

Robert D Mcmichael

List of Publications by Year in descending order

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120
papers

4,900
citations

101496

36
h-index

98753

67
g-index

120
all docs

120
docs citations

120
times ranked

3981
citing authors

#	ARTICLE	IF	CITATIONS
1	Enhanced magnetocaloric effect in $Gd_3Ga_5\tilde{x}Fe_xO_{12}$. Journal of Applied Physics, 1993, 73, 6946-6948.	1.1	287
2	Spin-wave propagation in the presence of interfacial Dzyaloshinskii-Moriya interaction. Physical Review B, 2013, 88, .	1.1	267
3	Magnetic normal modes of nanoelements. Journal of Applied Physics, 2005, 97, 10J901.	1.1	218
4	Ferromagnetic resonance studies of NiO-coupled thin films of $Ni_{80}Fe_{20}$. Physical Review B, 1998, 58, 8605-8612.	1.1	214
5	Localized Ferromagnetic Resonance in Inhomogeneous Thin Films. Physical Review Letters, 2003, 90, 227601.	2.9	209
6	Coercivity in exchange-bias bilayers. Physical Review B, 2001, 63, .	1.1	206
7	Oxygen as a surfactant in the growth of giant magnetoresistance spin valves. Journal of Applied Physics, 1997, 82, 6142-6151.	1.1	193
8	Magnetic and optical properties of $\tilde{r}\tilde{a}\tilde{e}Fe_2O_3$ nanocrystals. Journal of Applied Physics, 1993, 73, 5109-5116.	1.1	192
9	Control of Magnetic Fluctuations by Spin Current. Physical Review Letters, 2011, 107, 107204.	2.9	145
10	Spin-Torque Excitation of Perpendicular Standing Spin Waves in Coupled $\langle mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"> \langle mml:mrow> \langle mml:mi>YIG</mml:mi> \langle mml:mo>/\langle mml:mo> \langle mml:mi>Co</mml:mi> \langle mml:mrow> \langle mml:math>$ Heterostructures. Physical Review Letters, 2018, 120, 127201.	2.9	180
11	Magnetoresistance values exceeding 21% in symmetric spin valves. Journal of Applied Physics, 1995, 78, 273-277.	1.1	127
12	Ferromagnetic resonance linewidth in thin films coupled to NiO. Journal of Applied Physics, 1998, 83, 7037-7039.	1.1	122
13	Effect of 3d, 4d, and 5d transition metal doping on damping in permalloy thin films. Journal of Applied Physics, 2007, 101, 033911.	1.1	107
14	Spin dynamics and mode structure in nanomagnet arrays: Effects of size and thickness on linewidth and damping. Physical Review B, 2009, 79, .	1.1	96
15	Demagnetized state dependence of Henkel plots. I. The Preisach model. Journal of Applied Physics, 1994, 75, 5689-5691.	1.1	88
16	Edge saturation fields and dynamic edge modes in ideal and nonideal magnetic film edges. Physical Review B, 2006, 74, .	1.1	87
17	Optimizing the giant magnetoresistance of symmetric and bottom spin valves (invited). Journal of Applied Physics, 1996, 79, 5277.	1.1	75
18	Microstructural origin of switching field distribution in patterned $Co\tilde{\cdot}Pd$ multilayer nanodots. Applied Physics Letters, 2008, 92, .	1.5	71

