C J Lobb

List of Publications by Year in descending order

147 papers	7,733 citations	53939 47 h-index	60403 85 g-index
148 all docs	148 docs citations	148 times ranked	4112 citing authors

#	Article	IF	Citations
1	Long-lived transmons with different electrode layouts. MRS Advances, 2022, 7, 273-277.	0.5	2
2	Scanning tunneling Andreev microscopy of titanium nitride thin films. Physical Review B, 2019, 100, .	1.1	4
3	Simultaneously scanning two connected tips in a scanning tunneling microscope. Journal of Applied Physics, 2017, 121, 214501.	1.1	1
4	Contact resistance and phase slips in mesoscopic superfluid-atom transport. Physical Review A, 2016, 93, .	1.0	44
5	Electronic Transport and Possible Superconductivity at Van Hove Singularities in Carbon Nanotubes. Nano Letters, 2015, 15, 7859-7866.	4.5	16
6	A 30 mK, 13.5 T scanning tunneling microscope with two independent tips. Review of Scientific Instruments, 2014, 85, 043706.	0.6	24
7	Plasma etching of superconducting Niobium tips for scanning tunneling microscopy. Journal of Applied Physics, 2014, 116, 014308.	1.1	3
8	Resistive Flow in a Weakly Interacting Bose-Einstein Condensate. Physical Review Letters, 2014, 113, 045305.	2.9	99
9	DC SQUID Phase Qubit Coupled to an On-Chip LC Resonator. IEEE Transactions on Applied Superconductivity, 2013, 23, 1701504-1701504.	1.1	0
10	Threshold for creating excitations in a stirred superfluid ring. Physical Review A, 2013, 88, .	1.0	59
11	Examining the role of hydrogen in the electrical performance of in situ fabricated metal-insulator-metal trilayers using an atomic layer deposited Al₂O₃ dielectric. Applied Physics Letters, 2013, 102, 173501.	1.5	28
12	Driving Phase Slips in a Superfluid Atom Circuit with a Rotating Weak Link. Physical Review Letters, 2013, 110, 025302.	2.9	250
13	Evidence for hydrogen two-level systems in atomic layer deposition oxides. Applied Physics Letters, 2013, 103, .	1.5	22
14	Asymmetric superconducting quantum interference devices for suppression of phase diffusion in small Josephson junctions. Journal of Applied Physics, 2013, 113, 183905.	1.1	7
15	Coherent nonlocal transport in quantum wires with strongly coupled electrodes. Physical Review B, 2013, 87, .	1.1	9
16	Analogs of Basic Electronic Circuit Elements in a Free-Space Atom Chip. Scientific Reports, 2013, 3, 1034.	1.6	39
17	A Josephson junction defect spectrometer for measuring two-level systems. Applied Physics Letters, 2012, 101, 062602.	1.5	23
18	Superflow in a Toroidal Bose-Einstein Condensate: An Atom Circuit with a Tunable Weak Link. Physical Review Letters, 2011, 106, 130401.	2.9	400

