James Wenner

List of Publications by Year
in descending order

64 papers	13,453 citations	41323 49 h-index	110317 64 g-index
64 all docs	64 docs citations	64 times ranked	7929 citing authors

#	Article	IF	Citations
1	Quantum ground state and single-phonon control of a mechanical resonator. Nature, 2010, 464, 697-703.	13.7	1,677
2	Superconducting quantum circuits at the surface code threshold for fault tolerance. Nature, 2014, 508, 500-503.	13.7	1,270
3	Synthesizing arbitrary quantum states in a superconducting resonator. Nature, 2009, 459, 546-549.	13.7	730
4	State preservation by repetitive error detection in a superconducting quantum circuit. Nature, 2015, 519, 66-69.	13.7	682
5	Scalable Quantum Simulation of Molecular Energies. Physical Review X, 2016, 6, .	2.8	577
6	Coherent Josephson Qubit Suitable for Scalable Quantum Integrated Circuits. Physical Review Letters, 2013, 111, 080502.	2.9	536
7	Qubit Architecture with High Coherence and Fast Tunable Coupling. Physical Review Letters, 2014, 113, 220502.	2.9	387
8	Violation of Bell's inequality in Josephson phase qubits. Nature, 2009, 461, 504-506.	13.7	357
9	Generation of three-qubit entangled states using superconducting phase qubits. Nature, 2010, 467, 570-573.	13.7	342
10	Planar superconducting resonators with internal quality factors above one million. Applied Physics Letters, 2012, 100, .	1.5	341
11	Digitized adiabatic quantum computing with a superconducting circuit. Nature, 2016, 534, 222-226.	13.7	339
12	Spectroscopic signatures of localization with interacting photons in superconducting qubits. Science, 2017, 358, 1175-1179.	6.0	315
13	A blueprint for demonstrating quantum supremacy with superconducting qubits. Science, 2018, 360, 195-199.	6.0	307
14	Chiral ground-state currents of interacting photons in a synthetic magnetic field. Nature Physics, 2017, 13, 146-151.	6.5	292
15	Fast Accurate State Measurement with Superconducting Qubits. Physical Review Letters, 2014, 112, 190504.	2.9	273
16	Digital quantum simulation of fermionic models with a superconducting circuit. Nature Communications, 2015, 6, 7654.	5.8	258
17	Implementing the Quantum von Neumann Architecture with Superconducting Circuits. Science, 2011, 334, 61-65.	6.0	246
18	Computing prime factors with a Josephson phase qubit quantum processor. Nature Physics, 2012, 8, 719-723.	6.5	238

#	Article	IF	Citations
19	Emulation of a Quantum Spin with a Superconducting Phase Qudit. Science, 2009, 325, 722-725.	6.0	237
20	Ergodic dynamics and thermalization in an isolated quantum system. Nature Physics, 2016, 12, 1037-1041.	6.5	208
21	Quantum process tomography of a universal entangling gate implemented with Josephson phase qubits. Nature Physics, 2010, 6, 409-413.	6.5	186
22	Minimizing quasiparticle generation from stray infrared light in superconducting quantum circuits. Applied Physics Letters, 2011, 99, .	1.5	184
23	Fluctuations of Energy-Relaxation Times in Superconducting Qubits. Physical Review Letters, 2018, 121, 090502.	2.9	174
24	Deterministic Entanglement of Photons in Two Superconducting Microwave Resonators. Physical Review Letters, 2011, 106, 060401.	2.9	170
25	Observation of topological transitions in interacting quantum circuits. Nature, 2014, 515, 241-244.	13.7	162
26	Optimal Quantum Control Using Randomized Benchmarking. Physical Review Letters, 2014, 112, 240504.	2.9	160
27	Catch and Release of Microwave Photon States. Physical Review Letters, 2013, 110, 107001.	2.9	159
28	Improving the coherence time of superconducting coplanar resonators. Applied Physics Letters, 2009, 95, .	1.5	145
29	Measuring and Suppressing Quantum State Leakage in a Superconducting Qubit. Physical Review Letters, 2016, 116, 020501.	2.9	137
30	Measurement of the Decay of Fock States in a Superconducting Quantum Circuit. Physical Review Letters, 2008, 101, 240401.	2.9	134
31	Surface loss simulations of superconducting coplanar waveguide resonators. Applied Physics Letters, 2011, 99, .	1.5	130
32	Strong environmental coupling in a Josephson parametric amplifier. Applied Physics Letters, 2014, 104, .	1.5	127
33	Traveling wave parametric amplifier with Josephson junctions using minimal resonator phase matching. Applied Physics Letters, 2015, 106, .	1.5	124
34	Photon shell game in three-resonator circuit quantum electrodynamics. Nature Physics, 2011, 7, 287-293.	6.5	114
35	Fast Tunable Coupler for Superconducting Qubits. Physical Review Letters, 2011, 106, 060501.	2.9	98
36	Qubit compatible superconducting interconnects. Quantum Science and Technology, 2018, 3, 014005.	2.6	95

