Randall Victora

List of Publications by Year
in descending order

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100 papers	1,601 citations	471509 17 h-index	345221 36 g-index
100 all docs	100 docs citations	100 times ranked	1318 citing authors

#	Article	IF	Citations
1	Predicted time dependence of the switching field for magnetic materials. Physical Review Letters, 1989, 63, 457-460.	7.8	299
2	Electronic structure of Ni2MnIn for use in spin injection. Journal of Applied Physics, 2000, 87, 7064-7066.	2.5	119
3	Composite media (dynamic tilted media) for magnetic recording. Applied Physics Letters, 2005, 86, 142504.	3.3	104
4	Intrinsic Nonlinear Ferromagnetic Relaxation in Thin Metallic Films. Physical Review Letters, 2003, 90, 167203.	7.8	81
5	Simulation of Heat-Assisted Magnetic Recording Using Renormalized Media Cells. IEEE Transactions on Magnetics, 2013, 49, 751-757.	2.1	73
6	Spontaneous exchange bias: Unidirectional anisotropy in an otherwise isotropic system. Physical Review B, 2007, 76, .	3.2	54
7	Micromagnetic predictions for thermally assisted reversal over long time scales. Applied Physics Letters, 2000, 77, 3432-3434.	3.3	45
8	Composite media for high density heat assisted magnetic recording. Applied Physics Letters, 2016, 108, .	3.3	43
9	Surface Roughness Induced Extrinsic Damping in Thin Magnetic Films. Physical Review Letters, 2004, 92, 257204.	7.8	31
10	Two-Dimensional Magnetic Recording at 10 $hbox{Tbits/in}^{2}$. IEEE Transactions on Magnetics, 2012, 48, 1697-1703.	2.1	28
11	Large scale micromagnetic simulation for the exchange interaction between a polycrystalline antiferromagnet and a ferromagnet. Physical Review B, 2006, 73, .	3.2	25
12	Thermal switching probability distribution of L10 FePt for heat assisted magnetic recording. Applied Physics Letters, 2017, 110, .	3.3	25
13	Renormalized anisotropic exchange for representing heat assisted magnetic recording media. Journal of Applied Physics, 2015, 117, .	2.5	23
14	A Study of SNR and BER in Heat-Assisted Magnetic Recording. IEEE Transactions on Magnetics, 2015, 51, 1-4.	2.1	20
15	Effect of substitutional defects on Kambersky damping in L1 magnetic materials. Applied Physics Letters, 2015, 106, .	3.3	20
16	Composite Structure With Superparamagnetic Writing Layer for Heat-Assisted Magnetic Recording. IEEE Transactions on Magnetics, 2016, 52, 1-4.	2.1	19
17	Micromagnetic calculation for superlattice magnetic recording media. Journal of Applied Physics, 2000, 87, 6361-6363.	2.5	17
18	Use of square waves incident on magnetic nanoparticles to induce magnetic hyperthermia for therapeutic cancer treatment. Applied Physics Letters, 2010, 97, 093705.	3.3	17

