Yan Zhou

List of Publications by Citations

223 papers	6,902 citations	42 h-index	77 g-index
244 ext. papers	8,989 ext. citations	4.5 avg, IF	6.49 L-index

#	Paper	IF	Citations
223	Direct observation of the skyrmion Hall effect. *Nature Physics*, **2017**, 13, 162-169	16.2	555
222	Magnetic skyrmion logic gates: conversion, duplication and merging of skyrmions. *Scientific Reports*, **2015**, 5, 9400	4.9	467
221	Magnetic bilayer-skyrmions without skyrmion Hall effect. *Nature Communications*, **2016**, 7, 10293	17.4	270
220	A reversible conversion between a skyrmion and a domain-wall pair in a junction geometry. *Nature Communications*, **2014**, 5, 4652	17.4	249
219	Molecular orientation and alignment by intense single-cycle THz pulses. *Physical Review Letters*, **2011**, 107, 163603	7.4	218
218	Antiferromagnetic Skyrmion: Stability, Creation and Manipulation. *Scientific Reports*, **2016**, 6, 24795	4.9	206
217	Precision Measurement of the Electron's Electric Dipole Moment Using Trapped Molecular Ions. *Physical Review Letters*, **2017**, 119, 153001	7.4	202
216	Current-driven dynamics and inhibition of the skyrmion Hall effect of ferrimagnetic skyrmions in GdFeCo films. *Nature Communications*, **2018**, 9, 959	17.4	197
215	Skyrmion-Electronics: An Overview and Outlook. *Proceedings of the IEEE*, **2016**, 104, 2040-2061	14.3	196
214	Magnetic skyrmion transistor: skyrmion motion in a voltage-gated nanotrack. *Scientific Reports*, **2015**, 5, 11369	4.9	158
213	Magnetic skyrmion-based synaptic devices. *Nanotechnology*, **2017**, 28, 08LT02	3.4	152
212	Dynamically stabilized magnetic skyrmions. *Nature Communications*, **2015**, 6, 8193	17.4	148
211	Skyrmion-based artificial synapses for neuromorphic computing. *Nature Electronics*, **2020**, 3, 148-155	28.4	130
210	Voltage Controlled Magnetic Skyrmion Motion for Racetrack Memory. *Scientific Reports*, **2016**, 6, 23164	4.9	130
209	Skyrmion-electronics: writing, deleting, reading and processing magnetic skyrmions toward spintronic applications. *Journal of Physics Condensed Matter*, **2020**, 32, 143001	1.8	112
208	Magnetic skyrmion-based artificial neuron device. *Nanotechnology*, **2017**, 28, 31LT01	3.4	105
207	Skyrmion dynamics in a frustrated ferromagnetic film and current-induced helicity locking-unlocking transition. *Nature Communications*, **2017**, 8, 1717	17.4	95

206	Spin-torque oscillator with tilted fixed layer magnetization. *Applied Physics Letters*, **2008**, 92, 262508	3.4	94
205	Skyrmion-Based Dynamic Magnonic Crystal. *Nano Letters*, **2015**, 15, 4029-36	11.5	82
204	Control and manipulation of a magnetic skyrmionium in nanostructures. *Physical Review B*, **2016**, 94,	3.3	81
203	Deterministic creation and deletion of a single magnetic skyrmion observed by direct time-resolved X-ray microscopy. *Nature Electronics*, **2018**, 1, 288-296	28.4	74
202	Mechanisms of imprint effect on ferroelectric thin films. *Journal of Applied Physics*, **2005**, 98, 024111	2.5	71
201	Electric Field-Induced Creation and Directional Motion of Domain Walls and Skyrmion Bubbles. *Nano Letters*, **2019**, 19, 353-361	11.5	67
200	Phase-locked spin torque oscillators: Impact of device variability and time delay. *Journal of Applied Physics*, **2007**, 101, 09A503	2.5	61
199	Magnetic skyrmions: intriguing physics and new spintronic device concepts. *National Science Review* , **2019**, 6, 210-212	10.8	60
198	All-magnetic control of skyrmions in nanowires by a spin wave. *Nanotechnology*, **2015**, 26, 225701	3.4	59
197	An Improved Racetrack Structure for Transporting a Skyrmion. *Scientific Reports*, **2017**, 7, 45330	4.9	58
196	A compact skyrmionic leaky-integrate-fire spiking neuron device. *Nanoscale*, **2018**, 10, 6139-6146	7.7	57
195	Zero-field precession and hysteretic threshold currents in a spin torque nano device with tilted polarizer. *New Journal of Physics*, **2009**, 11, 103028	2.9	56
194	Electromagnetically induced absorption in a three-resonator metasurface system. *Scientific Reports* , **2015**, 5, 10737	4.9	55
193	Tunable intrinsic phase of a spin torque oscillator. *Applied Physics Letters*, **2008**, 92, 092505	3.4	55
192	Spin torque nano-oscillators based on antiferromagnetic skyrmions. *Applied Physics Letters*, **2019**, 114, 042402	3.4	53
191	Complementary Skyrmion Racetrack Memory With Voltage Manipulation. *IEEE Electron Device Letters*, **2016**, 37, 924-927	4.4	52
190	Perpendicular spin torque promotes synchronization of magnetic tunnel junction based spin torque oscillators. *Applied Physics Letters*, **2009**, 94, 112503	3.4	52
189	Thermally stable magnetic skyrmions in multilayer synthetic antiferromagnetic racetracks. *Physical Review B*, **2016**, 94,	3.3	51

