

# Shou-Cheng Zhang

## List of Publications by Citations

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

124 papers	45,142 citations	68 h-index	127 g-index
127 ext. papers	52,473 ext. citations	9.5 avg, IF	7.92 L-index

#	Paper	IF	Citations
124	Topological insulators and superconductors. <i>Reviews of Modern Physics</i> , <b>2011</b> , 83, 1057-1110	40.5	8720
123	Quantum spin Hall effect and topological phase transition in HgTe quantum wells. <i>Science</i> , <b>2006</b> , 314, 1757-61	33.3	4585
122	Topological insulators in Bi <sub>2</sub> Se <sub>3</sub> , Bi <sub>2</sub> Te <sub>3</sub> and Sb <sub>2</sub> Te <sub>3</sub> with a single Dirac cone on the surface. <i>Nature Physics</i> , <b>2009</b> , 5, 438-442	16.2	4411
121	Quantum spin hall insulator state in HgTe quantum wells. <i>Science</i> , <b>2007</b> , 318, 766-70	33.3	4215
120	Topological field theory of time-reversal invariant insulators. <i>Physical Review B</i> , <b>2008</b> , 78,	3.3	2263
119	Experimental observation of the quantum anomalous Hall effect in a magnetic topological insulator. <i>Science</i> , <b>2013</b> , 340, 167-70	33.3	2044
118	Quantized anomalous Hall effect in magnetic topological insulators. <i>Science</i> , <b>2010</b> , 329, 61-4	33.3	1382
117	Epitaxial growth of two-dimensional stanene. <i>Nature Materials</i> , <b>2015</b> , 14, 1020-5	27	1153
116	Crossover of the three-dimensional topological insulator Bi <sub>2</sub> Se <sub>3</sub> to the two-dimensional limit. <i>Nature Physics</i> , <b>2010</b> , 6, 584-588	16.2	1048
115	Large-gap quantum spin Hall insulators in tin films. <i>Physical Review Letters</i> , <b>2013</b> , 111, 136804	7.4	952
114	Polarization-sensitive broadband photodetector using a black phosphorus vertical p-n junction. <i>Nature Nanotechnology</i> , <b>2015</b> , 10, 707-13	28.7	785
113	Spin-orbit gap of graphene: First-principles calculations. <i>Physical Review B</i> , <b>2007</b> , 75,	3.3	720
112	The Quantum Spin Hall Effect: Theory and Experiment. <i>Journal of the Physical Society of Japan</i> , <b>2008</b> , 77, 031007	1.5	592
111	High-precision realization of robust quantum anomalous Hall state in a hard ferromagnetic topological insulator. <i>Nature Materials</i> , <b>2015</b> , 14, 473-7	27	581
110	Model Hamiltonian for topological insulators. <i>Physical Review B</i> , <b>2010</b> , 82,	3.3	563
109	Time-reversal-invariant topological superconductors and superfluids in two and three dimensions. <i>Physical Review Letters</i> , <b>2009</b> , 102, 187001	7.4	531
108	Buckled two-dimensional Xene sheets. <i>Nature Materials</i> , <b>2017</b> , 16, 163-169	27	484

