

Xin-Cheng Xie

List of Publications by Year in descending order

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128
papers

3,608
citations

159358

30
h-index

155451

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129
all docs

129
docs citations

129
times ranked

3813
citing authors

#	ARTICLE	IF	CITATIONS
1	Observation of superconductivity induced by a point contact on 3D Dirac semimetal Cd ₃ As ₂ crystals. Nature Materials, 2016, 15, 38-42.	13.3	209
2	Anisotropic magnetotransport and exotic longitudinal linear magnetoresistance in WTe ₂ crystals. Physical Review B, 2015, 92, .	1.1	156
3	Quantum Griffiths singularity of superconductor-metal transition in Ga thin films. Science, 2015, 350, 542-545.	6.0	151
4	Disorder-induced nonlinear Hall effect with time-reversal symmetry. Nature Communications, 2019, 10, 3047.	5.8	140
5	3D Quantum Hall Effect of Fermi Arcs in Topological Semimetals. Physical Review Letters, 2017, 119, 136806.	2.9	131
6	Band Signatures for Strong Nonlinear Hall Effect in Bilayer WTe ₂ . Physical Review Letters, 2018, 121, 266601.	2.9	128
7	Experimental signatures of spin superfluid ground state in canted antiferromagnet Cr ₂ O ₃ via nonlocal spin transport. Science Advances, 2018, 4, eaat1098.	4.7	127
8	Disorder and Metal-Insulator Transitions in Weyl Semimetals. Physical Review Letters, 2015, 115, 246603.	2.9	124
9	Topological Imbert-Fedorov Shift in Weyl Semimetals. Physical Review Letters, 2015, 115, 156602.	2.9	104
10	Nonlinear Hall effects. Nature Reviews Physics, 2021, 3, 744-752.	11.9	104
11	Electron scattering in tantalum monoarsenide. Physical Review B, 2017, 95, .	1.1	99
12	Spin current as a probe of quantum materials. Nature Materials, 2020, 19, 139-152.	13.3	94
13	Rules for Phase Shifts of Quantum Oscillations in Topological Nodal-Line Semimetals. Physical Review Letters, 2018, 120, 146602.	2.9	82
14	Detection of a Superconducting Phase in a Two-Atom Layer of Hexagonal Ga Film Grown on Semiconducting GaN(0001). Physical Review Letters, 2015, 114, 107003.	2.9	81
15	Magnetic-tunnelling-induced Weyl node annihilation in TaP. Nature Physics, 2017, 13, 979-986.	6.5	80
16	Quantum theory of the nonlinear Hall effect. Nature Communications, 2021, 12, 5038.	5.8	55
17	Discovery of log-periodic oscillations in ultraquantum topological materials. Science Advances, 2018, 4, eaau5096.	4.7	54
18	Chiral anomaly and ultrahigh mobility in crystalline HfT ₅ . Physical Review B, 2016, 93, .	1.1	53