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19	Approaching the Grain-Size Limit for Jitter Using FeRh/FePt in Heat-Assisted Magnetic Recording. IEEE Transactions on Magnetics, 2014, 50, 1-4.	2.1	17
20	Calculated dependence of FePt damping on external field magnitude and direction. AIP Advances, 2017, 7, .	1.3	17
21	High-frequency magnetoacoustic resonance through strain-spin coupling in perpendicular magnetic multilayers. Science Advances, 2020, 6, .	10.3	16
22	Feasibility of Recording 1 ${hbox{Tb/in}}^{2}$ Areal Density. IEEE Transactions on Magnetics, 2008, 44, 163-168.	2.1	15
23	Micromagnetic Study of Medium Noise Plateau. IEEE Transactions on Magnetics, 2009, 45, 3714-3717.	2.1	15
24	Calculation of spin transfer torque in partially polarized spin valves including multiple reflections. Applied Physics Letters, 2010, 97, 062506.	3.3	15
25	Novel system design for readback at 10 terabits per square inch user areal density. IEEE Magnetics Letters, 2012, 3, .	1.1	15
26	Nonlinear Parallel-Pumped FMR: Three and Four Magnon Processes. IEEE Transactions on Microwave Theory and Techniques, 2020, 68, 602-610.	4.6	15
27	Effect of pole tip anisotropy on the recording performance of a high density perpendicular head. Journal of Applied Physics, 2003, 93, 6543-6545.	2.5	14
28	Reader Design for Bit Patterned Media Recording at 10 Tb/in^{2} Density. IEEE Transactions on Magnetics, 2013, 49, 5208-5214.	2.1	14
29	Dependence of Kambersky damping on Fermi level and spin orientation. Journal of Applied Physics, 2014, 115, .	2.5	14
30	Effect of medium permeability on the perpendicular recording process. Applied Physics Letters, 2002, 81, 3822-3824.	3.3	12
31	Intrinsic nonlinear ferromagnetic relaxation (invited). Journal of Applied Physics, 2004, 95, 7139-7144.	2.5	12
32	Effect of pinholes in magnetic tunnel junctions. Applied Physics Letters, 2007, 91, .	3.3	12
33	Ultra-Low Write Energy Composite Free Layer Spinâ€“Orbit Torque MRAM. IEEE Transactions on Magnetics, 2018, 54, 1-5.	2.1	12
34	CPP GMR Through Nanowires. IEEE Transactions on Magnetics, 2012, 48, 1744-1750.	2.1	11
35	Noise Mitigation in Granular and Bit-Patterned Media for HAMR. IEEE Transactions on Magnetics, 2015, 51, 1-7.	2.1	11
36	Use of trapezoidal waves and complementary static fields incident on magnetic nanoparticles to induce magnetic hyperthermia for therapeutic cancer treatment. Journal of Applied Physics, 2011, 109, 07B305.	2.5	10

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37	Time Dependence of Magnetic Anisotropy at Finite Temperature for Homogeneous and Composite Media. IEEE Transactions on Magnetics, 2012, 48, 3188-3191.	2.1	10
38	Dependence of Predicted Areal Density on Common Optimization Strategies for Heat-Assisted Magnetic Recording. IEEE Magnetics Letters, 2017, 8, 1-4.	1.1	10
39	SNR improvement by variation of recording and media parameters for a HAMR exchange coupled composite media. AIP Advances, 2018, 8, .	1.3	10
40	Composite perpendicular magnetic recording media using [Coâˆ•PdSi]n as a hard layer and FeSiO as a soft layer. Journal of Applied Physics, 2005, 97, 10N513.	2.5	9
41	Thermal Switching Distribution of FePt Grains Through Atomistic Simulation. IEEE Transactions on Magnetics, 2014, 50, 1-4.	2.1	9
42	Phase-Lock Requirements in a Serial Array of Spin Transfer Nano-Oscillators. Scientific Reports, 2015, 5, 11462.	3.3	9
43	Dual Referenced Composite Free Layer Design for Improved Switching Efficiency of Spin-Transfer Torque Random Access Memory. IEEE Electron Device Letters, 2016, 37, 1108-1111.	3.9	9
44	High-Density Shingled Heat-Assisted Recording Using Bit-Patterned Media Subject to Track Misregistration. IEEE Transactions on Magnetics, 2017, 53, 1-4.	2.1	9
45	A fully electric field driven scalable magnetoelectric switching element. Applied Physics Letters, 2018, 112, .	3.3	9
46	Manipulation of nonlinear magnon effects using a secondary microwave frequency. Applied Physics Letters, 2020, 117, .	3.3	9
47	Micromagnetic predictions of bit decay caused by thermal fluctuations over long time scales. Journal of Applied Physics, 2001, 89, 6985-6987.	2.5	8
48	Comparison between micromagnetic simulation and experiment for the Coâˆ•Î³-Fe50Mn50 exchange-biased system. Journal of Applied Physics, 2007, 102, 073901.	2.5	8
49	Comparison of Recording Head Designs for Perpendicular and Exchange-Coupled Composite Media. IEEE Transactions on Magnetics, 2007, 43, 2289-2291.	2.1	8
50	Recording Comparison of ECC versus Conventional Media at Equal Grain Size. IEEE Transactions on Magnetics, 2011, 47, 4073-4076.	2.1	8
51	Metallic 10 nm Diameter Magnetic Sensors and Large-Scale Ordered Arrays. IEEE Transactions on Magnetics, 2014, 50, 1-5.	2.1	8
52	Feasibility of bit patterned media for HAMR at 5â€‰Tb/in2. Journal of Applied Physics, 2015, 117, 17C115.	2.5	8
53	Nonlinear Magnon Scattering Mechanism for Microwave Pumping in Magnetic Films. IEEE Access, 2020, 8, 216960-216968.	4.2	8
54	Analysis of Adjacent Track Erasure in the HAMR Media. IEEE Transactions on Magnetics, 2021, 57, 1-11.	2.1	8

