Raymond Simmonds

List of Publications by Year
in descending order

83	9,793	61945 43	82499 72
papers	citations	h-index	g-index

83	83	83	5986
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Efficient Qubit Measurement with a Nonreciprocal Microwave Amplifier. Physical Review Letters, 2021, 126, 020502.	2.9	12
2	Direct observation of deterministic macroscopic entanglement. Science, 2021, 372, 622-625.	6.0	137
3	Quantum Optomechanics with Millimeter Wave Photons. , 2021, , .		1
4	Microwave Measurement beyond the Quantum Limit with a Nonreciprocal Amplifier. Physical Review Applied, 2020, 13, .	1.5	15
5	Ultrastrong Parametric Coupling between a Superconducting Cavity and a Mechanical Resonator. Physical Review Letters, 2019, 123, 247701.	2.9	43
6	Sideband cooling beyond the quantum backaction limit with squeezed light. Nature, 2017, 541, 191-195.	13.7	196
7	Nonreciprocal Microwave Signal Processing with a Field-Programmable Josephson Amplifier. Physical Review Applied, 2017, 7, .	1.5	145
8	Hybrid quantum systems with trapped charged particles. Physical Review A, 2017, 95, .	1.0	27
9	Reconfigurable re-entrant cavity for wireless coupling to an electro-optomechanical device. Review of Scientific Instruments, 2017, 88, 094701.	0.6	7
10	Demonstration of Efficient Nonreciprocity in a Microwave Optomechanical Circuit. Physical Review X, 2017, 7, .	2.8	106
11	Improving Broadband Displacement Detection with Quantum Correlations. Physical Review X, 2017, 7, .	2.8	46
12	Mechanically Mediated Microwave Frequency Conversion in the Quantum Regime. Physical Review Letters, 2016, 116, 043601.	2.9	76
13	Observation of strong radiation pressure forces from squeezed light on a mechanical oscillator. Nature Physics, 2016, 12, 683-687.	6.5	68
14	Overwhelming Thermomechanical Motion with Microwave Radiation Pressure Shot Noise. Physical Review Letters, 2016, 116, 013602.	2.9	55
15	Optomechanical Raman-ratio thermometry. Physical Review A, 2015, 92, .	1.0	52
16	Quantum Nondemolition Measurement of a Nonclassical State of a Massive Object. Physical Review X, 2015, 5, 041037.	2.8	204
17	Connecting microwave and optical frequencies with a vibrational degree of freedom. , 2015, , .		0
18	Resolving the vacuum fluctuations of an optomechanical system using an artificial atom. Nature Physics, 2015, 11, 635-639.	6.5	83

#	Article	IF	Citations
19	Coherent-state storage and retrieval between superconducting cavities using parametric frequency conversion. Applied Physics Letters, 2015, 106, 172603.	1.5	38
20	Progress towards quantum state transfer between microwave and optical light using an electro-optomechanical resonator. , 2015, , .		0
21	Modulated electromechanics: large enhancements of nonlinearities. New Journal of Physics, 2014, 16, 072001.	1.2	31
22	A phononic bandgap shield for high-<i>Q</i> membrane microresonators. Applied Physics Letters, 2014, 104, .	1.5	71
23	Realization of a single-Cooper-pair Josephson laser. Physical Review B, 2014, 90, .	1.1	54
24	Tunable-cavity QED with phase qubits. Physical Review B, 2014, 90, .	1.1	25
25	Bidirectional and efficient conversion between microwave and optical light. Nature Physics, 2014, 10, 321-326.	6.5	648
26	Tunable Resonant and Nonresonant Interactions between a Phase Qubit and<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mi>L</mml:mi><mml:mi>C</mml:mi></mml:math>Resonator. Physical Review Letters, 2014, 112, 123601.	2.9	57
27	Bidirectional and Efficient Conversion Between Microwave and Optical Light. , 2014, , .		0
28	Entangling Mechanical Motion with Microwave Fields. Science, 2013, 342, 710-713.	6.0	524
29	Coherent state transfer between itinerant microwave fields and a mechanical oscillator. Nature, 2013, 495, 210-214.	13.7	358
30	Tunable Coupling to a Mechanical Oscillator Circuit Using a Coherent Feedback Network. Physical Review X, 2013, 3, .	2.8	40
31	Dynamical Autler-Townes control of a phase qubit. Scientific Reports, 2012, 2, 645.	1.6	42
32	Entangled-state synthesis for superconducting resonators. Physical Review A, 2012, 85, .	1.0	23
33	Quantum interference heats up. Nature, 2012, 492, 358-359.	13.7	8
34	Quantum Interference between Two Single Photons of Different Microwave Frequencies. Physical Review Letters, 2012, 108, 163602.	2.9	22
35	Quantum Optomechanics with Microwave Photons. , 2012, , .		0
36	Decoherence, Autler-Townes effect, and dark states in two-tone driving of a three-level superconducting system. Physical Review B, 2011, 84, .	1.1	48

