

Richard Evans

List of Publications by Year in descending order

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108
papers

5,261
citations

126907

33
h-index

88630

70
g-index

111
all docs

111
docs citations

111
times ranked

4545
citing authors

#	ARTICLE	IF	CITATIONS
1	Relativistic domain-wall dynamics in van der Waals antiferromagnet MnPS ₃ . Npj Computational Materials, 2022, 8, .	8.7	18
2	The Magnetic Genome of Two-Dimensional van der Waals Materials. ACS Nano, 2022, 16, 6960-7079.	14.6	149
3	Quantum Rescaling, Domain Metastability, and Hybrid Domain Walls in 2D CrI ₃ Magnets. Advanced Materials, 2021, 33, e2004138.	21.0	34
4	Properties and dynamics of meron topological spin textures in the two-dimensional magnet CrCl ₃ . Nature Communications, 2021, 12, 185.	12.8	57
5	Role of element-specific damping in ultrafast, helicity-independent, all-optical switching dynamics in amorphous (Gd,Tb)Co thin films. Physical Review B, 2021, 103, .	3.2	40
6	Exchange bias in multigranular noncollinear $\text{IrMn}/\text{IrMn}_3$ thin films. Physical Review B, 2021, 103, .	3.2	14
7	Spin-lattice dynamics model with angular momentum transfer for canonical and microcanonical ensembles. Physical Review B, 2021, 103, .	3.2	20
8	Nanomagnets: Quantum Rescaling, Domain Metastability, and Hybrid Domain Walls in 2D CrI ₃ Magnets (Adv. Mater. 5/2021). Advanced Materials, 2021, 33, 2170036.	21.0	0
9	Spin transfer torque switching dynamics in CoFeB/MgO magnetic tunnel junctions. Physical Review B, 2021, 103, .	3.2	15
10	Atomistic origin of the athermal training effect in granular IrMn/CoFe bilayers. Physical Review B, 2021, 103, .	3.2	9
11	Atomistic simulations of the magnetic properties of $\text{Ir}/\text{Ir}_2\text{Zr}$ alloys. Physical Review Materials, 2021, 5, .	3.2	4
12	Role of anti-phase boundaries in the formation of magnetic domains in magnetite thin films. Journal of Physics Condensed Matter, 2021, 33, 175802.	1.8	3
13	First principles and atomistic calculation of the magnetic anisotropy of Y ₂ Fe ₁₄ B. Journal of Applied Physics, 2021, 130, .	2.5	5
14	Large magnetoresistance in Heusler alloy-based current perpendicular to plane giant magnetoresistance sensors. Journal Physics D: Applied Physics, 2021, 54, 395004.	2.8	9
15	Spontaneous creation and annihilation dynamics of magnetic skyrmions at elevated temperature. Physical Review B, 2021, 104, .	3.2	8
16	Defect-correlated skyrmions and controllable generation in perpendicularly magnetized CoFeB ultrathin films. Applied Physics Letters, 2021, 119, .	3.3	2
17	Domain wall dynamics in two-dimensional van der Waals ferromagnets. Applied Physics Reviews, 2021, 8, .	11.3	16
18	Anisotropic exchange in Nd-Fe-B permanent magnets. Materials Research Letters, 2020, 8, 89-96.	8.7	14