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19	Artifacts in ballistic magnetoresistance measurements (invited). Journal of Applied Physics, 2004, 95, 7554-7559.	1.1	69
20	Intrinsic damping and intentional ferromagnetic resonance broadening in thin Permalloy films. Journal of Applied Physics, 2003, 93, 6903-6905.	1.1	66
21	Growth of giant magnetoresistance spin valves using Pb and Au as surfactants. Journal of Applied Physics, 1996, 80, 5183-5191.	1.1	61
22	Spectroscopy and Imaging of Edge Modes in Permalloy Nanodisks. Physical Review Letters, 2013, 110, 017601.	2.9	60
23	Effects of Disorder and Internal Dynamics on Vortex Wall Propagation. Physical Review Letters, 2010, 104, 217201.	2.9	59
24	Phase diagram of magnetic nanodisks measured by scanning electron microscopy with polarization analysis. Physical Review B, 2010, 81, .	1.1	57
25	Giant magnetoresistance peaks in CoNiCu/Cu multilayers grown by electrodeposition. Journal of Applied Physics, 1994, 76, 6519-6521.	1.1	56
26	Strong anisotropy in thin magnetic films deposited on obliquely sputtered Ta underlayers. Journal of Applied Physics, 2000, 88, 5296-5299.	1.1	56
27	Quasi-two-dimensional magnon identification in antiferromagnetic FeP_3 via magneto-Raman spectroscopy. Physical Review B, 2020, 101, .	1.1	53
28	Effects of shape distortions and imperfections on mode frequencies and collective linewidths in nanomagnets. Physical Review B, 2011, 83, .	1.1	52
29	Characterization of magnetic properties at edges by edge-mode dynamics. Journal of Applied Physics, 2006, 99, 08C703.	1.1	51
30	Magneto-optical indicator film observation of domain structure in magnetic multilayers. Applied Physics Letters, 1995, 66, 888-890.	1.5	50
31	Magnetostriction and angular dependence of ferromagnetic resonance linewidth in Tb-doped $\text{Ni}_{0.8}\text{Fe}_{0.2}$ thin films. Journal of Applied Physics, 2002, 91, 8659.	1.1	50
32	High-power ferromagnetic resonance without a degenerate spin-wave manifold. Physical Review Letters, 1990, 64, 64-67.	2.9	49
33	Temperature dependence of magnetization drift velocity and current polarization in $\text{Ni}_{80}\text{Fe}_{20}$ spin-wave Doppler measurements. Physical Review B, 2010, 81, .	1.1	46
34	Correlation Between Structural Imperfection and Giant Magnetoresistance in Electrodeposited Co/Cu Multilayers. Journal of the Electrochemical Society, 2001, 148, C518.	1.3	45
35	Practical preparation of copper oxide superconductors. Review of Scientific Instruments, 1987, 58, 1565-1571.	0.6	44
36	Nanoscale Spin Wave Localization Using Ferromagnetic Resonance Force Microscopy. Physical Review Letters, 2012, 108, 087206.	2.9	39

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55	Switching dynamics and critical behavior of standard problem No. 4. Journal of Applied Physics, 2001, 89, 7603-7605.	1.1	20
56	Two-dimensional spectroscopic imaging of individual ferromagnetic nanostripes. Physical Review B, 2012, 86, .	1.1	20
57	Sequential Bayesian Experiment Design for Optically Detected Magnetic Resonance of Nitrogen-Vacancy Centers. Physical Review Applied, 2020, 14, .	1.5	20
58	The magnetocaloric effect: The role of magnetic anisotropy. Journal of Applied Physics, 1993, 73, 6507-6509.	1.1	19
59	Suppression of orange-peel coupling in magnetic tunnel junctions by preoxidation. Applied Physics Letters, 2006, 88, 162508.	1.5	19
60	Langevin approach to hysteresis and Barkhausen jump modeling in steel. Journal of Applied Physics, 1993, 73, 5848-5850.	1.1	18
61	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.	1.1	18
62	Modification of edge mode dynamics by oxidation in Ni80Fe20 thin film edges. Journal of Applied Physics, 2010, 107, 103908.	1.1	18
63	Nonlinear ferromagnetic resonance shift in submicron Permalloy ellipses. Physical Review B, 2015, 91, .	1.1	18
64	Parametric excitation of magnetostatic modes in circular ferromagnetic films. Physical Review B, 1990, 42, 6723-6726.	1.1	17
65	A mean-field model of extrinsic line broadening in ferromagnetic resonance. Journal of Applied Physics, 2008, 103, 07B114.	1.1	17
66	Scalable microresonators for room-temperature detection of electron spin resonance from dilute, sub-nanoliter volume solids. Science Advances, 2020, 6, .	4.7	17
67	Advances in magnetometry through miniaturization. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2008, 26, 757-762.	0.9	16
68	Demagnetized state dependence of Henkel plots. II. Domain wall motion. Journal of Applied Physics, 1994, 75, 5692-5694.	1.1	15
69	The tradeoff between large magnetoresistance and small coercivity in symmetric spin valves. Journal of Applied Physics, 1996, 79, 8603-8606.	1.1	15
70	Thickness dependence of magnetic film edge properties in Ni80Fe20 stripes. Journal of Applied Physics, 2008, 103, 07C505.	1.1	15
71	Calculation of damping rates in thin inhomogeneous ferromagnetic films due to coupling to lattice vibrations. Journal of Applied Physics, 2002, 91, 8650.	1.1	14
72	High Speed Switching and Rotational Dynamics in Small Magnetic Thin Film Devices. , 2003, , 93-156.		14

