

# Isaak D Mayergoyz

## List of Publications by Year in descending order

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87  
papers

993  
citations

567281

15  
h-index

477307

29  
g-index

87  
all docs

87  
docs citations

87  
times ranked

637  
citing authors

#	ARTICLE	IF	CITATIONS
1	Nonlinear Magnetization Dynamics under Circularly Polarized Field. <i>Physical Review Letters</i> , 2001, 86, 724-727.	7.8	159
2	Analysis of Dynamics of Excitation and Dephasing of Plasmon Resonance Modes in Nanoparticles. <i>Physical Review Letters</i> , 2007, 98, 147401.	7.8	70
3	Statistical analysis of semiconductor devices. <i>Journal of Applied Physics</i> , 2001, 90, 3019-3029.	2.5	56
4	Nonlinear-dynamical-system approach to microwave-assisted magnetization dynamics (invited). <i>Journal of Applied Physics</i> , 2009, 105, .	2.5	53
5	Magnetic imaging on a spin-stand. <i>Journal of Applied Physics</i> , 2000, 87, 6824-6826.	2.5	41
6	Quantum mechanical effects on random oxide thickness and random doping induced fluctuations in ultrasmall semiconductor devices. <i>Journal of Applied Physics</i> , 2003, 94, 7163-7172.	2.5	38
7	Comparison of analytical solutions of Landau-Lifshitz equation for "damping" and "precessional" switchings. <i>Journal of Applied Physics</i> , 2003, 93, 6811-6813.	2.5	35
8	Analytical treatment of synchronization of spin-torque oscillators by microwave magnetic fields. <i>European Physical Journal B</i> , 2009, 68, 221-231.	1.5	32
9	Spin-Wave Instabilities in Large-Scale Nonlinear Magnetization Dynamics. <i>Physical Review Letters</i> , 2001, 87, 217203.	7.8	30
10	Plasmon resonance enhancement of Faraday rotation in thin garnet films. <i>Journal of Applied Physics</i> , 2011, 109, 07B717.	2.5	25
11	Quasiperiodic magnetization dynamics in uniformly magnetized particles and films. <i>Journal of Applied Physics</i> , 2004, 95, 7052-7054.	2.5	24
12	Numerical integration of Landau-Lifshitz-Gilbert equation based on the midpoint rule. <i>Journal of Applied Physics</i> , 2005, 97, 10E319.	2.5	24
13	Analytical study of magnetization dynamics driven by spin-polarized currents. <i>European Physical Journal B</i> , 2007, 59, 435-445.	1.5	21
14	Analysis of random-dopant induced fluctuations of frequency characteristics of semiconductor devices. <i>Journal of Applied Physics</i> , 2003, 93, 4646-4652.	2.5	18
15	Probabilistic Aspects of Magnetization Relaxation in Single-Domain Nanomagnets. <i>Physical Review Letters</i> , 2013, 110, 147205.	7.8	16
16	Noise in hysteretic systems and stochastic processes on graphs. <i>Physical Review E</i> , 2000, 62, 1850-1855.	2.1	15
17	Landau-Lifshitz magnetization dynamics driven by a random jump-noise process (invited). <i>Journal of Applied Physics</i> , 2011, 109, .	2.5	15
18	Spin-stand imaging of overwritten data and its comparison with magnetic force microscopy. <i>Journal of Applied Physics</i> , 2001, 89, 6772-6774.	2.5	14

#	ARTICLE	IF	CITATIONS
19	Modeling of the Electrostatic (Plasmon) Resonances in Metallic and Semiconductor Nanoparticles. Journal of Computational Electronics, 2005, 4, 139-143.	2.5	14
20	Analysis of spectral noise density of hysteretic systems driven by stochastic processes. Journal of Applied Physics, 2003, 93, 6826-6828.	2.5	13
21	Coupling between eddy currents and Landau-Lifshitz dynamics. Journal of Applied Physics, 2000, 87, 5529-5531.	2.5	12
22	Dynamic generalization of Stoner-Wohlfarth model. Journal of Applied Physics, 2001, 89, 7451-7453.	2.5	12
23	Plasmon resonance enhancement of magneto-optic effects in garnets. Journal of Applied Physics, 2010, 107, 09A925.	2.5	12
24	Effect of Sn Doping on Surface States of Bi <sub>2</sub> Se <sub>3</sub> Thin Films. Journal of Physical Chemistry C, 2020, 124, 27082-27088.	3.1	12
25	Rotationally symmetric solutions of the Landau-Lifshitz and diffusion equations. Journal of Applied Physics, 2000, 87, 5511-5513.	2.5	11
26	Power spectrum of current-induced magnetization dynamics in uniaxial nanomagnets. Journal of Applied Physics, 2007, 101, 09A507.	2.5	11
27	The Computation of Extinction Cross Sections of Resonant Metallic Nanoparticles Subject to Optical Radiation. IEEE Transactions on Magnetics, 2007, 43, 1681-1684.	2.1	10
28	Excitation and dephasing of circularly polarized plasmon modes in spherical nanoshells for application in all-optical magnetic recording. Journal of Applied Physics, 2009, 105, .	2.5	9
29	Numerical Analysis of Plasmon Resonances in Metallic Nanoshells. IEEE Transactions on Magnetics, 2007, 43, 1689-1692.	2.1	8
30	Growth effects (rotation rate) on the characteristics of bismuth substituted lutetium iron garnets. Journal of Applied Physics, 2004, 95, 6885-6887.	2.5	7
31	Spin-wave analysis of uniaxial nanopillar devices. Journal of Applied Physics, 2009, 105, 07D104.	2.5	7
32	Nonlinear Resonant and Chaotic Dynamics in Microwave Assisted Magnetization Switching. IEEE Transactions on Magnetics, 2009, 45, 3950-3953.	2.1	7
33	Zero-footprint Ethernet transformers using circuit-board embedded ferrites. Journal of Applied Physics, 2014, 115, .	2.5	7
34	Fabrication and Evaluation of PCB-Embedded Broadband Signal Transformers With Custom Machined Racetrack-Shaped Ferrite Cores for Ethernet Applications. IEEE Transactions on Magnetics, 2017, 53, 1-5.	2.1	7
35	NUMERICAL ANALYSIS OF RANDOM DOPANT-INDUCED EFFECTS IN SEMICONDUCTOR DEVICES. International Journal of High Speed Electronics and Systems, 2002, 12, 551-562.	0.7	6
36	Path Integral Approach to Stochastic Magnetization Dynamics in Uniaxial Ferromagnetic Nanoparticles. IEEE Transactions on Magnetics, 2008, 44, 3157-3160.	2.1	6