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19	Magnetic stray fields in nanoscale magnetic tunnel junctions. Journal Physics D: Applied Physics, 2020, 53, 044001.	2.8	23
20	Biquadratic exchange interactions in two-dimensional magnets. Npj Computational Materials, 2020, 6, .	8.7	83
21	Spin wave excitations in exchange biased IrMn/CoFe bilayers. Journal of Applied Physics, 2020, 128, 033903.	2.5	4
22	Bimeron clusters in chiral antiferromagnets. Npj Computational Materials, 2020, 6, .	8.7	34
23	Temperature scaling of two-ion anisotropy in pure and mixed anisotropy systems. Physical Review B, 2020, 102, .	3.2	24
24	Model of Magnetic Damping and Anisotropy at Elevated Temperatures: Application to Granular FePt Films. Physical Review Applied, 2020, 14, .	3.8	23
25	Micromagnetic modeling of the heat-assisted switching process in high anisotropy FePt granular thin films. Journal of Applied Physics, 2020, 128, .	2.5	6
26	Atomistic investigation of the temperature and size dependence of the energy barrier of CoFeB/MgO nanodots. Journal of Applied Physics, 2020, 128, .	2.5	11
27	Atomistic origin of exchange anisotropy in noncollinear CoFe bilayers. Physical Review B, 2020, 102, .	3.2	11
28	The role of faceting and elongation on the magnetic anisotropy of magnetite Fe_3O_4 nanocrystals. Scientific Reports, 2020, 10, 2722.	3.3	36
29	Magneto-resistance Dynamics in Superparamagnetic Co Nanodots. Physical Review Applied, 2020, 13, .	3.1	11
30	Atomistic study on the pressure dependence of the melting point of NdFe_{12} . AIP Advances, 2020, 10, 025130.	1.3	1
31	Atomistic simulations of $\text{Fe}/\text{Nd}_2\text{Fe}_{14}\text{B}$ magnetic core/shell nanocomposites with enhanced energy product for high temperature permanent magnet applications. Journal of Applied Physics, 2020, 127, 133901.	2.5	14
32	Atomistic Spin Dynamics. , 2020, , 427-448.		5
33	Phase boundary exchange coupling in the mixed magnetic phase regime of a Pd-doped FeRh epilayer. Physical Review Materials, 2020, 4, .	2.4	6
34	Calculating temperature-dependent properties of $\text{Nd}_2\text{Fe}_{14}\text{B}$ permanent magnets by atomistic spin model simulations. Physical Review B, 2019, 99, .	3.2	37
35	The Effect of Interstitial Nitrogen Addition on the Structural Properties of Supercells of $\text{NdFe}_{12}\text{Ti}$. IEEE Transactions on Magnetics, 2019, 55, 1-5.	2.1	2
36	Anomalous damping dependence of the switching time in Fe/FePt bilayer recording media. Physical Review B, 2019, 99, .	3.2	7

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37	Enhancement of intrinsic magnetic damping in defect-free epitaxial Fe ₃ O ₄ thin films. Applied Physics Letters, 2019, 114, .	3.3	17
38	Spin-current-mediated rapid magnon localisation and coalescence after ultrafast optical pumping of ferrimagnetic alloys. Nature Communications, 2019, 10, 1756.	12.8	54
39	Site-Resolved Contributions to the Magnetic Anisotropy of the Gilbert Damping in $\text{Co} - \text{Fe} - \text{MgO}$	3.8	11
40	Magnetic anisotropy of the noncollinear antiferromagnet IrMn ₃ . Physical Review B, 2019, 100, .	3.2	21
41	Optimal phase space sampling for Monte Carlo simulations of Heisenberg spin systems. Journal of Physics Condensed Matter, 2019, 31, 095802.	1.8	27
42	Spin canting across core/shell Fe ₃ O ₄ /Mn _x Fe _{3-x} O ₄ nanoparticles. Scientific Reports, 2018, 8, 3425.	3.3	90
43	The indispensable role of the transversal spin fluctuations mechanism in laser-induced demagnetization of Co/Pt multilayers with nanoscale magnetic domains. Nanotechnology, 2018, 29, 275703.	2.6	2
44	Hysteresis features of the transition-metal dichalcogenides VX ₂ (X = S, Se, and Te). Materials Research Express, 2018, 5, 046108.	1.6	25
45	Multiscale model approaches to the design of advanced permanent magnets. Scripta Materialia, 2018, 148, 56-62.	5.2	35
46	Evidence of Magnetostrictive Effects on STT-MRAM Performance by Atomistic and Spin Modeling. , 2018, , .		4
47	Enhanced finite size and interface mixing effects in iridium manganese ultra thin films. Journal of Applied Physics, 2018, 124, 152105.	2.5	9
48	Atomistic Spin Dynamics. , 2018, , 1-23.		0
49	Temperature-dependent properties of CoFeB/MgO thin films: Experiments versus simulations. Physical Review B, 2018, 98, .	3.2	46
50	Probability Distribution of Substituted Titanium in RT ₁₂ (R = Nd and Sm; T = Fe and Co) Structures. IEEE Transactions on Magnetics, 2018, 54, 1-5.	2.1	10
51	Site-Resolved Contributions to the Magnetic-Anisotropy Energy and Complex Spin Structure of $\text{Fe} - \text{MgO}$	3.8	6
52	Origin of reduced magnetization and domain formation in small magnetite nanoparticles. Scientific Reports, 2017, 7, 45997.	3.3	113
53	Hybrid Design for Advanced Magnetic Recording Media: Combining Exchange-Coupled Composite Media with Coupled Granular Continuous Media. Physical Review Applied, 2017, 8, .	3.8	8
54	Manifestation of higher-order inter-granular exchange in magnetic recording media. Applied Physics Letters, 2017, 111, 082405.	3.3	6