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19	Superposition of Inductive and Capacitive Coupling in Superconducting LC Resonators. IEEE Transactions on Applied Superconductivity, 2011, 21, 875-878.	1.1	3
20	Anomalous Switching Curves in a dc SQUID Phase Qubit. IEEE Transactions on Applied Superconductivity, 2011, 21, 860-863.	1.1	3
21	Identifying Sources of Decoherence in a dc SQUID Phase Qubit With a Sub-$mu{m m}$ Junction and Interdigitated Capacitor. IEEE Transactions on Applied Superconductivity, 2011, 21, 867-870.	1.1	1
22	Thin-film superconducting resonator tunable to the ground-state hyperfine splitting of 87Rb. AIP Advances, 2011, 1, .	0.6	15
23	Multilevel spectroscopy of two-level systems coupled to a dc SQUID phase qubit. Physical Review B, 2010, 81, .	1.1	28
24	Universal critical behavior in single crystals and films of<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:msub><mml:mrow><mml:mtext>YBa</mml:mtext></mml:mrow><mml:mn>2</mml:mn></mml:ms Physical Review B, 2009, 80, .	1.1	11
25	Dc SQUID Phase Qubit With an LC Filter. IEEE Transactions on Applied Superconductivity, 2009, 19, 957-960.	1.1	3
26	Multilevel effects in the Rabi oscillations of a Josephson phase qubit. Physical Review B, 2008, 78, .	1.1	26
27	Decoherence in dc SQUID phase qubits. Physical Review B, 2008, 77, .	1.1	16
28	Quantum behavior of a dc SQUID phase qubit. Physical Review B, 2008, 77, .	1.1	13
29	Measurements of Decoherence in Three dc SQUID Phase Qubits. IEEE Transactions on Applied Superconductivity, 2007, 17, 120-123.	1.1	3
30	Pulse Current Measurements and Rabi Oscillations in a dc SQUID Phase Qubit. IEEE Transactions on Applied Superconductivity, 2007, 17, 162-165.	1.1	6
31	Strong-Field Effects in the Rabi Oscillations of the Superconducting Phase Qubit. IEEE Transactions on Applied Superconductivity, 2007, 17, 105-108.	1.1	17
32	Initializing the flux state of multiwell inductively isolated Josephson junction qubits. Physical Review B, 2006, 73, .	1.1	20
33	Spectroscopic resonance broadening in a Josephson junction qubit due to current noise. Physical Review B, 2005, 71, .	1.1	22
34	Macroscopic Tunnel Splittings in Superconducting Phase Qubits. Physical Review Letters, 2005, 94, 187004.	2.9	19
35	Effects of self field and low magnetic fields on the normal-superconducting phase transition. Physical Review B, 2005, 72, .	1.1	4
36	Spectroscopy of Three-Particle Entanglement in a Macroscopic Superconducting Circuit. Physical Review Letters, 2005, 94, 027003.	2.9	50

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37	SINGLE JOSEPHSON JUNCTIONS AS QUBITS. , 2005, , .		0
38	Determination of relaxation time of a Josephson junction qubit. Physical Review B, 2004, 70, .	1.1	11
39	Normal-superconducting phase transition mimicked by current noise. Physical Review B, 2004, 70, .	1.1	14
40	Zero-field superconducting phase transition obscured by finite-size effects in thickYBa2Cu3O7â^Î´films. Physical Review B, 2004, 69, .	1.1	5
41	When are Superconductors Really Superconducting?. Journal of Superconductivity and Novel Magnetism, 2004, 17, 641-651.	0.5	1
42	Entangled Macroscopic Quantum States in Two Superconducting Qubits. Science, 2003, 300, 1548-1550.	6.0	401
43	Spectroscopy of capacitively coupled Josephson-junction qubits. Physical Review B, 2003, 67, .	1.1	48
44	Dynamic scaling and two-dimensional high-Tcsuperconductors. Physical Review B, 2003, 67, .	1.1	20
45	Decoherence in a Josephson-junction qubit. Physical Review B, 2003, 68, .	1.1	46
46	Quantum Logic Gates for Coupled Superconducting Phase Qubits. Physical Review Letters, 2003, 91, 167005.	2.9	163
47	Observation and a model for resonances in one-dimensional unshunted Josephson-junction arrays with ground planes. Physical Review B, 2003, 68, .	1.1	5
48	Anomalous magnetothermopower in the mixed state of the electron-doped high-Tcsuperconductors. Physical Review B, 2002, 66, .	1.1	3
49	Thermopower and Hall conductivity in the magnetic-field-driven normal state ofPr2â^'xCexCuO4â^Î´superconductors. Physical Review B, 2002, 65, .	1.1	16
50	Direct observation of a threshold for coherent radiation in unshunted Josephson-junction arrays with ground planes. Physical Review B, 2002, 65, .	1.1	18
51	Dynamics of a Charged Fluctuator in an Alâ€“AlOxâ€“Al Single-Electron Transistor. Journal of Low Temperature Physics, 2001, 123, 103-126.	0.6	7
52	Josephson-junction arrays as high-efficiency sources of coherent millimeter-wave radiation. Applied Physics Letters, 2001, 78, 1137-1139.	1.5	26
53	Mutual-inductance route to the paramagnetic Meissner effect in two-dimensional Josephson-junction arrays. Physical Review B, 2001, 64, .	1.1	14
54	Finite-size effects and dynamical scaling in two-dimensional Josephson junction arrays. Physical Review B, 2001, 63, .	1.1	28

