Felipe Garcia-Sanchez

List of Publications by Year
in descending order

71 papers	4,363 citations	304368 22 h-index	106150 65 g-index
76 all docs	76 docs citations	76 times ranked	3659 citing authors

#	Article	IF	Citations
1	The design and verification of MuMax3. AIP Advances, 2014, 4, .	0.6	2,358
2	Non-adiabatic spin-torques in narrow magnetic domain walls. Nature Physics, 2010, 6, 17-21.	6.5	194
3	A skyrmion-based spin-torque nano-oscillator. New Journal of Physics, 2016, 18, 075011.	1.2	170
4	Fast domain wall dynamics in magnetic nanotubes: Suppression of Walker breakdown and Cherenkov-like spin wave emission. Applied Physics Letters, 2011, 99, .	1.5	157
5	Narrow Magnonic Waveguides Based on Domain Walls. Physical Review Letters, 2015, 114, 247206.	2.9	150
6	Breathing modes of confined skyrmions in ultrathin magnetic dots. Physical Review B, 2014, 90, .	1.1	140
7	Nonreciprocal spin-wave channeling along textures driven by the Dzyaloshinskii-Moriya interaction. Physical Review B, 2014, 89, .	1.1	94
8	Current-driven asymmetric magnetization switching in perpendicularly magnetized CoFeB/MgO heterostructures. Physical Review B, 2015, 91, .	1.1	78
9	Chiral symmetry breaking and pair-creation mediated Walker breakdown in magnetic nanotubes. Applied Physics Letters, 2012, 100, 252401.	1.5	77
10	Individual skyrmion manipulation by local magnetic field gradients. Communications Physics, 2019, 2, .	2.0	74
11	Skyrmion Logic System for Large-Scale Reversible Computation. Physical Review Applied, 2019, 12, .	1.5	70
12	Magnetic domain wall neuron with lateral inhibition. Journal of Applied Physics, 2018, 124, .	1.1	56
13	Time-resolved spin-torque switching in MgO-based perpendicularly magnetized tunnel junctions. Physical Review B, 2016, 93, .	1.1	50
14	Exchange spring structures and coercivity reduction in FePtâˆ•FeRh bilayers: A comparison of multiscale and micromagnetic calculations. Applied Physics Letters, 2005, 87, 122501.	1.5	46
15	Controlling magnetic domain wall motion in the creep regime in He+-irradiated CoFeB/MgO films with perpendicular anisotropy. Applied Physics Letters, 2015, 107, .	1.5	41
16	Skyrmion motion induced by voltage-controlled in-plane strain gradients. Applied Physics Letters, 2019, 115, .	1.5	40
17	Shape-Based Magnetic Domain Wall Drift for an Artificial Spintronic Leaky Integrate-and-Fire Neuron. IEEE Transactions on Electron Devices, 2019, 66, 4970-4975.	1.6	39
18	Modulation bandwidth of spin torque oscillators under current modulation. Applied Physics Letters, 2014, 105, 152401.	1.5	34