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55	Ideas for Detection in Two-Dimensional Magnetic Recording Systems. IEEE Transactions on Magnetics, 2012, 48, 4582-4585.	2.1	7
56	Possible Explanation for Observed Effectiveness of Voltage-Controlled Anisotropy in CoFeB/MgO MTJ. IEEE Transactions on Magnetics, 2015, 51, 1-4.	2.1	7
57	Analytical Estimation of Transition Jitter for the Heat-Assisted Magnetic Recording Process. IEEE Magnetics Letters, 2020, 11, 1-4.	1.1	7
58	Effects and microstructures of indium tin oxide seed layers for perpendicular magnetic recording media. Journal of Applied Physics, 2003, 93, 7849-7851.	2.5	6
59	Ferromagnetic relaxation by magnon-induced currents. Physical Review B, 2006, 73, .	3.2	6
60	Surface scattering in metallic nanowires. Applied Physics Letters, 2008, 93, 162105.	3.3	6
61	Predicted Effects of Pinhole and Surface Roughness in Magnetoresistive Read Head. IEEE Transactions on Magnetics, 2010, 46, 702-708.	2.1	6
62	Measurements of configurational anisotropy in isolated sub-micron square permalloy dots. Applied Physics Letters, 2013, 103, 042409.	3.3	6
63	Theoretical study of interfacial damping in perpendicular anisotropy superlattices along multiple crystal orientations. Physical Review B, 2016, 93, .	3.2	6
64	Understanding Transition and Remanence Noise in HAMR. IEEE Transactions on Magnetics, 2018, 54, 1-5.	2.1	6
65	CoCrPt-oxide based perpendicular recording media with hybrid soft magnetic underlayers. Journal of Applied Physics, 2008, 104, 103905.	2.5	5
66	Micromagnetic specifications for recording self-assembled bit-patterned media. Journal of Applied Physics, 2012, 111, 07B904.	2.5	5
67	Simulation of Expected Areal Density Gain for Heat-Assisted Magnetic Recording Relative to Other Advanced Recording Schemes. IEEE Transactions on Magnetics, 2015, 51, 1-7.	2.1	5
68	Optical Analysis of HAMR Media. IEEE Transactions on Magnetics, 2019, 55, 1-8.	2.1	5
69	Micromagnetic Study of Media Noise Plateau in Heat-Assisted Magnetic Recording. IEEE Transactions on Magnetics, 2019, 55, 1-4.	2.1	5
70	Rotated read head design for high-density heat-assisted shingled magnetic recording. Applied Physics Letters, 2021, 118, .	3.3	5
71	Angular dependence of current perpendicular to plane giant magnetoresistance in multilayer nanowire. Journal of Applied Physics, 2012, 111, .	2.5	4
72	Transition Noise Analysis of Recording Media With a Soft Underlayer (SUL) and an Antiferromagnetic Soft Underlayer (AF-SUL). IEEE Transactions on Magnetics, 2013, 49, 824-828.	2.1	4

