Robert D Mcmichael

List of Publications by Year in Descending Order

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	Sequential Bayesian experiment design for adaptive Ramsey sequence measurements. *Journal of Applied Physics*, **2021**, 130, 144401	2.5	0
114	Effect of strain-induced anisotropy on magnetization dynamics in YFeO films recrystallized on a lattice-mismatched substrate. *Scientific Reports*, **2021**, 11, 14011	4.9	6
113	Comparison of measured and simulated spin-wave mode spectra of magnetic nanostructures. *Applied Physics Letters*, **2021**, 118, 012408	3.4	4
112	Optbayesexpt: Sequential Bayesian Experiment Design for Adaptive Measurements. *Journal of Research of the National Institute of Standards and Technology*, **2021**, 126,	1.3	1
111	Scalable microresonators for room-temperature detection of electron spin resonance from dilute, sub-nanoliter volume solids. *Science Advances*, **2020**, 6,	14.3	9
110	Quasi-two-dimensional magnon identification in antiferromagnetic FePS3 via magneto-Raman spectroscopy. *Physical Review B*, **2020**, 101,	3.3	30
109	Sequential Bayesian experiment design for optically detected magnetic resonance of nitrogen-vacancy centers. *Physical Review Applied*, **2020**, 14,	4.3	5
108	A differential rate meter for real-time peak tracking in optically detected magnetic resonance at low photon count rates. *Review of Scientific Instruments*, **2019**, 90, 023907	1.7	8
107	Spin-Torque Excitation of Perpendicular Standing Spin Waves in Coupled YIG/Co Heterostructures. *Physical Review Letters*, **2018**, 120, 127201	7.4	76
106	Enhanced ferromagnetic resonance linewidth of the free layer in perpendicular magnetic tunnel junctions. *AIP Advances*, **2017**, 7,	1.5	4
105	Phase-resolved ferromagnetic resonance using heterodyne detection method. *Physical Review B*, **2016**, 93,	3.3	9
104	Spin wave localization in tangentially magnetized films. *Physical Review B*, **2016**, 93,	3.3	5
103	Nonlinear ferromagnetic resonance shift in submicron Permalloy ellipses. *Physical Review B*, **2015**, 91,	3.3	16
102	Ferromagnetic resonance measurement using stroboscopic magneto-optical Kerr effect. *Journal of Applied Physics*, **2015**, 117, 213908	2.5	6
101	Quantitative magnetometry of ferromagnetic nanorods by microfluidic analytical magnetophoresis. *Journal of Applied Physics*, **2015**, 118, 093904	2.5	7
100	Magnetic structure and anisotropy of [Co/Pd]5/NiFe multilayers. *Physical Review B*, **2015**, 91,	3.3	22
99	Parametric pumping of precession modes in ferromagnetic nanodisks. *Physical Review B*, **2014**, 89,	3.3	13

98	Corrosion detection in steel-reinforced concrete using a spectroscopic technique **2014**,		1
97	Measurement and simulation of millimeter wave scattering cross-sections from steel-reinforced concrete **2014**,		1
96	Spin-wave propagation in the presence of interfacial Dzyaloshinskii-Moriya interaction. *Physical Review B*, **2013**, 88,	3.3	193
95	Spectroscopy and imaging of edge modes in Permalloy nanodisks. *Physical Review Letters*, **2013**, 110, 017601	7.4	50
94	Nanoscale spin wave localization using ferromagnetic resonance force microscopy. *Physical Review Letters*, **2012**, 108, 087206	7.4	35
93	Spectroscopic defect imaging in magnetic nanostructure arrays. *Applied Physics Letters*, **2012**, 101, 042408	3.4	12
92	Two-dimensional spectroscopic imaging of individual ferromagnetic nanostripes. *Physical Review B*, **2012**, 86,	3.3	15
91	Effects of shape distortions and imperfections on mode frequencies and collective linewidths in nanomagnets. *Physical Review B*, **2011**, 83,	3.3	45
90	Control of magnetic fluctuations by spin current. *Physical Review Letters*, **2011**, 107, 107204	7.4	124
89	Impact of Gd dopants on current polarization and the resulting effect on spin transfer velocity in Permalloy wires. *Journal of Applied Physics*, **2011**, 110, 033902	2.5	8
88	Effects of disorder on magnetic vortex gyration. *Physical Review B*, **2011**, 83,	3.3	10
87	Enhanced magnetization drift velocity and current polarization in (CoFe)1−xGex alloys. *Applied Physics Letters*, **2011**, 98, 072510	3.4	11
86	Effect of interactions on edge property measurements in magnetic multilayers. *Journal of Applied Physics*, **2011**, 109, 043904-043904-8	2.5	10
85	Temperature dependence of magnetization drift velocity and current polarization in Ni80Fe20 by spin-wave Doppler measurements. *Physical Review B*, **2010**, 81,	3.3	43
84	Modification of edge mode dynamics by oxidation in Ni80Fe20 thin film edges. *Journal of Applied Physics*, **2010**, 107, 103908	2.5	14
83	Effects of disorder and internal dynamics on vortex wall propagation. *Physical Review Letters*, **2010**, 104, 217201	7.4	54
82	Phase diagram of magnetic nanodisks measured by scanning electron microscopy with polarization analysis. *Physical Review B*, **2010**, 81,	3.3	52
81	Hysteresis loop collapse for linear response in magnetic-tunnel-junction sensors. *Journal of Applied Physics*, **2009**, 105, 07E723	2.5	12

