

# Robert D Mcmichael

## List of Publications by Citations

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115  
papers

4,278  
citations

35  
h-index

62  
g-index

120  
ext. papers

4,597  
ext. citations

3.4  
avg, IF

5.2  
L-index

#	Paper	IF	Citations
115	Enhanced magnetocaloric effect in Gd <sub>3</sub> Ga <sub>5</sub> Fe <sub>x</sub> O <sub>12</sub> . <i>Journal of Applied Physics</i> , <b>1993</b> , 73, 6946-6948	2.5	264
114	Ferromagnetic resonance studies of NiO-coupled thin films of Ni <sub>80</sub> Fe <sub>20</sub> . <i>Physical Review B</i> , <b>1998</b> , 58, 8605-8612	3.3	203
113	Magnetic normal modes of nanoelements. <i>Journal of Applied Physics</i> , <b>2005</b> , 97, 10J901	2.5	202
112	Coercivity in exchange-bias bilayers. <i>Physical Review B</i> , <b>2001</b> , 63,	3.3	195
111	Spin-wave propagation in the presence of interfacial Dzyaloshinskii-Moriya interaction. <i>Physical Review B</i> , <b>2013</b> , 88,	3.3	193
110	Oxygen as a surfactant in the growth of giant magnetoresistance spin valves. <i>Journal of Applied Physics</i> , <b>1997</b> , 82, 6142-6151	2.5	183
109	Magnetic and optical properties of Fe <sub>2</sub> O <sub>3</sub> nanocrystals. <i>Journal of Applied Physics</i> , <b>1993</b> , 73, 5109-5116	2.5	175
108	Localized ferromagnetic resonance in inhomogeneous thin films. <i>Physical Review Letters</i> , <b>2003</b> , 90, 227604	7.4	173
107	Control of magnetic fluctuations by spin current. <i>Physical Review Letters</i> , <b>2011</b> , 107, 107204	7.4	124
106	Magnetoresistance values exceeding 21% in symmetric spin valves. <i>Journal of Applied Physics</i> , <b>1995</b> , 78, 273-277	2.5	116
105	Ferromagnetic resonance linewidth in thin films coupled to NiO. <i>Journal of Applied Physics</i> , <b>1998</b> , 83, 7037-7039	2.5	114
104	Effect of 3d, 4d, and 5d transition metal doping on damping in permalloy thin films. <i>Journal of Applied Physics</i> , <b>2007</b> , 101, 033911	2.5	93
103	Spin dynamics and mode structure in nanomagnet arrays: Effects of size and thickness on linewidth and damping. <i>Physical Review B</i> , <b>2009</b> , 79,	3.3	92
102	Demagnetized-state dependence of Henkel plots. I. The Preisach model. <i>Journal of Applied Physics</i> , <b>1994</b> , 75, 5689-5691	2.5	88
101	Spin-Torque Excitation of Perpendicular Standing Spin Waves in Coupled YIG/Co Heterostructures. <i>Physical Review Letters</i> , <b>2018</b> , 120, 127201	7.4	76
100	Edge saturation fields and dynamic edge modes in ideal and nonideal magnetic film edges. <i>Physical Review B</i> , <b>2006</b> , 74,	3.3	72
99	Optimizing the giant magnetoresistance of symmetric and bottom spin valves (invited). <i>Journal of Applied Physics</i> , <b>1996</b> , 79, 5277	2.5	70

