

Jing Xia

List of Publications by Year in descending order

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66
papers

2,865
citations

201674

27
h-index

175258

52
g-index

67
all docs

67
docs citations

67
times ranked

1853
citing authors

#	ARTICLE	IF	CITATIONS
1	Skyrmion-skyrmion and skyrmion-edge repulsions in skyrmion-based racetrack memory. Scientific Reports, 2015, 5, 7643.	3.3	360
2	Skyrmion-based artificial synapses for neuromorphic computing. Nature Electronics, 2020, 3, 148-155.	26.0	346
3	Skyrmion-electronics: writing, deleting, reading and processing magnetic skyrmions toward spintronic applications. Journal of Physics Condensed Matter, 2020, 32, 143001.	1.8	268
4	Skyrmion dynamics in a frustrated ferromagnetic film and current-induced helicity locking-unlocking transition. Nature Communications, 2017, 8, 1717.	12.8	147
5	Control and manipulation of a magnetic skyrmionium in nanostructures. Physical Review B, 2016, 94, .	3.2	137
6	Electric-field-driven non-volatile multi-state switching of individual skyrmions in a multiferroic heterostructure. Nature Communications, 2020, 11, 3577.	12.8	117
7	Spin torque nano-oscillators based on antiferromagnetic skyrmions. Applied Physics Letters, 2019, 114, .	3.3	106
8	Electric Field-Induced Creation and Directional Motion of Domain Walls and Skyrmion Bubbles. Nano Letters, 2019, 19, 353-361.	9.1	97
9	An Improved Racetrack Structure for Transporting a Skyrmion. Scientific Reports, 2017, 7, 45330.	3.3	92
10	Dynamics of the antiferromagnetic skyrmion induced by a magnetic anisotropy gradient. Physical Review B, 2018, 98, .	3.2	84
11	Current-Induced Dynamics and Chaos of Antiferromagnetic Bimerons. Physical Review Letters, 2020, 124, 037202.	7.8	82
12	Topology-Dependent Brownian Gyromotion of a Single Skyrmion. Physical Review Letters, 2020, 125, 027206.	7.8	50
13	Current-Induced Helicity Reversal of a Single Skyrmionic Bubble Chain in a Nanostructured Frustrated Magnet. Advanced Materials, 2020, 32, e1904815.	21.0	47
14	Motion of skyrmions in nanowires driven by magnonic momentum-transfer forces. New Journal of Physics, 2017, 19, 065001.	2.9	46
15	Current-Induced Dynamics of the Antiferromagnetic Skyrmion and Skyrmionium. Physical Review Applied, 2019, 12, .	3.8	46
16	Dynamics of a magnetic skyrmionium driven by spin waves. Applied Physics Letters, 2018, 112, .	3.3	43
17	Realization of Isolated and High-Density Skyrmions at Room Temperature in Uncompensated Synthetic Antiferromagnets. Nano Letters, 2020, 20, 3299-3305.	9.1	42
18	Static and dynamic properties of bimerons in a frustrated ferromagnetic monolayer. Physical Review B, 2020, 101, .	3.2	40

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19	Antiferromagnetic skyrmion-based logic gates controlled by electric currents and fields. Applied Physics Letters, 2021, 119, .	3.3	40
20	Dynamics of an antiferromagnetic skyrmion in a racetrack with a defect. Physical Review B, 2019, 100, .	3.2	37
21	A skyrmion-based spin-torque nano-oscillator with enhanced edge. Journal of Magnetism and Magnetic Materials, 2019, 491, 165610.	2.3	36
22	A spiking neuron constructed by the skyrmion-based spin torque nano-oscillator. Applied Physics Letters, 2020, 116, .	3.3	36
23	Bimeron clusters in chiral antiferromagnets. Npj Computational Materials, 2020, 6, .	8.7	34
24	A ferromagnetic skyrmion-based diode with a voltage-controlled potential barrier. Nanoscale, 2020, 12, 9507-9516.	5.6	34
25	Confinement and Protection of Skyrmions by Patterns of Modified Magnetic Properties. Nano Letters, 2021, 21, 4320-4326.	9.1	32
26	Current-Driven Dynamics of Frustrated Skyrmions in a Synthetic Antiferromagnetic Bilayer. Physical Review Applied, 2019, 11, .	3.8	31
27	Magnetic skyrmionium diode with a magnetic anisotropy voltage gating. Applied Physics Letters, 2020, 117, .	3.3	30
28	A ferromagnetic skyrmion-based nano-oscillator with modified profile of Dzyaloshinskii-Moriya interaction. Journal of Magnetism and Magnetic Materials, 2020, 496, 165912.	2.3	27
29	Dynamics of an elliptical ferromagnetic skyrmion driven by the spin-orbit torque. Applied Physics Letters, 2020, 116, .	3.3	27
30	A microwave field-driven transistor-like skyrmionic device with the microwave current-assisted skyrmion creation. Journal of Applied Physics, 2017, 122, .	2.5	24
31	Generation and manipulation of skyrmions and other topological spin structures with rare metals. Rare Metals, 2022, 41, 2200-2216.	7.1	24
32	Current-driven skyrmionium in a frustrated magnetic system. Applied Physics Letters, 2020, 117, .	3.3	22
33	Direct imaging of an inhomogeneous electric current distribution using the trajectory of magnetic half-skyrmions. Science Advances, 2020, 6, eaay1876.	10.3	20
34	Dynamics of ferromagnetic bimerons driven by spin currents and magnetic fields. Physical Review B, 2020, 102, .	3.2	19
35	Controllable transport of a skyrmion in a ferromagnetic narrow channel with voltage-controlled magnetic anisotropy. Journal Physics D: Applied Physics, 2018, 51, 205002.	2.8	17
36	Current-induced dynamics of skyrmion tubes in synthetic antiferromagnetic multilayers. Physical Review B, 2021, 103, .	3.2	16

