Jing Xia

List of Publications by Year in descending order

66 papers	2,865 citations	201575 27 h-index	175177 52 g-index
67 all docs	67 docs citations	67 times ranked	1853 citing authors

#	Article	IF	Citations
1	Nonreciprocal dynamics of ferrimagnetic bimerons. Physical Review B, 2022, 105, .	1.1	7
2	Generation and manipulation of skyrmions and other topological spin structures with rare metals. Rare Metals, 2022, 41, 2200-2216.	3.6	24
3	Dynamic properties of a ferromagnetic skyrmion in an in-plane magnetic field. Journal of Applied Physics, 2022, 131, .	1.1	1
4	Exchange-Torque-Triggered Fast Switching of Antiferromagnetic Domains. Physical Review Letters, 2022, 128, 137201.	2.9	6
5	Single-bit full adder and logic gate based on synthetic antiferromagnetic bilayer skyrmions. Rare Metals, 2022, 41, 2249-2258.	3.6	6
6	Structural transition of skyrmion quasiparticles under compression. Physical Review B, 2022, 105, .	1.1	5
7	Mutual conversion between a magnetic NÃ©el hopfion and a NÃ©el toron. Physical Review B, 2022, 105, .	1.1	7
8	Bifurcation of a topological skyrmion string. Physical Review B, 2022, 105, .	1.1	14
9	Antiferromagnetic Skyrmions and Bimerons. Topics in Applied Physics, 2021, , 441-457.	0.4	0
10	Signal detection based on the chaotic motion of an antiferromagnetic domain wall. Applied Physics Letters, 2021, 118, .	1.5	4
11	A frustrated bimeronium: Static structure and dynamics. Applied Physics Letters, 2021, 118, .	1.5	13
12	A ferromagnetic skyrmion-based nano-oscillator with modified perpendicular magnetic anisotropy. Physics Letters, Section A: General, Atomic and Solid State Physics, 2021, 392, 127157.	0.9	12
13	Current-induced dynamics of skyrmion tubes in synthetic antiferromagnetic multilayers. Physical Review B, 2021, 103, .	1.1	16
14	Confinement and Protection of Skyrmions by Patterns of Modified Magnetic Properties. Nano Letters, 2021, 21, 4320-4326.	4.5	32
15	Transcription and logic operations of magnetic skyrmions in bilayer cross structures. Journal of Physics Condensed Matter, 2021, 33, 404001.	0.7	3
16	Domain wall dynamics in ferromagnet/Ru/ferromagnet stacks with a wedged spacer. Applied Physics Letters, 2021, 119, .	1.5	5
17	Antiferromagnetic skyrmion-based logic gates controlled by electric currents and fields. Applied Physics Letters, 2021, 119, .	1.5	40
18	Conventional applications of skyrmions. , 2021, , 367-391.		0

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19	Dynamics of ferrimagnetic skyrmionium driven by spin-orbit torque. Physical Review B, 2021, 104, .	1.1	12
20	Configurable pixelated skyrmions on nanoscale magnetic grids. Communications Physics, 2021, 4, .	2.0	14
21	Dynamic transformation between a skyrmion string and a bimeron string in a layered frustrated system. Physical Review B, 2021, 104, .	1.1	7
22	Dynamics of antiskyrmions induced by the voltage-controlled magnetic anisotropy gradient. Journal of Magnetism and Magnetic Materials, 2020, 496, 165922.	1.0	14
23	Skyrmion-electronics: writing, deleting, reading and processing magnetic skyrmions toward spintronic applications. Journal of Physics Condensed Matter, 2020, 32, 143001.	0.7	268
24	A ferromagnetic skyrmion-based nano-oscillator with modified profile of Dzyaloshinskii-Moriya interaction. Journal of Magnetism and Magnetic Materials, 2020, 496, 165912.	1.0	27
25	Currentâ€Induced Helicity Reversal of a Single Skyrmionic Bubble Chain in a Nanostructured Frustrated Magnet. Advanced Materials, 2020, 32, e1904815.	11.1	47
26	Electric-field-driven non-volatile multi-state switching of individual skyrmions in a multiferroic heterostructure. Nature Communications, 2020, 11, 3577.	5.8	117
27	Bimeron clusters in chiral antiferromagnets. Npj Computational Materials, 2020, 6, .	3.5	34
28	Magnetic skyrmionium diode with a magnetic anisotropy voltage gating. Applied Physics Letters, 2020, 117, .	1.5	30
29	Skyrmion-based artificial synapses for neuromorphic computing. Nature Electronics, 2020, 3, 148-155.	13.1	346
30	A spiking neuron constructed by the skyrmion-based spin torque nano-oscillator. Applied Physics Letters, 2020, 116, .	1.5	36
31	Current-driven skyrmionium in a frustrated magnetic system. Applied Physics Letters, 2020, 117, .	1.5	22
32	Topology-Dependent Brownian Gyromotion of a Single Skyrmion. Physical Review Letters, 2020, 125, 027206.	2.9	50
33	Direct imaging of an inhomogeneous electric current distribution using the trajectory of magnetic half-skyrmions. Science Advances, 2020, 6, eaay1876.	4.7	20
34	Current-Induced Dynamics and Chaos of Antiferromagnetic Bimerons. Physical Review Letters, 2020, 124, 037202.	2.9	82
35	Dynamics of an elliptical ferromagnetic skyrmion driven by the spinâ€“orbit torque. Applied Physics Letters, 2020, 116, .	1.5	27
36	Realization of Isolated and High-Density Skyrmions at Room Temperature in Uncompensated Synthetic Antiferromagnets. Nano Letters, 2020, 20, 3299-3305.	4.5	42

