

Xiao-Liang Qi

List of Publications by Citations

Source: <https://exaly.com/author-pdf/7366617/xiao-liang-qi-publications-by-citations.pdf>

Version: 2024-04-19

This document has been generated based on the publications and citations recorded by exaly.com. For the latest version of this publication list, visit the link given above.

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

152
papers

43,762
citations

71
h-index

153
g-index

153
ext. papers

49,734
ext. citations

7.4
avg, IF

7.97
L-index

#	Paper	IF	Citations
152	Topological insulators and superconductors. <i>Reviews of Modern Physics</i> , 2011 , 83, 1057-1110	40.5	8720
151	Topological insulators in Bi ₂ Se ₃ , Bi ₂ Te ₃ and Sb ₂ Te ₃ with a single Dirac cone on the surface. <i>Nature Physics</i> , 2009 , 5, 438-442	16.2	4411
150	Quantum spin hall insulator state in HgTe quantum wells. <i>Science</i> , 2007 , 318, 766-70	33.3	4215
149	Experimental realization of a three-dimensional topological insulator, Bi ₂ Te ₃ . <i>Science</i> , 2009 , 325, 178-81	33.3	2650
148	Topological field theory of time-reversal invariant insulators. <i>Physical Review B</i> , 2008 , 78,	3.3	2263
147	Crossover of the three-dimensional topological insulator Bi ₂ Se ₃ to the two-dimensional limit. <i>Nature Physics</i> , 2010 , 6, 584-588	16.2	1048
146	The quantum spin Hall effect and topological insulators. <i>Physics Today</i> , 2010 , 63, 33-38	0.9	939
145	Massive Dirac fermion on the surface of a magnetically doped topological insulator. <i>Science</i> , 2010 , 329, 659-62	33.3	913
144	Spin-orbit gap of graphene: First-principles calculations. <i>Physical Review B</i> , 2007 , 75,	3.3	720
143	Inducing a magnetic monopole with topological surface States. <i>Science</i> , 2009 , 323, 1184-7	33.3	708
142	Tunable multifunctional topological insulators in ternary Heusler compounds. <i>Nature Materials</i> , 2010 , 9, 541-5	27	674
141	Nonlocal transport in the quantum spin Hall state. <i>Science</i> , 2009 , 325, 294-7	33.3	665
140	Aharonov-Bohm interference in topological insulator nanoribbons. <i>Nature Materials</i> , 2010 , 9, 225-9	27	660
139	The Quantum Spin Hall Effect: Theory and Experiment. <i>Journal of the Physical Society of Japan</i> , 2008 , 77, 031007	1.5	592
138	Model Hamiltonian for topological insulators. <i>Physical Review B</i> , 2010 , 82,	3.3	563
137	Quantum spin Hall effect in inverted type-II semiconductors. <i>Physical Review Letters</i> , 2008 , 100, 236601	7.4	546
136	Time-reversal-invariant topological superconductors and superfluids in two and three dimensions. <i>Physical Review Letters</i> , 2009 , 102, 187001	7.4	531

135	Quantum anomalous hall effect in Hg _{1-y} MnyTe quantum wells. <i>Physical Review Letters</i> , 2008 , 101, 146802	7.4	487
134	Topological Mott insulators. <i>Physical Review Letters</i> , 2008 , 100, 156401	7.4	473
133	Magnetic impurities on the surface of a topological insulator. <i>Physical Review Letters</i> , 2009 , 102, 156603	7.4	459
132	Topological quantization of the spin Hall effect in two-dimensional paramagnetic semiconductors. <i>Physical Review B</i> , 2006 , 74,	3.3	454
131	Quantum spin Hall effect in a transition metal oxide Na ₂ IrO ₃ . <i>Physical Review Letters</i> , 2009 , 102, 256403	7.4	399
130	Minimal two-band model of the superconducting iron oxypnictides. <i>Physical Review B</i> , 2008 , 77,	3.3	390
129	Oscillatory crossover from two-dimensional to three-dimensional topological insulators. <i>Physical Review B</i> , 2010 , 81,	3.3	389
128	Quantum Hall effect from the topological surface states of strained bulk HgTe. <i>Physical Review Letters</i> , 2011 , 106, 126803	7.4	376
127	Intrinsic topological insulator Bi ₂ Te ₃ thin films on Si and their thickness limit. <i>Advanced Materials</i> , 2010 , 22, 4002-7	2.4	335
126	Landau quantization of topological surface states in Bi ₂ Se ₃ . <i>Physical Review Letters</i> , 2010 , 105, 076801	7.4	327
125	Chaos in quantum channels. <i>Journal of High Energy Physics</i> , 2016 , 2016, 1	5.4	312
124	Dynamical axion field in topological magnetic insulators. <i>Nature Physics</i> , 2010 , 6, 284-288	16.2	299
123	Chiral topological superconductor from the quantum Hall state. <i>Physical Review B</i> , 2010 , 82,	3.3	289
122	The Quantum Anomalous Hall Effect: Theory and Experiment. <i>Annual Review of Condensed Matter Physics</i> , 2016 , 7, 301-321	19.7	253
121	Chiral gauge field and axial anomaly in a Weyl semimetal. <i>Physical Review B</i> , 2013 , 87,	3.3	239
120	Local criticality, diffusion and chaos in generalized Sachdev-Ye-Kitaev models. <i>Journal of High Energy Physics</i> , 2017 , 2017, 1	5.4	236
119	Holographic duality from random tensor networks. <i>Journal of High Energy Physics</i> , 2016 , 2016, 1	5.4	235
118	Spin polarization of the quantum spin Hall edge states. <i>Nature Physics</i> , 2012 , 8, 485-490	16.2	213