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19	Planar Hall effect in tilted Weyl semimetals. <i>Physical Review B</i> , 2019, 99, .	1.1	53
20	Crossover between Weak Antilocalization and Weak Localization of Bulk States in Ultrathin Bi ₂ Se ₃ Films. <i>Scientific Reports</i> , 2014, 4, 5817.	1.6	52
21	Theory for the Charge-Density-Wave Mechanism of 3D Quantum Hall Effect. <i>Physical Review Letters</i> , 2020, 125, 206601.	2.9	50
22	Probe of spin dynamics in superconducting NbN thin films via spin pumping. <i>Physical Review B</i> , 2018, 97, .	1.1	49
23	Observation of quantum Griffiths singularity and ferromagnetism at the superconducting interface of LaAlO ₃ /SrTiO ₃ heterostructure. <i>Physical Review B</i> , 2016, 94, .	1.1	49
24	3D Quantum Hall Effect and a Global Picture of Edge States in Weyl Semimetals. <i>Physical Review Letters</i> , 2020, 125, 036602.	2.9	38
25	Spin injection and inverse Edelstein effect in the surface states of topological Kondo insulator SmB ₆ . <i>Nature Communications</i> , 2016, 7, 13485.	5.8	37
26	Quantum perfect crossed Andreev reflection in top-gated quantum anomalous Hall insulator-superconductor junctions. <i>Physical Review B</i> , 2017, 95, .	1.1	37
27	Manipulation and Characterization of the Valley-Polarized Topological Kink States in Graphene-Based Interferometers. <i>Physical Review Letters</i> , 2018, 121, 156801.	2.9	36
28	Spin superconductor in ferromagnetic graphene. <i>Physical Review B</i> , 2011, 84, .	1.1	34
29	Analytical solution for the surface states of the antiferromagnetic topological insulator MnBi ₂ Te ₄ . <i>Physical Review B</i> , 2020, 102, .	1.1	34
30	Using nonlocal surface transport to identify the axion insulator. <i>Physical Review B</i> , 2021, 103, .	1.1	33
31	Two-dimensional lattice model for the surface states of topological insulators. <i>Physical Review B</i> , 2017, 95, .	1.1	30
32	Chiral wave-packet scattering in Weyl semimetals. <i>Physical Review B</i> , 2016, 93, .	1.1	28
33	Field-Tunable One-Sided Higher-Order Topological Hinge States in Dirac Semimetals. <i>Physical Review Letters</i> , 2021, 127, 066801.	2.9	28
34	Detection of spinons via spin transport. <i>Physical Review B</i> , 2013, 88, .	1.1	27
35	Ultraquantum magnetoresistance in the Kramers-Weyl semimetal candidate $\hat{\Gamma}_2\hat{A}'$ -Ag ₂ Se. <i>Physical Review B</i> , 2017, 96, .	1.1	27
36	Signatures of a strange metal in a bosonic system. <i>Nature</i> , 2022, 601, 205-210.	13.7	27

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37	Multiorbital model reveals a second-order topological insulator in $\langle \text{mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"} \langle \text{mml:mrow} \langle \text{mml:mn} \rangle 1 \langle \text{mml:mn} \rangle \langle \text{mml:mi} \rangle \text{H} \langle \text{mml:mi} \rangle \frac{1}{2} \langle \text{mml:mrow} \rangle \langle \text{mml:math} \rangle \text{transition metal dichalcogenides. Physical Review B, 2021, 104, .$	5.8	26
38	Electrically switchable van der Waals magnon valves. Nature Communications, 2021, 12, 6279.	5.8	26
39	Non-Abelian Braiding of Dirac Fermionic Modes Using Topological Corner States in Higher-Order Topological Insulator. Physical Review Letters, 2020, 125, 036801.	2.9	24
40	Coexistence of Quantum Hall and Quantum Anomalous Hall Phases in Disordered $\langle \text{mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"} \text{display="inline"} \langle \text{mml:mrow} \langle \text{mml:msub} \langle \text{mml:mrow} \langle \text{mml:mi} \rangle \text{MnBi} \langle \text{mml:mi} \rangle \langle \text{mml:mrow} \rangle \langle \text{mml:mrow} \langle \text{mml:mn} \rangle 2 \langle \text{mml:mn} \rangle \langle \text{mml:math} \rangle \text{Physical Review Letters, 2021, 127, 236402.}$	2.9	24
41	Critical Behavior and Universal Signature of an Axion Insulator State. Physical Review Letters, 2021, 126, 156601.	2.9	23
42	Coulomb Instabilities of a Three-Dimensional Higher-Order Topological Insulator. Physical Review Letters, 2021, 127, 176601.	2.9	22
43	Spin-polarized $\langle \text{mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"} \text{display="inline"} \langle \text{mml:mrow} \langle \text{mml:mi} \rangle \hat{I}^{1/2} \langle \text{mml:mi} \rangle \langle \text{mml:mo} \rangle = \langle \text{mml:mo} \rangle \langle \text{mml:mn} \rangle 0 \langle \text{mml:mn} \rangle \langle \text{mml:mrow} \rangle \langle \text{mml:math} \rangle \text{state of graphene: A spin superconductor. Physical Review B, 2013, 87, .$	1.1	21
44	Tunable Anderson metal-insulator transition in quantum spin-Hall insulators. Physical Review B, 2015, 91, .	1.1	21
45	Positive magnetoconductivity of Weyl semimetals in the ultraquantum limit. Physical Review B, 2016, 93, .	1.1	21
46	Anomalous quantum Griffiths singularity in ultrathin crystalline lead films. Nature Communications, 2019, 10, 3633.	5.8	21
47	Effects of Random Domains on the Zero Hall Plateau in the Quantum Anomalous Hall Effect. Physical Review Letters, 2019, 122, 026601.	2.9	21
48	Double-frequency Aharonov-Bohm effect and non-Abelian braiding properties of Jackiw-Rebbi zero-mode. National Science Review, 2020, 7, 572-578.	4.6	21
49	Role of Oxygen in Ionic Liquid Gating on Two-Dimensional $\text{Cr} \langle \text{sub} \rangle 2 \langle \text{sub} \rangle \text{Ge} \langle \text{sub} \rangle 2 \langle \text{sub} \rangle \text{Te} \langle \text{sub} \rangle 6 \langle \text{sub} \rangle$: A Non-oxide Material. ACS Applied Materials & Interfaces, 2018, 10, 1383-1388.	4.0	20
50	Unconventional Hall effect induced by Berry curvature. National Science Review, 2020, 7, 1879-1885.	4.6	19
51	Transport properties of Floquet topological superconductors at the transition from the topological phase to the Anderson localized phase. Physical Review B, 2014, 90, .	1.1	18
52	Dephasing Effect on Backscattering of Helical Surface States in 3D Topological Insulators. Physical Review Letters, 2014, 113, 046805.	2.9	18
53	Kondo effect with Weyl semimetal Fermi arcs. Physical Review B, 2018, 97, .	1.1	18
54	Coexistence and decoupling of bulk and edge states in disordered two-dimensional topological insulators. Physical Review B, 2014, 90, .	1.1	17

