Hong Yao

List of Publications by Year
in descending order

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101	7,865	57681	54771
papers	citations	46 h-index	88 g-index

101	101	101	7941
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Pair-density-wave in the strong coupling limit of the Holstein-Hubbard model. Npj Quantum Materials, 2022, 7, .	1.8	16
2	Variational Quantum-Neural Hybrid Eigensolver. Physical Review Letters, 2022, 128, 120502.	2.9	20
3	Topological states in a dimerized system with staggered magnetic fluxes. Physical Review B, 2022, 105, .	1.1	4
4	Quantum criticality preempted by nematicity. Physical Review B, 2021, 103, .	1.1	5
5	Experimental Evidence of Chiral Symmetry Breaking in KekulÃ©-Ordered Graphene. Physical Review Letters, 2021, 126, 206804.	2.9	72
6	Neural predictor based quantum architecture search. Machine Learning: Science and Technology, 2021, 2, 045027.	2.4	23
7	Possible Superconductivity with a Bogoliubov Fermi Surface in a Lightly Doped Kagome U(1) Spin Liquid. Physical Review Letters, 2021, 127, 187003.	2.9	4
8	Charge- <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:mn>4</mml:mn><mml:mi>e</mml:mi></mml:mrow></mml:math> Superconductivity from Nematic Superconductors in Two and Three Dimensions. Physical Review Letters, 2021, 127, 227001.	2.9	12
9	Antiferromagnetism Induced by Bond Su-Schrieffer-Heeger Electron-Phonon Coupling: A Quantum MonteÂCarlo Study. Physical Review Letters, 2021, 127, 247203.	2.9	25
10	Enhancement of superconductivity in organic-inorganic hybrid topological materials. Science Bulletin, 2020, 65, 188-193.	4.3	39
11	Strong Coupling Limit of the Holstein-Hubbard Model. Physical Review Letters, 2020, 125, 167001.	2.9	29
12	Edge current and orbital angular momentum of chiral superfluids revisited. Physical Review B, 2020, 102, .	1.1	9
13	Observation of Coulomb Gap and Enhanced Superconducting Gap in Nano-Sized Pb Islands Grown on SrTiO₃*. Chinese Physics Letters, 2020, 37, 017402.	1.3	7
14	Type-II Ising Superconductivity and Anomalous Metallic State in Macro-Size Ambient-Stable Ultrathin Crystalline Films. Nano Letters, 2020, 20, 5728-5734.	4.5	43
15	Fermion-induced quantum critical point in Dirac semimetals: A sign-problem-free quantum Monte Carlo study. Physical Review B, 2020, 101, .	1.1	10
16	Non-Abelian fractional Chern insulator in disk geometry. Physical Review B, 2020, 101, .	1.1	4
17	Mass hierarchy in collective modes of pair-density-wave superconductors. Physical Review Research, 2020, 2, .	1.3	8
18	Violation of the viscosity/entropy bound in translationally invariant non-Fermi liquids. Physical Review Research, 2020, 2, .	1.3	6

