Andrew Cleland

List of Publications by Year
in descending order

76 papers	14,334 citations	44069 48 h-index	76900 74 g-index
76 all docs	76 docs citations	76 times ranked	8457 citing authors

#	Article	IF	Citations
1	Entanglement Purification and Protection in a Superconducting Quantum Network. Physical Review Letters, 2022, 128, 080504.	7.8	25
2	Deterministic multi-qubit entanglement in a quantum network. Nature, 2021, 590, 571-575.	27.8	77
3	Flux-pumped impedance-engineered broadband Josephson parametric amplifier. Applied Physics Letters, 2021, 118, .	3.3	23
4	Superconducting qubits in a flip-chip architecture. Applied Physics Letters, 2021, 118, .	3.3	24
5	Proposal for a Nanomechanical Qubit. Physical Review X, 2021, 11, .	8.9	25
6	Fast frequency discrimination and phoneme recognition using a biomimetic membrane coupled to a neural network. Bioinspiration and Biomimetics, 2021, 16, 026012.	2.9	0
7	Quantum communication with itinerant surface acoustic wave phonons. Npj Quantum Information, 2021, 7, .	6.7	23
8	Continuous and Time-Domain Coherent Signal Conversion between Optical and Microwave Frequencies. Physical Review Applied, 2020, 14, .	3.8	11
9	Quantum Erasure Using Entangled Surface Acoustic Phonons. Physical Review X, 2020, 10, .	8.9	20
10	Remote Entanglement via Adiabatic Passage Using a Tunably Dissipative Quantum Communication System. Physical Review Letters, 2020, 124, 240502.	7.8	23
11	Measurements of a quantum bulk acoustic resonator using a superconducting qubit. Applied Physics Letters, 2020, 117, .	3.3	5
12	A fast and large bandwidth superconducting variable coupler. Applied Physics Letters, 2020, 117, .	3.3	7
13	The 2019 surface acoustic waves roadmap. Journal Physics D: Applied Physics, 2019, 52, 353001.	2.8	236
14	Unidirectional distributed acoustic reflection transducers for quantum applications. Applied Physics Letters, 2019, 114, .	3.3	10
15	Violating Bellâ€™s inequality with remotely connected superconducting qubits. Nature Physics, 2019, 15, 741-744.	16.7	50
16	Simple non-galvanic flip-chip integration method for hybrid quantum systems. Applied Physics Letters, 2019, 114, .	3.3	15
17	Phonon-mediated quantum state transfer and remote qubit entanglement. Science, 2019, 364, 368-371.	12.6	186
18	Spinâ€“phonon interactions in silicon carbide addressed by Gaussian acoustics. Nature Physics, 2019, 15, 490-495.	16.7	159

#	Article	IF	Citations
19	Deterministic bidirectional communication and remote entanglement generation between superconducting qubits. Npj Quantum Information, 2019, 5, .	6.7	44
20	Quantum control of surface acoustic-wave phonons. Nature, 2018, 563, 661-665.	27.8	263
21	Input-output theory for superconducting and photonic circuits that contain weak retroreflections and other weak pseudocavities. Physical Review A, 2018, 98, .	2.5	9
22	Bi-directional conversion between microwave and optical frequencies in a piezoelectric optomechanical device. Applied Physics Letters, 2016, 109, .	3.3	111
23	A simple microfluidic aggregation analyzer for the specific, sensitive and multiplexed quantification of proteins in a serum environment. Biosensors and Bioelectronics, 2016, 77, 1062-1069.	10.1	14
24	Qubit Metrology of Ultralow Phase Noise Using Randomized Benchmarking. Physical Review Applied, 2015, 3, .	3.8	66
25	Quantum Delayed-Choice Experiment with a Beam Splitter in a Quantum Superposition. Physical Review Letters, 2015, 115, 260403.	7.8	32
26	State preservation by repetitive error detection in a superconducting quantum circuit. Nature, 2015, 519, 66-69.	27.8	682
27	Pumping up the quantum. Science, 2015, 350, 280-280.	12.6	0
28	Strong environmental coupling in a Josephson parametric amplifier. Applied Physics Letters, 2014, 104, .	3.3	127
29	Rolling quantum dice with a superconducting qubit. Physical Review A, 2014, 90, .	2.5	27
30	Catching Time-Reversed Microwave Coherent State Photons with 99.4% Absorption Efficiency. Physical Review Letters, 2014, 112, .	7.8	92
31	Qubit Architecture with High Coherence and Fast Tunable Coupling. Physical Review Letters, 2014, 113, 220502.	7.8	387
32	Characterization and reduction of microfabrication-induced decoherence in superconducting quantum circuits. Applied Physics Letters, 2014, 105, .	3.3	85
33	Fabrication and characterization of aluminum airbridges for superconducting microwave circuits. Applied Physics Letters, 2014, 104, .	3.3	89
34	Superconducting quantum circuits at the surface code threshold for fault tolerance. Nature, 2014, 508, 500-503.	27.8	1,270
35	Reducing the impact of intrinsic dissipation in a superconducting circuit by quantum error detection. Nature Communications, 2014, 5, 3135.	12.8	23
36	Observation of topological transitions in interacting quantum circuits. Nature, 2014, 515, 241-244.	27.8	162