117	Topological invariants for the Fermi surface of a time-reversal-invariant superconductor. <i>Physical Review B</i> , 2010 , 81,	3.3	208
116	Thin films of magnetically doped topological insulator with carrier-independent long-range ferromagnetic order. <i>Advanced Materials</i> , 2013 , 25, 1065-70	2.4	201
115	General relationship between the entanglement spectrum and the edge state spectrum of topological quantum states. <i>Physical Review Letters</i> , 2012 , 108, 196402	7.4	201
114	Kondo effect in the helical edge liquid of the quantum spin Hall state. <i>Physical Review Letters</i> , 2009 , 102, 256803	7.4	190
113	Topological quantization in units of the fine structure constant. <i>Physical Review Letters</i> , 2010 , 105, 166803	7.4	175
112	Topological Nematic States and Non-Abelian Lattice Dislocations. <i>Physical Review X</i> , 2012 , 2,	9.1	169
111	Collective modes of a helical liquid. <i>Physical Review Letters</i> , 2010 , 104, 116401	7.4	163
110	Fractional charge and quantized current in the quantum spin Hall state. <i>Nature Physics</i> , 2008 , 4, 273-276	16.2	163
109	Twist defects and projective non-Abelian braiding statistics. <i>Physical Review B</i> , 2013 , 87,	3.3	160
108	Possible proximity of the Mott insulating iridate Na ₂ IrO ₃ to a topological phase: Phase diagram of the Heisenberg-Kitaev model in a magnetic field. <i>Physical Review B</i> , 2011 , 83,	3.3	159
107	General theorem relating the bulk topological number to edge states in two-dimensional insulators. <i>Physical Review B</i> , 2006 , 74,	3.3	157
106	Helical edge and surface states in HgTe quantum wells and bulk insulators. <i>Physical Review B</i> , 2008 , 77,	3.3	153
105	Generic wave-function description of fractional quantum anomalous Hall states and fractional topological insulators. <i>Physical Review Letters</i> , 2011 , 107, 126803	7.4	147
104	Topological order parameters for interacting topological insulators. <i>Physical Review Letters</i> , 2010 , 105, 256803	7.4	143
103	Topological insulator Bi ₂ Se ₃ thin films grown on double-layer graphene by molecular beam epitaxy. <i>Applied Physics Letters</i> , 2010 , 97, 143118	3.4	140
102	Fractional topological insulators in three dimensions. <i>Physical Review Letters</i> , 2010 , 105, 246809	7.4	139
101	Entanglement entropy and entanglement spectrum of the Kitaev model. <i>Physical Review Letters</i> , 2010 , 105, 080501	7.4	133
100	Theoretical prediction of topological insulators in thallium-based III-V-VI 2 ternary chalcogenides. <i>Europhysics Letters</i> , 2010 , 90, 37002	1.6	126

