

Unai Atxitia

List of Publications by Year in descending order

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Version: 2024-02-01

47
papers

2,679
citations

257450

24
h-index

243625

44
g-index

50
all docs

50
docs citations

50
times ranked

1871
citing authors

#	ARTICLE	IF	CITATIONS
1	Ultrafast heating as a sufficient stimulus for magnetization reversal in a ferrimagnet. <i>Nature Communications</i> , 2012, 3, 666.	12.8	588
2	Towards multiscale modeling of magnetic materials: Simulations of FePt. <i>Physical Review B</i> , 2008, 77, .	3.2	188
3	Stochastic form of the Landau-Lifshitz-Bloch equation. <i>Physical Review B</i> , 2012, 85, .	3.2	157
4	Evidence for thermal mechanisms in laser-induced femtosecond spin dynamics. <i>Physical Review B</i> , 2010, 81, .	3.2	139
5	Crystallographically amorphous ferrimagnetic alloys: Comparing a localized atomistic spin model with experiments. <i>Physical Review B</i> , 2011, 84, .	3.2	130
6	Quantitative simulation of temperature-dependent magnetization dynamics and equilibrium properties of elemental ferromagnets. <i>Physical Review B</i> , 2015, 91, .	3.2	119
7	Micromagnetic modeling of laser-induced magnetization dynamics using the Landau-Lifshitz-Bloch equation. <i>Applied Physics Letters</i> , 2007, 91, .	3.3	114
8	Multiscale modeling of magnetic materials: Temperature dependence of the exchange stiffness. <i>Physical Review B</i> , 2010, 82, .	3.2	95
9	Ultrafast magnetization dynamics rates within the Landau-Lifshitz-Bloch model. <i>Physical Review B</i> , 2011, 84, .	3.2	90
10	Two-magnon bound state causes ultrafast thermally induced magnetisation switching. <i>Scientific Reports</i> , 2013, 3, 3262.	3.3	87
11	Fundamentals and applications of the Landau-Lifshitz-Bloch equation. <i>Journal Physics D: Applied Physics</i> , 2017, 50, 033003.	2.8	83
12	Landau-Lifshitz-Bloch equation for ferrimagnetic materials. <i>Physical Review B</i> , 2012, 86, .	3.2	80
13	Inertia-Free Thermally Driven Domain-Wall Motion in Antiferromagnets. <i>Physical Review Letters</i> , 2016, 117, 107201.	7.8	77
14	Ultrafast Spin Dynamics: The Effect of Colored Noise. <i>Physical Review Letters</i> , 2009, 102, 057203.	7.8	72
15	Ultrafast dynamical path for the switching of a ferrimagnet after femtosecond heating. <i>Physical Review B</i> , 2013, 87, .	3.2	57
16	Electron- and phonon-mediated ultrafast magnetization dynamics of Gd(0001). <i>Physical Review B</i> , 2012, 85, .	3.2	56
17	The Landau-Lifshitz equation in atomistic models. <i>Low Temperature Physics</i> , 2015, 41, 705-712.	0.6	44
18	Controlling the polarity of the transient ferromagnetic-like state in ferrimagnets. <i>Physical Review B</i> , 2014, 89, .	3.2	40

#	ARTICLE	IF	CITATIONS
19	Multiscale modeling of ultrafast element-specific magnetization dynamics of ferromagnetic alloys. Physical Review B, 2015, 92, .	3.2	40
20	Quantum Landau-Lifshitz-Bloch equation and its comparison with the classical case. Physical Review B, 2014, 90, .	3.2	37
21	Temperature dependence of the frequencies and effective damping parameters of ferrimagnetic resonance. Physical Review B, 2012, 86, .	3.2	33
22	Temperature scaling of the Dzyaloshinsky-Moriya interaction in the spin wave spectrum. Physical Review B, 2017, 96, .	3.2	33
23	Optimal electron, phonon, and magnetic characteristics for low energy thermally induced magnetization switching. Applied Physics Letters, 2015, 107, .	3.3	29
24	Unifying femtosecond and picosecond single-pulse magnetic switching in Gd-Fe-Co. Physical Review B, 2021, 103, .	3.2	25
25	Temperature scaling of two-ion anisotropy in pure and mixed anisotropy systems. Physical Review B, 2020, 102, .	3.2	24
26	Ultrafast double magnetization switching in GdFeCo with two picosecond-delayed femtosecond pump pulses. Applied Physics Letters, 2018, 113, .	3.3	22
27	Unified decoupling scheme for exchange and anisotropy contributions and temperature-dependent spectral properties of anisotropic spin systems. Physical Review B, 2012, 86, .	3.2	21
28	Lattice dynamics and ultrafast energy flow between electrons, spins, and phonons in a 3d ferromagnet. Physical Review Research, 2021, 3, .	3.6	21
29	A Review of Modelling in Ferrimagnetic Spintronics. Journal of the Physical Society of Japan, 2021, 90, 081001.	1.6	21
30	Damping dependence of the reversal time of the magnetization of single-domain ferromagnetic particles for the Néel-Brown model: Langevin dynamics simulations versus analytic results. Physical Review B, 2010, 82, .	3.2	20
31	Unveiling domain wall dynamics of ferrimagnets in thermal magnon currents: Competition of angular momentum transfer and entropic torque. Physical Review Research, 2020, 2, .	3.6	18
32	The classical two-sublattice Landau-Lifshitz-Bloch equation for all temperatures. Low Temperature Physics, 2015, 41, 739-744.	0.6	15
33	Controlling All-Optical Helicity-Dependent Switching in Engineered Rare-Earth Free Synthetic Ferrimagnets. Advanced Science, 2019, 6, 1901876.	11.2	15
34	Atomistic modeling of magnetization reversal modes in L_{10} nanodots with magnetically soft edges. Physical Review B, 2014, 90, .	3.2	13
35	Accelerating double pulse all-optical write/erase cycles in metallic ferrimagnets. Applied Physics Letters, 2022, 120, .	3.3	13
36	Universal Criteria for Single Femtosecond Pulse Ultrafast Magnetization Switching in Ferrimagnets. Physical Review Letters, 2022, 129, .	7.8	13

#	ARTICLE	IF	CITATIONS
37	Reduced thermal stability of antiferromagnetic nanostructures. Physical Review B, 2019, 100, .	3.2	11
38	Intrinsic energy flow in laser-excited $3d$ ferromagnets. Physical Review Research, 2022, 4, .	3.6	11
39	Giant localised spin-Peltier effect due to ultrafast domain wall motion in antiferromagnetic metals. Communications Physics, 2020, 3, .	5.3	9
40	Ultrafast magnetization dynamics at very high magnetic fields and elevated temperatures. Physical Review B, 2018, 98, .	3.2	6
41	Realistic micromagnetic description of all-optical ultrafast switching processes in ferrimagnetic alloys. Physical Review B, 2022, 105, .	3.2	6
42	Atomistic spin model of single pulse toggle switching in Mn_2Ru_xGa Heusler alloys. Applied Physics Letters, 2022, 120, .	3.3	5
43	Topologically-mediated energy release by relativistic antiferromagnetic solitons. Physical Review Research, 2021, 3, .	3.6	1
44	Optimising materials for energy-efficient all-optical magnetic switching. , 2015, , .		0
45	Multiscale modeling of ultrafast element-specific magnetization dynamics in FeNi ferromagnetic alloys. , 2015, , .		0
46	Energy efficient thermally induced magnetization switching by tailoring the electron and phonon dynamics. , 2015, , .		0
47	Inverse faraday effect as mechanism for ultrafast all-optical magnetic switching. , 2015, , .		0