

# James Wenner

## 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.

64  
papers

10,199  
citations

48  
h-index

64  
g-index

64  
ext. papers

12,063  
ext. citations

13.2  
avg, IF

5.16  
L-index

| #  | Paper   | IF   | Citations |
|----|---|------|-----------|
| 64 | Quantum ground state and single-phonon control of a mechanical resonator. <i>Nature</i> , <b>2010</b> , 464, 697-703                          | 50.4 | 1368      |
| 63 | Superconducting quantum circuits at the surface code threshold for fault tolerance. <i>Nature</i> , <b>2014</b> , 508, 500-3                  | 50.4 | 961       |
| 62 | Synthesizing arbitrary quantum states in a superconducting resonator. <i>Nature</i> , <b>2009</b> , 459, 546-9                                | 50.4 | 617       |
| 61 | State preservation by repetitive error detection in a superconducting quantum circuit. <i>Nature</i> , <b>2015</b> , 519, 66-9                | 50.4 | 542       |
| 60 | Coherent Josephson qubit suitable for scalable quantum integrated circuits. <i>Physical Review Letters</i> , <b>2013</b> , 111, 080502        | 7.4  | 401       |
| 59 | Scalable Quantum Simulation of Molecular Energies. <i>Physical Review X</i> , <b>2016</b> , 6,  | 9.1  | 355       |
| 58 | Generation of three-qubit entangled states using superconducting phase qubits. <i>Nature</i> , <b>2010</b> , 467, 570-3                       | 50.4 | 293       |
| 57 | Violation of Bell's inequality in Josephson phase qubits. <i>Nature</i> , <b>2009</b> , 461, 504-6  | 50.4 | 290       |
| 56 | Qubit Architecture with High Coherence and Fast Tunable Coupling. <i>Physical Review Letters</i> , <b>2014</b> , 113, 220502                  | 7.4  | 279       |
| 55 | Planar superconducting resonators with internal quality factors above one million. <i>Applied Physics Letters</i> , <b>2012</b> , 100, 113510 | 3.4  | 264       |
| 54 | Digitized adiabatic quantum computing with a superconducting circuit. <i>Nature</i> , <b>2016</b> , 534, 222-6                                | 50.4 | 239       |
| 53 | Implementing the quantum von Neumann architecture with superconducting circuits. <i>Science</i> , <b>2011</b> , 334, 61-5                     | 33.3 | 214       |
| 52 | A blueprint for demonstrating quantum supremacy with superconducting qubits. <i>Science</i> , <b>2018</b> , 360, 195-199                      | 33.3 | 205       |
| 51 | Fast accurate state measurement with superconducting qubits. <i>Physical Review Letters</i> , <b>2014</b> , 112, 190504                       | 7.4  | 200       |
| 50 | Computing prime factors with a Josephson phase qubit quantum processor. <i>Nature Physics</i> , <b>2012</b> , 8, 719-723                      | 17.4 | 194       |
| 49 | Digital quantum simulation of fermionic models with a superconducting circuit. <i>Nature Communications</i> , <b>2015</b> , 6, 7654           | 17.4 | 191       |
| 48 | Emulation of a quantum spin with a superconducting phase qubit. <i>Science</i> , <b>2009</b> , 325, 722-5                                     | 33.3 | 190       |

