John Clarke

List of Publications by Year
in descending order

108 papers	7,855 citations	70961 41 h-index	49773 87 g-index
118 all docs	118 docs citations	118 times ranked	4870 citing authors

#	Article	IF	Citations
1	Superconducting quantum bits. Nature, 2008, 453, 1031-1042.	13.7	1,572
2	dc SQUID: Noise and optimization. Journal of Low Temperature Physics, 1977, 29, 301-331.	0.6	635
3	â€˜1/fnoiseâ€™ in music and speech. Nature, 1975, 258, 317-318.	13.7	500
4	The flux qubit revisited to enhance coherence and reproducibility. Nature Communications, 2016, 7, 12964.	5.8	383
5	Tunnel junction dc SQUID: Fabrication, operation, and performance. Journal of Low Temperature Physics, 1976, 25, 99-144.	0.6	269
6	Dispersive magnetometry with a quantum limited SQUID parametric amplifier. Physical Review B, 2011, 83, .	1.1	217
7	c-axis Josephson Tunneling betweenYBa2Cu3O7âˆ'Î´and Pb: Direct Evidence for Mixed Order Parameter Symmetry in a High-TcSuperconductor. Physical Review Letters, 1997, 79, 3050-3053.	2.9	195
8	SQUID-Detected Magnetic Resonance Imaging in Microtesla Fields. Annual Review of Biomedical Engineering, 2007, 9, 389-413.	5.7	188
9	Lowâ€frequency noise in dc superconducting quantum interference devices below 1 K. Applied Physics Letters, 1987, 50, 772-774.	1.5	174
10	Noiseless non-reciprocity in a parametric activeÂdevice. Nature Physics, 2011, 7, 311-315.	6.5	174
11	Integrated dc SQUID magnetometer with a high slew rate. Review of Scientific Instruments, 1984, 55, 952-957.	0.6	137
12	Decoherence in Josephson-junction qubits due to critical-current fluctuations. Physical Review B, 2004, 70, .	1.1	133
13	Pair Tunneling fromc-AxisYBa2Cu3O7âˆ'xto Pb: Evidence fors-Wave Component from Microwave Induced Steps. Physical Review Letters, 1996, 76, 2161-2164.	2.9	128
14	Magnetotelluric data analysis: removal of bias. Geophysics, 1978, 43, 1157-1166.	1.4	120
15	Multilayer YBa2Cu3Oxâ€SrTiO3â€YBa2Cu3Oxfilms for insulating crossovers. Applied Physics Letters, 1990, 56, 189-191.	1.5	119
16	Surface modification with the scanning tunneling microscope. IBM Journal of Research and Development, 1986, 30, 492-499.	3.2	113
17	Optimization of dc SQUID voltmeter and magnetometer circuits. Journal of Low Temperature Physics, 1979, 37, 405-420.	0.6	102
18	DC SQUIDs as radiofrequency amplifiers. Journal of Low Temperature Physics, 1985, 61, 263-280.	0.6	99

