

# Andrew D Kent

## List of Publications by Year in descending order

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149  
papers

6,519  
citations

94433

37  
h-index

69250

77  
g-index

150  
all docs

150  
docs citations

150  
times ranked

5722  
citing authors

#	ARTICLE	IF	CITATIONS
1	Current-induced torques in magnetic materials. <i>Nature Materials</i> , 2012, 11, 372-381.	27.5	969
2	A new spin on magnetic memories. <i>Nature Nanotechnology</i> , 2015, 10, 187-191.	31.5	645
3	The 2017 Magnetism Roadmap. <i>Journal Physics D: Applied Physics</i> , 2017, 50, 363001.	2.8	279
4	Spin-transfer-induced precessional magnetization reversal. <i>Applied Physics Letters</i> , 2004, 84, 3897-3899.	3.3	244
5	Negative Domain Wall Contribution to the Resistivity of Microfabricated Fe Wires. <i>Physical Review Letters</i> , 1998, 80, 5639-5642.	7.8	224
6	Properties and measurement of scanning tunneling microscope fabricated ferromagnetic particle arrays (invited). <i>Journal of Applied Physics</i> , 1994, 76, 6656-6660.	2.5	189
7	Ultrafast switching in magnetic tunnel junction based orthogonal spin transfer devices. <i>Applied Physics Letters</i> , 2010, 97, .	3.3	145
8	Magnetic Quantum Tunneling in the Single-Molecule Magnet Mn <sub>12</sub> -Acetate. <i>Journal of Low Temperature Physics</i> , 2005, 140, 119-174.	1.4	131
9	Spin-transfer pulse switching: From the dynamic to the thermally activated regime. <i>Applied Physics Letters</i> , 2010, 97, .	3.3	128
10	Domain wall resistivity in epitaxial thin film microstructures. <i>Journal of Physics Condensed Matter</i> , 2001, 13, R461-R488.	1.8	124
11	Ferromagnetic resonance linewidth in ultrathin films with perpendicular magnetic anisotropy. <i>Physical Review B</i> , 2009, 80, .	3.2	124
12	Current-Induced Magnetization Reversal in High Magnetic Fields in Co/Cu/Co Nanopillars. <i>Physical Review Letters</i> , 2003, 91, 067203.	7.8	122
13	Crossover between Thermally Assisted and Pure Quantum Tunneling in Molecular Magnet Mn <sub>12</sub> -Acetate. <i>Physical Review Letters</i> , 2000, 85, 4803-4806.	7.8	108
14	Ultrafast spin-transfer switching in spin valve nanopillars with perpendicular anisotropy. <i>Applied Physics Letters</i> , 2010, 96, .	3.3	89
15	Perpendicular all the way. <i>Nature Materials</i> , 2010, 9, 699-700.	27.5	87
16	Ferromagnetic resonance study of sputtered Co   Ni multilayers. <i>European Physical Journal B</i> , 2007, 59, 475-483.	1.5	85
17	Dynamics of spin torque switching in all-perpendicular spin valve nanopillars. <i>Journal of Magnetism and Magnetic Materials</i> , 2014, 358-359, 233-258.	2.3	84
18	Stable magnetic droplet solitons in spin-transfer nanocontacts. <i>Nature Nanotechnology</i> , 2014, 9, 992-996.	31.5	79