98	Microstructural origin of switching field distribution in patterned CoBd multilayer nanodots. <i>Applied Physics Letters</i> , <b>2008</b> , 92, 012506	3.4	67
97	Artifacts in ballistic magnetoresistance measurements (invited). <i>Journal of Applied Physics</i> , <b>2004</b> , 95, 7554-7559	2.5	64
96	Intrinsic damping and intentional ferromagnetic resonance broadening in thin Permalloy films. <i>Journal of Applied Physics</i> , <b>2003</b> , 93, 6903-6905	2.5	60
95	Growth of giant magnetoresistance spin valves using Pb and Au as surfactants. <i>Journal of Applied Physics</i> , <b>1996</b> , 80, 5183-5191	2.5	58
94	Effects of disorder and internal dynamics on vortex wall propagation. <i>Physical Review Letters</i> , <b>2010</b> , 104, 217201	7.4	54
93	Phase diagram of magnetic nanodisks measured by scanning electron microscopy with polarization analysis. <i>Physical Review B</i> , <b>2010</b> , 81,	3.3	52
92	Giant magnetoresistance peaks in CoNiCu/Cu multilayers grown by electrodeposition. <i>Journal of Applied Physics</i> , <b>1994</b> , 76, 6519-6521	2.5	52
91	Spectroscopy and imaging of edge modes in Permalloy nanodisks. <i>Physical Review Letters</i> , <b>2013</b> , 110, 017601	7.4	50
90	Strong anisotropy in thin magnetic films deposited on obliquely sputtered Ta underlayers. <i>Journal of Applied Physics</i> , <b>2000</b> , 88, 5296-5299	2.5	48
89	Effects of shape distortions and imperfections on mode frequencies and collective linewidths in nanomagnets. <i>Physical Review B</i> , <b>2011</b> , 83,	3.3	45
88	Magnetostriction and angular dependence of ferromagnetic resonance linewidth in Tb-doped Ni <sub>0.8</sub> Fe <sub>0.2</sub> thin films. <i>Journal of Applied Physics</i> , <b>2002</b> , 91, 8659	2.5	45
87	High-power ferromagnetic resonance without a degenerate spin-wave manifold. <i>Physical Review Letters</i> , <b>1990</b> , 64, 64-67	7.4	45
86	Characterization of magnetic properties at edges by edge-mode dynamics. <i>Journal of Applied Physics</i> , <b>2006</b> , 99, 08C703	2.5	44
85	Temperature dependence of magnetization drift velocity and current polarization in Ni <sub>80</sub> Fe <sub>20</sub> by spin-wave Doppler measurements. <i>Physical Review B</i> , <b>2010</b> , 81,	3.3	43
84	Practical preparation of copper oxide superconductors. <i>Review of Scientific Instruments</i> , <b>1987</b> , 58, 1565-1571	7.4	43
83	Magneto-optical indicator film observation of domain structure in magnetic multilayers. <i>Applied Physics Letters</i> , <b>1995</b> , 66, 888-890	3.4	42
82	Correlation Between Structural Imperfection and Giant Magnetoresistance in Electrodeposited Co/Cu Multilayers. <i>Journal of the Electrochemical Society</i> , <b>2001</b> , 148, C518	3.9	39
81	Nanoscale spin wave localization using ferromagnetic resonance force microscopy. <i>Physical Review Letters</i> , <b>2012</b> , 108, 087206	7.4	35