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19	Radio-frequency amplifier based on a niobium dc superconducting quantum interference device with microstrip input coupling. Applied Physics Letters, 1998, 72, 2885-2887.	1.5	94
20	Entangling flux qubits with a bipolar dynamic inductance. Physical Review B, 2004, 70, .	1.1	94
21	Single superconducting quantum interference device multiplexer for arrays of low-temperature sensors. Applied Physics Letters, 2001, 78, 371-373.	1.5	90
22	Highâ€transition temperature superconducting quantum interference device microscope. Review of Scientific Instruments, 1996, 67, 4208-4215.	0.6	88
23	Quantum noise theory for the dc SQUID. Applied Physics Letters, 1981, 38, 380-382.	1.5	87
24	Suppressing relaxation in superconducting qubits by quasiparticle pumping. Science, 2016, 354, 1573-1577.	6.0	80
25	Magnetic Flux Noise in dc SQUIDs: Temperature and Geometry Dependence. Physical Review Letters, 2013, 110, 147002.	2.9	79
26	Lowâ€frequency excess noise in Nbâ€Al2O3â€Nb Josephson tunnel junctions. Applied Physics Letters, 1987, 50, 1757-1759.	1.5	75
27	Measurements of the relaxation of quasiparticle branch imbalance in superconductors. Journal of Low Temperature Physics, 1974, 15, 491-522.	0.6	72
28	Observation of the Quasiparticle Hall Effect in SuperconductingYBa2Cu3O7â˜'Î´. Physical Review Letters, 1994, 73, 1537-1540.	2.9	70
29	Flux noise from superconducting YBa2Cu3O7â˜'xflux transformers. Applied Physics Letters, 1991, 58, 1106-1108.	1.5	65
30	Phase-Sensitive Measurements of Vortex Dynamics in the Terahertz Domain. Physical Review Letters, 1995, 74, 3265-3268.	2.9	63
31	High-resolution operation of frequency-multiplexed transition-edge photon sensors. Applied Physics Letters, 2002, 81, 159-161.	1.5	63
32	Low magnetic flux noise observed in laser-deposited in situ films of YB2Cu3Oy and implications for high- Tc SQUIDs. Nature, 1989, 341, 723-725.	13.7	58
33	Nuclear quadrupole resonance detected at 30 MHz with a dc superconducting quantum interference device. Applied Physics Letters, 1985, 47, 637-639.	1.5	57
34	Scanning tunneling microscopy of silver, gold, and aluminum monomers and small clusters on graphite. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 1988, 6, 419-423.	0.9	56
35	Design and performance of the ADMX SQUID-based microwave receiver. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2011, 656, 39-44.	0.7	56
36	Hotâ€electron limitation to the sensitivity of the dc superconducting quantum interference device. Applied Physics Letters, 1989, 54, 2599-2601.	1.5	53

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37	Dynamic Scaling of Magnetic Flux Noise near the Kosterlitz-Thouless-Berezinskii Transition in Overdamped Josephson Junction Arrays. Physical Review Letters, 1996, 76, 2551-2554.	2.9	49
38	Direct imaging of Au and Ag clusters by scanning tunneling microscopy. Applied Physics Letters, 1986, 49, 853-855.	1.5	47
39	Superconducting thinâ€film multiturn coils of YBa2Cu3O7â^'x. Applied Physics Letters, 1990, 56, 2336-2338.	1.5	47
40	Josephsonâ€Junction Amplifier. Applied Physics Letters, 1971, 19, 469-471.	1.5	45
41	Quantum Josephson junction circuits and the dawn of artificial atoms. Nature Physics, 2020, 16, 234-237.	6.5	44
42	Low field magnetic resonance images of polarized noble gases obtained with a dc superconducting quantum interference device. Applied Physics Letters, 1998, 72, 1908-1910.	1.5	42
43	Axion dark matter experiment: Run 1B analysis details. Physical Review D, 2021, 103, .	1.6	38
44	Series array of incommensurate superconducting quantum interference devices from YBa2Cu3O7â^'Î´ ion damage Josephson junctions. Applied Physics Letters, 2008, 93, 182502.	1.5	37
45	Microstrip superconducting quantum interference device radio-frequency amplifier: Tuning and cascading. Applied Physics Letters, 1999, 75, 3545-3547.	1.5	36
46	The Josephson Effect and e/h. American Journal of Physics, 1970, 38, 1071-1095.	0.3	34
47	Twoâ€dimensional, remote micropositioner for a scanning tunneling microscope. Review of Scientific Instruments, 1985, 56, 2168-2170.	0.6	34
48	Small-scale analog applications of high-transition-temperature superconductors. Nature, 1988, 333, 29-35.	13.7	33
49	SQUID Electronics. , 2005, , 127-170.		33
50	Pure dephasing in flux qubits due to flux noise with spectral density scaling as1/fÎ±. Physical Review B, 2012, 85, .	1.1	33
51	Radioâ€frequency amplifier based on a dc superconducting quantum interference device. Applied Physics Letters, 1983, 43, 694-696.	1.5	32
52	Scanning force microscope springs optimized for opticalâ€beam deflection and with tips made by controlled fracture. Journal of Applied Physics, 1994, 76, 172-181.	1.1	32
53	High-Tc second-order gradiometer for magnetocardiography in an unshielded environment. Applied Physics Letters, 1999, 75, 1979-1981.	1.5	32
54	Lowâ€frequency nuclear magnetic resonance and nuclear quadrupole resonance spectrometer based on a dc superconducting quantum interference device. Review of Scientific Instruments, 1991, 62, 1453-1459.	0.6	31

