Jiadong Zang

List of Publications by Year
in descending order

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57 papers	4,750 citations	172457 29 h-index	133252 59 g-index
60 all docs	60 docs citations	60 times ranked	4443 citing authors

#	Article	IF	Citations
1	Inducing a Magnetic Monopole with Topological Surface States. Science, 2009, 323, 1184-1187.	12.6	824
2	Dynamics of Skyrmion Crystals in Metallic Thin Films. Physical Review Letters, 2011, 107, 136804.	7.8	422
3	Skyrmions in magnetic multilayers. Physics Reports, 2017, 704, 1-49.	25.6	412
4	The 2020 skyrmionics roadmap. Journal Physics D: Applied Physics, 2020, 53, 363001.	2.8	245
5	Dynamics of an Insulating Skyrmion under a Temperature Gradient. Physical Review Letters, 2013, 111, 067203.	7.8	236
6	NÃ©el-type skyrmion in WTe2/Fe3GeTe2 van der Waals heterostructure. Nature Communications, 2020, 11, 3860.	12.8	208
7	Edge-mediated skyrmion chain and its collective dynamics in a confined geometry. Nature Communications, 2015, 6, 8504.	12.8	199
8	Interacting dark energy and dark matter: Observational constraints from cosmological parameters. Nuclear Physics B, 2007, 778, 69-84.	2.5	173
9	Electric-Field-Induced Skyrmion Distortion and Giant Lattice Rotation in the Magnetoelectric Insulator<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:msub><mml:mrow><mml:mi>Cu</mml:mi></mml:mrow><mml:mrow><mml:mn>2</mml:mn></ Physical Review Letters, 2014, 113, 107203.	7.8	169
10	Skyrmion lattice in a two-dimensional chiral magnet. Physical Review B, 2010, 82, .	3.2	162
11	Direct Imaging of a Zero-Field Target Skyrmion and Its Polarity Switch in a Chiral Magnetic Nanodisk. Physical Review Letters, 2017, 119, 197205.	7.8	156
12	Theoretical study of the dynamics of magnetization on the topological surface. Physical Review B, 2010, 81, .	3.2	147
13	Direct imaging of magnetic field-driven transitions of skyrmion cluster states in FeGe nanodisks. Proceedings of the National Academy of Sciences of the United States of America, 2016, 113, 4918-4923.	7.1	125
14	Magnetic skyrmion bundles and their current-driven dynamics. Nature Nanotechnology, 2021, 16, 1086-1091.	31.5	110
15	Reversible manipulation of the magnetic state in SrRuO3 through electric-field controlled proton evolution. Nature Communications, 2020, 11, 184.	12.8	86
16	Electrical probing of field-driven cascading quantized transitions of skyrmion cluster states in MnSi nanowires. Nature Communications, 2015, 6, 7637.	12.8	83
17	Binding a hopfion in a chiral magnet nanodisk. Physical Review B, 2018, 98, .	3.2	83
18	Concurrence of quantum anomalous Hall and topological Hall effects in magnetic topological insulator sandwich heterostructures. Nature Materials, 2020, 19, 732-737.	27.5	72

#	Article	IF	Citations
19	Topological charge analysis of ultrafast single skyrmion creation. Physical Review B, 2016, 93, .	3.2	62
20	Three-Dimensional Dynamics of a Magnetic Hopfion Driven by Spin Transfer Torque. Physical Review Letters, 2020, 124, 127204.	7.8	56
21	Topological spin Hall effect resulting from magnetic skyrmions. Physical Review B, 2015, 92, .	3.2	53
22	Electrical manipulation of skyrmions in a chiral magnet. Nature Communications, 2022, 13, 1593.	12.8	51
23	Emergence of skyrmions from rich parent phases in the molybdenum nitrides. Physical Review B, 2016, 93, .	3.2	43
24	Manipulation of Magnetic Skyrmion in a 2D van der Waals Heterostructure via Both Electric and Magnetic Fields. Advanced Functional Materials, 2021, 31, 2104452.	14.9	40
25	Skyrmion creation and annihilation by spin waves. Applied Physics Letters, 2015, 107, .	3.3	39
26	Possible Topological Hall Effect above Room Temperature in Layered Cr_{1.2}Te₂ Ferromagnet. Nano Letters, 2021, 21, 4280-4286.	9.1	35
27	Charged skyrmions on the surface of a topological insulator. Physical Review B, 2015, 91, .	3.2	34
28	Monopole current and unconventional Hall response on a topological insulator. Physical Review B, 2010, 81, .	3.2	32
29	Planar Hall Effect in Antiferromagnetic MnTe Thin Films. Physical Review Letters, 2019, 122, 106602.	7.8	29
30	<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:mi mathvariant="normal">R</mml:mi><mml:msub><mml:mi mathvariant="normal">h</mml:mi><mml:mn>2</mml:mn></mml:msub><mml:mi mathvariant="normal">M</mml:mi><mml:msub><mml:mi mathvariant="normal">o</mml:mi><mml:mn>3</mml:mn></mml:msub><mml:mi mathvariant="normal">N</mml:mi></mml:mrow></mml:math>: Noncentrosymmetric	3.2	26
31	<mml:math xmlns: Kondo physics in antiferromagnetic Weyl semimetal Mn _{3+ x} Sn _{1â^' x} films. Science Advances, 2020, 6, eabc1977.	10.3	23
32	Thermally driven topology in chiral magnets. Physical Review B, 2017, 96, .	3.2	22
33	Magnetic resonance induced pseudoelectric field and giant current response in axion insulators. Physical Review B, 2019, 100, .	3.2	21
34	Quantifying chiral exchange interaction for NÃ©el-type skyrmions via Lorentz transmission electron microscopy. Physical Review B, 2019, 99, .	3.2	21
35	Size effects on transport properties in topological Anderson insulators. Physical Review B, 2011, 84, .	3.2	20
36	Transport theory of metallicB20helimagnets. Physical Review B, 2015, 91, .	3.2	20