80	Behavior of MAG standard problem No. 2 in the small particle limit. <i>Journal of Applied Physics</i> , <b>2000</b> , 87, 5520-5522	2.5	35
79	Surface oxidation as a diffusion barrier for Al deposited on ferromagnetic metals. <i>Journal of Applied Physics</i> , <b>2001</b> , 89, 5209-5214	2.5	33
78	Structural, magnetic, and magnetocaloric properties of (Hf <sub>0.83</sub> Ta <sub>0.17</sub> )Fe <sub>2+x</sub> materials. <i>Journal of Applied Physics</i> , <b>1996</b> , 79, 5998	2.5	33
77	Micromagnetics on Curved Geometries Using Rectangular Cells: Error Correction and Analysis. <i>IEEE Transactions on Magnetics</i> , <b>2007</b> , 43, 2878-2880	2	32
76	Quasi-two-dimensional magnon identification in antiferromagnetic FePS <sub>3</sub> via magneto-Raman spectroscopy. <i>Physical Review B</i> , <b>2020</b> , 101,	3.3	30
75	Spin dynamics and damping in nanomagnets measured directly by frequency-resolved magneto-optic Kerr effecta). <i>Journal of Applied Physics</i> , <b>2007</b> , 102, 103909	2.5	29
74	Surface anisotropy of permalloy in NM/NiFe/NM multilayers. <i>Journal of Applied Physics</i> , <b>2005</b> , 97, 10J113	2.5	28
73	Variation of thin film edge magnetic properties with patterning process conditions in Ni <sub>80</sub> Fe <sub>20</sub> stripes. <i>Applied Physics Letters</i> , <b>2007</b> , 90, 232504	3.4	26
72	Magnetic Properties of Ultrathin Laminated Co/Cu Films Prepared by Electrodeposition. <i>Journal of the Electrochemical Society</i> , <b>2002</b> , 149, C439	3.9	26
71	Monte Carlo simulations of the magnetocaloric effect in superferromagnetic clusters having uniaxial magnetic anisotropy. <i>Journal of Applied Physics</i> , <b>1994</b> , 75, 5493-5495	2.5	26
70	Effect of twin boundaries on flux pinning in YBa <sub>2</sub> Cu <sub>3</sub> O <sub>7-x</sub> at low and intermediate magnetic fields. <i>Journal of Applied Physics</i> , <b>1991</b> , 70, 5739-5741	2.5	24
69	Magnetic structure and anisotropy of [Co/Pd] <sub>5</sub> /NiFe multilayers. <i>Physical Review B</i> , <b>2015</b> , 91,	3.3	22
68	Nanostructure, interfaces, and magnetic properties in giant magnetoresistive NiO-Co-Cu-based spin valves. <i>Journal of Applied Physics</i> , <b>1997</b> , 81, 4017-4019	2.5	22
67	Thin Al, Au, Cu, Ni, Fe, and Ta films as oxidation barriers for Co in air. <i>Journal of Applied Physics</i> , <b>2003</b> , 93, 8731-8733	2.5	21
66	Ferromagnetic resonance mode interactions in periodically perturbed films. <i>Journal of Applied Physics</i> , <b>2002</b> , 91, 8647	2.5	21
65	Suppression of orange-peel coupling in magnetic tunnel junctions by preoxidation. <i>Applied Physics Letters</i> , <b>2006</b> , 88, 162508	3.4	19
64	Structural and magnetic fourfold symmetry of Co/Cu multilayers electrodeposited on Si(001) substrates. <i>Journal of Applied Physics</i> , <b>1998</b> , 84, 1504-1507	2.5	19
63	Effect of structural changes on the zero-resistance transition temperature of La <sub>1</sub> Ba <sub>2</sub> Cu <sub>3</sub> O <sub>9-δ</sub> . <i>Physical Review B</i> , <b>1987</b> , 36, 2417-2420	3.3	19

62	Magnetic and structural characterization and ferromagnetic resonance study of thin film HITPERM soft magnetic materials for data storage applications. <i>Journal of Applied Physics</i> , <b>2003</b> , 93, 6528-6530	2.5	18
61	The magnetocaloric effect: The role of magnetic anisotropy. <i>Journal of Applied Physics</i> , <b>1993</b> , 73, 6507-6509		18
60	A mean-field model of extrinsic line broadening in ferromagnetic resonance. <i>Journal of Applied Physics</i> , <b>2008</b> , 103, 07B114	2.5	17
59	Nonlinear ferromagnetic resonance shift in submicron Permalloy ellipses. <i>Physical Review B</i> , <b>2015</b> , 91,	3.3	16
58	Parametric excitation of magnetostatic modes in circular ferromagnetic films. <i>Physical Review B</i> , <b>1990</b> , 42, 6723-6726	3.3	16
57	Two-dimensional spectroscopic imaging of individual ferromagnetic nanostripes. <i>Physical Review B</i> , <b>2012</b> , 86,	3.3	15
56	Switching dynamics and critical behavior of standard problem No. 4. <i>Journal of Applied Physics</i> , <b>2001</b> , 89, 7603-7605	2.5	15
55	Langevin approach to hysteresis and Barkhausen jump modeling in steel. <i>Journal of Applied Physics</i> , <b>1993</b> , 73, 5848-5850	2.5	15
54	Modification of edge mode dynamics by oxidation in Ni80Fe20 thin film edges. <i>Journal of Applied Physics</i> , <b>2010</b> , 107, 103908	2.5	14
53	Advances in magnetometry through miniaturization. <i>Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films</i> , <b>2008</b> , 26, 757-762	2.9	14
52	Parametric pumping of precession modes in ferromagnetic nanodisks. <i>Physical Review B</i> , <b>2014</b> , 89,	3.3	13
51	Correlation of edge roughness to nucleation field and nucleation field distribution in patterned Permalloy elements. <i>Journal of Applied Physics</i> , <b>2007</b> , 102, 023916	2.5	13
50	The trade-off between large magnetoresistance and small coercivity in symmetric spin valves. <i>Journal of Applied Physics</i> , <b>1996</b> , 79, 8603-8606	2.5	13
49	X-ray and neutron diffracton study of La1Ba2Cu3O9- delta : Influence of the Cu-O structure on Tc. <i>Physical Review B</i> , <b>1988</b> , 37, 607-610	3.3	13
48	Hysteresis loop collapse for linear response in magnetic-tunnel-junction sensors. <i>Journal of Applied Physics</i> , <b>2009</b> , 105, 07E723	2.5	12
47	Spectroscopic defect imaging in magnetic nanostructure arrays. <i>Applied Physics Letters</i> , <b>2012</b> , 101, 042408		12
46	Thickness dependence of magnetic film edge properties in Ni80Fe20 stripes. <i>Journal of Applied Physics</i> , <b>2008</b> , 103, 07C505	2.5	12
45	High Speed Switching and Rotational Dynamics in Small Magnetic Thin Film Devices <b>2003</b> , 93-156		12