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37	Static and dynamic properties of bimerons in a frustrated ferromagnetic monolayer. Physical Review B, 2020, 101, .	1.1	40
38	A ferromagnetic skyrmion-based diode with a voltage-controlled potential barrier. Nanoscale, 2020, 12, 9507-9516.	2.8	34
39	Dynamics of ferromagnetic bimerons driven by spin currents and magnetic fields. Physical Review B, 2020, 102, .	1.1	19
40	A skyrmion-based spin-torque nano-oscillator with enhanced edge. Journal of Magnetism and Magnetic Materials, 2019, 491, 165610.	1.0	36
41	Dynamics of an antiferromagnetic skyrmion in a racetrack with a defect. Physical Review B, 2019, 100, .	1.1	37
42	Spin torque nano-oscillators based on antiferromagnetic skyrmions. Applied Physics Letters, 2019, 114, .	1.5	106
43	Current-Driven Dynamics of Frustrated Skyrmions in a Synthetic Antiferromagnetic Bilayer. Physical Review Applied, 2019, 11, .	1.5	31
44	Generation and Hall effect of skyrmions enabled using nonmagnetic point contacts. Physical Review B, 2019, 100, .	1.1	14
45	Current-Induced Dynamics of the Antiferromagnetic Skyrmion and Skyrmionium. Physical Review Applied, 2019, 12, .	1.5	46
46	Electric Field-Induced Creation and Directional Motion of Domain Walls and Skyrmion Bubbles. Nano Letters, 2019, 19, 353-361.	4.5	97
47	Dynamics of a magnetic skyrmionium driven by spin waves. Applied Physics Letters, 2018, 112, .	1.5	43
48	Controllable transport of a skyrmion in a ferromagnetic narrow channel with voltage-controlled magnetic anisotropy. Journal Physics D: Applied Physics, 2018, 51, 205002.	1.3	17
49	Current-induced skyrmion dynamics in a frustrated magnetic film. , 2018, , .		0
50	Dynamics of a magnetic skyrmionium driven by a spin wave. , 2018, , .		1
51	Dynamics of the antiferromagnetic skyrmion induced by a magnetic anisotropy gradient. Physical Review B, 2018, 98, .	1.1	84
52	Dynamics of Magnetic Skyrmion Clusters Driven by Spin-Polarized Current With a Spatially Varied Polarization. IEEE Magnetics Letters, 2018, 9, 1-5.	0.6	6
53	The influence of the edge effect on the skyrmion generation in a magnetic nanotrack. AIP Advances, 2017, 7, .	0.6	14
54	Motion of skyrmions in nanowires driven by magnonic momentum-transfer forces. New Journal of Physics, 2017, 19, 065001.	1.2	46

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55	An Improved Racetrack Structure for Transporting a Skyrmion. Scientific Reports, 2017, 7, 45330.	1.6	92
56	A microwave field-driven transistor-like skyrmionic device with the microwave current-assisted skyrmion creation. Journal of Applied Physics, 2017, 122, .	1.1	24
57	Skyrmion dynamicsÂin a frustrated ferromagnetic filmÂand current-induced helicity locking-unlocking transition. Nature Communications, 2017, 8, 1717.	5.8	147
58	Magnetic Skyrmion Transport in a Nanotrack With Spatially Varying Damping and Non-adiabatic Torque. IEEE Transactions on Magnetics, 2016, , 1-1.	1.2	7
59	Control and manipulation of a magnetic skyrmionium in nanostructures. Physical Review B, 2016, 94, .	1.1	137
60	Spin-Cherenkov effect in a magnetic nanostrip with interfacial Dzyaloshinskii-Moriya interaction. Scientific Reports, 2016, 6, 25189.	1.6	11
61	Hysteresis of misaligned hardâ€“soft grains. Journal of Magnetism and Magnetic Materials, 2016, 397, 181-187.	1.0	4
62	Skyrmion Spin Structure of Exchange-Coupled Magnetic Coreâ€“Shell Nanodisk. IEEE Transactions on Magnetics, 2015, 51, 1-3.	1.2	1
63	Skyrmion-skyrmion and skyrmion-edge repulsions in skyrmion-based racetrack memory. Scientific Reports, 2015, 5, 7643.	1.6	360
64	Angular Dependence of the Pinning Fields for Hard/Soft Multilayers. IEEE Transactions on Magnetics, 2015, 51, 1-4.	1.2	1
65	Micromagnetic simulation of Smâ€”Co/Î±-Fe/Smâ€”Co trilayers with various angles between easy axes and the film plane. Chinese Physics B, 2014, 23, 097504.	0.7	7
66	Significant deterioration of energy products in exchange-coupled composite magnets. Journal of Applied Physics, 2012, 112, 013918.	1.1	13