99	A time-reversal invariant topological phase at the surface of a 3D topological insulator. <i>Journal of Statistical Mechanics: Theory and Experiment</i> , 2013 , 2013, P09016	1.9	121
98	Massive Dirac surface states in topological insulator/magnetic insulator heterostructures. <i>Physical Review B</i> , 2013 , 87,	3.3	115
97	Topological Superconductivity on the Surface of Fe-Based Superconductors. <i>Physical Review Letters</i> , 2016 , 117, 047001	7.4	111
96	Prediction of a Weyl semimetal in $\text{Hg}_{1-x}\text{Cd}_x\text{Mn}_y\text{Te}$. <i>Physical Review B</i> , 2014 , 89,	3.3	111
95	One-dimensional helical transport in topological insulator nanowire interferometers. <i>Nano Letters</i> , 2014 , 14, 2815-21	11.5	103
94	Electronic structures and surface states of the topological insulator Bi_2Sb_3 . <i>Physical Review B</i> , 2009 , 80,	3.3	101
93	Quantized topological magnetoelectric effect of the zero-plateau quantum anomalous Hall state. <i>Physical Review B</i> , 2015 , 92,	3.3	100
92	Topological quantum computation based on chiral Majorana fermions. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2018 , 115, 10938-10942	11.5	98
91	Theory of defects in Abelian topological states. <i>Physical Review B</i> , 2013 , 88,	3.3	95
90	Time-reversal-invariant topological superconductivity in doped Weyl semimetals. <i>Physical Review B</i> , 2014 , 90,	3.3	91
89	A new class of $(2 + 1)$ -dimensional topological superconductors with \mathbb{Z}_8 topological classification. <i>New Journal of Physics</i> , 2013 , 15, 065002	2.9	91
88	Topological field theory and thermal responses of interacting topological superconductors. <i>Physical Review B</i> , 2011 , 84,	3.3	89
87	Topological superconducting phase and Majorana fermions in half-metal/superconductor heterostructures. <i>Physical Review B</i> , 2011 , 84,	3.3	85
86	Conductance and noise signatures of Majorana backscattering. <i>Physical Review B</i> , 2011 , 83,	3.3	82
85	Topological insulators in ternary compounds with a honeycomb lattice. <i>Physical Review Letters</i> , 2011 , 106, 156402	7.4	77
84	Quantum Error Correction in Scrambling Dynamics and Measurement-Induced Phase Transition. <i>Physical Review Letters</i> , 2020 , 125, 030505	7.4	77
83	Spin-charge separation in the quantum spin Hall state. <i>Physical Review Letters</i> , 2008 , 101, 086802	7.4	74
82	Equivalent topological invariants of topological insulators. <i>New Journal of Physics</i> , 2010 , 12, 065007	2.9	71

81	Classification of topological defects in Abelian topological states. <i>Physical Review B</i> , 2013 , 88,	3.3	67
80	Momentum polarization: An entanglement measure of topological spin and chiral central charge. <i>Physical Review B</i> , 2013 , 88,	3.3	61
79	Magnetoconductance of the quantum spin Hall state. <i>Physical Review B</i> , 2010 , 82,	3.3	61
78	Effects of magnetic doping on weak antilocalization in narrow Bi ₂ Se ₃ nanoribbons. <i>Nano Letters</i> , 2012 , 12, 4355-9	11.5	59
77	Spread of entanglement in a Sachdev-Ye-Kitaev chain. <i>Journal of High Energy Physics</i> , 2017 , 2017, 1	5.4	58
76	Energy diffusion and the butterfly effect in inhomogeneous Sachdev-Ye-Kitaev chains. <i>SciPost Physics</i> , 2017 , 2,	6.1	57
75	Topological invariants for interacting topological insulators with inversion symmetry. <i>Physical Review B</i> , 2012 , 85,	3.3	56
74	Topological insulators in filled skutterudites. <i>Physical Review B</i> , 2012 , 85,	3.3	53
73	Axion topological field theory of topological superconductors. <i>Physical Review B</i> , 2013 , 87,	3.3	50
72	Landau level spectroscopy of surface states in the topological insulator Bi _{0.91} Sb _{0.09} via magneto-optics. <i>Physical Review B</i> , 2012 , 85,	3.3	49
71	Bidirectional holographic codes and sub-AdS locality. <i>Journal of High Energy Physics</i> , 2016 , 2016, 1	5.4	48
70	Spin Aharonov-Bohm effect and topological spin transistor. <i>Physical Review B</i> , 2010 , 82,	3.3	48
69	Layer Construction of 3D Topological States and String Braiding Statistics. <i>Physical Review X</i> , 2014 , 4,	9.1	47
68	Theoretical prediction of topological insulator in ternary rare earth chalcogenides. <i>Physical Review B</i> , 2010 , 82,	3.3	47
67	Projective ribbon permutation statistics: A remnant of non-Abelian braiding in higher dimensions. <i>Physical Review B</i> , 2011 , 83,	3.3	46
66	Synthetic Topological Qubits in Conventional Bilayer Quantum Hall Systems. <i>Physical Review X</i> , 2014 , 4,	9.1	45
65	Pseudopotential formalism for fractional Chern insulators. <i>Physical Review B</i> , 2013 , 88,	3.3	45
64	Entanglement holographic mapping of many-body localized system by spectrum bifurcation renormalization group. <i>Physical Review B</i> , 2016 , 93,	3.3	44

