Michel Devoret

List of Publications by Year
in descending order

106 papers	19,341 citations	15504 65 h-index	30087 103 g-index
107 all docs	107 docs citations	107 times ranked	7499 citing authors

#	Article	IF	Citations
1	Charge-insensitive qubit design derived from the Cooper pair box. Physical Review A, 2007, 76, .	2.5	2,184
2	Superconducting Circuits for Quantum Information: An Outlook. Science, 2013, 339, 1169-1174.	12.6	1,529
3	Manipulating the Quantum State of an Electrical Circuit. Science, 2002, 296, 886-889.	12.6	1,425
4	Introduction to quantum noise, measurement, and amplification. Reviews of Modern Physics, 2010, 82, 1155-1208.	45.6	1,291
5	Observation of High Coherence in Josephson Junction Qubits Measured in a Three-Dimensional Circuit QED Architecture. Physical Review Letters, 2011, 107, 240501.	7.8	830
6	Extending the lifetime of a quantum bit with error correction in superconducting circuits. Nature, 2016, 536, 441-445.	27.8	603
7	Quantum-information processing with circuit quantum electrodynamics. Physical Review A, 2007, 75, .	2.5	550
8	Fluxonium: Single Cooper-Pair Circuit Free of Charge Offsets. Science, 2009, 326, 113-116.	12.6	483
9	Suppressing charge noise decoherence in superconducting charge qubits. Physical Review B, 2008, 77, .	3.2	415
10	Dynamically protected cat-qubits: a new paradigm for universal quantum computation. New Journal of Physics, 2014, 16, 045014.	2.9	394
11	Amplifying quantum signals with the single-electron transistor. Nature, 2000, 406, 1039-1046.	27.8	374
12	Phase-preserving amplification near the quantum limit with a Josephson ring modulator. Nature, 2010, 465, 64-68.	27.8	357
13	Confining the state of light to a quantum manifold by engineered two-photon loss. Science, 2015, 347, 853-857.	12.6	357
14	Controlling the Spontaneous Emission of a Superconducting Transmon Qubit. Physical Review Letters, 2008, 101, 080502.	7.8	336
15	Qubit-photon interactions in a cavity: Measurement-induced dephasing and number splitting. Physical Review A, 2006, 74, .	2.5	281
16	Autonomously stabilized entanglement between two superconducting quantum bits. Nature, 2013, 504, 419-422.	27.8	267
17	A SchrÃ¶dinger cat living in two boxes. Science, 2016, 352, 1087-1091.	12.6	244
18	Quantum memory with millisecond coherence in circuit QED. Physical Review B, 2016, 94, .	3.2	237

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19	Quantum error correction of a qubit encoded in grid states of an oscillator. Nature, 2020, 584, 368-372.	27.8	232
20	Nonlinear response of the vacuum Rabi resonance. Nature Physics, 2009, 5, 105-109.	16.7	226
21	Black-Box Superconducting Circuit Quantization. Physical Review Letters, 2012, 108, 240502.	7.8	226
22	Stabilization and operation of a Kerr-cat qubit. Nature, 2020, 584, 205-209.	27.8	218
23	Coherent suppression of electromagnetic dissipation due to superconducting quasiparticles. Nature, 2014, 508, 369-372.	27.8	201
24	Tracking photon jumps with repeated quantum non-demolition parity measurements. Nature, 2014, 511, 444-448.	27.8	195
25	To catch and reverse a quantum jump mid-flight. Nature, 2019, 570, 200-204.	27.8	185
26	Implementing a universal gate set on a logical qubit encoded in an oscillator. Nature Communications, 2017, 8, 94.	12.8	183
27	Nonequilibrium Quasiparticles and2ePeriodicity in Single-Cooper-Pair Transistors. Physical Review Letters, 2004, 92, 066802.	7.8	182
28	Introduction to quantum electromagnetic circuits. International Journal of Circuit Theory and Applications, 2017, 45, 897-934.	2.0	177
29	Analog information processing at the quantum limit with a Josephson ring modulator. Nature Physics, 2010, 6, 296-302.	16.7	174
30	Noiseless non-reciprocity in a parametric activeÂdevice. Nature Physics, 2011, 7, 311-315.	16.7	174
31	Surface participation and dielectric loss in superconducting qubits. Applied Physics Letters, 2015, 107, .	3.3	170
32	Implementing Qubits with Superconducting Integrated Circuits. Quantum Information Processing, 2004, 3, 163-203.	2.2	169
33	Reaching 10â€‰ms single photon lifetimes for superconducting aluminum cavities. Applied Physics Letters, 2013, 102, .	3.3	168
34	Microwave Characterization of Josephson Junction Arrays: Implementing a Low Loss Superinductance. Physical Review Letters, 2012, 109, 137002.	7.8	158
35	Deterministic teleportation of a quantum gate between two logical qubits. Nature, 2018, 561, 368-373.	27.8	154
36	Demonstrating a Driven Reset Protocol for a Superconducting Qubit. Physical Review Letters, 2013, 110, 120501.	7.8	147