44	Demagnetized-state dependence of Henkel plots. II. Domain wall motion. <i>Journal of Applied Physics</i> , <b>1994</b> , 75, 5692-5694	2.5	12
43	Enhanced magnetization drift velocity and current polarization in (CoFe) <sub>1-x</sub> Gex alloys. <i>Applied Physics Letters</i> , <b>2011</b> , 98, 072510	3.4	11
42	Calculation of damping rates in thin inhomogeneous ferromagnetic films due to coupling to lattice vibrations. <i>Journal of Applied Physics</i> , <b>2002</b> , 91, 8650	2.5	11
41	400-fold reduction in saturation field by interlayering. <i>Journal of Applied Physics</i> , <b>2009</b> , 105, 013921	2.5	10
40	Effects of disorder on magnetic vortex gyration. <i>Physical Review B</i> , <b>2011</b> , 83,	3.3	10
39	Effect of interactions on edge property measurements in magnetic multilayers. <i>Journal of Applied Physics</i> , <b>2011</b> , 109, 043904-043904-8	2.5	10
38	Complementary imaging of granular Co-Ag films with magneto-optical indicator film technique and magnetic force microscopy. <i>Journal of Applied Physics</i> , <b>1996</b> , 79, 5315	2.5	10
37	Scalable microresonators for room-temperature detection of electron spin resonance from dilute, sub-nanoliter volume solids. <i>Science Advances</i> , <b>2020</b> , 6,	14.3	9
36	Phase-resolved ferromagnetic resonance using heterodyne detection method. <i>Physical Review B</i> , <b>2016</b> , 93,	3.3	9
35	Ferromagnetic resonance linewidth models for perpendicular media. <i>Journal of Applied Physics</i> , <b>2004</b> , 95, 7001-7003	2.5	9
34	Magnetic and magnetocaloric properties of melt-spun GdxAg100-x alloys. <i>Journal of Applied Physics</i> , <b>1994</b> , 76, 6301-6303	2.5	9
33	Impact of Gd dopants on current polarization and the resulting effect on spin transfer velocity in Permalloy wires. <i>Journal of Applied Physics</i> , <b>2011</b> , 110, 033902	2.5	8
32	Physics. A new spin on the Doppler effect. <i>Science</i> , <b>2008</b> , 322, 386-7	33.3	8
31	Anomalous switching behavior of antiparallel-coupled Co layers separated by a super thin Ru spacer. <i>Journal of Applied Physics</i> , <b>2002</b> , 91, 8272	2.5	8
30	Nanocomposites for Magnetic Refrigeration. <i>Materials Research Society Symposia Proceedings</i> , <b>1992</b> , 286, 449		8
29	A differential rate meter for real-time peak tracking in optically detected magnetic resonance at low photon count rates. <i>Review of Scientific Instruments</i> , <b>2019</b> , 90, 023907	1.7	8
28	Quantitative magnetometry of ferromagnetic nanorods by microfluidic analytical magnetophoresis. <i>Journal of Applied Physics</i> , <b>2015</b> , 118, 093904	2.5	7
27	Ferromagnetic resonance measurement using stroboscopic magneto-optical Kerr effect. <i>Journal of Applied Physics</i> , <b>2015</b> , 117, 213908	2.5	6