80	400-fold reduction in saturation field by interlayering. *Journal of Applied Physics*, **2009**, 105, 013921	2.5	10
79	Spin dynamics and mode structure in nanomagnet arrays: Effects of size and thickness on linewidth and damping. *Physical Review B*, **2009**, 79,	3.3	92
78	Advances in magnetometry through miniaturization. *Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films*, **2008**, 26, 757-762	2.9	14
77	Physics. A new spin on the Doppler effect. *Science*, **2008**, 322, 386-7	33.3	8
76	Microstructural origin of switching field distribution in patterned Co/Pd multilayer nanodots. *Applied Physics Letters*, **2008**, 92, 012506	3.4	67
75	Thickness dependence of magnetic film edge properties in Ni80Fe20 stripes. *Journal of Applied Physics*, **2008**, 103, 07C505	2.5	12
74	A mean-field model of extrinsic line broadening in ferromagnetic resonance. *Journal of Applied Physics*, **2008**, 103, 07B114	2.5	17
73	Effect of 3d, 4d, and 5d transition metal doping on damping in permalloy thin films. *Journal of Applied Physics*, **2007**, 101, 033911	2.5	93
72	Micromagnetics on Curved Geometries Using Rectangular Cells: Error Correction and Analysis. *IEEE Transactions on Magnetics*, **2007**, 43, 2878-2880	2	32
71	Spin dynamics and damping in nanomagnets measured directly by frequency-resolved magneto-optic Kerr effecta). *Journal of Applied Physics*, **2007**, 102, 103909	2.5	29
70	Correlation of edge roughness to nucleation field and nucleation field distribution in patterned Permalloy elements. *Journal of Applied Physics*, **2007**, 102, 023916	2.5	13
69	Variation of thin film edge magnetic properties with patterning process conditions in Ni80Fe20 stripes. *Applied Physics Letters*, **2007**, 90, 232504	3.4	26
68	Preliminary design and noise considerations for an ultrasensitive magnetic field sensor **2007**,		3
67	Suppression of orange-peel coupling in magnetic tunnel junctions by preoxidation. *Applied Physics Letters*, **2006**, 88, 162508	3.4	19
66	Periodic Table of Impurity Damping in Doped Permalloy Thin Films **2006**,		1
65	Characterization of magnetic properties at edges by edge-mode dynamics. *Journal of Applied Physics*, **2006**, 99, 08C703	2.5	44
64	Edge saturation fields and dynamic edge modes in ideal and nonideal magnetic film edges. *Physical Review B*, **2006**, 74,	3.3	72
63	Effect of conformal roughness on ferromagnetic resonance linewidth in thin Permalloy films. *Journal of Applied Physics*, **2005**, 97, 10A721	2.5	6