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55	Do Superconductors Have Zero Resistance in a Magnetic Field?. Physical Review Letters, 2001, 87, 067007.	2.9	62
56	Temperature dependence of low-frequency noise in Alâ€“Al2O3â€“Al single-electron transistors. Journal of Applied Physics, 2000, 88, 6536-6540.	1.1	30
57	Anomalous saturation of the phase coherence length in underdopedPr2â^'xCexCuO4thin films. Physical Review B, 2000, 62, R11993-R11996.	1.1	43
58	Paramagnetic Meissner effect in multiply-connected superconductors. Physical Review B, 2000, 62, 14380-14383.	1.1	32
59	Systematic study of anisotropic Josephson coupling betweenYBa2Cu3O7â^'xand PbIn using in-plane aligneda-axis films. Physical Review B, 1999, 59, 7205-7208.	1.1	9
60	Stimulated Emission and Amplification in Josephson Junction Arrays. Physical Review Letters, 1999, 82, 1963-1966.	2.9	214
61	Synchronized oscillations in Josephson junction arrays: The role of distributed coupling. Physical Review B, 1999, 60, 7575-7578.	1.1	53
62	Reentrant ac magnetic susceptibility in Josephson-junction arrays: An alternative explanation for the paramagnetic Meissner effect. Physical Review B, 1999, 60, 7489-7495.	1.1	36
63	Behavior of Alâ€“Al2O3â€“Al single-electron transistors from 85 mK to 5 K. Applied Physics Letters, 1998, 72, 2268-2270.	1.5	9
64	Insulator-Metal Crossover near Optimal Doping inPr2â^'xCexCuO4: Anomalous Normal-State Low Temperature Resistivity. Physical Review Letters, 1998, 81, 4720-4723.	2.9	173
65	Complex dynamics of resistively and inductively shunted Josephson junctions. Journal of Applied Physics, 1998, 84, 1126-1132.	1.1	71
66	Magnetic homogeneity of colossal-magnetoresistance thin films determined by alternating current magnetic susceptibility. Applied Physics Letters, 1998, 73, 3456-3458.	1.5	25
67	Effect of finite size on the Kosterlitz-Thouless transition in two-dimensional arrays of proximity-coupled junctions. Physical Review B, 1998, 57, 1154-1163.	1.1	26
68	Properties of a-axis YBa2Cu3O7-x/PrBa2Cu3O7-x/YBa2Cu3O7-x Trilayer Josephson Junctions on (100) LaSrGaO4. , 1998, , 959-964.		0
69	Comment on â€œPinning Strength Dependence of Mixed-State Hall Effect inYBa2Cu3O7Crystals with Columnar Defectsâ€• Physical Review Letters, 1997, 79, 4044-4044.	2.9	6
70	Pinning and the intrinsic magnetic-field dependence of the mixed-state Hall conductivity in amorphousMo3SiandYBa2Cu3O7â^'Î´. Physical Review B, 1997, 56, R2944-R2947.	1.1	18
71	Thermomagnetic transport properties ofNd1.85Ce0.15CuO4+Î´films: Evidence for two types of charge carriers. Physical Review B, 1997, 56, 14149-14156.	1.1	76
72	Hall-conductivity sign reversal and fluctuations inYBa2Cu3O7â^'Î´films. Physical Review B, 1997, 55, 11802-11805.	1.1	21