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37	On design of air-core Ethernet transformers. Journal of Applied Physics, 2009, 105, 07A307.	2.5	6
38	Spin-Wave Instabilities in Spin-Transfer-Driven Magnetization Dynamics. IEEE Magnetics Letters, 2010, 1, 3000104-3000104.	1.1	6
39	Current-driven chaotic magnetization dynamics in microwave assisted switching of spin-valve elements. Journal of Applied Physics, 2011, 109, 07D349.	2.5	6
40	Random magnetization dynamics at elevated temperatures. Journal of Applied Physics, 2012, 111, 07D501.	2.5	6
41	Heteroclinic tangle phenomena in nanomagnets subject to time-harmonic excitations. Journal of Applied Physics, 2015, 117, .	2.5	6
42	Analytical Treatment of Nonlinear Ferromagnetic Resonance in Nanomagnets. IEEE Transactions on Magnetics, 2017, 53, 1-5.	2.1	6
43	Study of etched (210)-oriented thin garnet films. Journal of Applied Physics, 2008, 103, .	2.5	5
44	The use of plasmon resonances in thermally assisted magnetic recording. Journal of Applied Physics, 2008, 103, .	2.5	5
45	Common Mode Analysis of Ethernet Transformers. IEEE Magnetics Letters, 2010, 1, 0500204-0500204.	1.1	5
46	Analysis of eddy currents in magnetically nonlinear conductors. Journal of Applied Physics, 2011, 109, 07E703.	2.5	5
47	Analysis of Nested Winding Dielectric-Core Transformers for Ethernet Applications. IEEE Transactions on Magnetics, 2012, 48, 4127-4130.	2.1	5
48	Phase-Flow Interpretation of Magnetization Relaxation in Nanomagnets. IEEE Transactions on Magnetics, 2014, 50, 1-4.	2.1	5
49	Inductance Maximization by Mitigation of Encapsulation Stresses of PCB Embedded Ferrite Broadband Transformers. IEEE Transactions on Magnetics, 2016, 52, 1-4.	2.1	5
50	A scanning tunneling microscopy based potentiometry technique and its application to the local sensing of the spin Hall effect. AIP Advances, 2017, 7, 125205.	1.3	5
51	On Local Sensing of Spin Hall Effect in Tungsten Films by Using STM-Based Measurements. IEEE Nanotechnology Magazine, 2018, 17, 914-919.	2.0	5
52	Modeling and Testing of Ethernet Transformers. IEEE Transactions on Magnetics, 2009, 45, 4793-4796.	2.1	4
53	Generalized H-theorems for magnetization dynamics driven by a jump-noise process. Journal of Applied Physics, 2011, 109, 07D327.	2.5	4
54	Monte Carlo simulations of Landau-Lifshitz dynamics driven by a jump-noise process. Journal of Applied Physics, 2012, 111, .	2.5	4