26	Effect of conformal roughness on ferromagnetic resonance linewidth in thin Permalloy films. <i>Journal of Applied Physics</i> , <b>2005</b> , 97, 10A721	2.5	6
25	Structural, magnetic, and thermal stability of IrMn exchange biased layers. <i>Journal of Applied Physics</i> , <b>2002</b> , 91, 8566	2.5	6
24	Effect of strain-induced anisotropy on magnetization dynamics in YFeO films recrystallized on a lattice-mismatched substrate. <i>Scientific Reports</i> , <b>2021</b> , 11, 14011	4.9	6
23	Spin wave localization in tangentially magnetized films. <i>Physical Review B</i> , <b>2016</b> , 93,	3.3	5
22	Structure and Magnetic Anisotropy of Electrodeposited Co on n-GaAs(001). <i>Journal of the Electrochemical Society</i> , <b>2003</b> , 150, C753	3.9	5
21	Micromechanical detectors for ferromagnetic resonance spectroscopy <b>2000</b> , 4176, 84		5
20	Sequential Bayesian experiment design for optically detected magnetic resonance of nitrogen-vacancy centers. <i>Physical Review Applied</i> , <b>2020</b> , 14,	4.3	5
19	Enhanced ferromagnetic resonance linewidth of the free layer in perpendicular magnetic tunnel junctions. <i>AIP Advances</i> , <b>2017</b> , 7,	1.5	4
18	Method for determining both magnetostriction and elastic modulus by ferromagnetic resonance. <i>Journal of Applied Physics</i> , <b>1994</b> , 75, 5650-5652	2.5	4
17	Field and power dependence of auto-oscillations in yttrium-iron-garnet films. <i>Journal of Applied Physics</i> , <b>1988</b> , 64, 5474-5476	2.5	4
16	Comparison of measured and simulated spin-wave mode spectra of magnetic nanostructures. <i>Applied Physics Letters</i> , <b>2021</b> , 118, 012408	3.4	4
15	Preliminary design and noise considerations for an ultrasensitive magnetic field sensor <b>2007</b> ,		3
14	Detection of Pinholes in Ultrathin Films by Magnetic Coupling. <i>Materials Research Society Symposia Proceedings</i> , <b>2001</b> , 674, 1		3
13	Noise Power Spectrum of Copper Oxide Superconductors in the Normal State. <i>Materials Research Society Symposia Proceedings</i> , <b>1987</b> , 99, 357		3
12	Thermal stability of Ta-pinned spin valves. <i>Journal of Applied Physics</i> , <b>2001</b> , 89, 6825-6827	2.5	2
11	Corrosion detection in steel-reinforced concrete using a spectroscopic technique <b>2014</b> ,		1
10	Measurement and simulation of millimeter wave scattering cross-sections from steel-reinforced concrete <b>2014</b> ,		1
9	Periodic Table of Impurity Damping in Doped Permalloy Thin Films <b>2006</b> ,		1

8	Origin of exchange decoupling effects in high-coercivity air-annealed CoPd multilayers. <i>Journal of Applied Physics</i> , <b>2005</b> , 97, 10J104	2.5	1
7	Comparison of the 1-2-3 Phase and the 3-3-6 Phase in the La-Ba-Cu-O Superconductor Series. <i>ACS Symposium Series</i> , <b>1987</b> , 192-197	0.4	1
6	Correlation of Resistance and Thermogravimetric Measurements of the Er <sub>1</sub> Ba <sub>2</sub> Cu <sub>3</sub> O <sub>9-<math>\delta</math></sub> Superconductor to Sample Preparation Techniques. <i>ACS Symposium Series</i> , <b>1987</b> , 272-278	0.4	1
5	Optbayesxpt: Sequential Bayesian Experiment Design for Adaptive Measurements. <i>Journal of Research of the National Institute of Standards and Technology</i> , <b>2021</b> , 126,	1.3	1
4	Parametric excitation of magnetostatic modes in thin yttrium iron garnet films (invited). <i>Journal of Applied Physics</i> , <b>1991</b> , 69, 5425-5429	2.5	0
3	Sequential Bayesian experiment design for adaptive Ramsey sequence measurements. <i>Journal of Applied Physics</i> , <b>2021</b> , 130, 144401	2.5	0
2	Nonlinear dynamics of magnetoexchange modes in YIG films (abstract). <i>Journal of Applied Physics</i> , <b>1990</b> , 67, 5642-5642	2.5	
1	LA1BA2CU3O9- $\delta$ Structural Analysis as Determined by Neutron Diffraction. <i>Materials Research Society Symposia Proceedings</i> , <b>1987</b> , 99, 895		