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19	Thermal Stability of Magnetic States in Circular Thin-Film Nanomagnets with Large Perpendicular Magnetic Anisotropy. <i>Physical Review Applied</i> , 2015, 4, .	3.8	78
20	Symmetry of Magnetic Quantum Tunneling in Single Molecule Magnet Mn <sub>12</sub> -Acetate. <i>Physical Review Letters</i> , 2003, 91, 047203.	7.8	76
21	Quantum Superposition of High Spin States in the Single Molecule Magnet Ni <sub>4</sub> . <i>Physical Review Letters</i> , 2004, 93, 157202.	7.8	74
22	Spin-wave interference patterns created by spin-torque nano-oscillators for memory and computation. <i>Nanotechnology</i> , 2011, 22, 095301.	2.6	71
23	Low-temperature magnetic hysteresis in Mn <sub>12</sub> acetate single crystals. <i>Europhysics Letters</i> , 2000, 49, 521-527.	2.0	59
24	Nonvolatile Ionic Modification of the Dzyaloshinskii-Moriya Interaction. <i>Physical Review Applied</i> , 2019, 12, .	3.8	59
25	Strong perpendicular magnetic anisotropy in Ni/Co(111) single crystal superlattices. <i>Applied Physics Letters</i> , 2009, 94, 262504.	3.3	58
26	Direct Observation of a Localized Magnetic Soliton in a Spin-Transfer Nanocontact. <i>Physical Review Letters</i> , 2015, 115, 127205.	7.8	56
27	Micromagnetics of mesoscopic epitaxial (110) Fe elements with nanoshaped ends. <i>Journal of Applied Physics</i> , 1999, 85, 5501-5503.	2.5	55
28	Direct observation and imaging of a spin-wave soliton with p-like symmetry. <i>Nature Communications</i> , 2015, 6, 8889.	12.8	52
29	Nonlocal transport mediated by spin supercurrents. <i>Physical Review B</i> , 2014, 90, .	3.2	47
30	Magnetization damping in ultrathin polycrystalline Co films: Evidence for nonlocal effects. <i>Physical Review B</i> , 2006, 74, .	3.2	46
31	Time-resolved studies of the spin-transfer reversal mechanism in perpendicularly magnetized magnetic tunnel junctions. <i>Physical Review B</i> , 2016, 94, .	3.2	46
32	Spin-torque driven ferromagnetic resonance of Co/Ni synthetic layers in spin valves. <i>Applied Physics Letters</i> , 2008, 92, .	3.3	45
33	Thermally assisted spin-transfer torque dynamics in energy space. <i>Physical Review B</i> , 2013, 88, .	3.2	44
34	Skymionics—Computing and memory technologies based on topological excitations in magnets. <i>Journal of Applied Physics</i> , 2021, 130, .	2.5	42
35	Ferromagnetic resonance study of polycrystalline cobalt ultrathin films. <i>Journal of Applied Physics</i> , 2006, 99, 08N503.	2.5	40
36	Spin transport and dynamics in all-oxide perovskite $\text{La}_{1-x}\text{Sr}_x\text{MnO}_3$ . <i>Physical Review B</i> , 2016, 94, .	2.5	39

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37	Organic magneto-electroluminescence for room temperature transduction between magnetic and optical information. <i>Nature Communications</i> , 2014, 5, 3609.	12.8	38
38	X-ray Detection of Transient Magnetic Moments Induced by a Spin Current in Cu. <i>Physical Review Letters</i> , 2015, 115, 096601.	7.8	38
39	Perpendicular magnetic anisotropy in ultrathin $\text{Co/Ni}$ multilayer films studied with ferromagnetic resonance and magnetic x-ray microspectroscopy. <i>Journal of Magnetism and Magnetic Materials</i> , 2012, 324, 3629-3632.	2.3	36
40	Observation of droplet soliton drift resonances in a spin-transfer-torque nanocontact to a ferromagnetic thin film. <i>Physical Review B</i> , 2015, 92, .	3.2	36
41	Magnetoresistance due to domain walls in an epitaxial microfabricated Fe wire. <i>Applied Physics Letters</i> , 1998, 73, 1298-1300.	3.3	35
42	Spin-transfer switching of orthogonal spin-valve devices at cryogenic temperatures. <i>Journal of Applied Physics</i> , 2014, 115, .	2.5	35
43	A comparison between high-symmetry $\text{Mn}_{12}$ single-molecule magnets in different ligand/solvent environments. <i>Polyhedron</i> , 2005, 24, 2284-2292.	2.2	34
44	Spin-torque driven ferromagnetic resonance in a nonlinear regime. <i>Applied Physics Letters</i> , 2009, 95, 172513.	3.3	33
45	Spin-torque oscillators with thermal noise: A constant energy orbit approach. <i>Physical Review B</i> , 2014, 90, .	3.2	33
46	Micromagnetic study of magnetization reversal in ferromagnetic nanorings. <i>Physical Review B</i> , 2009, 79, .	3.2	32
47	Sub-nanosecond spin-torque switching of perpendicular magnetic tunnel junction nanopillars at cryogenic temperatures. <i>Applied Physics Letters</i> , 2019, 115, .	3.3	32
48	Electrical Control of Majorana Bound States Using Magnetic Stripes. <i>Physical Review Applied</i> , 2019, 12, .	3.8	32
49	Micromagnetics of submicron (110) Fe elements. <i>Applied Physics Letters</i> , 2000, 76, 766-768.	3.3	30
50	Tunneling splittings in $\text{Mn}_{12}$ -acetate single crystals. <i>Europhysics Letters</i> , 2002, 60, 768-774.	2.0	30
51	Precessional reversal in orthogonal spin transfer magnetic random access memory devices. <i>Applied Physics Letters</i> , 2012, 101, .	3.3	30
52	Spin transport in antiferromagnetic NiO and magnetoresistance in $\text{Y}_3\text{Fe}_5\text{O}_{12}/\text{NiO}/\text{Pt}$ structures. <i>AIP Advances</i> , 2017, 7, 055903.	1.3	30
53	Tuning interfacial Dzyaloshinskii-Moriya interactions in thin amorphous ferrimagnetic alloys. <i>Scientific Reports</i> , 2020, 10, 7447.	3.3	30
54	A low temperature functioning $\text{CoFeB}/\text{MgO}$ -based perpendicular magnetic tunnel junction for cryogenic nonvolatile random access memory. <i>Applied Physics Letters</i> , 2020, 116, .	3.3	28

