

# Xiangrong Wang

## List of Publications by Year in descending order

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94  
papers

2,086  
citations

257357

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265120

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docs citations

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times ranked

1902  
citing authors

#	ARTICLE	IF	CITATIONS
1	Skyrmion pinning by disk-shaped defects. <i>Physical Review B</i> , 2022, 105, .	1.1	7
2	Nematic and smectic stripe phases and stripe-SkX transformations. <i>Science China: Physics, Mechanics and Astronomy</i> , 2022, 65, 1.	2.0	7
3	Hermitian chiral boundary states in non-Hermitian topological insulators. <i>Physical Review B</i> , 2022, 105, .	1.1	5
4	A theory of skyrmion crystal formation. <i>Nanoscale</i> , 2022, 14, 7516-7529.	2.8	10
5	Observation of the antiferromagnetic spin Hall effect. <i>Nature Materials</i> , 2021, 20, 800-804.	13.3	113
6	Influence of the spin pumping induced inverse spin Hall effect on spin-torque ferromagnetic resonance measurements. <i>Applied Physics Letters</i> , 2021, 118, 132401.	1.5	5
7	Robustness of helical hinge states of weak second-order topological insulators. <i>Physical Review B</i> , 2021, 103, .	1.1	11
8	Anomalous spin Hall and inverse spin Hall effects in magnetic systems. <i>Communications Physics</i> , 2021, 4, .	2.0	18
9	Topological magnonics. <i>Journal of Applied Physics</i> , 2021, 129, .	1.1	29
10	Random walk of antiferromagnetic skyrmions in granular films. <i>Physical Review B</i> , 2021, 103, .	1.1	8
11	Stripe skyrmions and skyrmion crystals. <i>Communications Physics</i> , 2021, 4, .	2.0	17
12	Nonreciprocal emergence of hybridized magnons in magnetic thin films. <i>Physical Review B</i> , 2021, 104, .	1.1	9
13	Dancing synchronization in coupled spin-torque nano-oscillators. <i>Physical Review B</i> , 2021, 104, .	1.1	3
14	Size and profile of skyrmions in skyrmion crystals. <i>Communications Physics</i> , 2021, 4, .	2.0	30
15	Experimental observation of edge-dependent quantum pseudospin Hall effect. <i>Physical Review B</i> , 2021, 104, .	1.1	6
16	Second-order topological solitonic insulator in a breathing square lattice of magnetic vortices. <i>Physical Review B</i> , 2020, 101, .	1.1	22
17	Backward Magnetostatic Surface Spin Waves in Coupled Co/FeNi Bilayers. <i>Physica Status Solidi - Rapid Research Letters</i> , 2020, 14, 2000118.	1.2	8
18	Current-driven skyrmion motion in granular films. <i>Physical Review B</i> , 2020, 101, .	1.1	38

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19	Interfacial modulation of spin pumping in YIG/Pt. Physical Review B, 2020, 102, .	1.1	14
20	Symmetry-Protected Zero Modes in Metamaterials Based on Topological Spin Texture. Physical Review Applied, 2020, 13, .	1.5	21
21	Quantifying the bulk and interfacial Dzyaloshinskii-Moriya interactions. Physical Review B, 2020, 101, .	1.1	6
22	Level statistics of extended states in random non-Hermitian Hamiltonians. Physical Review B, 2020, 101, .	1.1	18
23	Recent progress in antiferromagnetic dynamics. Europhysics Letters, 2020, 132, 57001.	0.7	9
24	Disorder-induced quantum phase transitions in three-dimensional second-order topological insulators. Physical Review Research, 2020, 2, .	1.3	18
25	Proper dissipative torques in antiferromagnetic dynamics. Europhysics Letters, 2019, 126, 67006.	0.7	23
26	Modulating Blue Phosphorene by Synergetic Codoping: Indirect to Direct Gap Transition and Strong Bandgap Bowing. Advanced Functional Materials, 2019, 29, 1808721.	7.8	6
27	Wiggling skyrmion propagation under parametric pumping. Physical Review B, 2019, 99, .	1.1	28
28	Charge-induced ferromagnetic phase transition and anomalous Hall effect in full $d$ -band nonmagnetic metals. Physical Review B, 2019, 99, .	1.1	9
29	Non-Wigner-Dyson level statistics and fractal wave function of disordered Weyl semimetals. Physical Review B, 2019, 99, .	1.1	5
30	Anatomy of electrical signals and dc-voltage line shape in spin-torque ferromagnetic resonance. Physical Review B, 2019, 99, .	1.1	11
31	Higher-order topological solitonic insulators. Npj Computational Materials, 2019, 5, .	3.5	38
32	Metal to marginal-metal transition in two-dimensional ferromagnetic electron gases. Physical Review B, 2019, 100, .	1.1	7
33	Anomalies in the switching dynamics of C-type antiferromagnets and antiferromagnetic nanowires. Physical Review Research, 2019, 1, .	1.3	3
34	Breaking the current density threshold in spin-orbit-torque magnetic random access memory. Physical Review B, 2018, 97, .	1.1	22
35	Eavesdropping on spin waves inside the domain-wall nanochannel via three-magnon processes. Physical Review B, 2018, 97, .	1.1	31
36	Interplay of wave localization and turbulence in spin Seebeck effect. Physical Review B, 2018, 98, .	1.1	5