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37	Direct Observation of Dynamical Bifurcation between Two Driven Oscillation States of a Josephson Junction. Physical Review Letters, 2005, 94, 027005.	7.8	143
38	On-demand quantum state transfer and entanglement between remote microwave cavity memories. Nature Physics, 2018, 14, 705-710.	16.7	143
39	Measurement and control of quasiparticle dynamics in a superconducting qubit. Nature Communications, 2014, 5, 5836.	12.8	130
40	Multilayer microwave integrated quantum circuits for scalable quantum computing. Npj Quantum Information, 2016, 2, .	6.7	121
41	3-wave mixing Josephson dipole element. Applied Physics Letters, 2017, 110, .	3.3	121
42	Direct Microwave Measurement of Andreev-Bound-State Dynamics in a Semiconductor-Nanowire Josephson Junction. Physical Review Letters, 2018, 121, 047001.	7.8	119
43	Widely Tunable, Nondegenerate Three-Wave Mixing Microwave Device Operating near the Quantum Limit. Physical Review Letters, 2012, 108, 147701.	7.8	116
44	Introduction to parametric amplification of quantum signals with Josephson circuits. Comptes Rendus Physique, 2016, 17, 740-755.	0.9	114
45	Hot Nonequilibrium Quasiparticles in Transmon Qubits. Physical Review Letters, 2018, 121, 157701.	7.8	114
46	Deterministic Remote Entanglement of Superconducting Circuits through Microwave Two-Photon Transitions. Physical Review Letters, 2018, 120, 200501.	7.8	105
47	Evidence for coherent quantum phase slips across a Josephson junction array. Physical Review B, 2012, 85, .	3.2	103
48	Controlled release of multiphoton quantum states from a microwave cavity memory. Nature Physics, 2017, 13, 882-887.	16.7	101
49	Non-Poissonian Quantum Jumps of a Fluxonium Qubit due to Quasiparticle Excitations. Physical Review Letters, 2014, 113, 247001.	7.8	98
50	A CNOT gate between multiphoton qubits encoded in two cavities. Nature Communications, 2018, 9, 652.	12.8	95
51	Nondegenerate three-wave mixing with the Josephson ring modulator. Physical Review B, 2013, 87, .	3.2	88
52	Optimizing the Nonlinearity and Dissipation of a SNAIL Parametric Amplifier for Dynamic Range. Physical Review Applied, 2018, 10, .	3.8	85
53	Stabilizing a Bell state of two superconducting qubits by dissipation engineering. Physical Review A, 2013, 88, .	2.5	84
54	Detecting highly entangled states with a joint qubit readout. Physical Review A, 2010, 81, .	2.5	82

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55	Persistent Control of a Superconducting Qubit by Stroboscopic Measurement Feedback. Physical Review X, 2013, 3, .	8.9	82
56	Robust Concurrent Remote Entanglement Between Two Superconducting Qubits. Physical Review X, 2016, 6, .	8.9	82
57	Life after charge noise: recent results with transmon qubits. Quantum Information Processing, 2009, 8, 105-115.	2.2	81
58	Improving the quality factor of microwave compact resonators by optimizing their geometrical parameters. Applied Physics Letters, 2012, 100, .	3.3	78
59	Josephson Directional Amplifier for Quantum Measurement of Superconducting Circuits. Physical Review Letters, 2014, 112, 167701.	7.8	78
60	Coherent manipulation of an Andreev spin qubit. Science, 2021, 373, 430-433.	12.6	78
61	Holonomic Quantum Control with Continuous Variable Systems. Physical Review Letters, 2016, 116, 140502.	7.8	77
62	Charging Effects in the Inductively Shunted Josephson Junction. Physical Review Letters, 2009, 103, 217004.	7.8	75
63	Deterministic protocol for mapping a qubit to coherent state superpositions in a cavity. Physical Review A, 2013, 87, .	2.5	74
64	Coherent Oscillations inside a Quantum Manifold Stabilized by Dissipation. Physical Review X, 2018, 8, .	8.9	73
65	Gated Conditional Displacement Readout of Superconducting Qubits. Physical Review Letters, 2019, 122, 080502.	7.8	73
66	Single-Photon-Resolved Cross-Kerr Interaction for Autonomous Stabilization of Photon-Number States. Physical Review Letters, 2015, 115, 180501.	7.8	63
67	Proposal for Heralded Generation and Detection of Entangled Microwaveâ€“Optical-Photon Pairs. Physical Review Letters, 2020, 124, 010511.	7.8	57
68	Full Coherent Frequency Conversion between Two Propagating Microwave Modes. Physical Review Letters, 2013, 110, 173902.	7.8	55
69	Superconducting circuit protected by two-Cooper-pair tunneling. Npj Quantum Information, 2020, 6, .	6.7	52
70	Escape of a Driven Quantum Josephson Circuit into Unconfined States. Physical Review Applied, 2019, 11, .	3.8	48
71	Characterizing entanglement of an artificial atom and a cavity cat state with Bellâ€™s inequality. Nature Communications, 2015, 6, 8970.	12.8	46
72	Quantum control of bosonic modes with superconducting circuits. Science Bulletin, 2021, 66, 1789-1805.	9.0	45