#	Article	IF	Citations
37	Quantum process tomography of two-qubit controlled-Z and controlled-NOT gates using superconducting phase qubits. Physical Review B, 2010, 82, .	1.1	93
38	Catching Time-Reversed Microwave Coherent State Photons with 99.4% Absorption Efficiency. Physical Review Letters, 2014, 112, .	2.9	92
39	Measurement-Induced State Transitions in a Superconducting Qubit: Beyond the Rotating Wave Approximation. Physical Review Letters, 2016, 117, 190503.	2.9	91
40	Fabrication and characterization of aluminum airbridges for superconducting microwave circuits. Applied Physics Letters, 2014, 104, .	1.5	89
41	Observation of Classical-Quantum Crossover of <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mn>1</mml:mn><mml:mo stretchy="false">/</mml:mo><mml:mi>f</mml:mi></mml:math> Flux Noise and Its Paramagnetic Temperature Dependence. Physical Review Letters, 2017, 118, 057702.	2.9	87
42	Characterization and reduction of microfabrication-induced decoherence in superconducting quantum circuits. Applied Physics Letters, 2014, 105, .	1.5	85
43	Measurement of energy decay in superconducting qubits from nonequilibrium quasiparticles. Physical Review B, 2011, 84, .	1.1	81
44	Reduced phase error through optimized control of a superconducting qubit. Physical Review A, 2010, 82, .	1.0	76
45	Characterization and reduction of capacitive loss induced by sub-micron Josephson junction fabrication in superconducting qubits. Applied Physics Letters, 2017, 111, .	1.5	76
46	Design and characterization of a lumped element single-ended superconducting microwave parametric amplifier with on-chip flux bias line. Applied Physics Letters, 2013, 103, .	1.5	73
47	Multiplexed dispersive readout of superconducting phase qubits. Applied Physics Letters, 2012, 101, .	1.5	67
48	Qubit Metrology of Ultralow Phase Noise Using Randomized Benchmarking. Physical Review Applied, 2015, 3, .	1.5	66
49	Room temperature deposition of sputtered TiN films for superconducting coplanar waveguide resonators. Superconductor Science and Technology, 2014, 27, 015009.	1.8	58
50	Wirebond crosstalk and cavity modes in large chip mounts for superconducting qubits. Superconductor Science and Technology, 2011, 24, 065001.	1.8	50
51	Flux Noise Probed with Real Time Qubit Tomography in a Josephson Phase Qubit. Physical Review Letters, 2012, 109, 067001.	2.9	49
52	Excitation of Superconducting Qubits from Hot Nonequilibrium Quasiparticles. Physical Review Letters, 2013, 110, 150502.	2.9	48
53	Compressed sensing quantum process tomography for superconducting quantum gates. Physical Review B, 2014, 90, .	1.1	45
54	Decoherence Dynamics of Complex Photon States in a Superconducting Circuit. Physical Review Letters, 2009, 103, 200404.	2.9	44

#	Article	IF	Citations
55	Fluctuations from edge defects in superconducting resonators. Applied Physics Letters, 2013, 103, .	1.5	44
56	Preserving entanglement during weak measurement demonstrated with a violation of the Bellâ€“Leggettâ€“Garg inequality. Npj Quantum Information, 2016, 2, .	2.8	41
57	A method for building low loss multi-layer wiring for superconducting microwave devices. Applied Physics Letters, 2018, 112, .	1.5	35
58	Emulating weak localization using a solid-state quantum circuit. Nature Communications, 2014, 5, 5184.	5.8	30
59	Scalablein situqubit calibration during repetitive error detection. Physical Review A, 2016, 94, .	1.0	30
60	Rolling quantum dice with a superconducting qubit. Physical Review A, 2014, 90, .	1.0	27
61	Dielectric surface loss in superconducting resonators with flux-trapping holes. Superconductor Science and Technology, 2016, 29, 104006.	1.8	22
62	Phase qubits fabricated with trilayer junctions. Superconductor Science and Technology, 2011, 24, 055005.	1.8	17
63	Dynamic quantum Kerr effect in circuit quantum electrodynamics. Physical Review A, 2012, 85, .	1.0	13
64	High speed flux sampling for tunable superconducting qubits with an embedded cryogenic transducer. Superconductor Science and Technology, 2019, 32, 015012.	1.8	13