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55	Global phase diagram of disordered type-II Weyl semimetals. <i>Physical Review B</i> , 2017, 96, .	1.1	17
56	Cycling Fermi arc electrons with Weyl orbits. <i>Nature Reviews Physics</i> , 2021, 3, 660-670.	11.9	17
57	Observation of In-Plane Quantum Griffiths Singularity in Two-Dimensional Crystalline Superconductors. <i>Physical Review Letters</i> , 2021, 127, 137001.	2.9	17
58	Berry phase induced valley level crossing in bilayer graphene quantum dots. <i>Physical Review B</i> , 2019, 99, .	1.1	16
59	Hinged quantum spin Hall effect in antiferromagnetic topological insulators. <i>Physical Review B</i> , 2020, 101, .	1.1	16
60	Ginzburgâ€“Landau-type theory of spin superconductivity. <i>Nature Communications</i> , 2013, 4, 2951.	5.8	15
61	Quantum interference in topological insulator Josephson junctions. <i>Physical Review B</i> , 2016, 93, .	1.1	15
62	Log-periodic quantum magneto-oscillations and discrete-scale invariance in topological material HfTe5. <i>National Science Review</i> , 2019, 6, 914-920.	4.6	15
63	Evidence for anisotropic spin-triplet Andreev reflection at the 2D van der Waals ferromagnet/superconductor interface. <i>Nature Communications</i> , 2021, 12, 6725.	5.8	15
64	Universal boundary entropies in conformal field theory: A quantum Monte Carlo study. <i>Physical Review B</i> , 2017, 96, .	1.1	14
65	Quantum secure direct communication with an untrusted Charlie using imperfect measurement devices. <i>Science China: Physics, Mechanics and Astronomy</i> , 2020, 63, 1.	2.0	14
66	Effect of magnetic field on a magnetic topological insulator film with structural inversion asymmetry. <i>Physical Review B</i> , 2014, 89, .	1.1	13
67	Spin selectivity effect in achiral molecular systems. <i>Physical Review B</i> , 2016, 94, .	1.1	13
68	Numerical study of universal conductance fluctuations in three-dimensional topological semimetals. <i>Physical Review B</i> , 2017, 96, .	1.1	13
69	Even-odd interference effect in a topological superconducting wire. <i>Physical Review B</i> , 2017, 96, .	1.1	13
70	Noise signatures for determining chiral Majorana fermion modes. <i>Physical Review B</i> , 2018, 98, .	1.1	13
71	Doubled Shapiro steps in a topological Josephson junction. <i>Physical Review B</i> , 2018, 97, .	1.1	12
72	Magnetic flux control of chiral Majorana edge modes in topological superconductor. <i>Science China: Physics, Mechanics and Astronomy</i> , 2018, 61, 1.	2.0	12