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73	Hysteresis loop collapse for linear response in magnetic-tunnel-junction sensors. Journal of Applied Physics, 2009, 105, .	1.1	14
74	Effects of disorder on magnetic vortex gyration. Physical Review B, 2011, 83, .	1.1	14
75	X-ray and neutron-diffraction study of $\text{La}_{1-x}\text{Ba}_x\text{Cu}_3\text{O}_{9-\delta}$: Influence of the Cu-O structure on T_c . Physical Review B, 1988, 37, 607-610.	1.1	13
76	Correlation of edge roughness to nucleation field and nucleation field distribution in patterned Permalloy elements. Journal of Applied Physics, 2007, 102, 023916.	1.1	13
77	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.	0.6	13
78	Spectroscopic defect imaging in magnetic nanostructure arrays. Applied Physics Letters, 2012, 101, 042408.	1.5	12
79	Nanocomposites For magnetic Refrigeration. Materials Research Society Symposia Proceedings, 1992, 286, 449.	0.1	11
80	400-fold reduction in saturation field by interlayering. Journal of Applied Physics, 2009, 105, .	1.1	11
81	Enhanced magnetization drift velocity and current polarization in $(\text{CoFe})_{1-x}\text{Gex}$ alloys. Applied Physics Letters, 2011, 98, 072510.	1.5	11
82	Complementary imaging of granular Co-Ag films with magneto-optical indicator film technique and magnetic force microscopy. Journal of Applied Physics, 1996, 79, 5315.	1.1	10
83	Ferromagnetic resonance linewidth models for perpendicular media. Journal of Applied Physics, 2004, 95, 7001-7003.	1.1	10
84	A New Spin on the Doppler Effect. Science, 2008, 322, 386-387.	6.0	10
85	Effect of interactions on edge property measurements in magnetic multilayers. Journal of Applied Physics, 2011, 109, 043904-043904-8.	1.1	10
86	Phase-resolved ferromagnetic resonance using a heterodyne detection method. Physical Review B, 2016, 93, .	1.1	10
87	Spin-wave localization in tangentially magnetized films. Physical Review B, 2016, 93, .	1.1	10
88	Sequential Bayesian experiment design for adaptive Ramsey sequence measurements. Journal of Applied Physics, 2021, 130, .	1.1	10
89	Magnetic and magnetocaloric properties of melt-spun $\text{Gd}_x\text{Ag}_{100-x}$ alloys. Journal of Applied Physics, 1994, 76, 6301-6303.	1.1	9
90	Anomalous switching behavior of antiparallel-coupled Co layers separated by a super thin Ru spacer. Journal of Applied Physics, 2002, 91, 8272.	1.1	9