107	Topological quantization of the spin Hall effect in two-dimensional paramagnetic semiconductors. <i>Physical Review B</i> , <b>2006</b> , 74,	3.3	454
106	Minimal two-band model of the superconducting iron oxypnictides. <i>Physical Review B</i> , <b>2008</b> , 77,	3.3	390
105	Oscillatory crossover from two-dimensional to three-dimensional topological insulators. <i>Physical Review B</i> , <b>2010</b> , 81,	3.3	389
104	The coexistence of superconductivity and topological order in the Bi <sub>2</sub> Se <sub>3</sub> thin films. <i>Science</i> , <b>2012</b> , 336, 52-5	33.3	371
103	Chiral Majorana fermion modes in a quantum anomalous Hall insulator-superconductor structure. <i>Science</i> , <b>2017</b> , 357, 294-299	33.3	363
102	Intrinsic magnetic topological insulators in van der Waals layered MnBiTe-family materials. <i>Science Advances</i> , <b>2019</b> , 5, eaaw5685	14.3	330
101	Dynamical axion field in topological magnetic insulators. <i>Nature Physics</i> , <b>2010</b> , 6, 284-288	16.2	299
100	Chiral topological superconductor from the quantum Hall state. <i>Physical Review B</i> , <b>2010</b> , 82,	3.3	289
99	SU(2) non-Abelian holonomy and dissipationless spin current in semiconductors. <i>Physical Review B</i> , <b>2004</b> , 69,	3.3	266
98	Experimental Realization of an Intrinsic Magnetic Topological Insulator*. <i>Chinese Physics Letters</i> , <b>2019</b> , 36, 076801	1.8	260
97	The Quantum Anomalous Hall Effect: Theory and Experiment. <i>Annual Review of Condensed Matter Physics</i> , <b>2016</b> , 7, 301-321	19.7	253
96	Enhanced thermoelectric performance and anomalous seebeck effects in topological insulators. <i>Physical Review Letters</i> , <b>2014</b> , 112, 226801	7.4	249
95	Generation and electric control of spin-valley-coupled circular photogalvanic current in WSe <sub>2</sub> . <i>Nature Nanotechnology</i> , <b>2014</b> , 9, 851-7	28.7	216
94	Spin polarization of the quantum spin Hall edge states. <i>Nature Physics</i> , <b>2012</b> , 8, 485-490	16.2	213
93	Electron interaction-driven insulating ground state in Bi <sub>2</sub> Se <sub>3</sub> topological insulators in the two-dimensional limit. <i>Physical Review B</i> , <b>2011</b> , 83,	3.3	204
92	Multiple Types of Topological Fermions in Transition Metal Silicides. <i>Physical Review Letters</i> , <b>2017</b> , 119, 206402	7.4	176
91	Epitaxial growth of ultraflat stanene with topological band inversion. <i>Nature Materials</i> , <b>2018</b> , 17, 1081-1086	10.86	175
90	Symmetry-protected ideal Weyl semimetal in HgTe-class materials. <i>Nature Communications</i> , <b>2016</b> , 7, 11136	17.4	169

89	Nodal-link semimetals. <i>Physical Review B</i> , <b>2017</b> , 96,	3.3	165
88	Fractional charge and quantized current in the quantum spin Hall state. <i>Nature Physics</i> , <b>2008</b> , 4, 273-276	16.2	163
87	General theorem relating the bulk topological number to edge states in two-dimensional insulators. <i>Physical Review B</i> , <b>2006</b> , 74,	3.3	157
86	Helical edge and surface states in HgTe quantum wells and bulk insulators. <i>Physical Review B</i> , <b>2008</b> , 77,	3.3	153
85	Dirac fermions in an antiferromagnetic semimetal. <i>Nature Physics</i> , <b>2016</b> , 12, 1100-1104	16.2	144
84	Topological insulator Bi <sub>2</sub> Se <sub>3</sub> thin films grown on double-layer graphene by molecular beam epitaxy. <i>Applied Physics Letters</i> , <b>2010</b> , 97, 143118	3.4	140
83	Topological insulators for high-performance terahertz to infrared applications. <i>Physical Review B</i> , <b>2010</b> , 82,	3.3	139
82	Simplified Topological Invariants for Interacting Insulators. <i>Physical Review X</i> , <b>2012</b> , 2,	9.1	137
81	Interacting topological phases and modular invariance. <i>Physical Review B</i> , <b>2012</b> , 85,	3.3	136
80	Stable two-dimensional dumbbell stanene: A quantum spin Hall insulator. <i>Physical Review B</i> , <b>2014</b> , 90,	3.3	135
79	Superconductivity in few-layer stanene. <i>Nature Physics</i> , <b>2018</b> , 14, 344-348	16.2	133
78	Quantitative test of a microscopic mechanism of high-temperature superconductivity. <i>Nature</i> , <b>1998</b> , 396, 733-735	50.4	112
77	Topological Superconductivity on the Surface of Fe-Based Superconductors. <i>Physical Review Letters</i> , <b>2016</b> , 117, 047001	7.4	111
76	The Quantum Spin Hall Effect. <i>Annual Review of Condensed Matter Physics</i> , <b>2011</b> , 2, 31-53	19.7	103
75	Learning atoms for materials discovery. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2018</b> , 115, E6411-E6417	11.5	103
74	Metal-to-insulator switching in quantum anomalous Hall states. <i>Nature Communications</i> , <b>2015</b> , 6, 8474	17.4	100
73	Quantized topological magnetoelectric effect of the zero-plateau quantum anomalous Hall state. <i>Physical Review B</i> , <b>2015</b> , 92,	3.3	100
72	Topological quantum computation based on chiral Majorana fermions. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2018</b> , 115, 10938-10942	11.5	98