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73	Chiral interface states and related quantized transport in disordered Chern insulators. Physical Review B, 2021, 103, .	1.1	12
74	Quantum Hall effect originated from helical edge states in CdMnTe . Physical Review Research, 2021, 3, .	1.3	11
75	Identifying the topological superconducting phase in a multiband quantum wire. Physical Review B, 2015, 91, .	1.1	11
76	Chern Kondo Insulator in an Optical Lattice. Physical Review Letters, 2016, 116, 046401.	2.9	11
77	Superconductor-graphene-superconductor Josephson junction in the quantum Hall regime. Physical Review B, 2017, 96, .	1.1	11
78	Anomalous Hall effect mechanisms in the quasi-two-dimensional van der Waals ferromagnet Fe_3S_2 . Physical Review B, 2019, 100, .	1.1	11
79	Valley-selective Floquet Chern flat bands in twisted multilayer graphene. Physical Review B, 2021, 103, .	1.1	11
80	Theory for Magnetic-Field-Driven 3D Metal-Insulator Transitions in the Quantum Limit. Physical Review Letters, 2021, 127, 046602.	2.9	11
81	Minimal setup for non-Abelian braiding of Majorana zero modes. Science China: Physics, Mechanics and Astronomy, 2021, 64, .	2.0	11
82	Spin-current diode with a ferromagnetic semiconductor. Applied Physics Letters, 2015, 106, .	1.5	10
83	Spin-flip reflection at the normal metal-spin superconductor interface. Physical Review B, 2017, 95, .	1.1	10
84	Dephasing effects in topological insulators. Frontiers of Physics, 2019, 14, 1.	2.4	10
85	Evolution of Berry curvature and reentrant quantum anomalous Hall effect in an intrinsic magnetic topological insulator. Science China: Physics, Mechanics and Astronomy, 2021, 64, 1.	2.0	10
86	Theory for electric dipole superconductivity with an application for bilayer excitons. Scientific Reports, 2015, 5, 11925.	1.6	9
87	Higgs amplitude mode in massless Dirac fermion systems. Physical Review B, 2016, 93, .	1.1	9
88	Giant oscillatory Gilbert damping in superconductor/ferromagnet/superconductor junctions. Science Advances, 2021, 7, eabh3686.	4.7	9
89	The effect of disorder on the valley-dependent transport in zigzag graphene nanoribbons. Journal of Applied Physics, 2011, 109, 123718.	1.1	8
90	Numerical study of the giant nonlocal resistance in spin-orbit coupled graphene. Physical Review B, 2016, 94, .	1.1	8

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91	Observation of long phase-coherence length in epitaxial La-doped CdO thin films. Physical Review B, 2017, 96, .	1.1	8
92	Forbidden Backscattering and Resistance Dip in the Quantum Limit as a Signature for Topological Insulators. Physical Review Letters, 2018, 121, 036602.	2.9	8
93	Quantum Hall effect in wedge-shaped samples. Physical Review B, 2020, 102, .	1.1	8
94	Effective spin dephasing mechanism in confined two-dimensional topological insulators. Science China: Physics, Mechanics and Astronomy, 2016, 59, 1.	2.0	7
95	Flux-induced topological superconductor in planar Josephson junction. Physical Review B, 2019, 100, .	1.1	7
96	Disorder effects on quantum transport and quantum phase transition in low-dimensional superconducting and topological systems. Advances in Physics: X, 2021, 6, .	1.5	7
97	Non-Abelian statistics of Majorana zero modes in the presence of an Andreev bound state. Physical Review B, 2022, 105, .	1.1	7
98	Klein bottle entropy of compactified boson conformal field theory. Physical Review B, 2019, 99, .	1.1	6
99	Quantum to classical crossover under dephasing effects in a two-dimensional percolation model. Science China: Physics, Mechanics and Astronomy, 2020, 63, 1.	2.0	6
100	Emergent Z ₂ topological invariant and robust helical edge states in two-dimensional topological metals. Science China: Physics, Mechanics and Astronomy, 2020, 63, 1.	2.0	6
101	Gate tunability of the superconducting state at the EuO/TaO_3 interface. Physical Review B, 2021, 104, .	1.1	6
102	A Majorana perspective on understanding and identifying axion insulators. Communications Physics, 2021, 4, .	2.0	6
103	Non-Abelian Braiding in Spin Superconductors Utilizing the Aharonov-Casher Effect. Physical Review Letters, 2022, 128, 106804.	2.9	6
104	Ginzburg-Landau-type theory of nonpolarized spin superconductivity. Physical Review B, 2017, 95, .	1.1	5
105	Current noises in a topological Josephson junction. Science China: Physics, Mechanics and Astronomy, 2018, 61, 1.	2.0	5
106	Interaction-driven topological switch in a P-band honeycomb lattice. Physical Review A, 2019, 100, .	1.0	5
107	Quantum oscillation beyond the quantum limit in pseudospin Dirac materials. Physical Review B, 2020, 102, .	1.1	5
108	Transport study of the wormhole effect in three-dimensional topological insulators. Physical Review B, 2020, 102, .	1.1	5