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37	Quantum superposition of a single microwave photon in two different â€™colourâ€™ states. Nature Physics, 2011, 7, 599-603.	6.5	93
38	Sideband cooling of micromechanical motion to the quantum ground state. Nature, 2011, 475, 359-363.	13.7	1,701
39	Circuit cavity electromechanics in the strong-coupling regime. Nature, 2011, 471, 204-208.	13.7	700
40	Introduction of a dc bias into a high-Q superconducting microwave cavity. Applied Physics Letters, 2011, 98, .	1.5	36
41	Manipulating particle trajectories with phase-control in surface acoustic wave microfluidics. Biomicrofluidics, 2011, 5, 44107-441079.	1.2	48
42	Tripartite interactions between two phase qubits and a resonant cavity. Nature Physics, 2010, 6, 777-781.	6.5	35
43	Measurement of nanomechanical motion with precision sufficient to detect zero-point motion. , 2010, , .		0
44	Remote sensing and control of phase qubits. Applied Physics Letters, 2010, 97, 102507.	1.5	9
45	Measurement crosstalk between two phase qubits coupled by a coplanar waveguide. Physical Review B, 2010, 82, .	1.1	7
46	rf-SQUID-Mediated Coherent Tunable Coupling between a Superconducting Phase Qubit and a Lumped-Element Resonator. Physical Review Letters, 2010, 104, 177004.	2.9	81
47	Arbitrary Control of Entanglement between two Superconducting Resonators. Physical Review Letters, 2010, 105, 050501.	2.9	86
48	Low-loss superconducting resonant circuits using vacuum-gap-based microwave components. Applied Physics Letters, 2010, 96, .	1.5	50
49	Autler-Townes Effect in a Superconducting Three-Level System. Physical Review Letters, 2009, 103, 193601.	2.9	135
50	Vacuum-Gap Capacitors for Low-Loss Superconducting Resonant Circuits. IEEE Transactions on Applied Superconductivity, 2009, 19, 948-952.	1.1	13
51	Coherent interactions between phase qubits, cavities, and TLS defects. Quantum Information Processing, 2009, 8, 117-131.	1.0	18
52	Circuits that process with magic. Nature, 2009, 460, 187-188.	13.7	0
53	Parametric coupling between macroscopic quantum resonators. New Journal of Physics, 2008, 10, 115001.	1.2	65
54	Quantum information with superconducting quantum bits and cavities. , 2008, , .		0