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55	Half-Metallic Ferromagnetism in Double Perovskite $\text{Ca}_2\text{CoMoO}_6$ Compound: DFT+U Calculations. Spin, 2017, 07, 1750009.	1.3	22
56	Thermally nucleated magnetic reversal in CoFeB/MgO nanodots. Scientific Reports, 2017, 7, 16729.	3.3	27
57	The antiphase boundary in half-metallic Heusler alloy $\text{Co}_2\text{Fe}(\text{Al},\text{Si})$: atomic structure, spin polarization reversal, and domain wall effects. Applied Physics Letters, 2016, 109, .	3.3	9
58	Antiferromagnets see the rainbow. Nature Photonics, 2016, 10, 622-623.	31.4	2
59	Temperature-dependent exchange stiffness and domain wall width in Co. Physical Review B, 2016, 94, .	3.2	86
60	Atomic and electronic structure of twin growth defects in magnetite. Scientific Reports, 2016, 6, 20943.	3.3	15
61	Newtype single-layer magnetic semiconductor in transition-metal dichalcogenides VX_2 ($\text{X}=\text{S}, \text{Se}$ and Tl) ETC_{q1} 1 0.784314 170	3.3	170
62	First-principles study of the $\text{Fe}/\text{MgO}(001)$ interface: magnetic anisotropy. Journal of Physics Condensed Matter, 2016, 28, 156003.	1.8	8
63	Magnetic Switching in BPM, TEAMR, and Modified TEAMR Using Dielectric Underlayer Media. IEEE Transactions on Magnetics, 2016, 52, 1-5.	2.1	2
64	Influence of uniaxial anisotropy on domain wall motion driven by spin torque. Physical Review B, 2015, 92, .	3.2	9
65	Magnetotransport in metal/insulating-ferromagnet heterostructures: Spin Hall magnetoresistance or magnetic proximity effect. Physical Review B, 2015, 92, .	3.2	60
66	The Landau-Lifshitz equation in atomistic models. Low Temperature Physics, 2015, 41, 705-712.	0.6	44
67	Mapping motion of antiferromagnetic interfacial uncompensated magnetic moment in exchange-biased bilayers. Scientific Reports, 2015, 5, 9183.	3.3	24
68	Quantitative simulation of temperature-dependent magnetization dynamics and equilibrium properties of elemental ferromagnets. Physical Review B, 2015, 91, .	3.2	119
69	Study of perpendicular anisotropy L10-FePt pseudo spin valves using a micromagnetic trilayer model. Journal of Applied Physics, 2015, 117, 213901.	2.5	9
70	Ultrafast and Distinct Spin Dynamics in Magnetic Alloys. Spin, 2015, 05, 1550004.	1.3	81
71	Engineering Ultrafast Magnetism. Springer Proceedings in Physics, 2015, , 297-299.	0.2	1
72	High energy product in Battenberg structured magnets. Applied Physics Letters, 2014, 105, .	3.3	26