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73	Continuous monitoring of a trapped superconducting spin. Nature Physics, 2020, 16, 1103-1107.	16.7	44
74	Quantum Josephson junction circuits and the dawn of artificial atoms. Nature Physics, 2020, 16, 234-237.	16.7	44
75	Energy-participation quantization of Josephson circuits. Npj Quantum Information, 2021, 7, .	6.7	41
76	Demonstration of superconducting micromachined cavities. Applied Physics Letters, 2015, 107, .	3.3	39
77	Photon-Assisted Charge-Parity Jumps in a Superconducting Qubit. Physical Review Letters, 2019, 123, 107704.	7.8	33
78	Josephson Array-Mode Parametric Amplifier. Physical Review Applied, 2020, 13, .	3.8	31
79	Quantization of inductively shunted superconducting circuits. Physical Review B, 2016, 94, .	3.2	30
80	Planar Multilayer Circuit Quantum Electrodynamics. Physical Review Applied, 2016, 5, .	3.8	30
81	Implementing and Characterizing Precise Multiqubit Measurements. Physical Review X, 2016, 6, .	8.9	27
82	Degeneracy-Preserving Quantum Nondemolition Measurement of Parity-Type Observables for Cat Qubits. Physical Review Letters, 2017, 119, 060503.	7.8	27
83	Structural Instability of Driven Josephson Circuits Prevented by an Inductive Shunt. Physical Review Applied, 2019, 11, .	3.8	27
84	Model-Free Quantum Control with Reinforcement Learning. Physical Review X, 2022, 12, .	8.9	27
85	Quantum-limited parametric amplification with Josephson circuits in the regime of pump depletion. Physical Review B, 2018, 98, .	3.2	23
86	Asymmetric Frequency Conversion in Nonlinear Systems Driven by a Biharmonic Pump. Physical Review Letters, 2014, 113, 247003.	7.8	22
87	Theory of remote entanglement via quantum-limited phase-preserving amplification. Physical Review A, 2016, 93, .	2.5	22
88	Continuous generation and stabilization of mesoscopic field superposition states in a quantum circuit. Physical Review A, 2015, 91, .	2.5	21
89	Simultaneous Monitoring of Fluxonium Qubits in a Waveguide. Physical Review Applied, 2018, 9, .	3.8	21
90	Driving Forbidden Transitions in the Fluxonium Artificial Atom. Physical Review Applied, 2018, 9, .	3.8	19

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91	Gain, directionality, and noise in microwave SQUID amplifiers: Input-output approach. Physical Review B, 2012, 86, .	3.2	18
92	Planar superconducting whispering gallery mode resonators. Applied Physics Letters, 2013, 103, .	3.3	18
93	Quantum Versus Classical Switching Dynamics of Driven Dissipative Kerr Resonators. Physical Review Applied, 2020, 13, .	3.8	16
94	Generating higher-order quantum dissipation from lower-order parametric processes. Quantum Science and Technology, 2017, 2, 024005.	5.8	14
95	Quantum Microwave Radiometry with a Superconducting Qubit. Physical Review Letters, 2021, 126, 180501.	7.8	13
96	Microwave response of an Andreev bound state. Physical Review B, 2021, 104, .	3.2	12
97	Wireless Josephson amplifier. Applied Physics Letters, 2014, 104, .	3.3	11
98	Remote Entanglement by Coherent Multiplication of Concurrent Quantum Signals. Physical Review Letters, 2015, 115, 150503.	7.8	10
99	Geometric Approach to Digital Quantum Information. Quantum Information Processing, 2004, 3, 351-380.	2.2	8
100	Does Brian Josephsonâ€™s Gauge-Invariant Phase Difference Live on a Line or a Circle?. Journal of Superconductivity and Novel Magnetism, 2021, 34, 1633-1642.	1.8	6
101	Frequency-tunable Kerr-free three-wave mixing with a gradiometric SNAIL. Applied Physics Letters, 2022, 120, .	3.3	5
102	Mesoscopic resistor as a self-calibrating quantum noise source. Applied Physics Letters, 2012, 100, 203507.	3.3	3
103	Quantum Information Processing with Superconducting Qubits and Cavities. , 2007, , .		2
104	Strong measurement and quantum feedback for persistent Rabi oscillations in circuit QED experiments. , 2012, , .		1
105	Going with the grains. Science, 2021, 372, 464-464.	12.6	1
106	Exponential quantum enhancement for distributed addition with local nonlinearity. Quantum Information Processing, 2010, 9, 47-59.	2.2	0