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55	Frequency-Tunable Josephson Junction Resonator for Quantum Computing. IEEE Transactions on Applied Superconductivity, 2007, 17, 166-168.	1.1	30
56	Josephson Junction Microscope for Low-Frequency Fluctuators. Physical Review Letters, 2007, 99, 137002.	2.9	26
57	Coherent quantum state storage and transfer between two phase qubits via a resonant cavity. Nature, 2007, 449, 438-442.	13.7	559
58	Josephson junction Materials Research Using Phase Qubits. , 2006, , 86-94.		1
59	Practical implementation of dynamic methods for measuring atomic force microscope cantilever spring constants. Nanotechnology, 2006, 17, 2135-2145.	1.3	165
60	Epitaxial growth of rhenium with sputtering. Thin Solid Films, 2006, 496, 389-394.	0.8	14
61	Elimination of two level fluctuators in superconducting quantum bits by an epitaxial tunnel barrier. Physical Review B, 2006, 74, .	1.1	85
62	Low-leakage superconducting tunnel junctions with a single-crystal Al2O3barrier. Superconductor Science and Technology, 2005, 18, 1396-1399.	1.8	25
63	Simultaneous State Measurement of Coupled Josephson Phase Qubits. Science, 2005, 307, 1299-1302.	6.0	263
64	Decoherence in Josephson Qubits from Dielectric Loss. Physical Review Letters, 2005, 95, 210503.	2.9	616
65	Conducting atomic force microscopy for nanoscale tunnel barrier characterization. Review of Scientific Instruments, 2004, 75, 2726-2731.	0.6	58
66	Observation of Quantum Oscillations between a Josephson Phase Qubit and a Microscopic Resonator Using Fast Readout. Physical Review Letters, 2004, 93, 180401.	2.9	189
67	Decoherence in Josephson Phase Qubits from Junction Resonators. Physical Review Letters, 2004, 93, 077003.	2.9	375
68	Numerical studies of the superfluid Shapiro effect. Physica B: Condensed Matter, 2003, 329-333, 62-63.	1.3	0
69	Relating atomic-scale electronic phenomena to wave-like quasiparticle states in superconducting Bi2Sr2CaCu2O8+Î´. Nature, 2003, 422, 592-596.	13.7	425
70	Ballistic effusion of normal liquid3Hethrough nanoscale apertures. Physical Review B, 2002, 65, .	1.1	3
71	Quantum interference of superfluid 3He. Nature, 2001, 412, 55-58.	13.7	55
72	Observation of the Superfluid Shapiro Effect in aH3eWeak Link. Physical Review Letters, 2001, 87, 035301.	2.9	13

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73	Effect of pre-plating on third sound in superfluid. Physica B: Condensed Matter, 2000, 280, 132-133.	1.3	0
74	New Flow Dissipation Mechanisms in SuperfluidH3e. Physical Review Letters, 2000, 84, 6062-6065.	2.9	19
75	Observation of the Josephson plasma mode for a superfluid3Heweak link. Physical Review B, 2000, 61, 4196-4199.	1.1	50
76	Bi-state SuperfluidH3eWeak Links and the Stability of JosephsonÏ€States. Physical Review Letters, 1999, 83, 3860-3863.	2.9	72
77	Josephson effect and a Ï€-state in superfluid 3He. Nature, 1999, 397, 484-485.	13.7	12
78	Josephson effect and a Ï€-state in superfluid 3He. Nature, 1999, 397, 485-485.	13.7	1
79	Capacitive Generation and Detection of Third Sound Resonances in Saturated Superfluid 4He Films. Journal of Low Temperature Physics, 1998, 110, 603-608.	0.6	45
80	Discovery of a metastable Ï€-state in a superfluid 3He weak link. Nature, 1998, 392, 687-690.	13.7	66
81	Observation of â€˜third soundâ€™ in superfluid 3He. Nature, 1998, 396, 554-557.	13.7	219
82	dc Supercurrents from Resonant Mixing of Josephson Oscillations in aH3eWeak Link. Physical Review Letters, 1998, 81, 1247-1250.	2.9	57
83	A very low temperature vibration isolation system. European Physical Journal D, 1996, 46, 2737-2738.	0.4	11