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19	Large Damping-Like Spinâ€“Orbit Torque in a 2D Conductive 1T-TaS₂ Monolayer. Nano Letters, 2020, 20, 6372-6380.	4.5	31
20	Graded-Anisotropy-Induced Magnetic Domain Wall Drift for an Artificial Spintronic Leaky Integrate-and-Fire Neuron. IEEE Journal on Exploratory Solid-State Computational Devices and Circuits, 2019, 5, 19-24.	1.1	30
21	Skyrmion logic clocked via voltage-controlled magnetic anisotropy. Applied Physics Letters, 2021, 118, .	1.5	28
22	Effect of crystalline defects on domain wall motion under field and current in nanowires with perpendicular magnetization. Physical Review B, 2010, 81, .	1.1	22
23	Measurement of magnetization using domain compressibility in CoFeB films with perpendicular anisotropy. Applied Physics Letters, 2014, 104, .	1.5	22
24	Spinâ€Wave Eigenmodes of Dzyaloshinskii Domain Walls. Advanced Electronic Materials, 2016, 2, 1500202.	2.6	21
25	Influence of thermal fluctuations on the emission linewidth in MgO-based spin transfer oscillators. Applied Physics Letters, 2012, 101, 062407.	1.5	20
26	Control of magnetization reversal by combining shape and magnetocrystalline anisotropy in epitaxial Fe planar nanowires. Nanotechnology, 2010, 21, 255301.	1.3	18
27	A micromagnetic study of the hysteretic behavior of antidot Fe films. Journal of Magnetism and Magnetic Materials, 2005, 290-291, 149-152.	1.0	17
28	Enhanced modulation rates via field modulation in spin torque nano-oscillators. Applied Physics Letters, 2016, 108, .	1.5	17
29	Coercivity mechanisms in lithographed antidot arrays. Europhysics Letters, 2008, 84, 67002.	0.7	16
30	Disentangling the Physical Contributions to the Electrical Resistance in Magnetic Domain Walls: A Multiscale Study. Physical Review Letters, 2012, 108, 077201.	2.9	15
31	Electric Field Control of the Skyrmion Hall Effect in Piezoelectric-Magnetic Devices. Physical Review Applied, 2021, 16, .	1.5	15
32	Multiscale versus micromagnetic calculations of the switching field reduction in FePtâˆ•FeRh bilayers with perpendicular exchange spring. Journal of Applied Physics, 2005, 97, 10J101.	1.1	14
33	Multiscale modelling of hysteresis in FePt/FeRh bilayer. Physica B: Condensed Matter, 2006, 372, 328-331.	1.3	14
34	Modeling of microwave-assisted switching in micron-sized magnetic ellipsoids. Physical Review B, 2009, 79, .	1.1	13
35	Numerical evaluation of energy barriers in nano-sized magnetic elements with Lagrange multiplier technique. Physica B: Condensed Matter, 2008, 403, 330-333.	1.3	12
36	Switching and thermal stability properties of bilayer thin films: Single versus multigrain cases. Journal of Applied Physics, 2008, 103, 07F505.	1.1	11

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37	Reversible magnetization variations in large field ranges associated to periodic arrays of antidots. IEEE Transactions on Magnetics, 2005, 41, 3106-3108.	1.2	10
38	Depinning of Transverse Domain Walls from Notches in Magnetostatically Coupled Nanostrips. Applied Physics Express, 2011, 4, 033001.	1.1	10
39	Spin transfer torque nano-oscillators based on synthetic ferrimagnets: Influence of the exchange bias field and interlayer exchange coupling. Journal of Applied Physics, 2017, 121, .	1.1	10
40	Multiscale models of hard-soft composite media. Journal of Magnetism and Magnetic Materials, 2006, 303, 282-286.	1.0	9
41	Stochastic domain-wall depinning under current in FePt spin valves and single layers. Physical Review B, 2011, 84, .	1.1	9
42	Non-linear mode interaction between spin torque driven and damped modes in spin torque nano-oscillators. Applied Physics Letters, 2015, 106, .	1.5	9
43	Dynamic Skyrmion-Mediated Switching of Perpendicular MTJs: Feasibility Analysis of Scaling to 20 nm With Thermal Noise. IEEE Transactions on Electron Devices, 2020, 67, 3883-3888.	1.6	9
44	Excitation and coherent control of magnetization dynamics in magnetic tunnel junctions using acoustic pulses. Applied Physics Letters, 2018, 113, .	1.5	8
45	Domain Wall Leaky Integrate-and-Fire Neurons With Shape-Based Configurable Activation Functions. IEEE Transactions on Electron Devices, 2022, 69, 2353-2359.	1.6	8
46	Experimental and computational analysis of the angular dependence of the hysteresis processes in an antidots array. Journal of Applied Physics, 2006, 99, 08S503.	1.1	7
47	Structure and magnetization in CoPd thin films and nanocontacts. Journal of Magnetism and Magnetic Materials, 2013, 325, 112-116.	1.0	6
48	Realistic micromagnetic description of all-optical ultrafast switching processes in ferrimagnetic alloys. Physical Review B, 2022, 105, .	1.1	6
49	Recent developments in the manipulation of magnetic domain walls in CoFeBâ€“MgO wires for applications to high-density nonvolatile memories. , 2015, , 333-378.		5
50	Influence of interlayer coupling on the spin-torque-driven excitations in a spin-torque oscillator. Physical Review B, 2017, 95, .	1.1	5
51	Thermal coercivity mechanism in Fe nanoribbons and stripes. Applied Physics Letters, 2008, 93, 192508.	1.5	4
52	Magnetization Reversal in Exchange-Coupled Composite Mediaâ€”Experiment and Modeling. IEEE Transactions on Magnetics, 2009, 45, 856-861.	1.2	4
53	Asymmetric domain wall depinning under current in spin valves with perpendicular anisotropy. Applied Physics Letters, 2011, 98, 232512.	1.5	4
54	Toggle Spin-Orbit Torque MRAM With Perpendicular Magnetic Anisotropy. IEEE Journal on Exploratory Solid-State Computational Devices and Circuits, 2019, 5, 166-172.	1.1	4