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73	Temperature distribution of granular media for heat assisted magnetic recording. Journal of Applied Physics, 2015, 117, 17D147.	2.5	4
74	Optical modeling of media for heat assisted magnetic recording. Applied Physics Letters, 2016, 108, .	3.3	4
75	Modeling temperature dependent exchange bias in systems with magnetoelectric chromia. AIP Advances, 2017, 7, .	1.3	4
76	Dual referenced composite free layer design optimization for improving switching efficiency of spin-transfer torque RAM. AIP Advances, 2017, 7, 055929.	1.3	4
77	Impact of radius and skew angle on areal density in heat assisted magnetic recording hard disk drives. AIP Advances, 2018, 8, 056507.	1.3	4
78	Dependence of HAMR Transition Curvature on Bit Length. IEEE Transactions on Magnetics, 2022, 58, 1-5.	2.1	4
79	Dependence of nonlinear response and magnon scattering on material properties. Journal of Applied Physics, 2021, 129, .	2.5	4
80	Localization noise in deep subwavelength plasmonic devices. Physical Review B, 2018, 97, .	3.2	3
81	Reduction of recording noise caused by nano-scale variations in Curie temperature. Applied Physics Letters, 2019, 114, 072402.	3.3	3
82	Spinâ€“Orbit Torque Switching in Low-Damping Magnetic Insulators: A Micromagnetic Study. IEEE Magnetics Letters, 2020, 11, 1-5.	1.1	3
83	Effective phase noise considerations in magnon based parametric excitations. Scientific Reports, 2021, 11, 11322.	3.3	3
84	Enhancement of giant magnetoresistance and oscillation by wave-vector filtering in Fe/Ag/Fe/InAs/Ag. Physical Review B, 2016, 94, .	3.2	2
85	Write position shifts in heat-assisted magnetic recording. AIP Advances, 2017, 7, 056506.	1.3	2
86	Readback model for double layer perpendicular recording media. Journal of Applied Physics, 2002, 91, 8013.	2.5	1
87	Comparing Analytical, Micromagnetic and Statistical Channel Models at 4 Tcbpsi Patterned Media Recording. IEEE Transactions on Magnetics, 2012, 48, 1826-1832.	2.1	1
88	Two-Dimensional Magnetic Recording Using a Rotated Head Array and LDPC Code Decoding. IEEE Transactions on Magnetics, 2014, 50, 1-4.	2.1	1
89	A study of SNR and BER in Heat Assisted Magnetic Recording (HAMR). , 2015, , .		1
90	Dependence of the Threshold Field Intensity of Ferrite Films on Intrinsic Damping and Secondary Microwave Signal. IEEE Transactions on Magnetics, 2022, 58, 1-6.	2.1	1

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91	Dependence of Nonlinear Response and Magnon Scattering on Damping. IEEE Journal of Microwaves, 2021, 1, 997-1002.	6.5	1
92	Dynamic Threshold Control and Higher-Order Processes for Magnetics Based Microwave Devices. , 2021, , .		1
93	Dependence of Bit Error Rates on HAMR Transition Curvatures. IEEE Transactions on Magnetics, 2022, 58, 1-5.	2.1	1
94	Parallel Computations Based Micromagnetic Solver and Analysis Tools for Magnon-Microwave Interaction Studies. IEEE Journal on Multiscale and Multiphysics Computational Techniques, 2021, 6, 239-248.	2.2	1
95	Ferromagnetic Relaxation by Magnon-Electron Interaction. , 2006, , .		0
96	The effects of oxygen on intergranular exchange and anisotropy dispersion in Coâ•Pd multilayers for perpendicular magnetic recording media. Journal of Applied Physics, 2006, 99, 08E708.	2.5	0
97	Large scale micromagnetic simulation for the exchange interaction between a polycrystalline antiferromagnet and a ferromagnet. , 2006, , .		0
98	Heat assisted magnetic recording media design using impedance modification method. , 2015, , .		0
99	Possible explanation for observed effectiveness of voltage controlled anisotropy. , 2015, , .		0
100	HAMR Versus PMR: A Comparative Study of Signal-Noise Performance. IEEE Transactions on Magnetics, 2019, 55, 1-7.	2.1	0