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55	Planar Hall Driven Torque in a Ferromagnet/Nonmagnet/Ferromagnet System. Physical Review Letters, 2020, 124, 197204.	7.8	27
56	Magnetoresistance due to domain walls in micron scale Fe wires with stripe domains. IEEE Transactions on Magnetics, 1998, 34, 900-902.	2.1	26
57	Magnetic reversal in nanoscopic ferromagnetic rings. Physical Review B, 2006, 73, .	3.2	26
58	Direct observation of mixing of spin multiplets in an antiferromagnetic molecular nanomagnet by electron paramagnetic resonance. Physical Review B, 2007, 76, .	3.2	25
59	Asymmetric switching behavior in perpendicularly magnetized spin-valve nanopillars due to the polarizer dipole field. Applied Physics Letters, 2012, 100, 062404.	3.3	25
60	A cryogenic spin-torque memory element with precessional magnetization dynamics. Scientific Reports, 2019, 9, 803.	3.3	25
61	Realization of random-field Ising ferromagnetism in a molecular magnet. Physical Review B, 2010, 82, .	3.2	24
62	Regulating low-dimensional magnetic behavior of organic radicals in crystalline hydrogen-bonded host frameworks. Journal of Materials Chemistry, 2011, 21, 2204-2219.	6.7	23
63	Thermally assisted spin-transfer torque magnetization reversal in uniaxial nanomagnets. Applied Physics Letters, 2012, 101, .	3.3	23
64	Energy barriers to magnetization reversal in perpendicularly magnetized thin film nanomagnets. Journal of Applied Physics, 2013, 113, .	2.5	23
65	Direct imaging of electrical switching of antiferromagnetic Néel order in $\text{Fe}_3\text{O}_4$ epitaxial films. Physical Review B, 2021, 103, .	3.2	23
66	Ferromagnetic resonance study of polycrystalline $\text{Fe}_{1-x}\text{V}_x$ alloy thin films. Journal of Applied Physics, 2008, 103, .	2.5	22
67	Interlayer exchange coupling between layers with perpendicular and easy-plane magnetic anisotropies. Applied Physics Letters, 2016, 109, 082401.	3.3	22
68	Micromagnetism and high temperature coercivity of MnBi/Al multilayers. Journal of Applied Physics, 2000, 88, 4221.	2.5	21
69	Magnetic Fringe-Field Control of Electronic Transport in an Organic Film. Physical Review X, 2012, 2, .	8.9	21
70	Efficient spin current generation in low-damping $\text{Mg}(\text{Al}, \text{Fe})_2\text{O}_4$ thin films. Applied Physics Letters, 2019, 115, .	3.3	21
71	A nanomagnet oscillator. Nature Materials, 2007, 6, 399-400.	27.5	20
72	Distribution of internal transverse magnetic fields in a $\text{Mn}_{12}$ -based single molecule magnet. Physical Review B, 2004, 69, .	3.2	19