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73	Atomistic calculation of the thickness and temperature dependence of exchange coupling through a dilute magnetic oxide. <i>Journal Physics D: Applied Physics</i> , 2014, 47, 502001.	2.8	6
74	Atomistic simulation of sub-nanosecond non-equilibrium field cooling processes for magnetic data storage applications. <i>Applied Physics Letters</i> , 2014, 105, 192405.	3.3	5
75	Atomistic modeling of magnetization reversal modes in L_{10} nanodots with magnetically soft edges. <i>Physical Review B</i> , 2014, 90, .	3.2	13
76	Ultrafast thermally induced magnetic switching in synthetic ferrimagnets. <i>Applied Physics Letters</i> , 2014, 104, .	3.3	67
77	Atomistic spin model simulations of magnetic nanomaterials. <i>Journal of Physics Condensed Matter</i> , 2014, 26, 103202.	1.8	542
78	A STEM study of twin defects in Fe ₃ O ₄ (111)/YZO(111). <i>Journal of Physics: Conference Series</i> , 2014, 522, 012036.	0.4	3
79	Surface and interface effects in magnetic core-shell nanoparticles. <i>MRS Bulletin</i> , 2013, 38, 909-914.	3.5	26
80	Ultrafast dynamical path for the switching of a ferrimagnet after femtosecond heating. <i>Physical Review B</i> , 2013, 87, .	3.2	57
81	Effect of stacking faults on the magnetocrystalline anisotropy of hcp Co: a first-principles study. <i>Journal of Physics Condensed Matter</i> , 2013, 25, 296006.	1.8	11
82	The Curie temperature distribution of FePt granular magnetic recording media. <i>Applied Physics Letters</i> , 2012, 101, 052406.	3.3	68
83	Ultrafast magnetism as seen by x-rays. <i>Proceedings of SPIE</i> , 2012, , .	0.8	3
84	The thermodynamic limits of magnetic recording. <i>Journal of Applied Physics</i> , 2012, 111, .	2.5	53
85	Stochastic form of the Landau-Lifshitz-Bloch equation. <i>Physical Review B</i> , 2012, 85, .	3.2	157
86	Ultrafast heating as a sufficient stimulus for magnetization reversal in a ferrimagnet. <i>Nature Communications</i> , 2012, 3, 666.	12.8	588
87	Thermally induced error: Density limit for magnetic data storage. <i>Applied Physics Letters</i> , 2012, 100, .	3.3	56
88	Influence of interfacial roughness on exchange bias in core-shell nanoparticles. <i>Physical Review B</i> , 2011, 84, .	3.2	56
89	Crystallographically amorphous ferrimagnetic alloys: Comparing a localized atomistic spin model with experiments. <i>Physical Review B</i> , 2011, 84, .	3.2	130
90	Transient ferromagnetic-like state mediating ultrafast reversal of antiferromagnetically coupled spins. <i>Nature</i> , 2011, 472, 205-208.	27.8	828

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91	Atomistic Modeling of the Interlayer Coupling Behavior in Perpendicularly Magnetized $L1_{00}$ -FePt/Ag/ $L1_{00}$ -FePt Pseudo Spin Valves. IEEE Transactions on Magnetics, 2011, 47, 2646-2648.	2.1	4
92	Dynamics of domain wall driven by spin-transfer torque. Physical Review B, 2011, 83, .	3.2	24
93	Perpendicular anisotropy $L1_0$ -FePt based pseudo spin valve with Ag spacer layer. Applied Physics Letters, 2011, 98, 132501.	3.3	24
94	Micromagnetic modelling of $L1_0$ -FePt/Ag/ $L1_0$ -FePt pseudo spin valves. Applied Physics Letters, 2011, 99, 162503.	3.3	4
95	Control of the exchange coupling in granular CoPt/Co recording media. Journal of Applied Physics, 2011, 109, 07B752.	2.5	6
96	Magnetic orientation in advanced recording media. Journal Physics D: Applied Physics, 2011, 44, 455002.	2.8	7
97	Energy losses in interacting fine-particle magnetic composites. Journal Physics D: Applied Physics, 2010, 43, 474010.	2.8	40
98	Rate-dependence of the switching field distribution in nanoscale granular magnetic materials. Applied Physics Letters, 2010, 97, 062504.	3.3	16
99	Multiscale modeling of magnetic materials: Temperature dependence of the exchange stiffness. Physical Review B, 2010, 82, .	3.2	95
100	Constrained Monte Carlo method and calculation of the temperature dependence of magnetic anisotropy. Physical Review B, 2010, 82, .	3.2	130
101	Validation of $\hat{H}(M, \hat{M})$ -technique for identification of switching field distributions in the presence of thermal relaxation. Journal of Applied Physics, 2010, 108, 123901.	2.5	10
102	Temperature dependence of the effective anisotropies in magnetic nanoparticles with Néel surface anisotropy. Journal Physics D: Applied Physics, 2010, 43, 474009.	2.8	29
103	Atomistic spin model simulation of magnetic reversal modes near the Curie point. Applied Physics Letters, 2010, 97, .	3.3	39
104	On beating the superparamagnetic limit with exchange bias. Europhysics Letters, 2009, 88, 57004.	2.0	33
105	Effective anisotropies and energy barriers of magnetic nanoparticles with Néel surface anisotropy. Physical Review B, 2007, 76, .	3.2	122
106	Effects of surface anisotropy on the energy barrier in cobalt-silver core-shell nanoparticles. Journal of Magnetism and Magnetic Materials, 2007, 316, e791-e794.	2.3	15
107	The Effects of Surface Coating on the Structural and Magnetic Properties of CoAg Core-Shell Nanoparticles. IEEE Transactions on Magnetics, 2007, 43, 3106-3108.	2.1	8
108	The influence of shape and structure on the Curie temperature of Fe and Co nanoparticles. Journal of Applied Physics, 2006, 99, 08G703.	2.5	23