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55	Nbâ€Nb thinâ€film Josephson junctions. Journal of Applied Physics, 1976, 47, 1616-1619.	1.1	28
56	Superconducting quantum interference device as a near-quantum-limited amplifier for the axion dark-matter experiment. Applied Physics Letters, 2011, 98, 202503.	1.5	28
57	Effects of Dissipation on a Superconducting Single Electron Transistor. Physical Review Letters, 2001, 87, 017002.	2.9	26
58	Integrated highâ€transition temperature magnetometer with only two superconducting layers. Applied Physics Letters, 1993, 63, 559-561.	1.5	25
59	Microstrip superconducting quantum interference device radio-frequency amplifier: Scattering parameters and input coupling. Applied Physics Letters, 2008, 92, 172503.	1.5	25
60	Simulation of the noise rise in threeâ€photon Josephson parametric amplifiers. Applied Physics Letters, 1983, 43, 508-510.	1.5	22
61	The Magnetic Inverse Problem. , 0, , 139-267.		22
62	Asymmetric Frequency Conversion in Nonlinear Systems Driven by a Biharmonic Pump. Physical Review Letters, 2014, 113, 247003.	2.9	22
63	Josephson weak links in thin films of YBa2Cu3O7â^'xinduced by electrical pulses. Applied Physics Letters, 1990, 56, 2240-2242.	1.5	21
64	Superconducting quantum interference device with frequency-dependent damping: Readout of flux qubits. Physical Review B, 2005, 72, .	1.1	21
65	The superconducting quantum interference device microstrip amplifier: Computer models. Journal of Applied Physics, 2000, 88, 6910-6918.	1.1	20
66	SQUID Theory. , 2005, , 29-92.		20
67	Focus on SQUIDs in Biomagnetism. Superconductor Science and Technology, 2018, 31, 080201.	1.8	20
68	Thin-film YBCO magnetometer. Nature, 1991, 352, 482-483.	13.7	18
69	Gain, directionality, and noise in microwave SQUID amplifiers: Input-output approach. Physical Review B, 2012, 86, .	1.1	18
70	Axion Dark Matter Experiment: Detailed designÂand operations. Review of Scientific Instruments, 2021, 92, 124502.	0.6	18
71	High Tc superconducting asymmetric gradiometer for biomagnetic applications. Review of Scientific Instruments, 2000, 71, 2873-2881.	0.6	17
72	Biomagnetism. , 0, , 269-389.		17