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73	Current-induced switching in single ferromagnetic layer nanopillar junctions. Applied Physics Letters, 2006, 88, 162506.	3.3	19
74	Spin transfer in bilayer magnetic nanopillars at high fields as a function of free-layer thickness. Physical Review B, 2006, 74, .	3.2	19
75	Ferromagnetic resonance study of Co/Pd/Co/Ni multilayers with perpendicular anisotropy irradiated with helium ions. Journal of Applied Physics, 2011, 109, .	2.5	19
76	Time-resolved magnetic relaxation of a nanomagnet on subnanosecond time scales. Physical Review B, 2012, 85, .	3.2	19
77	Spin-transfer torque magnetization reversal in uniaxial nanomagnets with thermal noise. Journal of Applied Physics, 2013, 114, .	2.5	19
78	Magnetic properties of Fe microstructures with focused ion beam-fabricated nano-constrictions. IEEE Transactions on Magnetics, 2001, 37, 2101-2103.	2.1	18
79	Stability of $2\pi$ Domain Walls in Ferromagnetic Nanorings. IEEE Transactions on Magnetics, 2010, 46, 2272-2274.	2.1	17
80	Precessional spin-torque dynamics in biaxial antiferromagnets. Physical Review B, 2021, 103, .	3.2	17
81	Onset of a Propagating Self-Sustained Spin Reversal Front in a Magnetic System. Physical Review Letters, 2013, 110, 207203.	7.8	16
82	Reduced Exchange Interactions in Magnetic Tunnel Junction Free Layers with Insertion Layers. ACS Applied Electronic Materials, 2019, 1, 2025-2029.	4.3	16
83	Finite size effects on spin-torque driven ferromagnetic resonance in spin valves with a Co <sup>2+</sup> /Ni synthetic free layer. Journal of Applied Physics, 2008, 103, 07A502.	2.5	15
84	Effect of Temperature on Magnetic Solitons Induced by Spin-Transfer Torque. Physical Review Applied, 2017, 7, .	3.8	15
85	Generation and annihilation time of magnetic droplet solitons. Scientific Reports, 2018, 8, 6847.	3.3	15
86	High frequency EPR on dilute solutions of the single molecule magnet Ni <sub>4</sub> . Journal of Applied Physics, 2008, 103, 07B910.	2.5	14
87	Pure and random-field quantum criticality in the dipolar Ising model: Theory of Mn <sub>12</sub> acetates. Physical Review B, 2010, 81, .	3.2	14
88	Magnetic droplet solitons. Journal of Applied Physics, 2020, 128, .	2.5	14
89	Magnetoresistance of epitaxial Fe wires with varied domain wall structure. Journal of Magnetism and Magnetic Materials, 1999, 198-199, 261-263.	2.3	13
90	Influence of the ligand shell on the surface orientation of Mn <sub>12</sub> single molecule magnets. Polyhedron, 2009, 28, 1977-1981.	2.2	13