63	Half quantum spin Hall effect on the surface of weak topological insulators. <i>Physica E: Low-Dimensional Systems and Nanostructures</i> , 2012 , 44, 906-911	3	43
62	Position-Momentum Duality and Fractional Quantum Hall Effect in Chern Insulators. <i>Physical Review Letters</i> , 2015 , 114, 236802	7.4	40
61	Quantum anomalous Hall effect in magnetic insulator heterostructure. <i>Nano Letters</i> , 2015 , 15, 2019-23	11.5	40
60	Time-reversal anomaly and Josephson effect in time-reversal-invariant topological superconductors. <i>Physical Review B</i> , 2013 , 88,	3.3	40
59	Quantum epidemiology: operator growth, thermal effects, and SYK. <i>Journal of High Energy Physics</i> , 2019 , 2019, 1	5.4	39
58	Majorana zero modes in dislocations of Sr ₂ RuO ₄ . <i>Physical Review B</i> , 2014 , 90,	3.3	39
57	Topological magnetic insulators with corundum structure. <i>Physical Review Letters</i> , 2011 , 106, 126403	7.4	39
56	Machine learning spatial geometry from entanglement features. <i>Physical Review B</i> , 2018 , 97,	3.3	36
55	Fractional statistics and the butterfly effect. <i>Journal of High Energy Physics</i> , 2016 , 2016, 1	5.4	36
54	Mutual Chern-Simons effective theory of doped antiferromagnets. <i>Physical Review B</i> , 2005 , 71,	3.3	36
53	Effective entropy of quantum fields coupled with gravity. <i>Journal of High Energy Physics</i> , 2020 , 2020, 1	5.4	35
52	Replica wormhole and information retrieval in the SYK model coupled to Majorana chains. <i>Journal of High Energy Physics</i> , 2020 , 2020, 1	5.4	32
51	Tensor network quotient takes the vacuum to the thermal state. <i>Physical Review B</i> , 2016 , 94,	3.3	32
50	A random unitary circuit model for black hole evaporation. <i>Journal of High Energy Physics</i> , 2020 , 2020, 1	5.4	30
49	Field-induced gap and quantized charge pumping in a nanoscale helical wire. <i>Physical Review B</i> , 2009 , 79,	3.3	30
48	Stationary phase approximation approach to the quasiparticle interference on the surface of a strong topological insulator. <i>Physical Review B</i> , 2012 , 85,	3.3	30
47	Dissipationless phonon Hall viscosity. <i>Physical Review B</i> , 2012 , 85,	3.3	29
46	Topological superconductivity at the edge of transition-metal dichalcogenides. <i>Physical Review B</i> , 2014 , 90,	3.3	26

45	Models of three-dimensional fractional topological insulators. <i>Physical Review B</i> , 2012 , 86,	3-3	26
44	Quantum chaos in the Brownian SYK model with large finite N : OTOCs and tripartite information. <i>Journal of High Energy Physics</i> , 2019 , 2019, 1	5-4	26
43	Exact holographic mapping in free fermion systems. <i>Physical Review B</i> , 2016 , 93,	3-3	25
42	Lattice construction of pseudopotential Hamiltonians for fractional Chern insulators. <i>Physical Review B</i> , 2014 , 90,	3-3	23
41	Generalized Kitaev models and extrinsic non-Abelian twist defects. <i>Physical Review Letters</i> , 2015 , 114, 026401	7-4	22
40	Calculation of divergent photon absorption in ultrathin films of a topological insulator. <i>Physical Review B</i> , 2013 , 88,	3-3	22
39	Weakly coupled non-Abelian anyons in three dimensions. <i>Physical Review B</i> , 2011 , 84,	3-3	22
38	Superdensity operators for spacetime quantum mechanics. <i>Journal of High Energy Physics</i> , 2018 , 2018, 1	5-4	22
37	40 years of the quantum Hall effect. <i>Nature Reviews Physics</i> , 2020 , 2, 397-401	23-6	18
36	Holographic coherent states from random tensor networks. <i>Journal of High Energy Physics</i> , 2017 , 2017, 1	5-4	17
35	Electron fractionalization and unconventional order parameters of the $\nu=1/2$ model. <i>Nuclear Physics B</i> , 2012 , 854, 815-840	2-8	17
34	Topological response theory of doped topological insulators. <i>Physical Review Letters</i> , 2011 , 107, 206602	7-4	17
33	Holographic duality between (2+1)-dimensional quantum anomalous Hall state and (3+1)-dimensional topological insulators. <i>Physical Review B</i> , 2016 , 94,	3-3	17
32	Holographic entanglement renormalization of topological insulators. <i>Physical Review B</i> , 2016 , 94,	3-3	17
31	Modular flow as a disentangler. <i>Journal of High Energy Physics</i> , 2018 , 2018, 1	5-4	17
30	Integrable and Chaotic Dynamics of Spins Coupled to an Optical Cavity. <i>Physical Review X</i> , 2019 , 9,	9-1	16
29	Tensor network implementation of bulk entanglement spectrum. <i>Physical Review B</i> , 2014 , 90,	3-3	16
28	Position-momentum duality in the entanglement spectrum of free fermions. <i>Journal of Statistical Mechanics: Theory and Experiment</i> , 2014 , 2014, P10023	1-9	15