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37	Classification of magnetic forces acting on an antiferromagnetic domain wall. <i>Physical Review B</i> , 2018, 97, .	1.1	15
38	A theory on skyrmion size. <i>Communications Physics</i> , 2018, 1, .	2.0	219
39	Emergence of antiferromagnetic quantum domain walls. <i>Physical Review B</i> , 2018, 98, .	1.1	6
40	Subnanosecond magnetization reversal of a magnetic nanoparticle driven by a chirp microwave field pulse. <i>Physical Review B</i> , 2018, 97, .	1.1	7
41	Magnon-photon coupling in antiferromagnets. <i>Applied Physics Letters</i> , 2017, 110, .	1.5	37
42	The origin of spin current in YIG/nonmagnetic metal multilayers at ferromagnetic resonance. <i>Chinese Physics B</i> , 2017, 26, 047202.	0.7	5
43	Chiral anomaly of Weyl magnons in stacked honeycomb ferromagnets. <i>Physical Review B</i> , 2017, 96, .	1.1	59
44	Anderson transition of two-dimensional spinful electrons in the Gaussian unitary ensemble. <i>Physical Review B</i> , 2017, 96, .	1.1	8
45	Magnonic Weyl semimetal and chiral anomaly in pyrochlore ferromagnets. <i>Physical Review B</i> , 2017, 95, .	1.1	83
46	Large Magnetoresistance in Silicon at Room Temperature Induced by Onsite Coulomb Interaction. <i>Advanced Electronic Materials</i> , 2017, 3, 1700186.	2.6	4
47	A generic phase between disordered Weyl semimetal and diffusive metal. <i>Scientific Reports</i> , 2017, 7, 14382.	1.6	9
48	Topologically protected unidirectional edge spin waves and beam splitter. <i>Physical Review B</i> , 2017, 95, .	1.1	81
49	Absence of localization in disordered two-dimensional electron gas at weak magnetic field and strong spin-orbit coupling. <i>Scientific Reports</i> , 2016, 6, 33304.	1.6	14
50	Skyrmion Creation and Manipulation by Nano-Second Current Pulses. <i>Scientific Reports</i> , 2016, 6, 22638.	1.6	70
51	A room-temperature magnetic semiconductor from a ferromagnetic metallic glass. <i>Nature Communications</i> , 2016, 7, 13497.	5.8	71
52	Influence of nonlocal damping on the field-driven domain wall motion. <i>Physical Review B</i> , 2016, 94, .	1.1	15
53	Thermal spin current and spin accumulation at ferromagnetic insulator/nonmagnetic metal interface. <i>Physical Review B</i> , 2016, 94, .	1.1	14
54	Topological Anderson insulators in systems without time-reversal symmetry. <i>Physical Review B</i> , 2016, 93, .	1.1	19

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55	Boosting domain wall propagation by notches. <i>Physical Review B</i> , 2015, 92, .	1.1	30
56	Vortex-assisted domain wall depinning and propagation in notched nanowires. <i>European Physical Journal B</i> , 2015, 88, 1.	0.6	11
57	Nano magnetic vortex wall guide. <i>AIP Advances</i> , 2015, 5, .	0.6	9
58	Band of Critical States in Anderson Localization in a Strong Magnetic Field with Random Spin-Orbit Scattering. <i>Physical Review Letters</i> , 2015, 114, 096803.	2.9	23
59	A versatile vortex nanodevice. <i>Materials Research Innovations</i> , 2015, 19, S50-S52.	1.0	1
60	Anti-levitation in integer quantum Hall systems. <i>Physical Review B</i> , 2014, 89, .	1.1	7
61	Domain wall pinning in notched nanowires. <i>Physical Review B</i> , 2014, 89, .	1.1	51
62	Self-sustained current oscillations in spin-blockaded quantum dots. <i>Physical Review B</i> , 2013, 87, .	1.1	3
63	Observation of current-driven oscillatory domain wall motion in Ni80Fe20/Co bilayer nanowire. <i>Applied Physics Letters</i> , 2013, 103, 042403.	1.5	7
64	Magnonic Spin-Transfer Torque and Domain Wall Propagation. <i>IEEE Transactions on Magnetics</i> , 2012, 48, 4074-4076.	1.2	6
65	Vacancy-induced splitting of the Dirac nodal point in graphene. <i>Physical Review B</i> , 2012, 85, .	1.1	42
66	Current-induced domain wall motion with adiabatic and nonadiabatic spin torques in magnetic nanowires. <i>European Physical Journal B</i> , 2011, 79, 449-453.	0.6	10
67	Quantum spinon oscillations in a finite one-dimensional transverse Ising model. <i>Physical Review B</i> , 2011, 83, .	1.1	6
68	Spin transfer torque enhancement in dual spin valves in the ballistic regime. <i>Physical Review B</i> , 2011, 83, .	1.1	2
69	Shape of the Landau subbands in disordered graphene. <i>Physical Review B</i> , 2011, 83, .	1.1	8
70	Optimal time-dependent current pattern for domain wall dynamics in nanowires. <i>Applied Physics Letters</i> , 2010, 96, 162506.	1.5	11
71	Impurities in graphene. <i>Physica Status Solidi (A) Applications and Materials Science</i> , 2010, 207, 2726-2738.	0.8	5
72	ANALYSIS OF MAGNETIC PROPERTY MEASUREMENTS IN ULTRAFAST MAGNETIZATION DYNAMICS. <i>Modern Physics Letters B</i> , 2010, 24, 2215-2224.	1.0	1