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91	First harmonic measurements of the spin Seebeck effect. Applied Physics Letters, 2018, 113, .	3.3	13
92	Tuning Dzyaloshinskii-Moriya interaction in ferrimagnetic GdCo: A first-principles approach. Physical Review B, 2021, 103, .	3.2	13
93	Spin-transfer in nanopillars with a perpendicularly magnetized spin polarizer. Proceedings of SPIE, 2009, , .	0.8	12
94	Including fringe fields from a nearby ferromagnet in a percolation theory of organic magnetoresistance. Physical Review B, 2013, 87, .	3.2	12
95	Switching field distributions with spin transfer torques in perpendicularly magnetized spin-valve nanopillars. Physical Review B, 2014, 89, .	3.2	12
96	Easy-plane spin Hall nano-oscillators as spiking neurons for neuromorphic computing. Physical Review B, 2022, 105, .	3.2	12
97	Shape-dependent magnetization reversal processes and flux-closure configurations of microstructured epitaxial Fe(110) elements. Applied Physics Letters, 2001, 79, 3648-3650.	3.3	11
98	Temperature dependence of the switching field in all-perpendicular spin-valve nanopillars. Physical Review B, 2013, 88, .	3.2	11
99	Micromagnetic study of spin transfer switching with a spin polarization tilted out of the free layer plane. Journal of Applied Physics, 2015, 117, 17D705.	2.5	11
100	Asymmetric Magnetization Switching in Perpendicular Magnetic Tunnel Junctions: Role of the Synthetic Antiferromagnet's Fringe Field. Physical Review Applied, 2019, 11, .	3.8	11
101	Charge-To-Spin Conversion Efficiency in Ferromagnetic Nanowires by Spin Torque Ferromagnetic Resonance: Reconciling Lineshape and Linewidth Analysis Methods. Physical Review Applied, 2020, 14, .	3.8	10
102	Spin-transfer-induced magnetic excitation: The role of spin-pumping induced damping. Journal of Applied Physics, 2005, 97, 10C714.	2.5	9
103	Domain wall motion in nanopillar spin-valves with perpendicular anisotropy driven by spin-transfer torques. Physical Review B, 2012, 86, .	3.2	9
104	Thermally-Assisted Spin-Transfer Torque Magnetization Reversal of Uniaxial Nanomagnets in Energy Space. IEEE Transactions on Magnetics, 2013, 49, 3144-3146.	2.1	9
105	State diagram of an orthogonal spin transfer spin valve device. Journal of Applied Physics, 2015, 117, .	2.5	9
106	Spin transport in an insulating ferrimagnetic-antiferromagnetic-ferrimagnetic trilayer as a function of temperature. AIP Advances, 2019, 9, .	1.3	9
107	Multiple magnetic droplet soliton modes. Physical Review B, 2019, 99, .	3.2	9
108	Perspectives on spintronics technology development: Giant magnetoresistance to spin transfer torque magnetic random access memory. APL Materials, 2022, 10, .	5.1	9

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109	Incommensurate transverse anisotropy induced by disorder and spin-orbit-vibron coupling in Mn12 acetate. <i>Journal of Applied Physics</i> , 2005, 97, 10M505.	2.5	8
110	Hysteretic control of organic conductance due to remanent magnetic fringe fields. <i>Applied Physics Letters</i> , 2013, 102, 042408.	3.3	8
111	Generation and stability of dynamical skyrmions and droplet solitons. <i>Nanotechnology</i> , 2018, 29, 325302.	2.6	8
112	Sub-nanosecond switching in a cryogenic spin-torque spin-valve memory element with a dilute permalloy free layer. <i>Applied Physics Letters</i> , 2019, 114, 212402.	3.3	8
113	Quantifying Spin-Orbit Torques in Antiferromagnet-Heavy-Metal Heterostructures. <i>Physical Review Letters</i> , 2022, 128, .	7.8	8
114	Magnetic and microwave studies of high-spin states of single-molecule magnet Ni4. <i>Polyhedron</i> , 2005, 24, 2695-2700.	2.2	7
115	Micromagnetic simulations of ferromagnetic rings. <i>Journal of Applied Physics</i> , 2008, 103, 07D917.	2.5	7
116	Annular Spin-Transfer Memory Element. <i>IEEE Nanotechnology Magazine</i> , 2011, 10, 129-134.	2.0	7
117	Interplay between Spin-Orbit Torques and Dzyaloshinskii-Moriya Interactions in Ferrimagnetic Amorphous Alloys. <i>Advanced Science</i> , 2021, 8, 2100481.	11.2	7
118	A perspective on electrical generation of spin current for magnetic random access memories. <i>Applied Physics Letters</i> , 2022, 120, .	3.3	7
119	On-chip integration of high-frequency electron paramagnetic resonance spectroscopy and Hall-effect magnetometry. <i>Review of Scientific Instruments</i> , 2008, 79, 074703.	1.3	6
120	Characterization of interlayer interactions in magnetic random access memory layer stacks using ferromagnetic resonance. <i>Journal of Applied Physics</i> , 2012, 111, 07C721.	2.5	6
121	Temperature dependent nucleation, propagation, and annihilation of domain walls in all-perpendicular spin-valve nanopillars. <i>Journal of Applied Physics</i> , 2014, 115, 113910.	2.5	6
122	Partial spin reversal in magnetic deflagration. <i>Physical Review B</i> , 2014, 89, .	3.2	6
123	Bimodal switching field distributions in all-perpendicular spin-valve nanopillars. <i>Journal of Applied Physics</i> , 2014, 115, 17C707.	2.5	6
124	Spin-orbit torque based magnetization switching in Pt/Cu/[Co/Ni]5 multilayer structures. <i>Journal of Applied Physics</i> , 2017, 122, 213905.	2.5	6
125	Increased energy efficiency spin-torque switching of magnetic tunnel junction devices with a higher order perpendicular magnetic anisotropy. <i>Applied Physics Letters</i> , 2019, 114, 012404.	3.3	6
126	Micromagnetic instabilities in spin-transfer switching of perpendicular magnetic tunnel junctions. <i>Physical Review B</i> , 2021, 103, .	3.2	6