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55	Monte Carlo Simulations of Random Magnetization Dynamics Driven by a Jump-Noise Process on General Purpose Graphics Processing Units (GPUs). IEEE Transactions on Magnetics, 2013, 49, 3133-3136.	2.1	4
56	Anisotropy characterization of garnet films by using vibrating sample magnetometer measurements. Journal of Applied Physics, 2003, 93, 7065-7067.	2.5	3
57	Jump-noise process-driven magnetization dynamics and random switching of magnetization. Journal of Applied Physics, 2012, 111, .	2.5	3
58	Plasmon resonance enhancement of Faraday rotation of liquid phase epitaxy grown garnet films populated with gold nanoparticles on the film surfaces. Journal of Applied Physics, 2014, 115, 17A932.	2.5	3
59	Scanning tunneling microscopy measurements of the spin Hall effect in tungsten films by using iron-coated tungsten tips. AIP Advances, 2018, 8, 055914.	1.3	3
60	Nonlinear Landau-Lifshitz dynamics for circularly and elliptically polarized applied magnetic fields. IEEE Transactions on Magnetics, 2001, 37, 3065-3068.	2.1	2
61	Random Doping Fluctuations of Small-Signal Parameters in Nanoscale Semiconductor Devices. Journal of Computational Electronics, 2004, 3, 211-214.	2.5	2
62	Influence of surface anisotropy on the magnetization precessional switching in nanoparticles. Journal of Applied Physics, 2005, 97, 10J302.	2.5	2
63	Numerical Analysis of Nanoparticle-Structured Plasmon Waveguides of Light. IEEE Transactions on Magnetics, 2007, 43, 1685-1688.	2.1	2
64	Magnetic-Field-Driven Ferromagnetic Resonance in Spin-Transfer Devices. IEEE Transactions on Magnetics, 2009, 45, 3445-3448.	2.1	2
65	Anisotropy study of garnet films grown over substrates populated with gold nanoparticles. Journal of Applied Physics, 2012, 111, 07A505.	2.5	2
66	Deposition of gold nanoparticles on liquid phase epitaxy grown garnet films and Faraday rotation enhancement. Journal of Applied Physics, 2013, 113, .	2.5	2
67	Scanning Tunneling Microscopy Study of the Spin Hall Effect in Platinum and Highly Resistive Tungsten Films. IEEE Magnetics Letters, 2018, 9, 1-5.	1.1	2
68	Transient Chaos in Nanomagnets Subject to Elliptically Polarized AC Applied Fields. IEEE Transactions on Magnetics, 2019, 55, 1-5.	2.1	2
69	Origin of the universality of long-time thermal relaxations in hysteretic systems. Journal of Applied Physics, 2000, 87, 4789-4791.	2.5	1
70	Nonlinear Landau-Lifshitz dynamics for circularly and elliptically polarized applied magnetic fields. IEEE Transactions on Magnetics, 2000, 36, 3081-3083.	2.1	1
71	Circularly polarized plasmon modes in spheroidal nanoshells for applications to all-optical magnetic recording. Journal of Applied Physics, 2012, 111, 07A915.	2.5	1
72	Conservative effects in spin-transfer-driven magnetization dynamics. Physical Review B, 2014, 90, .	3.2	1

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73	Performance effects of device scale and core aspect-ratio on dielectric-core circuit board transformers. Journal of Applied Physics, 2014, 115, 17E717.	2.5	1
74	Numerical Modeling of Random Magnetization Dynamics. IEEE Transactions on Magnetics, 2015, 51, 1-4.	2.1	1
75	Power Spectral Density of Magnetization Dynamics Driven by a Jump-Noise Process. IEEE Transactions on Magnetics, 2017, 53, 1-5.	2.1	1
76	Study of Surface Spin-Polarized Electron Accumulation in Topological Insulators Using Scanning Tunneling Microscopy. IEEE Magnetics Letters, 2020, 11, 1-4.	1.1	1
77	Scanning Tunneling Microscopy Detection of Surface Spin-Polarized Electron Accumulations in Topological Insulators. IEEE Magnetics Letters, 2021, 12, 1-4.	1.1	1
78	NUMERICAL ANALYSIS OF RANDOM DOPANT-INDUCED EFFECTS IN SEMICONDUCTOR DEVICES. , 2003, , .		0
79	Micromagnetic analysis of foldover, quasiperiodicity, and parametric instabilities in ultra-thin films. , 2006, , .		0
80	Thermally induced switching in uniaxial nanomagnets subject to spin-polarized currents. , 2006, , .		0
81	Spin-Stand Imaging of Perpendicularly Recorded Data. IEEE Transactions on Magnetics, 2008, 44, 3237-3240.	2.1	0
82	Magneto-Optic Indicator Films for Forensics. Materials Research Society Symposia Proceedings, 2011, 1291, 1.	0.1	0
83	Calculation of eddy currents in magnetically nonlinear anisotropic conductors. Journal of Applied Physics, 2012, 111, 07E719.	2.5	0
84	Analysis of Reliable Ultrafast Precessional Switching in the Presence of Transverse Applied Magnetic Fields. IEEE Transactions on Magnetics, 2014, 50, 1-4.	2.1	0
85	Analysis of plasmon resonances in metallic nanostructures in proximity to dielectric objects with application to heat-assisted magnetic recording. Journal of Applied Physics, 2014, 115, 17B705.	2.5	0
86	Quantum Dynamics as Landau-Lifshitz-Type Dynamics and Random Wave Function Collapse. IEEE Magnetics Letters, 2017, 8, 1-4.	1.1	0
87	A simple implementation of scanning tunneling potentiometry with a standard scanning tunneling microscope. , 2017, , .		0