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73	Ion milling damage and regrowth of oxide substrates studied by ion channeling and atomic force microscopy. Applied Physics Letters, 1997, 70, 3098-3100.	1.5	4
74	Critical currents and pinning mechanisms in untwinneda-axisYBa2Cu3O7âˆ'xthin films. Physical Review B, 1997, 56, 925-933.	1.1	14
75	Spin-polarized quasiparticle injection devices using Au/YBa2Cu3O7/LaAlO3/Nd0.7Sr0.3MnO3 heterostructures. Applied Physics Letters, 1997, 71, 1718-1720.	1.5	161
76	Reentrant ac Magnetic Susceptibility in Josephson-Junction Arrays. Physical Review Letters, 1997, 78, 4625-4628.	2.9	53
77	Absence of a Kosterlitz-Thouless transition in ultrathinYBa2Cu3O7âˆ'Î´films. Physical Review B, 1996, 54, R9674-R9677.	1.1	75
78	Hall conductivity sign reversal and fluctuations in YBCO films. European Physical Journal D, 1996, 46, 1371-1372.	0.4	0
79	Resistive superconducting transition of single unit-cell YBa2Cu3O7âˆ'Î´ layers. European Physical Journal D, 1996, 46, 1707-1708.	0.4	0
80	Ginzburg-Landau theory for three-dimensional Josephson junction arrays. Journal of Low Temperature Physics, 1996, 105, 133-148.	0.6	0
81	Pinning and the mixed-state thermomagnetic transport properties ofYBa2Cu3O7âˆ'Î´. Physical Review B, 1996, 54, R9670-R9673.	1.1	9
82	Anisotropic selfâ€field effect in aâ€axis YBa2Cu3O7âˆ'x/Ag/PbIn Josephson junctions. Applied Physics Letters, 1996, 68, 1564-1566.	1.5	14
83	Fabrication of inâ€plane aligned aâ€axis oriented YBa2Cu3O7âˆ'x trilayer Josephson junctions. Applied Physics Letters, 1996, 69, 112-114.	1.5	19
84	Complex dynamical behavior inRCL-shunted Josephson tunnel junctions. Physical Review E, 1996, 53, 405-413.	0.8	62
85	Synchronization and phase locking in two-dimensional arrays of Josephson junctions. Physical Review B, 1996, 53, 12340-12345.	1.1	9
86	Vortex-induced rectification in type II superconductors. Journal of Low Temperature Physics, 1995, 100, 515-533.	0.6	2
87	Fabrication of all inâ€plane oriented aâ€axis YBa2Cu3O7âˆ'x/â€‰insulator/ YBa2Cu3O7âˆ'x heterostructures. Applied Physics Letters, 1995, 66, 1824-1826.	1.5	10
88	Effect of inductance in externally shunted Josephson tunnel junctions. Journal of Applied Physics, 1995, 77, 382-389.	1.1	67
89	Anisotropy, pinning, and the mixed-state Hall effect. Physical Review B, 1995, 52, R7046-R7049.	1.1	34
90	Application of single electron tunneling: Precision capacitance ratio measurements. Applied Physics Letters, 1995, 66, 2588-2590.	1.5	26