71	Large-gap quantum spin Hall states in decorated stanene grown on a substrate. <i>Physical Review B</i> , <b>2015</b> , 92,	3.3	94
70	Chiral topological superconductor and half-integer conductance plateau from quantum anomalous Hall plateau transition. <i>Physical Review B</i> , <b>2015</b> , 92,	3.3	90
69	Quasiparticle interference on the surface of the topological insulator Bi <sub>2</sub> Te <sub>3</sub> . <i>Physical Review B</i> , <b>2009</b> , 80,	3.3	90
68	Topological field theory and thermal responses of interacting topological superconductors. <i>Physical Review B</i> , <b>2011</b> , 84,	3.3	89
67	Fermi liquid instabilities in the spin channel. <i>Physical Review B</i> , <b>2007</b> , 75,	3.3	86
66	Ideal Weyl Semimetals in the Chalcopyrites CuTlSe <sub>2</sub> , AgTlTe <sub>2</sub> , AuTlTe <sub>2</sub> , and ZnPbAs <sub>2</sub> . <i>Physical Review Letters</i> , <b>2016</b> , 116, 226801	7.4	85
65	Mechanism for a pairing state with time-reversal symmetry breaking in iron-based superconductors. <i>Physical Review B</i> , <b>2012</b> , 85,	3.3	85
64	Conductance and noise signatures of Majorana backscattering. <i>Physical Review B</i> , <b>2011</b> , 83,	3.3	82
63	Topological states of condensed matter. <i>Nature Materials</i> , <b>2017</b> , 16, 1062-1067	27	81
62	Intrinsic Quantum Anomalous Hall Effect in the Kagome Lattice Cs <sub>2</sub> LiMn <sub>3</sub> F <sub>12</sub> . <i>Physical Review Letters</i> , <b>2015</b> , 115, 186802	7.4	81
61	Semiclassical time evolution of the holes from Luttinger Hamiltonian. <i>Physical Review B</i> , <b>2005</b> , 72,	3.3	81
60	Observation of the Zero Hall Plateau in a Quantum Anomalous Hall Insulator. <i>Physical Review Letters</i> , <b>2015</b> , 115, 126801	7.4	78
59	Universal scaling of the quantum anomalous Hall plateau transition. <i>Physical Review B</i> , <b>2014</b> , 89,	3.3	75
58	Unexpected edge conduction in mercury telluride quantum wells under broken time-reversal symmetry. <i>Nature Communications</i> , <b>2015</b> , 6, 7252	17.4	72
57	Reversible and selective ion intercalation through the top surface of few-layer MoS. <i>Nature Communications</i> , <b>2018</b> , 9, 5289	17.4	70
56	Model for topological phononics and phonon diode. <i>Physical Review B</i> , <b>2017</b> , 96,	3.3	63
55	Topological states in ferromagnetic CdO/EuO superlattices and quantum wells. <i>Physical Review Letters</i> , <b>2014</b> , 112, 096804	7.4	62
54	DIELECTRIC FUNCTION, FRIEDEL OSCILLATION AND PLASMONS IN WEYL SEMIMETALS. <i>International Journal of Modern Physics B</i> , <b>2013</b> , 27, 1350177	1.1	61