188	Skyrmions in Magnetic Tunnel Junctions. *ACS Applied Materials & Interfaces*, **2018**, 10, 16887-16892	9.5	49
187	Dynamics of the antiferromagnetic skyrmion induced by a magnetic anisotropy gradient. *Physical Review B*, **2018**, 98,	3.3	47
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185	Microwave generation of tilted-polarizer spin torque oscillator. *Journal of Applied Physics*, **2009**, 105, 07D116	2.5	44
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183	Negative capacitance transistors with monolayer black phosphorus. *Npj Quantum Materials*, **2016**, 1,	5	42
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181	Electric-field-driven non-volatile multi-state switching of individual skyrmions in a multiferroic heterostructure. *Nature Communications*, **2020**, 11, 3577	17.4	40
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179	Oscillatory transient regime in the forced dynamics of a nonlinear auto oscillator. *Physical Review B*, **2010**, 82,	3.3	38
178	Skyrmion domain wall collision and domain wall-gated skyrmion logic. *Physical Review B*, **2016**, 94,	3.3	37
177	Current-induced spin-wave excitation in Pt/YIG bilayer. *Physical Review B*, **2013**, 88,	3.3	35
176	Spin Torque Oscillators and RF Currents: Modulation, Locking, and Ringing. *Integrated Ferroelectrics*, **2011**, 125, 147-154	0.8	34
175	Dynamics of a magnetic skyrmionium driven by spin waves. *Applied Physics Letters*, **2018**, 112, 142404	3.4	32
174	Manipulating and trapping skyrmions by magnetic field gradients. *New Journal of Physics*, **2017**, 19, 083008	2.9	32
173	High-efficient catalytic reduction of 4-nitrophenol based on reusable Ag nanoparticles/graphene-loading loofah sponge hybrid. *Nanotechnology*, **2018**, 29, 315702	3.4	32
172	Néel-type skyrmions and their current-induced motion in van der Waals ferromagnet-based heterostructures. *Physical Review B*, **2021**, 103,	3.3	30
171	Motion of skyrmions in nanowires driven by magnonic momentum-transfer forces. *New Journal of Physics*, **2017**, 19, 065001	2.9	29

170	High-topological-number magnetic skyrmions and topologically protected dissipative structure. *Physical Review B*, **2016**, 93,	3.3	29
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167	Chopping skyrmions from magnetic chiral domains with uniaxial stress in magnetic nanowire. *Applied Physics Letters*, **2017**, 111, 022406	3.4	27
166	Current-Induced Dynamics and Chaos of Antiferromagnetic Bimerons. *Physical Review Letters*, **2020** , 124, 037202	7.4	26
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161	Strain-controlled skyrmion creation and propagation in ferroelectric/ferromagnetic hybrid wires. *Journal of Magnetism and Magnetic Materials*, **2018**, 455, 19-24	2.8	23
160	Fermionic theory for quantum antiferromagnets with spin S>12. *Physical Review B*, **2010**, 82,	3.3	23
159	Current-Induced Helicity Reversal of a Single Skyrmionic Bubble Chain in a Nanostructured Frustrated Magnet. *Advanced Materials*, **2020**, 32, e1904815	24	23
158	Magnetic skyrmions for unconventional computing. *Materials Horizons*, **2021**, 8, 854-868	14.4	23
157	Current-Induced Dynamics of the Antiferromagnetic Skyrmion and Skyrmionium. *Physical Review Applied*, **2019**, 12,	4.3	22
156	Realization of Isolated and High-Density Skyrmions at Room Temperature in Uncompensated Synthetic Antiferromagnets. *Nano Letters*, **2020**, 20, 3299-3305	11.5	21
155	Skyrmion dynamics in width-varying nanotracks and implications for skyrmionic applications. *Applied Physics Letters*, **2017**, 111, 202406	3.4	21
154	Chirped-pulse millimeter-wave spectroscopy of Rydberg-Rydberg transitions. *Physical Review Letters*, **2011**, 107, 143001	7.4	21
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146	Fractional locking of spin-torque oscillator by injected ac current. *Physical Review B*, **2011**, 83,	3.3	19
145	Coupled perturbed heteroclinic cycles: Synchronization and dynamical behaviors of spin-torque oscillators. *Physical Review B*, **2011**, 84,	3.3	19
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143	Current-Driven Dynamics of Frustrated Skyrmions in a Synthetic Antiferromagnetic Bilayer. *Physical Review Applied*, **2019**, 11,	4.3	18
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139	Skyrmion stability in nanocontact spin-transfer oscillators. *AIP Advances*, **2015**, 5, 097126	1.5	18
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121	Second-Scale Coherence Measured at the Quantum Projection Noise Limit with Hundreds of Molecular Ions. *Physical Review Letters*, **2020**, 124, 053201	7.4	11
120	Dynamics of an elliptical ferromagnetic skyrmion driven by the spin□rbit torque. *Applied Physics Letters*, **2020**, 116, 022407	3.4	11
119	Controllable transport of a skyrmion in a ferromagnetic narrow channel with voltage-controlled magnetic anisotropy. *Journal Physics D: Applied Physics*, **2018**, 51, 205002	3	11
118	Controlled skyrmion nucleation in extended magnetic layers using a nanocontact geometry. *Physical Review B*, **2017**, 96,	3.3	11
117	A spiking neuron constructed by the skyrmion-based spin torque nano-oscillator. *Applied Physics Letters*, **2020**, 116, 122402	3.4	10

116	Direct imaging of an inhomogeneous electric current distribution using the trajectory of magnetic half-skyrmions. *Science Advances*, **2020**, 6, eaay1876	14.3	10
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64	Current-induced dynamics of skyrmion tubes in synthetic antiferromagnetic multilayers. *Physical Review B*, **2021**, 103,	3.3	4
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