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37	The influence of the edge effect on the skyrmion generation in a magnetic nanotrack. AIP Advances, 2017, 7, .	1.3	14
38	Generation and Hall effect of skyrmions enabled using nonmagnetic point contacts. Physical Review B, 2019, 100, .	3.2	14
39	Dynamics of antiskyrmions induced by the voltage-controlled magnetic anisotropy gradient. Journal of Magnetism and Magnetic Materials, 2020, 496, 165922.	2.3	14
40	Configurable pixelated skyrmions on nanoscale magnetic grids. Communications Physics, 2021, 4, .	5.3	14
41	Bifurcation of a topological skyrmion string. Physical Review B, 2022, 105, .	3.2	14
42	Significant deterioration of energy products in exchange-coupled composite magnets. Journal of Applied Physics, 2012, 112, 013918.	2.5	13
43	A frustrated bimeronium: Static structure and dynamics. Applied Physics Letters, 2021, 118, .	3.3	13
44	A ferromagnetic skyrmion-based nano-oscillator with modified perpendicular magnetic anisotropy. Physics Letters, Section A: General, Atomic and Solid State Physics, 2021, 392, 127157.	2.1	12
45	Dynamics of ferrimagnetic skyrmionium driven by spin-orbit torque. Physical Review B, 2021, 104, .	3.2	12
46	Spin-Cherenkov effect in a magnetic nanostrip with interfacial Dzyaloshinskii-Moriya interaction. Scientific Reports, 2016, 6, 25189.	3.3	11
47	Micromagnetic simulation of $\text{Sm}\hat{\epsilon}^{\text{r}}\text{Co}\hat{\mu}_{\pm}\text{Fe}/\text{Sm}\hat{\epsilon}^{\text{r}}\text{Co}$ trilayers with various angles between easy axes and the film plane. Chinese Physics B, 2014, 23, 097504.	1.4	7
48	Magnetic Skyrmion Transport in a Nanotrack With Spatially Varying Damping and Non-adiabatic Torque. IEEE Transactions on Magnetics, 2016, , 1-1.	2.1	7
49	Nonreciprocal dynamics of ferrimagnetic bimerons. Physical Review B, 2022, 105, .	3.2	7
50	Dynamic transformation between a skyrmion string and a bimeron string in a layered frustrated system. Physical Review B, 2021, 104, .	3.2	7
51	Mutual conversion between a magnetic $\text{N}\hat{\epsilon}\text{el}$ hopfion and a $\text{N}\hat{\epsilon}\text{el}$ toron. Physical Review B, 2022, 105, .	3.2	7
52	Dynamics of Magnetic Skyrmion Clusters Driven by Spin-Polarized Current With a Spatially Varied Polarization. IEEE Magnetics Letters, 2018, 9, 1-5.	1.1	6
53	Exchange-Torque-Triggered Fast Switching of Antiferromagnetic Domains. Physical Review Letters, 2022, 128, 137201.	7.8	6
54	Single-bit full adder and logic gate based on synthetic antiferromagnetic bilayer skyrmions. Rare Metals, 2022, 41, 2249-2258.	7.1	6

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55	Domain wall dynamics in ferromagnet/Ru/ferromagnet stacks with a wedged spacer. Applied Physics Letters, 2021, 119, .	3.3	5
56	Structural transition of skyrmion quasiparticles under compression. Physical Review B, 2022, 105, .	3.2	5
57	Hysteresis of misaligned hard/soft grains. Journal of Magnetism and Magnetic Materials, 2016, 397, 181-187.	2.3	4
58	Signal detection based on the chaotic motion of an antiferromagnetic domain wall. Applied Physics Letters, 2021, 118, .	3.3	4
59	Transcription and logic operations of magnetic skyrmions in bilayer cross structures. Journal of Physics Condensed Matter, 2021, 33, 404001.	1.8	3
60	Skyrmion Spin Structure of Exchange-Coupled Magnetic Core/Shell Nanodisk. IEEE Transactions on Magnetics, 2015, 51, 1-3.	2.1	1
61	Angular Dependence of the Pinning Fields for Hard/Soft Multilayers. IEEE Transactions on Magnetics, 2015, 51, 1-4.	2.1	1
62	Dynamics of a magnetic skyrmionium driven by a spin wave. , 2018, , .		1
63	Dynamic properties of a ferromagnetic skyrmion in an in-plane magnetic field. Journal of Applied Physics, 2022, 131, .	2.5	1
64	Current-induced skyrmion dynamics in a frustrated magnetic film. , 2018, , .		0
65	Antiferromagnetic Skyrmions and Bimerons. Topics in Applied Physics, 2021, , 441-457.	0.8	0
66	Conventional applications of skyrmions. , 2021, , 367-391.		0