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91	Observation of Josephson effect in YBa2Cu3O7â^'x/Nd1.85Ce0.15CuO4â^'y bilayer junctions. Applied Physics Letters, 1995, 67, 2872-2874.	1.5	12
92	Oxygen pressure dependence of the grain size and surface morphology in YBa2Cu3O7â^'x aâ€•axis films. Applied Physics Letters, 1995, 66, 1536-1538.	1.5	25
93	Collective pinning and the Hall effect in superconductors. Physical Review B, 1995, 52, 7482-7487.	1.1	16
94	Asymmetric current-voltage characteristics in type-II superconductors. Physical Review B, 1994, 49, 9244-9247.	1.1	10
95	Sign reversal of the Hall resistivity in amorphousMo3Si. Physical Review B, 1994, 49, 12927-12930.	1.1	32
96	Anomalous Transport Properties in SuperconductingNd1.85Ce0.15CuO4Â±Î´. Physical Review Letters, 1994, 73, 1291-1294.	2.9	162
97	Dynamical states of underdamped Josephson arrays in a magnetic field. Physical Review B, 1993, 47, 1141-1144.	1.1	11
98	Anomalous flux-flow Hall effect:Nd1.85Ce0.15CuO4â^'yand evidence for vortex dynamics. Physical Review B, 1993, 47, 1064-1068.	1.1	195
99	Friction and inertia of a vortex in an underdamped Josephson array. Physical Review B, 1993, 47, 348-358.	1.1	53
100	Phase coherence and disorder in Josephsonâ€•junction arrays. Applied Physics Letters, 1992, 60, 766-768.	1.5	36
101	Effect of current direction on the dynamics of Josephson-junction arrays. Physical Review B, 1992, 45, 3003-3012.	1.1	26
102	Electric field effects on vortex dynamics in ultrathinYBa2Cu3O7â^'Î´films. Physical Review Letters, 1992, 69, 2709-2712.	2.9	47
103	Simulations and interpretation of fractional giant Shapiro steps in two-dimensional Josephson-junction arrays. Physical Review B, 1991, 44, 4601-4609.	1.1	57
104	Vortex-defect interactions in Josephson-junction arrays. Physical Review B, 1991, 43, 12823-12826.	1.1	17
105	Flux-flow Hall effect in superconductingTl2Ba2CaCu2O8films. Physical Review B, 1991, 43, 6246-6248.	1.1	131
106	Absence of fractional giant Shapiro steps in diagonal Josephson-junction arrays. Physical Review B, 1991, 44, 925-928.	1.1	24
107	Nonuniversality in two-dimensional percolating systems with a broad distribution of bond conductances. Physical Review B, 1991, 43, 8233-8237.	1.1	11
108	Subharmonic Shapiro steps in Josephson-junction arrays. Physical Review B, 1991, 44, 921-924.	1.1	59

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109	Anomalous Hall effect in superconductors near their critical temperatures. Physical Review B, 1990, 41, 11630-11633.	1.1	198
110	Dynamical simulations of fractional giant Shapiro steps in two-dimensional Josephson arrays. Physical Review B, 1990, 41, 7267-7269.	1.1	74
111	Effect of leads and energy gap upon the retrapping current of Josephson junctions. Physical Review Letters, 1990, 65, 1263-1266.	2.9	24
112	Critical currents in frustrated two-dimensional Josephson arrays. Physical Review B, 1990, 42, 6165-6171.	1.1	47
113	Flux-flow Nernst effect in epitaxialYBa2Cu3O7. Physical Review B, 1990, 42, 6777-6780.	1.1	87
114	Monte Carlo simulations of Josephson-junction arrays with positional disorder. Physical Review B, 1990, 41, 8749-8756.	1.1	38
115	Vortex pinning in Josephson-junction arrays. Physical Review B, 1990, 42, 2041-2050.	1.1	126
116	Percolative conduction in three dimensions. Physical Review B, 1990, 42, 8220-8224.	1.1	188
117	Fractional giant Shapiro steps and spatially correlated phase motion in 2D Josephson arrays. Physical Review Letters, 1990, 64, 693-696.	2.9	191
118	Iansitiet al.Reply. Physical Review Letters, 1989, 62, 484-484.	2.9	0
119	Quantum tunneling and low-voltage resistance in small superconducting tunnel junctions. Physical Review B, 1989, 40, 11370-11373.	1.1	11
120	Charging effects and quantum properties of small superconducting tunnel junctions. Physical Review B, 1989, 39, 6465-6484.	1.1	72
121	Highly efficient algorithm for percolative transport studies in two dimensions. Physical Review B, 1988, 37, 302-307.	1.1	217
122	Crossover from Josephson Tunneling to the Coulomb Blockade in Small Tunnel Junctions. Physical Review Letters, 1988, 60, 2414-2417.	2.9	39
123	Positional disorder in superconducting wire networks and Josephson junction arrays. Physical Review B, 1988, 38, 2869-2872.	1.1	44
124	Nonuniversal critical behavior in the critical current of superconducting composites. Physical Review B, 1988, 37, 9292-9297.	1.1	33
125	Positional disorder in Josephson-junction arrays: Experiments and simulations. Physical Review B, 1988, 37, 5966-5969.	1.1	82
126	Nonuniversal breakdown behavior in superconducting and dielectric composites. Physical Review B, 1987, 36, 1956-1961.	1.1	47