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19	Disorder-induced multifractal superconductivity in monolayer niobium dichalcogenides. Nature Physics, 2019, 15, 904-910.	6.5	86
20	Intermediate bosonic metallic state in the superconductor-insulator transition. Science, 2019, 366, 1505-1509.	6.0	88
21	Exotic Cooper pairing in multiorbital models of <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:msub><mml:mi>Sr</mml:mi><mml:mn>2</mml:mn></mml:msub></mml:mrow></mml:math> Physical Review B, 2019, 100, .	1.1	30
22	Experimental Realization of an Intrinsic Magnetic Topological Insulator[*]. Chinese Physics Letters, 2019, 36, 076801.	1.3	457
23	Global phase diagram of the one-dimensional Sachdev-Ye-Kitaev model at finite N. Physical Review B, 2019, 100, .	1.1	8
24	Sign-Problem-Free Fermionic Quantum Monte Carlo: Developments and Applications. Annual Review of Condensed Matter Physics, 2019, 10, 337-356.	5.2	60
25	Superconducting pairing in Sr2RuO4 from weak to intermediate coupling. Physical Review B, 2018, 97, .	1.1	26
26	Universal Properties of Many-Body Localization Transitions in Quasiperiodic Systems. Physical Review Letters, 2018, 121, 206601.	2.9	52
27	Numerical observation of emergent spacetime supersymmetry at quantum criticality. Science Advances, 2018, 4, eaau1463.	4.7	26
28	Possible Three-Dimensional Nematic Odd-Parity Superconductivity in <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:msub><mml:mrow><mml:mi>Sr</mml:mi></mml:mrow><mml:mrow><mml:mn>2</mml:mn></mml:mrow> Physical Review Letters, 2018, 121, 157002.	2.9	30
29	Chiral Tricritical Point: A New Universality Class in Dirac Systems. Physical Review Letters, 2018, 120, 215702.	2.9	12
30	Quantum criticality and duality in the <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mtext>Sachdev-Ye-Kitaev</mml:mtext><mml:mo>/</mml:mo><mml:msub mathvariant="normal">AdS</mml:mi><mml:mn>2</mml:mn></mml:msub></mml:math> chain. Physical Review B, 2018, 97, .	1.1	25
31	Charge- <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:mn>4</mml:mn><mml:mi>e</mml:mi></mml:mrow></mml:math> superconductors: A Majorana quantum Monte Carlo study. Physical Review B, 2017, 95, .	1.1	26
32	Fractional charge and emergent mass hierarchy in diagonal two-leg tâ€“J cylinders. Physical Review B, 2017, 95, .	1.1	6
33	Hourglass semimetals with nonsymmorphic symmetries in three dimensions. Physical Review B, 2017, 96, .	1.1	27
34	Fermion-induced quantum critical points in three-dimensional Weyl semimetals. Physical Review B, 2017, 96, .	1.1	25
35	Fermion-induced quantum critical points. Nature Communications, 2017, 8, 314.	5.8	85
36	Edge Quantum Criticality and Emergent Supersymmetry in Topological Phases. Physical Review Letters, 2017, 119, 107202.	2.9	28

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37	Lorentz-violating type-II Dirac fermions in transition metal dichalcogenide PtTe2. Nature Communications, 2017, 8, 257.	5.8	337
38	Edge stability and edge quantum criticality in two-dimensional interacting topological insulators. Physical Review B, 2017, 96, .	1.1	6
39	Fermion-induced quantum critical points in two-dimensional Dirac semimetals. Physical Review B, 2017, 96, .	1.1	25
40	Solvable Sachdev-Ye-Kitaev Models in Higher Dimensions: From Diffusion to Many-Body Localization. Physical Review Letters, 2017, 119, 206602.	2.9	87
41	Nature of the effective interaction in electron-doped cuprate superconductors: A sign-problem-free quantum Monte Carlo study. Physical Review B, 2017, 95, .	1.1	29
42	Emergence of Supersymmetric Quantum Electrodynamics. Physical Review Letters, 2017, 118, 166802.	2.9	52
43	Mottness Collapse in <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:mn>1</mml:mn><mml:mi mathvariant="normal">T</mml:mi><mml:mtext>â€“</mml:mtext><mml:msub><mml:mrow><mml:mi>TaS</mml:mi></mml:mrow><mml:mrow><mml:mn>2</mml:mn></mml:mrow></mml:msub></mml:mrow></mml:math> Transition-Metal Dichalcogenide: An Interplay between Localized. Physical Review X, 2017, 7, .	2.8	53
44	Correlated triple-Weyl semimetals with Coulomb interactions. Physical Review B, 2017, 96, .	1.1	18
45	Dislocation Majorana zero modes in perovskite oxide 2DEG. Scientific Reports, 2016, 6, 25184.	1.6	13
46	Majorana-Time-Reversal Symmetries: A Fundamental Principle for Sign-Problem-Free Quantum MonteÂCarlo Simulations. Physical Review Letters, 2016, 117, 267002.	2.9	80
47	What makes the Tc of monolayer FeSe on SrTiO3 so high: a sign-problem-free quantum Monte Carlo study. Science Bulletin, 2016, 61, 925-930.	4.3	94
48	Experimental observation of topological Fermi arcs in type-II Weyl semimetal MoTe2. Nature Physics, 2016, 12, 1105-1110.	6.5	663
49	Topological photonic crystal with equifrequency Weyl points. Physical Review A, 2016, 93, .	1.0	54
50	Visualizing the elongated vortices in<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mi>Î³</mml:mi></mml:math>-Ga nanostrips. Physical Review B, 2016, 93, .	1.1	8
51	Topological Semimetals in Chalcopyrites<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:msub><mml:mrow><mml:mi>CuTlSe</mml:mi></mml:mrow><mml:mrow><mml:mn>2</mml:mn></mml:mrow></mml:msub></mml:mrow></mml:math> and <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:msub><mml:mrow><mml:mi>AgTlTe</mml:mi></mml:mrow><mml:mrow><mml:mn>2</mml:mn></mml:mrow></mml:msub></mml:mrow></mml:math>. Physical Review Letters, 2016, 116, 226801.	2.9	116
52	Bulk Fermi Surface of Charge-Neutral Excitations inSmB6or Not: A Heat-Transport Study. Physical Review Letters, 2016, 116, 246403.	2.9	34
53	Detecting monopole charge in Weyl semimetals via quantum interference transport. Physical Review B, 2016, 93, .	1.1	40
54	Symmetry-protected ideal Weyl semimetal in HgTe-class materials. Nature Communications, 2016, 7, 11136.	5.8	206

