

Haohua Wang

List of Publications by Year in Descending Order

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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.

83 papers	7,382 citations	39 h-index	85 g-index
88 ext. papers	8,937 ext. citations	11.4 avg, IF	5.32 L-index

#	Paper	IF	Citations
83	Metrological Characterization of Non-Gaussian Entangled States of Superconducting Qubits.. <i>Physical Review Letters</i> , 2022 , 128, 150501	7.4	1
82	Stark Many-Body Localization on a Superconducting Quantum Processor.. <i>Physical Review Letters</i> , 2021 , 127, 240502	7.4	5
81	Quantum generative adversarial networks with multiple superconducting qubits. <i>Npj Quantum Information</i> , 2021 , 7,	8.6	3
80	Observation of energy-resolved many-body localization. <i>Nature Physics</i> , 2021 , 17, 234-239	16.2	20
79	Scalable Evaluation of Quantum-Circuit Error Loss Using Clifford Sampling. <i>Physical Review Letters</i> , 2021 , 126, 080501	7.4	0
78	A quantum enhanced search for dark matter axions. <i>Nature</i> , 2021 , 590, 238-242	50.4	46
77	High-Efficiency Arbitrary Quantum Operation on a High-Dimensional Quantum System. <i>Physical Review Letters</i> , 2021 , 127, 090504	7.4	2
76	Experimental Implementation of Universal Nonadiabatic Geometric Quantum Gates in a Superconducting Circuit. <i>Physical Review Letters</i> , 2020 , 124, 230503	7.4	42
75	Synthesizing three-body interaction of spin chirality with superconducting qubits. <i>Applied Physics Letters</i> , 2020 , 116, 114001	3.4	7
74	Demonstration of Controlled-Phase Gates between Two Error-Correctable Photonic Qubits. <i>Physical Review Letters</i> , 2020 , 124, 120501	7.4	22
73	Probing dynamical phase transitions with a superconducting quantum simulator. <i>Science Advances</i> , 2020 , 6, eaba4935	14.3	28
72	Controllable Switching between Superradiant and Subradiant States in a 10-qubit Superconducting Circuit. <i>Physical Review Letters</i> , 2020 , 124, 013601	7.4	25
71	Superconducting fluctuation induced conductance corrections near a pair-breaking quantum phase transition in doubly connected ultrathin cylinders of Al. <i>Science China: Physics, Mechanics and Astronomy</i> , 2020 , 63, 1	3.6	
70	Manipulating Complex Hybrid Entanglement and Testing Multipartite Bell Inequalities in a Superconducting Circuit. <i>Physical Review Letters</i> , 2020 , 125, 180503	7.4	7
69	Materials loss measurements using superconducting microwave resonators. <i>Review of Scientific Instruments</i> , 2020 , 91, 091101	1.7	17
68	Simultaneous Excitation of Two Noninteracting Atoms with Time-Frequency Correlated Photon Pairs in a Superconducting Circuit. <i>Physical Review Letters</i> , 2020 , 125, 133601	7.4	8
67	Tunable Coupler for Realizing a Controlled-Phase Gate with Dynamically Decoupled Regime in a Superconducting Circuit. <i>Physical Review Applied</i> , 2020 , 14,	4.3	24