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127	Charging energy and phase delocalization in single very small Josephson tunnel junctions. Physical Review Letters, 1987, 59, 489-492.	2.9	68
128	Critical fluctuations in high-Tcsuperconductors. Physical Review B, 1987, 36, 3930-3932.	1.1	302
129	Measurement of nonuniversal critical behavior in a two-dimensional continuum percolating system. Physical Review B, 1987, 35, 1899-1901.	1.1	54
130	Positional Disorder in Real Josephson Junction Arrays. Japanese Journal of Applied Physics, 1987, 26, 1423.	0.8	8
131	Possible Observation of Charging Energy Effects in Single Ultra-Small Josephson Tunnel Junctions. Japanese Journal of Applied Physics, 1987, 26, 1557.	0.8	1
132	Divergent phase-breaking rate in aluminum films from magnetoconductance measurements. Physical Review B, 1984, 29, 5232-5235.	1.1	40
133	Percolation on two-dimensional elastic networks with rotationally invariant bond-bending forces. Physical Review B, 1984, 30, 5386-5389.	1.1	157
134	Percolative conduction and the Alexander-Orbach conjecture in two dimensions. Physical Review B, 1984, 30, 4090-4092.	1.1	172
135	Theoretical interpretation of resistive transition data from arrays of superconducting weak links. Physical Review B, 1983, 27, 150-157.	1.1	352
136	Electron inelastic lifetime and electron-electron attraction strength in Al films. Physical Review B, 1983, 28, 4046-4049.	1.1	42
137	Periodic flux dependence of the resistive transition in two-dimensional superconducting arrays. Physical Review B, 1983, 28, 6578-6581.	1.1	87
138	An Order-Wave Description of the Kinetics of Spinodal Ordering. Materials Research Society Symposia Proceedings, 1982, 21, 571.	0.1	0
139	Resistive transition in two-dimensional arrays of superconducting weak links. Physical Review B, 1982, 26, 5268-5271.	1.1	129
140	Critical exponents for two-dimensional bond percolation. Physical Review B, 1982, 25, 492-495.	1.1	13
141	Percolative conduction in anisotropic media: A renormalization-group approach. Physical Review B, 1981, 23, 2262-2268.	1.1	61
142	Percolation tricical exponents for conductance and critical current in two dimensions. AIP Conference Proceedings, 1980, , .	0.3	3
143	A Monte Carlo calculation of the cluster size critical exponent for 2D bond percolation. Journal of Physics C: Solid State Physics, 1980, 13, L245-L248.	1.5	13
144	Superconducting and Mechanical Properties of in Situ Formed Cu-V3Ga Composites. , 1980, , 538-542.		2

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145	A large-cell renormalisation group calculation of the percolation conduction critical exponent. Journal of Physics C: Solid State Physics, 1979, 12, L827-L830.	1.5	63
146	Percolation in two-dimensional conductor-insulator networks with controllable anisotropy. Physical Review B, 1979, 20, 3653-3658.	1.1	111
147	Superconducting properties ofinsituformed Cuâ€V3Ga composites. Applied Physics Letters, 1979, 35, 93-95.	1.5	28