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127	Thermal Effects in Spin-Torque Switching of Perpendicular Magnetic Tunnel Junctions at Cryogenic Temperatures. <i>Physical Review Applied</i> , 2021, 15, .	3.8	6
128	Spin-torque switching mechanisms of perpendicular magnetic tunnel junction nanopillars. <i>Applied Physics Letters</i> , 2021, 118, .	3.3	6
129	Minimum action paths for spin-torque assisted thermally induced magnetization reversal. <i>Journal of Applied Physics</i> , 2011, 109, 07C918.	2.5	5
130	Reliable spin-transfer torque driven precessional magnetization reversal with an adiabatically decaying pulse. <i>Physical Review B</i> , 2016, 93, .	3.2	5
131	Ferromagnetic resonance linewidth in coupled layers with easy-plane and perpendicular magnetic anisotropies. <i>Journal of Applied Physics</i> , 2018, 124, .	2.5	5
132	Longitudinal and transverse magnetization components in thin films: A resonant magnetic reflectivity investigation using circularly polarized soft x-rays. <i>Applied Physics Letters</i> , 2010, 96, 042507.	3.3	4
133	Transverse field Ising ferromagnetism in Mn <sub>12</sub> -acetate-MeOH. <i>Physical Review B</i> , 2012, 85, .	3.2	4
134	Large fluctuations and singular behavior of nonequilibrium systems. <i>Physical Review E</i> , 2016, 93, 012114.	2.1	4
135	Voltage-Controlled Topological Spin Switch for Ultralow-Energy Computing: Performance Modeling and Benchmarking. <i>Physical Review Applied</i> , 2019, 11, .	3.8	4
136	Domain wall fringe field coupled spin logic. <i>AIP Advances</i> , 2016, 6, .	1.3	3
137	A quantum material spintronic resonator. <i>Scientific Reports</i> , 2021, 11, 15082.	3.3	3
138	Role of the nonmagnetic layer in determining the Landé-factor in a spin-transfer system. <i>Physical Review B</i> , 2009, 80, .	3.2	2
139	Anisotropic spin-wave patterns generated by spin-torque nano-oscillators. <i>Journal of Applied Physics</i> , 2011, 109, 07C733.	2.5	2
140	Singlet-to-triplet interconversion using hyperfine as well as ferromagnetic fringe fields. <i>Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences</i> , 2015, 373, 20140326.	3.4	2
141	Reduced model for precessional switching of thin-film nanomagnets under the influence of spin torque. <i>Physical Review B</i> , 2016, 94, .	3.2	2
142	Field tuning of domain-wall type and chirality in SrRuO <sub>3</sub> . <i>Physical Review B</i> , 2017, 95, .	3.2	2
143	Quantum fluctuations and long-range order in molecular magnets. <i>Polyhedron</i> , 2013, 64, 262-267.	2.2	1
144	Magnetization Dynamics. , 2021, , 1333-1365.		1

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145	Shape dependent magnetization reversal processes of microstructured epitaxial Fe[110] elements. , 0, , .		0
146	Switching probability in all-perpendicular spin valves. , 2010, , .		0
147	Orthogonal spin transfer MRAM. , 2011, , .		0
148	Magnetization Dynamics. , 2021, , 1-33.		0
149	Spin Mixing in Ferromagnets Revealed. Physics Magazine, 0, 14, .	0.1	0