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37	Topological quantum phase transition in an<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:mi>S</mml:mi><mml:mo>=</mml:mo><mml:mn>2</mml:mn></mml:mrow></mml:math>spin chain. Physical Review B, 2010, 81, .	3.2	19
38	Giant perpendicular magnetic anisotropy in Fe/III-V nitride thin films. Science Advances, 2018, 4, eaar7814.	10.3	19
39	Shape dependent resonant modes of skyrmions in magnetic nanodisks. Journal of Magnetism and Magnetic Materials, 2018, 455, 9-13.	2.3	19
40	Weyl fermions induced magnon electrodynamics in a Weyl semimetal. Physical Review B, 2014, 90, .	3.2	16
41	Field-driven oscillation and rotation of a multiskyrmion cluster in a nanodisk. Physical Review B, 2017, 95, .	3.2	16
42	Unusual magnetoresistance in cubic B20 Fe_{0.85}Co_{0.15}Si chiral magnets. New Journal of Physics, 2016, 18, 065010.	2.9	15
43	Chiral-Bubble-Induced Topological Hall Effect in Ferromagnetic Topological Insulator Heterostructures. Nano Letters, 2021, 21, 1108-1114.	9.1	15
44	Giant nonlinear anomalous Hall effect induced by spin-dependent band structure evolution. Physical Review Research, 2022, 4, .	3.6	14
45	Surface buckling of black phosphorus: Determination, origin, and influence on electronic structure. Physical Review Materials, 2017, 1, .	2.4	13
46	Collective modes of three-dimensional magnetic structures: A study of target skyrmions. Journal of Magnetism and Magnetic Materials, 2019, 489, 165447.	2.3	11
47	Geometrically stabilized skyrmionic vortex in FeGe tetrahedral nanoparticles. Nature Materials, 2022, 21, 305-310.	27.5	11
48	U(1) symmetry of the spin-orbit coupled Hubbard model on the kagome lattice. Physical Review B, 2015, 92, .	3.2	9
49	Spin-Josephson effects in exchange coupled antiferromagnetic insulators. Physical Review B, 2016, 94, .	3.2	9
50	Electronic scattering off a magnetic hopfion. Physical Review B, 2021, 104, .	3.2	7
51	Quantum-Well Bound States in Graphene Heterostructure Interfaces. Physical Review Letters, 2021, 127, 086805.	7.8	5
52	Current-induced dynamics and tunable spectra of a magnetic chiral bobber. Physical Review B, 2021, 104, .	3.2	3
53	Slowly rotating neutron stars and hadronic stars in the chiral SU(3) quark mean-field model. European Physical Journal A, 2010, 43, 295-301.	2.5	2
54	Thermally driven topology in frustrated systems. Physical Review B, 2019, 99, .	3.2	2

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55	Topological Hall effect in magnetic topological insulator films. Journal of Magnetism and Magnetic Materials, 2021, 528, 167700.	2.3	2
56	Current modulator based on topological insulator with sliding magnetic superlattice. Physical Review B, 2010, 81, .	3.2	1
57	Discrete quantum geometry and intrinsic spin Hall effect. Physical Review B, 2021, 104, .	3.2	1