, 2008, 78, .	1.1	62
96	Single-Shot Time-Resolved Measurements of Nanosecond-Scale Spin-Transfer Induced Switching: Stochastic Versus Deterministic Aspects. Physical Review Letters, 2008, 100, 057206.	2.9	219
97	Current-Driven Vortex Oscillations in Metallic Nanocontacts. Physical Review Letters, 2008, 100, 257201.	2.9	209
98	Line Shape Distortion in a Nonlinear Auto-Oscillator Near Generation Threshold: Application to Spin-Torque Nano-Oscillators. Physical Review Letters, 2008, 100, 167201.	2.9	87
99	Generation Linewidth of an Auto-Oscillator with a Nonlinear Frequency Shift: Spin-Torque Nano-Oscillator. Physical Review Letters, 2008, 100, 017207.	2.9	155
100	Electrical time-domain observation of magnetization switching induced by spin transfer in magnetic nanostructures (invited). Journal of Applied Physics, 2008, 103, 07A723.	1.1	9
101	Microwave power generated by a spin-torque oscillator in the presence of noise. Applied Physics Letters, 2007, 91, .	1.5	67
102	Theory of Generation Linewidth in Spin-torque Nano-sized Auto-oscillators. Journal of Magnetics, 2007, 12, 53-58.	0.2	3
103	Current-driven microwave oscillations in current perpendicular-to-plane spin-valve nanopillars. Applied Physics Letters, 2006, 88, 192507.	1.5	114
104	Stochastic theory of spin-transfer oscillator linewidths. Physical Review B, 2006, 73, .	1.1	52
105	Study of the dynamic magnetic properties of soft CoFeB films. Journal of Applied Physics, 2006, 100, 053903.	1.1	173
106	Temperature Dependences of the Resistivity and the Ferromagnetic Resonance Linewidth in Permalloy Thin Films. IEEE Transactions on Magnetics, 2006, 42, 3323-3325.	1.2	30
107	Magnetization switching by spin torque using subnanosecond current pulses assisted by hard axis magnetic fields. Applied Physics Letters, 2006, 88, 152502.	1.5	43
108	Magnetization dynamics in spin-valve structures with spin pumping. Journal of Magnetism and Magnetic Materials, 2005, 286, 56-60.	1.0	11

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109	Hysteresis from antiferromagnet domain-wall processes in exchange biased systems. Journal of Magnetism and Magnetic Materials, 2005, 286, 233-237.	1.0	1
110	Hysteresis from antiferromagnet domain-wall processes in exchange-biased systems: Magnetic defects and thermal effects. Physical Review B, 2005, 71, .	1.1	42
111	Bit selection scheme and dipolar interactions in high density precessional MRAM. IET Science, Measurement and Technology, 2005, 152, 196-200.	0.7	3
112	Precession-dominated reversal of synthetic antiferromagnets and synthetic ferrimagnets. IEEE Transactions on Magnetics, 2005, 41, 2655-2657.	1.2	1
113	Precession-dominated reversal of synthetic antiferromagnets and synthetic ferrimagnets. , 2005, , .		0
114	Magnetic anisotropy of epitaxial MgOâˆ•Feâˆ•MgO films studied by network analyzer ferromagnetic resonance. Journal of Applied Physics, 2005, 98, 023901.	1.1	17
115	Precession-dominated switching of synthetic antiferromagnets. Applied Physics Letters, 2004, 85, 4094-4096.	1.5	9
116	Spin wave contributions to the high-frequency magnetic response of thin films obtained with inductive methods. Journal of Applied Physics, 2004, 95, 5646-5652.	1.1	156
117	Inductive measurement of the high frequency permeability of a Permalloy thin film. Journal of Magnetism and Magnetic Materials, 2004, 272-276, 290-292.	1.0	20
118	Exchange bias of polycrystalline antiferromagnets with perfectly compensated interfaces. Physical Review B, 2003, 67, .	1.1	85
119	Phase diagrams and energy barriers of exchange-biased bilayers with additional anisotropies in the ferromagnet. Physical Review B, 2003, 67, .	1.1	17
120	Micromagnetic simulation of antiferromagnetic/ferromagnetic structures. IEEE Transactions on Magnetics, 2002, 38, 2397-2399.	1.2	28
121	Probing antiferromagnetic order with heat capacity in exchange-biased structures. Journal of Magnetism and Magnetic Materials, 2002, 240, 267-269.	1.0	2
122	Defect-modified exchange bias. Applied Physics Letters, 2001, 79, 2785-2787.	1.5	40
123	Theory of long-wavelength spin waves in exchange biased bilayers. Journal of Applied Physics, 2001, 89, 7651-7653.	1.1	2
124	Temperature dependence of exchange biased thin films. Journal of Applied Physics, 2000, 87, 6430-6432.	1.1	15
125	Angular dependence and interfacial roughness in exchange-biased ferromagnetic/antiferromagnetic bilayers. Physical Review B, 2000, 61, 8888-8894.	1.1	59
126	Roughness-induced instability in stripe domain patterns. Physical Review B, 2000, 62, 6467-6474.	1.1	14

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127	Magnetization dynamics: A study of the ferromagnet/antiferromagnet interface and exchange biasing. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 1999, 17, 1335-1339.	0.9	22
128	Magnetic properties of self-organized epitaxial cobalt structures. Journal of Applied Physics, 1999, 85, 5498-5500.	1.1	3
129	Exchange bias: interface imperfections and temperature dependence. IEEE Transactions on Magnetics, 1999, 35, 2994-2997.	1.2	11
130	Exchange biasing at the ferromagnet - antiferromagnet interface : bias stability and roughness effects. , 0, , .		0