66	Coupling a Superconducting Qubit to a Left-Handed Metamaterial Resonator. <i>Physical Review Applied</i> , 2020 , 14,	4.3	3
65	Quantum computation with universal error mitigation on a superconducting quantum processor. <i>Science Advances</i> , 2019 , 5, eaaw5686	14.3	34
64	Heisenberg-limited single-mode quantum metrology in a superconducting circuit. <i>Nature Communications</i> , 2019 , 10, 4382	17.4	14
63	Synthesis of antisymmetric spin exchange interaction and chiral spin clusters in superconducting circuits. <i>Nature Physics</i> , 2019 , 15, 382-386	16.2	30
62	Mode Structure in Superconducting Metamaterial Transmission-Line Resonators. <i>Physical Review Applied</i> , 2019 , 11,	4.3	11
61	Genuine 12-Qubit Entanglement on a Superconducting Quantum Processor. <i>Physical Review Letters</i> , 2019 , 122, 110501	7.4	72
60	Generation of multicomponent atomic Schrödinger cat states of up to 20 qubits. <i>Science</i> , 2019 , 365, 574-577	57.3	115
59	Observation of Topological Magnon Insulator States in a Superconducting Circuit. <i>Physical Review Letters</i> , 2019 , 123, 080501	7.4	40
58	Emulating Many-Body Localization with a Superconducting Quantum Processor. <i>Physical Review Letters</i> , 2018 , 120, 050507	7.4	106
57	Demonstration of Topological Robustness of Anyonic Braiding Statistics with a Superconducting Quantum Circuit. <i>Physical Review Letters</i> , 2018 , 121, 030502	7.4	24
56	Perfect Quantum State Transfer in a Superconducting Qubit Chain with Parametrically Tunable Couplings. <i>Physical Review Applied</i> , 2018 , 10,	4.3	59
55	Dephasing-Insensitive Quantum Information Storage and Processing with Superconducting Qubits. <i>Physical Review Letters</i> , 2018 , 121, 130501	7.4	17
54	Observation of geometric phase in a dispersively coupled resonator-qutrit system. <i>Chinese Physics B</i> , 2018 , 27, 070303	1.2	1
53	Single-Loop Realization of Arbitrary Nonadiabatic Holonomic Single-Qubit Quantum Gates in a Superconducting Circuit. <i>Physical Review Letters</i> , 2018 , 121, 110501	7.4	76
52	Continuous-variable geometric phase and its manipulation for quantum computation in a superconducting circuit. <i>Nature Communications</i> , 2017 , 8, 1061	17.4	34
51	10-Qubit Entanglement and Parallel Logic Operations with a Superconducting Circuit. <i>Physical Review Letters</i> , 2017 , 119, 180511	7.4	212
50	Solving Systems of Linear Equations with a Superconducting Quantum Processor. <i>Physical Review Letters</i> , 2017 , 118, 210504	7.4	47
49	Suppression of Dephasing by Qubit Motion in Superconducting Circuits. <i>Physical Review Letters</i> , 2016 , 116, 010501	7.4	20

48	Coherent population transfer between uncoupled or weakly coupled states in ladder-type superconducting qutrits. <i>Nature Communications</i> , 2016 , 7, 11018	17.4	46
47	Emulating Anyonic Fractional Statistical Behavior in a Superconducting Quantum Circuit. <i>Physical Review Letters</i> , 2016 , 117, 110501	7.4	38
46	Exploring the quantum critical behaviour in a driven Tavis-Cummings circuit. <i>Nature Communications</i> , 2015 , 6, 7111	17.4	27
45	Quantum Delayed-Choice Experiment with a Beam Splitter in a Quantum Superposition. <i>Physical Review Letters</i> , 2015 , 115, 260403	7.4	23
44	Reducing the impact of intrinsic dissipation in a superconducting circuit by quantum error detection. <i>Nature Communications</i> , 2014 , 5, 3135	17.4	19
43	Joint quantum state tomography of an entangled qubit-resonator hybrid. <i>New Journal of Physics</i> , 2013 , 15, 125027	2.9	6
42	Excitation of superconducting qubits from hot nonequilibrium quasiparticles. <i>Physical Review Letters</i> , 2013 , 110, 150502	7.4	37
41	Quantum state characterization of a fast tunable superconducting resonator. <i>Applied Physics Letters</i> , 2013 , 102, 163503	3.4	47
40	Optomechanical dark mode. <i>Science</i> , 2012 , 338, 1609-13	33.3	300
39	Flux noise probed with real time qubit tomography in a Josephson phase qubit. <i>Physical Review Letters</i> , 2012 , 109, 067001	7.4	44
38	Dynamic quantum Kerr effect in circuit quantum electrodynamics. <i>Physical Review A</i> , 2012 , 85,	2.6	10
37	Deterministic entanglement of photons in two superconducting microwave resonators. <i>Physical Review Letters</i> , 2011 , 106, 060401	7.4	145
36	Photon shell game in three-resonator circuit quantum electrodynamics. <i>Nature Physics</i> , 2011 , 7, 287-293	16.2	103
35	Surface loss simulations of superconducting coplanar waveguide resonators. <i>Applied Physics Letters</i> , 2011 , 99, 113513	3.4	95
34	Measurement of energy decay in superconducting qubits from nonequilibrium quasiparticles. <i>Physical Review B</i> , 2011 , 84,	3.3	67
33	Minimizing quasiparticle generation from stray infrared light in superconducting quantum circuits. <i>Applied Physics Letters</i> , 2011 , 99, 113507	3.4	147
32	Fast tunable coupler for superconducting qubits. <i>Physical Review Letters</i> , 2011 , 106, 060501	7.4	84
31	Implementing the quantum von Neumann architecture with superconducting circuits. <i>Science</i> , 2011 , 334, 61-5	33.3	214