62	Magnetic normal modes of nanoelements. *Journal of Applied Physics*, **2005**, 97, 10J901	2.5	202
61	Surface anisotropy of permalloy in NM/NiFe/NM multilayers. *Journal of Applied Physics*, **2005**, 97, 10J113	2.5	28
60	Origin of exchange decoupling effects in high-coercivity air-annealed CoPd multilayers. *Journal of Applied Physics*, **2005**, 97, 10J104	2.5	1
59	Artifacts in ballistic magnetoresistance measurements (invited). *Journal of Applied Physics*, **2004**, 95, 7554-7559	2.5	64
58	Ferromagnetic resonance linewidth models for perpendicular media. *Journal of Applied Physics*, **2004**, 95, 7001-7003	2.5	9
57	Thin Al, Au, Cu, Ni, Fe, and Ta films as oxidation barriers for Co in air. *Journal of Applied Physics*, **2003**, 93, 8731-8733	2.5	21
56	Intrinsic damping and intentional ferromagnetic resonance broadening in thin Permalloy films. *Journal of Applied Physics*, **2003**, 93, 6903-6905	2.5	60
55	Magnetic and structural characterization and ferromagnetic resonance study of thin film HITPERM soft magnetic materials for data storage applications. *Journal of Applied Physics*, **2003**, 93, 6528-6530	2.5	18
54	Structure and Magnetic Anisotropy of Electrodeposited Co on n-GaAs(001). *Journal of the Electrochemical Society*, **2003**, 150, C753	3.9	5
53	Localized ferromagnetic resonance in inhomogeneous thin films. *Physical Review Letters*, **2003**, 90, 227601	7.4	173
52	High Speed Switching and Rotational Dynamics in Small Magnetic Thin Film Devices **2003**, 93-156		12
51	Anomalous switching behavior of antiparallel-coupled Co layers separated by a super thin Ru spacer. *Journal of Applied Physics*, **2002**, 91, 8272	2.5	8
50	Magnetic Properties of Ultrathin Laminated Co/Cu Films Prepared by Electrodeposition. *Journal of the Electrochemical Society*, **2002**, 149, C439	3.9	26
49	Calculation of damping rates in thin inhomogeneous ferromagnetic films due to coupling to lattice vibrations. *Journal of Applied Physics*, **2002**, 91, 8650	2.5	11
48	Magnetostriction and angular dependence of ferromagnetic resonance linewidth in Tb-doped Ni0.8Fe0.2 thin films. *Journal of Applied Physics*, **2002**, 91, 8659	2.5	45
47	Structural, magnetic, and thermal stability of IrMn exchange biased layers. *Journal of Applied Physics*, **2002**, 91, 8566	2.5	6
46	Ferromagnetic resonance mode interactions in periodically perturbed films. *Journal of Applied Physics*, **2002**, 91, 8647	2.5	21
45	Correlation Between Structural Imperfection and Giant Magnetoresistance in Electrodeposited Co/Cu Multilayers. *Journal of the Electrochemical Society*, **2001**, 148, C518	3.9	39

44	Switching dynamics and critical behavior of standard problem No. 4. *Journal of Applied Physics*, **2001**, 89, 7603-7605	2.5	15
43	Thermal stability of Ta-pinned spin valves. *Journal of Applied Physics*, **2001**, 89, 6825-6827	2.5	2
42	Coercivity in exchange-bias bilayers. *Physical Review B*, **2001**, 63,	3.3	195
41	Surface oxidation as a diffusion barrier for Al deposited on ferromagnetic metals. *Journal of Applied Physics*, **2001**, 89, 5209-5214	2.5	33
40	Detection of Pinholes in Ultrathin Films by Magnetic Coupling. *Materials Research Society Symposia Proceedings*, **2001**, 674, 1		3
39	Strong anisotropy in thin magnetic films deposited on obliquely sputtered Ta underlayers. *Journal of Applied Physics*, **2000**, 88, 5296-5299	2.5	48
38	Behavior of IMAG standard problem No. 2 in the small particle limit. *Journal of Applied Physics*, **2000**, 87, 5520-5522	2.5	35
37	Micromechanical detectors for ferromagnetic resonance spectroscopy **2000**, 4176, 84		5
36	Ferromagnetic resonance linewidth in thin films coupled to NiO. *Journal of Applied Physics*, **1998**, 83, 7037-7039	2.5	114
35	Structural and magnetic fourfold symmetry of Co/Cu multilayers electrodeposited on Si(001) substrates. *Journal of Applied Physics*, **1998**, 84, 1504-1507	2.5	19
34	Ferromagnetic resonance studies of NiO-coupled thin films of Ni80Fe20. *Physical Review B*, **1998**, 58, 8605-8612	3.3	203
33	Oxygen as a surfactant in the growth of giant magnetoresistance spin valves. *Journal of Applied Physics*, **1997**, 82, 6142-6151	2.5	183
32	Nanostructure, interfaces, and magnetic properties in giant magnetoresistive NiO-Co-Cu-based spin valves. *Journal of Applied Physics*, **1997**, 81, 4017-4019	2.5	22
31	Complementary imaging of granular Co-Ag films with magneto-optical indicator film technique and magnetic force microscopy. *Journal of Applied Physics*, **1996**, 79, 5315	2.5	10
30	Optimizing the giant magnetoresistance of symmetric and bottom spin valves (invited). *Journal of Applied Physics*, **1996**, 79, 5277	2.5	70
29	Structural, magnetic, and magnetocaloric properties of (Hf0.83Ta0.17)Fe2+x materials. *Journal of Applied Physics*, **1996**, 79, 5998	2.5	33
28	Growth of giant magnetoresistance spin valves using Pb and Au as surfactants. *Journal of Applied Physics*, **1996**, 80, 5183-5191	2.5	58
27	The trade-off between large magnetoresistance and small coercivity in symmetric spin valves. *Journal of Applied Physics*, **1996**, 79, 8603-8606	2.5	13