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91	Quantitative magnetometry of ferromagnetic nanorods by microfluidic analytical magnetophoresis. Journal of Applied Physics, 2015, 118, 093904.	1.1	9
92	Robust Spin Relaxometry with Fast Adaptive Bayesian Estimation. Physical Review Applied, 2022, 17, .	1.5	9
93	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.	1.1	8
94	Structural, magnetic, and thermal stability of IrMn exchange biased layers. Journal of Applied Physics, 2002, 91, 8566.	1.1	7
95	Effect of conformal roughness on ferromagnetic resonance linewidth in thin Permalloy films. Journal of Applied Physics, 2005, 97, 10A721.	1.1	6
96	Ferromagnetic resonance measurement using stroboscopic magneto-optical Kerr effect. Journal of Applied Physics, 2015, 117, 213908.	1.1	6
97	Comparison of measured and simulated spin-wave mode spectra of magnetic nanostructures. Applied Physics Letters, 2021, 118, .	1.5	6
98	<title>Micromechanical detectors for ferromagnetic resonance spectroscopy</title>. , 2000, 4176, 84.		5
99	Structure and Magnetic Anisotropy of Electrodeposited Co on n-GaAs(001). Journal of the Electrochemical Society, 2003, 150, C753.	1.3	5
100	Enhanced ferromagnetic resonance linewidth of the free layer in perpendicular magnetic tunnel junctions. AIP Advances, 2017, 7, .	0.6	5
101	Field and power dependence of auto-oscillations in yttrium-iron-garnet films. Journal of Applied Physics, 1988, 64, 5474-5476.	1.1	4
102	Method for determining both magnetostriction and elastic modulus by ferromagnetic resonance. Journal of Applied Physics, 1994, 75, 5650-5652.	1.1	4
103	Optbayesexpt: Sequential Bayesian Experiment Design for Adaptive Measurements. Journal of Research of the National Institute of Standards and Technology, 2021, 126, .	0.4	4
104	Noise Power Spectrum of Copper Oxide Superconductors in the Normal State. Materials Research Society Symposia Proceedings, 1987, 99, 357.	0.1	3
105	Detection of Pinholes in Ultrathin Films by Magnetic Coupling. Materials Research Society Symposia Proceedings, 2001, 674, 1.	0.1	3
106	Preliminary design and noise considerations for an ultrasensitive magnetic field sensor. Proceedings of SPIE, 2007, , .	0.8	3
107	Thermal stability of Ta-pinned spin valves. Journal of Applied Physics, 2001, 89, 6825-6827.	1.1	2
108	Measurement and simulation of millimeter wave scattering cross-sections from steel-reinforced concrete. , 2014, , .		2

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109	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.	0.5	1
110	Correlation of Resistance and Thermogravimetric Measurements of the Er ₁ Ba ₂ Cu ₃ O _{9-δ} Superconductor to Sample Preparation Techniques. ACS Symposium Series, 1987, , 272-278.	0.5	1
111	Parametric excitation of magnetostatic modes in thin yttrium iron garnet films (invited). Journal of Applied Physics, 1991, 69, 5425-5429.	1.1	1
112	Origin of exchange decoupling effects in high-coercivity air-annealed CoPd multilayers. Journal of Applied Physics, 2005, 97, 10J104.	1.1	1
113	Edge saturation fields and dynamic edge modes in ideal and non-ideal magnetic film edges. , 2006, , .		1
114	Periodic Table of Impurity Damping in Doped Permalloy Thin Films. , 2006, , .		1
115	Corrosion detection in steel-reinforced concrete using a spectroscopic technique. , 2014, , .		1
116	LA ₁ BA ₂ CU ₃ O _{9-δ} : Structural Analysis as Determined by Neutron Diffraction. Materials Research Society Symposia Proceedings, 1987, 99, 895.	0.1	0
117	Nonlinear dynamics of magnetoexchange modes in YIG films (abstract). Journal of Applied Physics, 1990, 67, 5642-5642.	1.1	0
118	Pre-oxidation Suppresses Orange-peel Coupling in Magnetic Tunnel Junctions. , 2006, , .		0
119	Magnetometry methods for thin film edge property measurements. , 2006, , .		0
120	Forty-fold Speedup of NV ⁻ Center Magnetometry with Sequential Bayesian Experiment Design. , 2021, , .		0