30	Wirebond crosstalk and cavity modes in large chip mounts for superconducting qubits. <i>Superconductor Science and Technology</i> , 2011 , 24, 065001	3.1	34
29	Phase qubits fabricated with trilayer junctions. <i>Superconductor Science and Technology</i> , 2011 , 24, 055005	3.1	15
28	Quantum ground state and single-phonon control of a mechanical resonator. <i>Nature</i> , 2010 , 464, 697-703	50.4	1368
27	Generation of three-qubit entangled states using superconducting phase qubits. <i>Nature</i> , 2010 , 467, 570-3	30.4	293
26	Quantum process tomography of a universal entangling gate implemented with Josephson phase qubits. <i>Nature Physics</i> , 2010 , 6, 409-413	16.2	137
25	Quantum process tomography of two-qubit controlled-Z and controlled-NOT gates using superconducting phase qubits. <i>Physical Review B</i> , 2010 , 82,	3.3	76
24	Reduced phase error through optimized control of a superconducting qubit. <i>Physical Review A</i> , 2010 , 82,	2.6	49
23	Decoherence dynamics of complex photon states in a superconducting circuit. <i>Physical Review Letters</i> , 2009 , 103, 200404	7.4	39
22	Improving the coherence time of superconducting coplanar resonators. <i>Applied Physics Letters</i> , 2009 , 95, 233508	3.4	121
21	Josephson phase qubit circuit for the evaluation of advanced tunnel barrier materials. <i>Superconductor Science and Technology</i> , 2009 , 22, 015004	3.1	26
20	Synthesizing arbitrary quantum states in a superconducting resonator. <i>Nature</i> , 2009 , 459, 546-9	50.4	617
19	Violation of Bell's inequality in Josephson phase qubits. <i>Nature</i> , 2009 , 461, 504-6	50.4	290
18	Emulation of a quantum spin with a superconducting phase qubit. <i>Science</i> , 2009 , 325, 722-5	33.3	190
17	Generation of Fock states in a superconducting quantum circuit. <i>Nature</i> , 2008 , 454, 310-4	50.4	388
16	Process tomography of quantum memory in a Josephson-phase qubit coupled to a two-level state. <i>Nature Physics</i> , 2008 , 4, 523-526	16.2	192
15	High-fidelity gates in a single Josephson qubit. <i>Physical Review Letters</i> , 2008 , 100, 247001	7.4	90
14	Reversal of the weak measurement of a quantum state in a superconducting phase qubit. <i>Physical Review Letters</i> , 2008 , 101, 200401	7.4	189
13	Wang et al. Reply:. <i>Physical Review Letters</i> , 2008 , 101,	7.4	1

12	Transformed dissipation in superconducting quantum circuits. <i>Physical Review B</i> , 2008 , 77,	3-3	37
11	Microwave dielectric loss at single photon energies and millikelvin temperatures. <i>Applied Physics Letters</i> , 2008 , 92, 112903	3-4	183
10	Ultrathin, doubly connected superconducting cylinders: A link between one- and two-dimensional superconductors. <i>Physica C: Superconductivity and Its Applications</i> , 2008 , 468, 331-336	1-3	2
9	Measurement of the decay of Fock states in a superconducting quantum circuit. <i>Physical Review Letters</i> , 2008 , 101, 240401	7-4	112
8	Observation of a Possible Metallic State Induced by a Parallel Magnetic Field in Superconducting Au _{0.7} In _{0.3} Samples With Very Low Normal-state Sheet Resistance. <i>Journal of Low Temperature Physics</i> , 2007 , 147, 623-631	1-3	1
7	Observation of double resistance anomalies and excessive resistance in mesoscopic superconducting Au _{0.7} In _{0.3} rings with phase separation. <i>Physical Review B</i> , 2007 , 75,	3-3	4
6	1/f Flux noise in Josephson phase qubits. <i>Physical Review Letters</i> , 2007 , 99, 187006	7-4	137
5	Lithography-free fabrication of graphene devices. <i>Applied Physics Letters</i> , 2007 , 90, 143518	3-4	50
4	Possible observation of phase separation near a quantum phase transition in doubly connected ultrathin superconducting cylinders of aluminum. <i>Physical Review Letters</i> , 2005 , 95, 197003	7-4	26
3	Metallic contacts with individual Ru nanowires prepared by electrochemical deposition and the suppression of superconductivity in ultrasmall Ru grains. <i>Applied Physics Letters</i> , 2004 , 84, 5171-5173	3-4	9
2	Superconducting fluctuations in the destructive regime of ultrathin, superconducting cylinders. <i>Physica B: Condensed Matter</i> , 2003 , 329-333, 1415-1416	2-8	2
1	Destruction of the global phase coherence in ultrathin, doubly connected superconducting cylinders. <i>Science</i> , 2001 , 294, 2332-4	33-3	79