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109	The thinnest high-temperature superconductor. National Science Review, 2014, 1, 324-325.	4.6	4
110	Crystalline splitting of d orbitals in two-dimensional regular optical lattices. Physical Review A, 2018, 98, .	1.0	4
111	Numerical study of negative nonlocal resistance and backflow current in a ballistic graphene system. Physical Review B, 2019, 100, .	1.1	4
112	Majorana zero modes from topological kink states in the two-dimensional electron gas. Physical Review B, 2020, 101, .	1.1	4
113	Orbital order in a bosonic $\langle \text{mml:math} \text{xmlns:mml="http://www.w3.org/1998/Math/MathML"} \langle \text{mml:mi} \rangle \text{p} \langle \text{mml:mi} \rangle \langle \text{mml:math} \rangle$ -band triangular lattice. Physical Review B, 2021, 103, .	1.1	4
114	Precision measurement physics: physics that precision matters. National Science Review, 2020, 7, 1795-1795.	4.6	4
115	Spin waves in magnetic Weyl semimetals. Science China: Physics, Mechanics and Astronomy, 2021, 64, 1.	2.0	3
116	Half-integer Shapiro steps in strong ferromagnetic Josephson junctions. Physical Review B, 2021, 104, .	1.1	3
117	Suppressing noises with topology and dynamical decoupling. Science China: Physics, Mechanics and Astronomy, 2019, 62, 1.	2.0	2
118	Effect of Coulomb screening on the discrete scale invariance of quasibound states in three-dimensional topological semimetals. Physical Review B, 2019, 100, .	1.1	2
119	Quantized thermal Hall conductance from edge current calculations in lattice models. Physical Review B, 2019, 100, .	1.1	2
120	Unveiling non-Abelian statistics of vortex Majorana bound states in iron-based superconductors using fermionic modes. Physical Review B, 2022, 105, .	1.1	2
121	Interface ferromagnetism and anomalous Hall effect of CdO/ferromagnetic-insulator heterostructures. Physical Review Materials, 2019, 3, .	0.9	1
122	Preface: Centennial Physics at Peking University. Frontiers of Physics, 2013, 8, 473-474.	2.4	0
123	Editorial: Building an excellent future. Science China: Physics, Mechanics and Astronomy, 2018, 61, 1.	2.0	0
124	Perovskite solar cells fly in the sky. Science China: Physics, Mechanics and Astronomy, 2019, 62, 1.	2.0	0
125	Topological insulators induced by disorder and non-Hermiticity. Science China: Physics, Mechanics and Astronomy, 2020, 63, 1.	2.0	0
126	A new type of Andreev reflection. Science China: Physics, Mechanics and Astronomy, 2021, 64, 1.	2.0	0

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127	New piece of the jigsaw for orbital/bond order in a kagome superconductor. Science China: Physics, Mechanics and Astronomy, 2022, 65, 1.	2.0	0
128	Emergent Weyl fermions in an orbital multipolar ordered phase. Physical Review B, 2022, 105, .	1.1	0