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73	Motion of transverse domain walls in thin magnetic nanostripes under transverse magnetic fields. Journal of Applied Physics, 2010, 107, .	1.1	20
74	Evaluation of the Greenâ€™s function of disordered graphene. Physical Review B, 2010, 82, .	1.1	13
75	Inverse square-root field dependence of conductivity in organic field-effect transistors. Applied Physics Letters, 2009, 94, .	1.5	15
76	High-field domain wall propagation velocity in magnetic nanowires. Europhysics Letters, 2009, 86, 67001.	0.7	64
77	Resonance and antiresonance effects in electronic transport through several-quantum-dot combinations. Journal of Applied Physics, 2009, 105, 043706.	1.1	16
78	Quantum blockade and loop currents in graphene with topological defects. Physical Review B, 2008, 78, .	1.1	59
79	Light Emitting Diodes of Inverse Spin Valves. Research Letters in Physics, 2008, 2008, 1-4.	0.2	6
80	Microstructure, magnetic, and spin-dependent transport properties of (Zn,Cr)Te films fabricated by magnetron sputtering. Physical Review B, 2008, 77, .	1.1	7
81	Negative differential resistance and tunable peak-to-valley ratios in a silicon nanochain. Journal of Applied Physics, 2008, 103, 103719.	1.1	5
82	Theoretical Limits on the Minimal Switching Field and the Switching Current in Magnetization Reversal. Materials Research Society Symposia Proceedings, 2007, 1032, 1.	0.1	1
83	Theoretical Limit in the Magnetization Reversal of Stoner Particles. Physical Review Letters, 2007, 98, 077201.	2.9	44
84	QUANTUM PHASE TRANSITION AND ENTANGLEMENT IN THE TRANSVERSE-FIELD ISING MODEL. International Journal of Quantum Information, 2006, 04, 705-713.	0.6	2
85	Explanation to the resistance anomaly observed in nanowires. Applied Physics Letters, 2006, 88, 233110.	1.5	8
86	A Unified Picture Of The Scaling And Non-Scaling Behavior In Quantum Hall Plateau Transitions. AIP Conference Proceedings, 2005, , .	0.3	0
87	An External ac Bias Induced Expansion of Dynamic Voltage Bands in a Weakly Coupled GaAs/AlAs Superlattice. AIP Conference Proceedings, 2005, , .	0.3	0
88	ENTANGLEMENT IN THE XY SPIN CHAIN WITH NONUNIFORM EXTERNAL MAGNETIC FIELDS. International Journal of Quantum Information, 2005, 03, 569-577.	0.6	1
89	Fast magnetization switching of Stoner particles: A nonlinear dynamics picture. Physical Review B, 2005, 71, .	1.1	69
90	Negative differential capacitance of quantum dots. Physical Review B, 2002, 65, .	1.1	40

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91	Antiresonance scattering at defect levels in the quantum conductance of a one-dimensional system. Physical Review B, 2002, 65, .	1.1	68
92	Reply to "Comment on "Dephasing of conduction electrons due to zero-point fluctuation" Physical Review B, 2001, 64, .	1.1	1
93	Bistable characteristic and current jumps in field electron emission of nanocrystalline diamond films. Journal of Applied Physics, 2001, 90, 4810-4814.	1.1	19
94	Analysis of multiscaling structure in diffusion-limited aggregation: A kinetic renormalization-group approach. Physical Review A, 1989, 39, 5974-5984.	1.0	39