Qingyuan Zhao

List of Publications by Year
in descending order

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

#	Article	IF	Citations
1	Suppression of superconductivity dominated by proximity effect in amorphous MoSi nanobelts. Physical Review B, 2022, 105, .	3.2	6
2	Photon-assisted Phase Slips in Superconducting Nanowires. Physical Review Applied, 2022, 17, .	3.8	5
3	Probabilistic Energy-to-Amplitude Mapping in a Tapered Superconducting Nanowire Single-Photon Detector. Nano Letters, 2022, 22, 1587-1594.	9.1	5
4	Simultaneous resolution of photon numbers and positions with series-connected superconducting nanowires. Applied Physics Letters, 2022, 120, 124001.	3.3	4
5	Broadband Solenoidal Haloscope for Terahertz Axion Detection. Physical Review Letters, 2022, 128, 131801.	7.8	49
6	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
7	Compact and Tunable Forward Coupler Based on High-Impedance Superconducting Nanowires. Physical Review Applied, 2021, 15, .	3.8	5
8	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
9	Effect of buffer layer on thermal recovery of superconducting nanowire single-photon detector. Superconductor Science and Technology, 2021, 34, 074002.	3.5	5
10	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
11	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
12	A scalable superconducting nanowire memory cell and preliminary array test. Superconductor Science and Technology, 2021, 34, 035003.	3.5	8
13	Photonics-inspired terahertz whispering gallery mode resonator waveguide on silicon platform. Applied Physics Letters, 2021, 119, .	3.3	4
14	Single-Detector Spectrometer Using a Superconducting Nanowire. Nano Letters, 2021, 21, 9625-9632.	9.1	33
15	Wideband cryogenic amplifier for a superconducting nanowire single-photon detector. Frontiers of Information Technology and Electronic Engineering, 2021, 22, 1666-1676.	2.6	0
16	Improved pulse discrimination for a superconducting series nanowire detector by applying a digital matched filter. Applied Physics Letters, 2021, 119, .	3.3	7
17	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
18	Multilayered Heater Nanocryotron: A Superconducting-Nanowire-Based Thermal Switch. Physical Review Applied, 2020, 14, .	3.8	12

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19	Characterize the Speed of a Photon-Number-Resolving Superconducting Nanowire Detector. IEEE Photonics Journal, 2020, 12, 1-8.	2.0	7
20	Fabrication of superconducting niobium nitride nanowire with high aspect ratio for X-ray photon detection. Scientific Reports, 2020, 10, 9057.	3.3	8
21	Demonstration of sub-3 ps temporal resolution with a superconducting nanowire single-photon detector. Nature Photonics, 2020, 14, 250-255.	31.4	285
22	Cryogenic Memory Architecture Integrating Spin Hall Effect based Magnetic Memory and Superconductive Cryotron Devices. Scientific Reports, 2020, 10, 248.	3.3	25
23	A Superconducting Binary Encoder with Multigate Nanowire Cryotrons. Nano Letters, 2020, 20, 3553-3559.	9.1	16
24	Resolving Photon Numbers Using a Superconducting Nanowire with Impedance-Matching Taper. Nano Letters, 2020, 20, 3858-3863.	9.1	57
25	Enhanced photon communication through Bayesian estimation with an SNSPD array. Photonics Research, 2020, 8, 637.	7.0	14
26	Planar double-slot antenna integrated into a Nb₅N₆ microbolometer THz detector. Optics Letters, 2020, 45, 2894.	3.3	6
27	Noise-tolerant single-photon imaging with a superconducting nanowire camera. Optics Letters, 2020, 45, 6732.	3.3	6
28	Photon-Number Resolution Using Superconducting Tapered Nanowire Detector. , 2020, , .		0
29	Detecting Sub-GeV Dark Matter with Superconducting Nanowires. Physical Review Letters, 2019, 123, 151802.	7.8	116
30	Characterize the switching performance of a superconducting nanowire cryotron for reading superconducting nanowire single photon detectors. Scientific Reports, 2019, 9, 16345.	3.3	5
31	Design of a Power Efficient Artificial Neuron Using Superconducting Nanowires. Frontiers in Neuroscience, 2019, 13, 933.	2.8	33
32	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
33	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
34	A high speed and high efficiency superconducting photon number resolving detector. Superconductor Science and Technology, 2019, 32, 064002.	3.5	13
35	Jitter Characterization of a Dual-Readout SNSPD. IEEE Transactions on Applied Superconductivity, 2019, 29, 1-4.	1.7	7
36	Experimental Demonstration of Superconducting Series Nanowire Photon-Number-Resolving Detector at 660 nm Wavelength. IEEE Photonics Journal, 2019, 11, 1-8.	2.0	0