53	Topological insulators from the perspective of first-principles calculations. <i>Physica Status Solidi - Rapid Research Letters</i> , <b>2013</b> , 7, 72-81	2.5	58
52	Vortex configurations of bosons in an optical lattice. <i>Physical Review A</i> , <b>2004</b> , 69,	2.6	56
51	Fluctuation-induced topological quantum phase transitions in quantum spin-Hall and anomalous-Hall insulators. <i>Physical Review B</i> , <b>2012</b> , 86,	3.3	54
50	Topological insulators in filled skutterudites. <i>Physical Review B</i> , <b>2012</b> , 85,	3.3	53
49	Quantum anomalous Hall effect in magnetically doped InAs/GaSb quantum wells. <i>Physical Review Letters</i> , <b>2014</b> , 113, 147201	7.4	50
48	Axion topological field theory of topological superconductors. <i>Physical Review B</i> , <b>2013</b> , 87,	3.3	50
47	Thickness Dependence of the Quantum Anomalous Hall Effect in Magnetic Topological Insulator Films. <i>Advanced Materials</i> , <b>2016</b> , 28, 6386-90	24	50
46	Realizing an Epitaxial Decorated Stanene with an Insulating Bandgap. <i>Advanced Functional Materials</i> , <b>2018</b> , 28, 1802723	15.6	49
45	Theoretical prediction of topological insulator in ternary rare earth chalcogenides. <i>Physical Review B</i> , <b>2010</b> , 82,	3.3	47
44	Microscopic Electron Models with Exact SO(5) Symmetry. <i>Physical Review Letters</i> , <b>1998</b> , 80, 3586-3589	7.4	47
43	Exact spontaneous plaquette ground states for high-spin ladder models. <i>Physical Review B</i> , <b>2005</b> , 72,	3.3	41
42	A three-dimensional photonic topological insulator using a two-dimensional ring resonator lattice with a synthetic frequency dimension. <i>Science Advances</i> , <b>2018</b> , 4, eaat2774	14.3	41
41	Electrically Tunable Magnetism in Magnetic Topological Insulators. <i>Physical Review Letters</i> , <b>2015</b> , 115, 036805	7.4	37
40	Quantum Spin Hall and Quantum Anomalous Hall States Realized in Junction Quantum Wells. <i>Physical Review Letters</i> , <b>2014</b> , 112,	7.4	36
39	Field-induced gap and quantized charge pumping in a nanoscale helical wire. <i>Physical Review B</i> , <b>2009</b> , 79,	3.3	30
38	Stationary phase approximation approach to the quasiparticle interference on the surface of a strong topological insulator. <i>Physical Review B</i> , <b>2012</b> , 85,	3.3	30
37	Disentangling the magnetoelectric and thermoelectric transport in topological insulator thin films. <i>Physical Review B</i> , <b>2015</b> , 91,	3.3	28
36	Dynamical axion field in a magnetic topological insulator superlattice. <i>Physical Review B</i> , <b>2016</b> , 93,	3.3	28

35	Anomalous electron trajectory in topological insulators. <i>Physical Review B</i> , <b>2013</b> , 87,	3.3	28
34	Quantum phase transition of chiral Majorana fermions in the presence of disorder. <i>Physical Review B</i> , <b>2018</b> , 97,	3.3	27
33	Superconductivity of topological matters induced via pressure. <i>Frontiers of Physics</i> , <b>2012</b> , 7, 193-199	3.7	27
32	Half-metallic surface states and topological superconductivity in NaCoO <sub>2</sub> from first principles. <i>Physical Review B</i> , <b>2011</b> , 84,	3.3	27
31	Models of three-dimensional fractional topological insulators. <i>Physical Review B</i> , <b>2012</b> , 86,	3.3	26
30	Visualizing topological edge states of single and double bilayer Bi supported on multibilayer Bi(111) films. <i>Physical Review B</i> , <b>2018</b> , 98,	3.3	26
29	Generalized quantization condition for topological insulators. <i>Physical Review B</i> , <b>2011</b> , 83,	3.3	22
28	BAND COLLAPSE AND THE QUANTUM HALL EFFECT IN GRAPHENE. <i>International Journal of Modern Physics B</i> , <b>2006</b> , 20, 3257-3278	1.1	22
27	Edge-state-induced Andreev oscillation in quantum anomalous Hall insulator-superconductor junctions. <i>Physical Review B</i> , <b>2016</b> , 93,	3.3	21
26	Topological semimetal in honeycomb lattice LnSi. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2017</b> , 114, 10596-10600	11.5	21
25	Topological Insulators from a Chemist's Perspective. <i>Angewandte Chemie</i> , <b>2012</b> , 124, 7333-7337	3.6	21
24	QUINTET PAIRING AND NON-ABELIAN VORTEX STRING IN SPIN-3/2 COLD ATOMIC SYSTEMS. <i>International Journal of Modern Physics B</i> , <b>2010</b> , 24, 311-322	1.1	21
23	Double Helix Nodal Line Superconductor. <i>Physical Review Letters</i> , <b>2017</b> , 119, 147001	7.4	20
22	Chern-Simons theory and Wilson loops in the Brillouin zone. <i>Physical Review B</i> , <b>2017</b> , 95,	3.3	18
21	Topological quantum phase transition in an S=2 spin chain. <i>Physical Review B</i> , <b>2010</b> , 81,	3.3	18
20	Interrelation of superconducting and antiferromagnetic gaps in high- T(c) compounds: A test case for the SO(5) theory. <i>Physical Review Letters</i> , <b>2000</b> , 85, 824-7	7.4	18
19	Conversion Rules for Weyl Points and Nodal Lines in Topological Media. <i>Physical Review Letters</i> , <b>2018</b> , 121, 106402	7.4	18
18	Critical theory of the topological quantum phase transition in an S=2 spin chain. <i>Physical Review B</i> , <b>2010</b> , 82,	3.3	16