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55	Three Artificial Spintronic Leaky Integrate-and-Fire Neurons. Spin, 2020, 10, .	0.6	4
56	NONLINEAR ADIABATIC DYNAMICS OF SMALL FERROMAGNETIC PARTICLES. International Journal of Modern Physics B, 2006, 20, 5391-5404.	1.0	3
57	Dynamics and morphology of chiral magnetic bubbles in perpendicularly magnetized ultra-thin films. Journal of Magnetism and Magnetic Materials, 2018, 456, 433-438.	1.0	3
58	Modal Frustration and Periodicity Breaking in Artificial Spin Ice. Small, 2020, 16, 2003141.	5.2	3
59	Micromagnetic Modeling of All Optical Switching of Ferromagnetic Thin Films: The Role of Inverse Faraday Effect and Magnetic Circular Dichroism. Applied Sciences (Switzerland), 2020, 10, 1307.	1.3	3
60	A Ti/Pt/Co Multilayer Stack for Transfer Function Based Magnetic Force Microscopy Calibrations. Magnetochemistry, 2021, 7, 78.	1.0	3
61	Implementation of the â€œHyperdynamics of Infrequent Eventsâ€•Method for Acceleration of Thermal Switching Dynamics of Magnetic Moments. IEEE Transactions on Magnetics, 2004, 40, 2140-2142.	1.2	2
62	Hysteresis in Fe particles with surface and magnetoelastic anisotropies: Experiment and micromagnetic modeling. Physica B: Condensed Matter, 2008, 403, 469-472.	1.3	2
63	Spin Waves on Spin Structures: Topology, Localization, and Nonreciprocity. , 2017, , 219-260.		2
64	Magnetization reversal in textured Fe nanoparticles having different aspect ratios. Journal of Magnetism and Magnetic Materials, 2005, 290-291, 479-481.	1.0	1
65	Adiabatic dynamics of small ferromagnetic particles. Journal of Applied Physics, 2005, 97, 10A711.	1.1	1
66	Nonreciprocal flexural dynamics of Dzyaloshinskii domain walls. Physical Review B, 2018, 98, .	1.1	1
67	A comparison of two different mechanisms for deterministic spin orbit torque magnetization switching. Journal of Magnetism and Magnetic Materials, 2020, 508, 166700.	1.0	1
68	Energy efficiency challenges for all-spin logic. Microelectronics Journal, 2021, 110, 105008.	1.1	1
69	Logical and Physical Reversibility of Conservative Skyrmion Logic. IEEE Magnetics Letters, 2022, , 1-1.	0.6	1
70	CMOS-Free Magnetic Domain Wall Leaky Integrate-and-Fire Neurons with Intrinsic Lateral Inhibition. , 2020, , .		0
71	Magnetic domain wall neuron with intrinsic leaking and lateral inhibition capability. , 2019, , .		0