#	ARTICLE	IF	CITATIONS
55	Evidence for spin-triplet odd-parity superconductivity close to type-II van Hove singularities. Physical Review B, 2015, 91, .	1.1	15
56	Topological odd-parity superconductivity at type-II two-dimensional van Hove singularities. Physical Review B, 2015, 92, .	1.1	57
57	Correlated double-Weyl semimetals with Coulomb interactions: Possible applications to<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:msub><mml:mi>HgCr</mml:mi><mml:mn>2</mml:mn></<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:msub><mml:mi>SrSi</mml:mi><mml:mn>2</mml:mn></mml:msub></ Physical Review B, 2015, 92, .	1.1	71
58	Double-semion topological order from exactly solvable quantum dimer models. Physical Review B, 2015, 92, .	1.1	13
59	Topological<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:mi>p</mml:mi><mml:mo>+</mml:mo><mml:mi>i</mml:mi> in doped graphene-like single-sheet materials<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:msub><mml:mi>BC</mml:mi><mml:mn>3</mml:mn></mml:msub></ Physical Review B, 2015, 92, .	1.1	24
60	Emergent Spacetime Supersymmetry in 3D Weyl Semimetals and 2D Dirac Semimetals. Physical Review Letters, 2015, 114, 237001.	2.9	123
61	Realizing Majorana zero modes by proximity effect between topological insulators andd-wave high-temperature superconductors. Physical Review B, 2015, 91, .	1.1	21
62	Solving the fermion sign problem in quantum Monte Carlo simulations by Majorana representation. Physical Review B, 2015, 91, .	1.1	138
63	Interaction-driven topological and nematic phases on the Lieb lattice. New Journal of Physics, 2015, 17, 055016.	1.2	69
64	Fermion-sign-free Majarana-quantum-Monte-Carlo studies of quantum critical phenomena of Dirac fermions in two dimensions. New Journal of Physics, 2015, 17, 085003.	1.2	80
65	Majorana zero modes in dislocations of<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:msub><mml:mi mathvariant="normal">Sr</mml:mi><mml:mn>2</mml:mn></mml:msub><mml:msub><mml:mi mathvariant="normal">RuO</mml:mi><mml:mn>4</mml:mn></mml:msub></mml:math>. Physical Review	1.1	49
66	Possible triplet<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:mi>p</mml:mi><mml:mo>+</mml:mo><mml:mi>i</mml:mi><mml:mi> in graphene at low filling. Physical Review B, 2014, 90, .	1.1	33
67	Gapless spin liquids: Stability and possible experimental relevance. Physical Review B, 2013, 87, .	1.1	26
68	Fully gapped topological surface states in Bi2Se3 films induced by a d-wave high-temperature superconductor. Nature Physics, 2013, 9, 621-625.	6.5	149
69	Time-reversal symmetry breaking superconducting ground state in the doped Mott insulator on the honeycomb lattice. Physical Review B, 2013, 88, .	1.1	51
70	Interaction effect on topological classification of superconductors in two dimensions. Physical Review B, 2013, 88, .	1.1	120
71	Classification of topological insulators and superconductors in the presence of reflection symmetry. Physical Review B, 2013, 88, .	1.1	281
72	Frustrated Resonating Valence Bond States in Two Dimensions: Classification and Short-Range Correlations. Physical Review Letters, 2012, 109, 147209.	2.9	37