#	Article	IF	Citations
37	Emulating weak localization using a solid-state quantum circuit. Nature Communications, 2014, 5, 5184.	12.8	30
38	Fast Accurate State Measurement with Superconducting Qubits. Physical Review Letters, 2014, 112, 190504.	7.8	273
39	Optimal Quantum Control Using Randomized Benchmarking. Physical Review Letters, 2014, 112, 240504.	7.8	160
40	Coherent Josephson Qubit Suitable for Scalable Quantum Integrated Circuits. Physical Review Letters, 2013, 111, 080502.	7.8	536
41	Nanomechanical coupling between microwave and optical photons. Nature Physics, 2013, 9, 712-716.	16.7	485
42	Catch and Release of Microwave Photon States. Physical Review Letters, 2013, 110, 107001.	7.8	159
43	Design and characterization of a lumped element single-ended superconducting microwave parametric amplifier with on-chip flux bias line. Applied Physics Letters, 2013, 103, .	3.3	73
44	Fluctuations from edge defects in superconducting resonators. Applied Physics Letters, 2013, 103, .	3.3	44
45	Excitation of Superconducting Qubits from Hot Nonequilibrium Quasiparticles. Physical Review Letters, 2013, 110, 150502.	7.8	48
46	Quantum state characterization of a fast tunable superconducting resonator. Applied Physics Letters, 2013, 102, .	3.3	61
47	Multiplexed dispersive readout of superconducting phase qubits. Applied Physics Letters, 2012, 101, .	3.3	67
48	Dynamic quantum Kerr effect in circuit quantum electrodynamics. Physical Review A, 2012, 85, .	2.5	13
49	Surface codes: Towards practical large-scale quantum computation. Physical Review A, 2012, 86, .	2.5	1,607
50	Planar superconducting resonators with internal quality factors above one million. Applied Physics Letters, 2012, 100, .	3.3	341
51	Computing prime factors with a Josephson phase qubit quantum processor. Nature Physics, 2012, 8, 719-723.	16.7	238
52	A high-throughput label-free nanoparticle analyser. Nature Nanotechnology, 2011, 6, 308-313.	31.5	191
53	Photon shell game in three-resonator circuit quantum electrodynamics. Nature Physics, 2011, 7, 287-293.	16.7	114
54	Surface loss simulations of superconducting coplanar waveguide resonators. Applied Physics Letters, 2011, 99, .	3.3	130

#	Article	IF	Citations
55	Measurement of energy decay in superconducting qubits from nonequilibrium quasiparticles. Physical Review B, 2011, 84, .	3.2	81
56	Minimizing quasiparticle generation from stray infrared light in superconducting quantum circuits. Applied Physics Letters, 2011, 99, .	3.3	184
57	Quantum ground state and single-phonon control of a mechanical resonator. Nature, 2010, 464, 697-703.	27.8	1,677
58	Generation of three-qubit entangled states using superconducting phase qubits. Nature, 2010, 467, 570-573.	27.8	342
59	Quantum process tomography of a universal entangling gate implemented with Josephson phase qubits. Nature Physics, 2010, 6, 409-413.	16.7	186
60	Quantum process tomography of two-qubit controlled-Z and controlled-NOT gates using superconducting phase qubits. Physical Review B, 2010, 82, .	3.2	93
61	Decoherence Dynamics of Complex Photon States in a Superconducting Circuit. Physical Review Letters, 2009, 103, 200404.	7.8	44
62	Improving the coherence time of superconducting coplanar resonators. Applied Physics Letters, 2009, 95, .	3.3	145
63	Synthesizing arbitrary quantum states in a superconducting resonator. Nature, 2009, 459, 546-549.	27.8	730
64	Violation of Bell's inequality in Josephson phase qubits. Nature, 2009, 461, 504-506.	27.8	357
65	Photons refrigerating phonons. Nature Physics, 2009, 5, 458-460.	16.7	28
66	Process tomography of quantum memory in a Josephson-phase qubit coupled to a two-level state. Nature Physics, 2008, 4, 523-526.	16.7	222
67	Microwave dielectric loss at single photon energies and millikelvin temperatures. Applied Physics Letters, 2008, 92, .	3.3	211
68	State Tomography of Capacitively Shunted Phase Qubits with High Fidelity. Physical Review Letters, 2006, 97, 050502.	7.8	167
69	Measurement of the Entanglement of Two Superconducting Qubits via State Tomography. Science, 2006, 313, 1423-1425.	12.6	426
70	Mechanical quantum resonators. AIP Conference Proceedings, 2005, , .	0.4	2
71	Hot electrons in low-dimensional phonon systems. Physical Review B, 2005, 72, .	3.2	28
72	Superconducting qubits coupled to nanoelectromechanical resonators: An architecture for solid-state quantum-information processing. Physical Review A, 2005, 71, .	2.5	57

#	Article	IF	Citations
73	Superconducting phase qubit coupled to a nanomechanical resonator: Beyond the rotating-wave approximation. Physical Review A, 2004, 70, .	2.5	57
74	Superconducting Qubit Storage and Entanglement with Nanomechanical Resonators. Physical Review Letters, 2004, 93, 070501.	7.8	210
75	Nanoscale radio-frequency thermometry. Applied Physics Letters, 2003, 83, 1002-1004.	3.3	66
76	Single-electron transistor as a radio-frequency mixer. Applied Physics Letters, 2002, 81, 532-534.	3.3	49