26	Magnetoresistance values exceeding 21% in symmetric spin valves. *Journal of Applied Physics*, **1995**, 78, 273-277	2.5	116
25	Magneto-optical indicator film observation of domain structure in magnetic multilayers. *Applied Physics Letters*, **1995**, 66, 888-890	3.4	42
24	Giant magnetoresistance peaks in CoNiCu/Cu multilayers grown by electrodeposition. *Journal of Applied Physics*, **1994**, 76, 6519-6521	2.5	52
23	Magnetic and magnetocaloric properties of melt-spun GdxAg100 alloys. *Journal of Applied Physics*, **1994**, 76, 6301-6303	2.5	9
22	Method for determining both magnetostriction and elastic modulus by ferromagnetic resonance. *Journal of Applied Physics*, **1994**, 75, 5650-5652	2.5	4
21	Monte Carlo simulations of the magnetocaloric effect in superferromagnetic clusters having uniaxial magnetic anisotropy. *Journal of Applied Physics*, **1994**, 75, 5493-5495	2.5	26
20	Demagnetized-state dependence of Henkel plots. I. The Preisach model. *Journal of Applied Physics*, **1994**, 75, 5689-5691	2.5	88
19	Demagnetized-state dependence of Henkel plots. II. Domain wall motion. *Journal of Applied Physics*, **1994**, 75, 5692-5694	2.5	12
18	Magnetic and optical properties of Fe2O3 nanocrystals. *Journal of Applied Physics*, **1993**, 73, 5109-5116	2.5	175
17	Enhanced magnetocaloric effect in Gd3Ga5FexO12. *Journal of Applied Physics*, **1993**, 73, 6946-6948	2.5	264
16	Langevin approach to hysteresis and Barkhausen jump modeling in steel. *Journal of Applied Physics*, **1993**, 73, 5848-5850	2.5	15
15	The magnetocaloric effect: The role of magnetic anisotropy. *Journal of Applied Physics*, **1993**, 73, 6507-6509	2.5	18
14	Nanocomposites for Magnetic Refrigeration. *Materials Research Society Symposia Proceedings*, **1992**, 286, 449		8
13	Parametric excitation of magnetostatic modes in thin yttrium iron garnet films (invited). *Journal of Applied Physics*, **1991**, 69, 5425-5429	2.5	0
12	Effect of twin boundaries on flux pinning in YBa2Cu3O7 at low and intermediate magnetic fields. *Journal of Applied Physics*, **1991**, 70, 5739-5741	2.5	24
11	Nonlinear dynamics of magnetoexchange modes in YIG films (abstract). *Journal of Applied Physics*, **1990**, 67, 5642-5642	2.5	
10	Parametric excitation of magnetostatic modes in circular ferromagnetic films. *Physical Review B*, **1990**, 42, 6723-6726	3.3	16
9	High-power ferromagnetic resonance without a degenerate spin-wave manifold. *Physical Review Letters*, **1990**, 64, 64-67	7.4	45

8	Field and power dependence of auto-oscillations in yttrium-iron-garnet films. *Journal of Applied Physics*, **1988**, 64, 5474-5476	2.5	4
7	X-ray and neutron diffracton study of La1Ba2Cu3O9- delta : Influence of the Cu-O structure on Tc. *Physical Review B*, **1988**, 37, 607-610	3.3	13
6	Effect of structural changes on the zero-resistance transition temperature of La1Ba2Cu3O9- delta. *Physical Review B*, **1987**, 36, 2417-2420	3.3	19
5	Noise Power Spectrum of Copper Oxide Superconductors in the Normal State. *Materials Research Society Symposia Proceedings*, **1987**, 99, 357		3
4	LA1BA2CU3O9-□Structural Analysis as Determined by Neutron Diffraction. *Materials Research Society Symposia Proceedings*, **1987**, 99, 895		
3	Comparison of the 1-2-3 Phase and the 3-3-6 Phase in the La-Ba-Cu-O Superconductor Series. *ACS Symposium Series*, **1987**, 192-197	0.4	1
2	Correlation of Resistance and Thermogravimetric Measurements of the Er1Ba2Cu3O9-□ Superconductor to Sample Preparation Techniques. *ACS Symposium Series*, **1987**, 272-278	0.4	1
1	Practical preparation of copper oxide superconductors. *Review of Scientific Instruments*, **1987**, 58, 1565-1571	1.7	43