17	Magnetic order induces symmetry breaking in the single-crystalline orthorhombic CuMnAs semimetal. <i>Physical Review B</i> , <b>2017</b> , 96,	3.3	14
16	Non-Abelian Berry phase and Chern numbers in higher spin-pairing condensates. <i>Physical Review B</i> , <b>2004</b> , 69,	3.3	14
15	Three-Dimensional Chiral Lattice Fermion in Floquet Systems. <i>Physical Review Letters</i> , <b>2018</b> , 121, 196401.	7.4	14
14	Magnetic quantum phase transition in Cr-doped Bi(SeTe) driven by the Stark effect. <i>Nature Nanotechnology</i> , <b>2017</b> , 12, 953-957	28.7	13
13	A CLASS OF COLLECTIVE EXCITATIONS OF THE HUBBARD MODEL: EXCITATION OF THE NEGATIVE-U MODEL. <i>International Journal of Modern Physics B</i> , <b>1996</b> , 10, 2137-2166	1.1	12
12	Stable Dirac semimetal in the allotropes of group-IV elements. <i>Physical Review B</i> , <b>2016</b> , 93,	3.3	11
11	Exact microscopic wave function for a topological quantum membrane. <i>Physical Review Letters</i> , <b>2003</b> , 90, 196801	7.4	11
10	Spin accumulation from the non-Abelian Aharonov-Bohm effect. <i>Physical Review B</i> , <b>2007</b> , 76,	3.3	6
9	Wave Function and Emergent SU(2) Symmetry in the $\nu(T)=1$ Quantum Hall Bilayer. <i>Physical Review Letters</i> , <b>2018</b> , 120, 077601	7.4	5
8	Resonant magneto-optic Kerr effect in the magnetic topological insulator Cr:(Sbx,Bi $_{1-x}$ ) $_2$ Te $_3$ . <i>Physical Review B</i> , <b>2015</b> , 92,	3.3	5
7	Scaling properties of the projected SO(5) model in three dimensions. <i>Physical Review B</i> , <b>2003</b> , 68,	3.3	4
6	HIGH T $_c$ SUPERCONDUCTIVITY: SYMMETRIES AND REFLECTIONS. <i>International Journal of Modern Physics B</i> , <b>1999</b> , 13, 3855-3859	1.1	1
5	Spin-liquid condensate of spinful bosons. <i>Physical Review Letters</i> , <b>2014</b> , 113, 080402	7.4	0
4	Topological Insulators from a Chemist's Perspective. <i>Zeitschrift Fur Anorganische Und Allgemeine Chemie</i> , <b>2012</b> , 638, 1641-1641	1.3	
3	SCHRIEFFER'S PAPERS ON HIGH-TC SUPERCONDUCTIVITY. <i>World Scientific Series in 20th Century Physics</i> , <b>2002</b> , 439-441	0	
2	Topological insulators from the perspective of first-principles calculations <b>2019</b> , 205-214		
1	Topological Insulators and Superconductors and Mathematical Science. <i>Notices of the International Congress of Chinese Mathematicians</i> , <b>2015</b> , 3, 11-14	0.2	