Qingyuan Zhao

List of Publications by Year
in descending order

79 papers	4,171 citations	31 h-index (147801)	64 g-index (110387)
83 all docs	83 docs citations	83 times ranked	2384 citing authors

#	Article	IF	Citations
1	Kinetic-inductance-limited reset time of superconducting nanowire photon counters. Applied Physics Letters, 2006, 88, 111116.	3.3	358
2	Nanowire single-photon detector with an integrated optical cavity and anti-reflection coating. Optics Express, 2006, 14, 527.	3.4	350
3	Demonstration of sub-3 ps temporal resolution with a superconducting nanowire single-photon detector. Nature Photonics, 2020, 14, 250-255.	31.4	285
4	On-chip detection of non-classical light by scalable integration of single-photon detectors. Nature Communications, 2015, 6, 5873.	12.8	238
5	Geometry-dependent critical currents in superconducting nanocircuits. Physical Review B, 2011, 84, .	3.2	193
6	Modeling the Electrical and Thermal Response of Superconducting Nanowire Single-Photon Detectors. IEEE Transactions on Applied Superconductivity, 2007, 17, 581-585.	1.7	174
7	Single-Photon Detectors Based on Ultranarrow Superconducting Nanowires. Nano Letters, 2011, 11, 2048-2053.	9.1	167
8	Constriction-limited detection efficiency of superconducting nanowire single-photon detectors. Applied Physics Letters, 2007, 90, 101110.	3.3	163
9	781 Mbit/s photon-counting optical communications using a superconducting nanowire detector. Optics Letters, 2006, 31, 444.	3.3	161
10	Efficient Single Photon Detection from 500 nm to 5 Î¼m Wavelength. Nano Letters, 2012, 12, 4799-4804.	9.1	155
11	Optical properties of superconducting nanowire single-photon detectors. Optics Express, 2008, 16, 10750.	3.4	146
12	Electrothermal feedback in superconducting nanowire single-photon detectors. Physical Review B, 2009, 79, .	3.2	132
13	Single-photon imager based on a superconducting nanowire delay line. Nature Photonics, 2017, 11, 247-251.	31.4	127
14	Photon-number-resolution with sub-30-ps timing using multi-element superconducting nanowire single photon detectors. Journal of Modern Optics, 2009, 56, 364-373.	1.3	122
15	A Superconducting-Nanowire Three-Terminal Electrothermal Device. Nano Letters, 2014, 14, 5748-5753.	9.1	116
16	Detecting Sub-GeV Dark Matter with Superconducting Nanowires. Physical Review Letters, 2019, 123, 151802.	7.8	116
17	Superconducting nanowire detector jitter limited by detector geometry. Applied Physics Letters, 2016, 109, .	3.3	86
18	Universal scaling of the critical temperature for thin films near the superconducting-to-insulating transition. Physical Review B, 2014, 90, .	3.2	70