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|----|---|------|-----|
| 47 | Chiral ground-state currents of interacting photons in a synthetic magnetic field. <i>Nature Physics</i> , <b>2017</b> , 13, 146-151                            | 16.2 | 189 |
| 46 | Spectroscopic signatures of localization with interacting photons in superconducting qubits. <i>Science</i> , <b>2017</b> , 358, 1175-1179                      | 33.3 | 184 |
| 45 | Ergodic dynamics and thermalization in an isolated quantum system. <i>Nature Physics</i> , <b>2016</b> , 12, 1037-1041  | 16.2 | 154 |
| 44 | Minimizing quasiparticle generation from stray infrared light in superconducting quantum circuits. <i>Applied Physics Letters</i> , <b>2011</b> , 99, 113507    | 3.4  | 147 |
| 43 | Deterministic entanglement of photons in two superconducting microwave resonators. <i>Physical Review Letters</i> , <b>2011</b> , 106, 060401                   | 7.4  | 145 |
| 42 | Quantum process tomography of a universal entangling gate implemented with Josephson phase qubits. <i>Nature Physics</i> , <b>2010</b> , 6, 409-413             | 16.2 | 137 |
| 41 | Catch and release of microwave photon states. <i>Physical Review Letters</i> , <b>2013</b> , 110, 107001  | 7.4  | 125 |
| 40 | Improving the coherence time of superconducting coplanar resonators. <i>Applied Physics Letters</i> , <b>2009</b> , 95, 233508                                  | 3.4  | 121 |
| 39 | Observation of topological transitions in interacting quantum circuits. <i>Nature</i> , <b>2014</b> , 515, 241-4  | 50.4 | 120 |
| 38 | Optimal quantum control using randomized benchmarking. <i>Physical Review Letters</i> , <b>2014</b> , 112, 240504   | 7.4  | 118 |
| 37 | Measurement of the decay of Fock states in a superconducting quantum circuit. <i>Physical Review Letters</i> , <b>2008</b> , 101, 240401                        | 7.4  | 112 |
| 36 | Photon shell game in three-resonator circuit quantum electrodynamics. <i>Nature Physics</i> , <b>2011</b> , 7, 287-293  | 16.2 | 103 |
| 35 | Surface loss simulations of superconducting coplanar waveguide resonators. <i>Applied Physics Letters</i> , <b>2011</b> , 99, 113513                            | 3.4  | 95  |
| 34 | Fluctuations of Energy-Relaxation Times in Superconducting Qubits. <i>Physical Review Letters</i> , <b>2018</b> , 121, 090502                                   | 7.4  | 95  |
| 33 | Measuring and Suppressing Quantum State Leakage in a Superconducting Qubit. <i>Physical Review Letters</i> , <b>2016</b> , 116, 020501                          | 7.4  | 93  |
| 32 | Strong environmental coupling in a Josephson parametric amplifier. <i>Applied Physics Letters</i> , <b>2014</b> , 104, 263513                                   | 3.4  | 93  |
| 31 | Traveling wave parametric amplifier with Josephson junctions using minimal resonator phase matching. <i>Applied Physics Letters</i> , <b>2015</b> , 106, 242601 | 3.4  | 84  |
| 30 | Fast tunable coupler for superconducting qubits. <i>Physical Review Letters</i> , <b>2011</b> , 106, 060501   | 7.4  | 84  |