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73	SQUIDs for Standards and Metrology. , 0, , 95-137.		17
74	Flux1/fÎ±noise in two-dimensional Heisenberg spin glasses: Effects of weak anisotropic interactions. Physical Review B, 2014, 90, .	1.1	16
75	Dispersive readout of a flux qubit at the single-photon level. Physical Review B, 2011, 84, .	1.1	15
76	Input impedance of an amplifier based on a dc superconducting quantum interference device. Applied Physics Letters, 1984, 45, 799-801.	1.5	14
77	Correlation of Vortex Motion in High-TcSuperconductors. Physical Review Letters, 1995, 74, 2796-2799.	2.9	12
78	High-Tc superconducting quantum interference device observation of heat-affected zone in a spot-welded Feâ€"Crâ€"Ni system. Applied Physics Letters, 2003, 83, 1878-1880.	1.5	11
79	Low-noise computer-controlled current source for quantum coherence experiments. Review of Scientific Instruments, 2004, 75, 2541-2544.	0.6	11
80	PHYSICS: Flux Qubit Completes the Hat Trick. Science, 2003, 299, 1850-1851.	6.0	10
81	Practical DC SQUIDS: Configuration and Performance. , 2005, , 171-217.		9
82	A Numerical Treatment of the rf SQUID: I. General Properties and Noise Energy. Journal of Low Temperature Physics, 2007, 149, 230-260.	0.6	9
83	Low-frequency critical current noise in Josephson junctions induced by temperature fluctuations. Applied Physics Letters, 2012, 101, 092601.	1.5	9
84	SQUIDs for Geophysical Survey and Magnetic Anomaly Detection. , 0, , 481-543.		9
85	Low Frequency Nuclear Quadrupole Resonance with SQUID Amplifiers. Zeitschrift Fur Naturforschung - Section A Journal of Physical Sciences, 1994, 49, 5-13.	0.7	8
86	Feasibility of functional MRI at ultralow magnetic field via changes in cerebral blood volume. NeuroImage, 2019, 186, 185-191.	2.1	8
87	SQUIDs cross a watershed. Nature, 1994, 372, 501-502.	13.7	6
88	SQUID System Issues. , 2005, , 251-355.		6
89	Wired for the future. Nature Physics, 2006, 2, 794-796.	6.5	6
90	SQUID Fabrication Technology. , 2005, , 93-125.		5

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91	Microstrip superconducting quantum interference device amplifier: Conditional stability. Applied Physics Letters, 2010, 96, .	1.5	5
92	Ultralowâ€field and spinâ€locking relaxation dispersion in postmortem pig brain. Magnetic Resonance in Medicine, 2017, 78, 2342-2351.	1.9	5
93	Detection of Fatigue Damage Prior Crack Initiation with Scanning SQUID Microscopy. AIP Conference Proceedings, 2006, , .	0.3	4
94	Microstrip superconducting quantum interference device amplifier: Operation in higher-order modes. Applied Physics Letters, 2017, 111, .	1.5	4
95	SQUID Voltmeters and Amplifiers. , 0, , 1-93.		4
96	Measurements of Magnetism and Magnetic Properties of Matter. , 0, , 391-440.		3
97	Nondestructive Evaluation of Materials and Structures using SQUIDs. , 0, , 441-479.		3
98	Practical RF SQUIDs: Configuration and Performance. , 2005, , 219-250.		2
99	A Numerical Treatment of the rf SQUID: II. Noise Temperature. Journal of Low Temperature Physics, 2007, 149, 261-293.	0.6	2
100	Detecting damage in steel with scanning SQUID microscopy. AIP Conference Proceedings, 2002, , .	0.3	1
101	Gravity and Motion Sensors. , 0, , 545-579.		1
102	Response to â€˜â€˜Comment on â€˜Lowâ€frequency excess noise in Nbâ€Al2O3â€Nb Josephson tunnel junctionsâ€™â€‰â€™â€™ [Appl. Phys. Lett.52, 2001 (1988)]. Applied Physics Letters, 1988, 52, 2001-2002.	1.5	0
103	SQUIDs in with applications. Nature, 1991, 352, 110-111.	13.7	0
104	Coherent terahertz spectroscopy of the vortex-state of cuprate superconductors. Ferroelectrics, 1996, 177, 33-41.	0.3	0
105	Appendix 1: Basic Properties of Superconductivity. , 2005, , 357-366.		0
106	Magnetic field calculations in the vicinity of superconductive circuit structures. , 2013, , .		0
107	Brian Josephson and the Royal Society Mond Laboratory. Journal of Superconductivity and Novel Magnetism, 2021, 34, 1587-1590.	0.8	0
108	SQUIDs: THEN AND NOW. , 2010, , 145-184.		0