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19	A scalable multi-photon coincidence detector based on superconducting nanowires. Nature Nanotechnology, 2018, 13, 596-601.	31.5	62
20	Resolving Photon Numbers Using a Superconducting Nanowire with Impedance-Matching Taper. Nano Letters, 2020, 20, 3858-3863.	9.1	57
21	Broadband Solenoidal Haloscope for Terahertz Axion Detection. Physical Review Letters, 2022, 128, 131801.	7.8	49
22	Bias sputtered NbN and superconducting nanowire devices. Applied Physics Letters, 2017, 111, .	3.3	46
23	A compact superconducting nanowire memory element operated by nanowire cryotrons. Superconductor Science and Technology, 2018, 31, 035009.	3.5	40
24	A superconducting nanowire can be modeled by using SPICE. Superconductor Science and Technology, 2018, 31, 055010.	3.5	39
25	Counting rate enhancements in superconducting nanowire single-photon detectors with improved readout circuits. Optics Letters, 2014, 39, 1869.	3.3	38
26	Superconducting-nanowire single-photon-detector linear array. Applied Physics Letters, 2013, 103, 142602.	3.3	37
27	Microwave dynamics of high aspect ratio superconducting nanowires studied using self-resonance. Journal of Applied Physics, 2016, 119, .	2.5	37
28	Free-space-coupled superconducting nanowire single-photon detectors for infrared optical communications. Optics Express, 2016, 24, 3248.	3.4	37
29	A nanocryotron comparator can connect single-flux-quantum circuits to conventional electronics. Superconductor Science and Technology, 2017, 30, 044002.	3.5	36
30	Photon-Counting Optical Time-Domain Reflectometry Using a Superconducting Nanowire Single-Photon Detector. Journal of Lightwave Technology, 2012, 30, 2583-2588.	4.6	35
31	Design of a Power Efficient Artificial Neuron Using Superconducting Nanowires. Frontiers in Neuroscience, 2019, 13, 933.	2.8	33
32	Single-Detector Spectrometer Using a Superconducting Nanowire. Nano Letters, 2021, 21, 9625-9632.	9.1	33
33	Superconducting nanowire single-photon detector with integrated impedance-matching taper. Applied Physics Letters, 2019, 114, .	3.3	29
34	Long-haul and high-resolution optical time domain reflectometry using superconducting nanowire single-photon detectors. Scientific Reports, 2015, 5, 10441.	3.3	28
35	1.25-Gbit/s photon-counting optical communications using a two-element superconducting nanowire single photon detector. , 2006, 6372, 286.		27
36	Fabrication Process Yielding Saturated Nanowire Single-Photon Detectors With 24-ps Jitter. IEEE Journal of Selected Topics in Quantum Electronics, 2015, 21, 1-7.	2.9	27

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37	Using Geometry To Sense Current. Nano Letters, 2016, 16, 7626-7631.	9.1	25
38	Cryogenic Memory Architecture Integrating Spin Hall Effect based Magnetic Memory and Superconductive Cryotron Devices. Scientific Reports, 2020, 10, 248.	3.3	25
39	Frequency Pulling and Mixing of Relaxation Oscillations in Superconducting Nanowires. Physical Review Applied, 2018, 9, .	3.8	17
40	A Superconducting Binary Encoder with Multigate Nanowire Cryotrons. Nano Letters, 2020, 20, 3553-3559.	9.1	16
41	Enhanced photon communication through Bayesian estimation with an SNSPD array. Photonics Research, 2020, 8, 637.	7.0	14
42	A high speed and high efficiency superconducting photon number resolving detector. Superconductor Science and Technology, 2019, 32, 064002.	3.5	13
43	Eight-fold signal amplification of a superconducting nanowire single-photon detector using a multiple-avalanche architecture. Optics Express, 2014, 22, 24574.	3.4	12
44	A distributed electrical model for superconducting nanowire single photon detectors. Applied Physics Letters, 2018, 113, .	3.3	12
45	Oscilloscopic Capture of Greater-Than-100 GHz, Ultra-Low Power Optical Waveforms Enabled by Integrated Electrooptic Devices. Journal of Lightwave Technology, 2020, 38, 166-173.	4.6	12
46	Multilayered Heater Nanocryotron: A Superconducting-Nanowire-Based Thermal Switch. Physical Review Applied, 2020, 14, .	3.8	12
47	A Distributed Brillouin Temperature Sensor Using a Single-Photon Detector. IEEE Sensors Journal, 2016, 16, 2180-2185.	4.7	11
48	Saturation efficiency for detecting 1550â€‰â€‰nm photons with a 2â€‰Ã—â€‰2 array of Mo_{0.8}Si_{0.2} nanowires at 2.2â€‰â€‰K. Photonics Research, 2021, 9, 389.	7.0	9
49	Temperature dependence of niobium superconducting nanowire single-photon detectors in He-3 cryocooler. Science Bulletin, 2014, 59, 3549-3553.	1.7	8
50	Measuring thickness in thin NbN films for superconducting devices. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2019, 37, 041501.	2.1	8
51	Fabrication of superconducting niobium nitride nanowire with high aspect ratio for X-ray photon detection. Scientific Reports, 2020, 10, 9057.	3.3	8
52	Characterization of Superconducting Nbn, WSi and MoSi Ultra-Thin Films in Magnetic Field. IEEE Transactions on Applied Superconductivity, 2021, 31, 1-4.	1.7	8
53	A scalable superconducting nanowire memory cell and preliminary array test. Superconductor Science and Technology, 2021, 34, 035003.	3.5	8
54	Jitter Characterization of a Dual-Readout SNSPD. IEEE Transactions on Applied Superconductivity, 2019, 29, 1-4.	1.7	7