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73	Non-Abelian Quantum Hall Effect in Topological Flat Bands. Physical Review Letters, 2012, 108, 126805.	2.9	99
74	Fractional quantum Hall effect in topological flat bands with Chern number two. Physical Review B, 2012, 86, .	1.1	119
75	Phases of the Infinite<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mi>U</mml:mi></mml:math>Hubbard Model on Square Lattices. Physical Review Letters, 2012, 108, 126406.	2.9	55
76	Exact Spin Liquid Ground States of the Quantum Dimer Model on the Square and Honeycomb Lattices. Physical Review Letters, 2012, 108, 247206.	2.9	30
77	Spin liquid ground state of the spin-<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mfrac><mml:mn>1</mml:mn><mml:mn>2</mml:mn></mml:mfrac></mml:math>square<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:msub><mml:mi>J</mml:mi><mml:mn>1</mml:mn></mml:msub></mml:math>-<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:msub><mml:mi>J</mml:mi><mml:mn>2</mml:mn></mml:msub></mml:math>Heisenberg model. Physical Review Letters, 2011, 107, 077204.	7.1	271
78	Exact chiral spin liquid with stable spin Fermi surface on the kagome lattice. Physical Review B, 2011, 83, .	1.1	47
79	From a Single-Band Metal to a High-Temperature Superconductor via Two Thermal Phase Transitions. Science, 2011, 331, 1579-1583.	6.0	292
80	Doping dependence of the (Ï€, Ï€) shadow band in La-based cuprates studied by angle-resolved photoemission spectroscopy. New Journal of Physics, 2011, 13, 013031.	1.2	19
81	Fermi-surface reconstruction in a smectic phase of a high-temperature superconductor. Physical Review B, 2011, 84, .	1.1	57
82	Fermionic Magnons, Non-Abelian Spinons, and the Spin Quantum Hall Effect from an Exactly Solvable Spin-<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mn>1</mml:mn><mml:mo>/</mml:mo><mml:mn>2</mml:mn></mml:math>Kitaev Model with SU(2) Symmetry. Physical Review Letters, 2011, 107, 087205.	2.9	58
83	Hidden Itinerant-Spin Phase in Heavily Overdoped<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:msub><mml:mi>La</mml:mi><mml:mrow><mml:mn>2</mml:mn><mml:mo>â^’</mml:mo></mml:mrow></mml:msub></mml:math><mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mi>x</mml:mi></mml:math><mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:msub><mml:mi>Sr</mml:mi><mml:mi>x</mml:mi></mml:msub></mml:math><mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:msub><mml:mi>CuO</mml:mi><mml:mn>4</mml:mn></mml:msub></mml:math> Revealed by Dilute Fe Doping: A Combined Neutron Scattering and Angle-Resolved Photoemission Study. Physical Review Letters, 2011, 107, 127002.	7.1	27
84	Spin excitations of the block-antiferromagnetic state in K0.8Fe1.6Se2. Physical Review B, 2011, 84, .	1.1	24
85	Particleâ€“hole symmetry breaking in the pseudogap state of Bi2201. Nature Physics, 2010, 6, 414-418.	6.5	176
86	Entanglement Entropy and Entanglement Spectrum of the Kitaev Model. Physical Review Letters, 2010, 105, 080501.	2.9	175
87	Fragile Mott Insulators. Physical Review Letters, 2010, 105, 166402.	2.9	37
88	Topological quantum phase transition in an exactly solvable model of a chiral spin liquid at finite temperature. Physical Review B, 2010, 81, .	1.1	23
89	Topological insulators and topological nonlinearÏƒmodels. Physical Review B, 2010, 82, .	1.1	17
90	Spontaneous symmetry breaking in a two-dimensional kagome lattice. Physical Review B, 2010, 82, .	1.1	43

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91	Algebraic Spin Liquid in an Exactly Solvable Spin Model. Physical Review Letters, 2009, 102, 217202.	2.9	89
92	Topological Insulators and Nematic Phases from Spontaneous Symmetry Breaking in 2D Fermi Systems with a Quadratic Band Crossing. Physical Review Letters, 2009, 103, 046811.	2.9	356
93	Unity or diversity?. Nature Materials, 2008, 7, 927-928.	13.3	29
94	Theory of electron nematic order in LaFeAsO. Physical Review B, 2008, 77, .	1.1	588
95	Optimal inhomogeneity for superconductivity: Finite-size studies. Physical Review B, 2008, 77, .	1.1	51
96	Quantum phase transition in the quantum compass model. Physical Review B, 2007, 75, .	1.1	51
97	Exact Chiral Spin Liquid with Non-Abelian Anyons. Physical Review Letters, 2007, 99, 247203.	2.9	271
98	Myriad phases of the checkerboard Hubbard model. Physical Review B, 2007, 76, .	1.1	43
99	Theory of stripes in quasi-two-dimensional rare-earth tellurides. Physical Review B, 2006, 74, .	1.1	74
100	Valence-bond crystal in a{111}slice of the pyrochlore antiferromagnet. Physical Review B, 2004, 69, .	1.1	7
101	Exact solution of anisotropic antiferromagnetic alternating Heisenbergâ€“Ising spin chain. Solid State Communications, 2002, 121, 687-690.	0.9	13