27	Confinement-deconfinement interplay in quantum phases of doped Mott insulators. <i>Physical Review Letters</i> , 2011 , 106, 147002	7.4	15
26	Does gravity come from quantum information?. <i>Nature Physics</i> , 2018 , 14, 984-987	16.2	14
25	Spin Hall effect in a doped Mott insulator. <i>Physical Review B</i> , 2005 , 72,	3.3	13
24	The coupled SYK model at finite temperature. <i>Journal of High Energy Physics</i> , 2020 , 2020, 1	5.4	11
23	Identifying non-Abelian topological ordered state and transition by momentum polarization. <i>Physical Review B</i> , 2014 , 89,	3.3	10
22	Holographic entanglement negativity and replica symmetry breaking. <i>Journal of High Energy Physics</i> , 2021 , 2021, 1	5.4	10
21	Characterizing eigenstate thermalization via measures in the Fock space of operators. <i>Physical Review E</i> , 2016 , 93, 042138	2.4	9
20	Chaos and high temperature pure state thermalization. <i>Journal of High Energy Physics</i> , 2019 , 2019, 1	5.4	9
19	Topological insulators. <i>MRS Bulletin</i> , 2014 , 39, 843-846	3.2	9
18	Momentum-space instantons and maximally localized flat-band topological Hamiltonians. <i>Physica Status Solidi - Rapid Research Letters</i> , 2013 , 7, 154-156	2.5	9
17	Physics. Symmetry meets topology. <i>Science</i> , 2012 , 338, 1550-1	33.3	8
16	Crystal-symmetry preserving Wannier states for fractional Chern insulators. <i>Physical Review B</i> , 2013 , 88,	3.3	8
15	Lower pseudogap phase of Mott insulators: A spin/vortex liquid state. <i>Physical Review B</i> , 2006 , 74,	3.3	8
14	Unified Topological Response Theory For Gapped and Gapless Free Fermions. <i>Physical Review X</i> , 2015 , 5,	9.1	7
13	Quantum causal influence. <i>Journal of High Energy Physics</i> , 2019 , 2019, 1	5.4	6
12	Building bulk geometry from the tensor Radon transform. <i>Journal of High Energy Physics</i> , 2020 , 2020, 1	5.4	5
11	A fine point on topological insulators. <i>Physics Today</i> , 2010 , 63, 12-12	0.9	5
10	Mutual Chern-Simons gauge theory of spontaneous vortex phase. <i>Physical Review B</i> , 2007 , 76,	3.3	5

9	Rescuing a black hole in the large-q coupled SYK model. <i>Journal of High Energy Physics</i> , 2021 , 2021, 1	5.4	4
8	Size of bulk fermions in the SYK model. <i>Journal of High Energy Physics</i> , 2020 , 2020, 1	5.4	3
7	Emergent classicality in general multipartite states and channels. <i>Quantum - the Open Journal for Quantum Science</i> , 5 , 555		3
6	Field-Theory Foundations of Topological Insulators. <i>Contemporary Concepts of Condensed Matter Science</i> , 2013 , 6, 91-122		2
5	Strongly interacting phases of metallic wires in strong magnetic field. <i>Physical Review B</i> , 2017 , 96,	3.3	2
4	Quantum algorithmic measurement.. <i>Nature Communications</i> , 2022 , 13, 887	17.4	2
3	Reply to Comment on Chiral gauge field and axial anomaly in a Weyl semimetal. <i>Physical Review B</i> , 2017 , 96,	3.3	1
2	Entanglement island, miracle operators and the firewall. <i>Journal of High Energy Physics</i> , 2022 , 2022, 1	5.4	0
1	Holevo information and ensemble theory of gravity. <i>Journal of High Energy Physics</i> , 2022 , 2022, 1	5.4	0