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55	Characterize the Speed of a Photon-Number-Resolving Superconducting Nanowire Detector. IEEE Photonics Journal, 2020, 12, 1-8.	2.0	7
56	Improved pulse discrimination for a superconducting series nanowire detector by applying a digital matched filter. Applied Physics Letters, 2021, 119, .	3.3	7
57	Photon-counting optical time-domain reflectometry with superconducting nanowire single-photon detectors. , 2013, , .		6
58	Demonstration of a superconducting nanowire single photon detector with an ultrahigh polarization extinction ratio over 400. Optics Express, 2018, 26, 3947.	3.4	6
59	Planar double-slot antenna integrated into a Nb₅N₆ microbolometer THz detector. Optics Letters, 2020, 45, 2894.	3.3	6
60	Noise-tolerant single-photon imaging with a superconducting nanowire camera. Optics Letters, 2020, 45, 6732.	3.3	6
61	Suppression of superconductivity dominated by proximity effect in amorphous MoSi nanobelts. Physical Review B, 2022, 105, .	3.2	6
62	High efficiency, large-active-area superconducting nanowire single-photon detectors. Chinese Physics B, 2015, 24, 068501.	1.4	5
63	Characterize the switching performance of a superconducting nanowire cryotron for reading superconducting nanowire single photon detectors. Scientific Reports, 2019, 9, 16345.	3.3	5
64	Compact and Tunable Forward Coupler Based on High-Impedance Superconducting Nanowires. Physical Review Applied, 2021, 15, .	3.8	5
65	Effect of buffer layer on thermal recovery of superconducting nanowire single-photon detector. Superconductor Science and Technology, 2021, 34, 074002.	3.5	5
66	Photon-assisted Phase Slips in Superconducting Nanowires. Physical Review Applied, 2022, 17, .	3.8	5
67	Probabilistic Energy-to-Amplitude Mapping in a Tapered Superconducting Nanowire Single-Photon Detector. Nano Letters, 2022, 22, 1587-1594.	9.1	5
68	Investigation of ma-N 2400 series photoresist as an electron-beam resist for superconducting nanoscale devices. Journal of Vacuum Science and Technology B:Nanotechnology and Microelectronics, 2019, 37, 051207.	1.2	4
69	Photonics-inspired terahertz whispering gallery mode resonator waveguide on silicon platform. Applied Physics Letters, 2021, 119, .	3.3	4
70	Simultaneous resolution of photon numbers and positions with series-connected superconducting nanowires. Applied Physics Letters, 2022, 120, 124001.	3.3	4
71	Doped niobium superconducting nanowire single-photon detectors. Applied Physics B: Lasers and Optics, 2014, 116, 991-995.	2.2	3
72	Precise, subnanosecond, and high-voltage switching enabled by gallium nitride electronics integrated into complex loads. Review of Scientific Instruments, 2021, 92, 074704.	1.3	2

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73	Nb5N6 Buffered Superconducting NbN Nanowire Single-Photon Detector on Si Substrate. , 2019, , .		1
74	Operation of a Superconducting Nanowire in Two Detection Modes: KID and SPD. Journal of Low Temperature Physics, 2019, 194, 386-393.	1.4	1
75	64-Pixel Mo₈₀Si₂₀ superconducting nanowire single-photon imager with a saturated internal quantum efficiency at 1.5 Âµm. Optics Letters, 2022, 47, 3523.	3.3	1
76	Simulation of superconducting nanowire single photon detector with phase grating structure. , 2014, , .		0
77	Experimental Demonstration of Superconducting Series Nanowire Photon-Number-Resolving Detector at 660 nm Wavelength. IEEE Photonics Journal, 2019, 11, 1-8.	2.0	0
78	Photon-Number Resolution Using Superconducting Tapered Nanowire Detector. , 2020, , .		0
79	Wideband cryogenic amplifier for a superconducting nanowire single-photon detector. Frontiers of Information Technology and Electronic Engineering, 2021, 22, 1666-1676.	2.6	0