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| 29 | Quantum process tomography of two-qubit controlled-Z and controlled-NOT gates using superconducting phase qubits. <i>Physical Review B</i> , <b>2010</b> , 82,                                      | 3-3 | 76 |
| 28 | Catching Time-Reversed Microwave Coherent State Photons with 99.4% Absorption Efficiency. <i>Physical Review Letters</i> , <b>2014</b> , 112,   | 7-4 | 70 |
| 27 | Characterization and reduction of microfabrication-induced decoherence in superconducting quantum circuits. <i>Applied Physics Letters</i> , <b>2014</b> , 105, 062601                              | 3-4 | 68 |
| 26 | Measurement of energy decay in superconducting qubits from nonequilibrium quasiparticles. <i>Physical Review B</i> , <b>2011</b> , 84,  | 3-3 | 67 |
| 25 | Fabrication and characterization of aluminum airbridges for superconducting microwave circuits. <i>Applied Physics Letters</i> , <b>2014</b> , 104, 052602  | 3-4 | 60 |
| 24 | Measurement-Induced State Transitions in a Superconducting Qubit: Beyond the Rotating Wave Approximation. <i>Physical Review Letters</i> , <b>2016</b> , 117, 190503                                | 7-4 | 59 |
| 23 | Design and characterization of a lumped element single-ended superconducting microwave parametric amplifier with on-chip flux bias line. <i>Applied Physics Letters</i> , <b>2013</b> , 103, 122602 | 3-4 | 57 |
| 22 | Observation of Classical-Quantum Crossover of $1/f$ Flux Noise and Its Paramagnetic Temperature Dependence. <i>Physical Review Letters</i> , <b>2017</b> , 118, 057702                              | 7-4 | 56 |
| 21 | Multiplexed dispersive readout of superconducting phase qubits. <i>Applied Physics Letters</i> , <b>2012</b> , 101, 182601  | 3-4 | 53 |
| 20 | Characterization and reduction of capacitive loss induced by sub-micron Josephson junction fabrication in superconducting qubits. <i>Applied Physics Letters</i> , <b>2017</b> , 111, 022601        | 3-4 | 52 |
| 19 | Room temperature deposition of sputtered TiN films for superconducting coplanar waveguide resonators. <i>Superconductor Science and Technology</i> , <b>2014</b> , 27, 015009                       | 3-1 | 51 |
| 18 | Qubit compatible superconducting interconnects. <i>Quantum Science and Technology</i> , <b>2018</b> , 3, 014005   | 5-5 | 49 |
| 17 | Reduced phase error through optimized control of a superconducting qubit. <i>Physical Review A</i> , <b>2010</b> , 82,  | 2-6 | 49 |
| 16 | Flux noise probed with real time qubit tomography in a Josephson phase qubit. <i>Physical Review Letters</i> , <b>2012</b> , 109, 067001  | 7-4 | 44 |
| 15 | Qubit Metrology of Ultralow Phase Noise Using Randomized Benchmarking. <i>Physical Review Applied</i> , <b>2015</b> , 3,  | 4-3 | 39 |
| 14 | Decoherence dynamics of complex photon states in a superconducting circuit. <i>Physical Review Letters</i> , <b>2009</b> , 103, 200404  | 7-4 | 39 |
| 13 | Excitation of superconducting qubits from hot nonequilibrium quasiparticles. <i>Physical Review Letters</i> , <b>2013</b> , 110, 150502   | 7-4 | 37 |
| 12 | Fluctuations from edge defects in superconducting resonators. <i>Applied Physics Letters</i> , <b>2013</b> , 103, 072603  | 3-4 | 34 |

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| 11 | Wirebond crosstalk and cavity modes in large chip mounts for superconducting qubits. <i>Superconductor Science and Technology</i> , <b>2011</b> , 24, 065001               | 3.1  | 34 |
| 10 | Preserving entanglement during weak measurement demonstrated with a violation of the Bell-eggett-Charg inequality. <i>Npj Quantum Information</i> , <b>2016</b> , 2,       | 8.6  | 30 |
| 9  | Compressed sensing quantum process tomography for superconducting quantum gates. <i>Physical Review B</i> , <b>2014</b> , 90,  | 3.3  | 29 |
| 8  | A method for building low loss multi-layer wiring for superconducting microwave devices. <i>Applied Physics Letters</i> , <b>2018</b> , 112, 063502                        | 3.4  | 27 |
| 7  | Emulating weak localization using a solid-state quantum circuit. <i>Nature Communications</i> , <b>2014</b> , 5, 5184  | 17.4 | 27 |
| 6  | Scalable in situ qubit calibration during repetitive error detection. <i>Physical Review A</i> , <b>2016</b> , 94,   | 2.6  | 21 |
| 5  | Rolling quantum dice with a superconducting qubit. <i>Physical Review A</i> , <b>2014</b> , 90,  | 2.6  | 20 |
| 4  | Phase qubits fabricated with trilayer junctions. <i>Superconductor Science and Technology</i> , <b>2011</b> , 24, 055005   | 3.1  | 15 |
| 3  | Dielectric surface loss in superconducting resonators with flux-trapping holes. <i>Superconductor Science and Technology</i> , <b>2016</b> , 29, 104006                    | 3.1  | 14 |
| 2  | High speed flux sampling for tunable superconducting qubits with an embedded cryogenic transducer. <i>Superconductor Science and Technology</i> , <b>2019</b> , 32, 015012 | 3.1  | 10 |
| 1  | Dynamic quantum Kerr effect in circuit quantum electrodynamics. <i>Physical Review A</i> , <b>2012</b> , 85,   | 2.6  | 10 |