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37	Superconducting nanowire single-photon detector with integrated impedance-matching taper. Applied Physics Letters, 2019, 114, .	3.3	29
38	Nb5N6 Buffered Superconducting NbN Nanowire Single-Photon Detector on Si Substrate. , 2019, , .		1
39	Operation of a Superconducting Nanowire in Two Detection Modes: KID and SPD. Journal of Low Temperature Physics, 2019, 194, 386-393.	1.4	1
40	A superconducting nanowire can be modeled by using SPICE. Superconductor Science and Technology, 2018, 31, 055010.	3.5	39
41	A compact superconducting nanowire memory element operated by nanowire cryotrons. Superconductor Science and Technology, 2018, 31, 035009.	3.5	40
42	Demonstration of a superconducting nanowire single photon detector with an ultrahigh polarization extinction ratio over 400. Optics Express, 2018, 26, 3947.	3.4	6
43	A distributed electrical model for superconducting nanowire single photon detectors. Applied Physics Letters, 2018, 113, .	3.3	12
44	A scalable multi-photon coincidence detector based on superconducting nanowires. Nature Nanotechnology, 2018, 13, 596-601.	31.5	62
45	Frequency Pulling and Mixing of Relaxation Oscillations in Superconducting Nanowires. Physical Review Applied, 2018, 9, .	3.8	17
46	A nanocryotron comparator can connect single-flux-quantum circuits to conventional electronics. Superconductor Science and Technology, 2017, 30, 044002.	3.5	36
47	Single-photon imager based on a superconducting nanowire delay line. Nature Photonics, 2017, 11, 247-251.	31.4	127
48	Bias sputtered NbN and superconducting nanowire devices. Applied Physics Letters, 2017, 111, .	3.3	46
49	Using Geometry To Sense Current. Nano Letters, 2016, 16, 7626-7631.	9.1	25
50	Microwave dynamics of high aspect ratio superconducting nanowires studied using self-resonance. Journal of Applied Physics, 2016, 119, .	2.5	37
51	Superconducting nanowire detector jitter limited by detector geometry. Applied Physics Letters, 2016, 109, .	3.3	86
52	A Distributed Brillouin Temperature Sensor Using a Single-Photon Detector. IEEE Sensors Journal, 2016, 16, 2180-2185.	4.7	11
53	Free-space-coupled superconducting nanowire single-photon detectors for infrared optical communications. Optics Express, 2016, 24, 3248.	3.4	37
54	Long-haul and high-resolution optical time domain reflectometry using superconducting nanowire single-photon detectors. Scientific Reports, 2015, 5, 10441.	3.3	28

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55	On-chip detection of non-classical light by scalable integration of single-photon detectors. Nature Communications, 2015, 6, 5873.	12.8	238
56	High efficiency, large-active-area superconducting nanowire single-photon detectors. Chinese Physics B, 2015, 24, 068501.	1.4	5
57	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
58	Eight-fold signal amplification of a superconducting nanowire single-photon detector using a multiple-avalanche architecture. Optics Express, 2014, 22, 24574.	3.4	12
59	Simulation of superconducting nanowire single photon detector with phase grating structure. , 2014, , .		0
60	Counting rate enhancements in superconducting nanowire single-photon detectors with improved readout circuits. Optics Letters, 2014, 39, 1869.	3.3	38
61	Universal scaling of the critical temperature for thin films near the superconducting-to-insulating transition. Physical Review B, 2014, 90, .	3.2	70
62	Doped niobium superconducting nanowire single-photon detectors. Applied Physics B: Lasers and Optics, 2014, 116, 991-995.	2.2	3
63	Temperature dependence of niobium superconducting nanowire single-photon detectors in He-3 cryocooler. Science Bulletin, 2014, 59, 3549-3553.	1.7	8
64	A Superconducting-Nanowire Three-Terminal Electrothermal Device. Nano Letters, 2014, 14, 5748-5753.	9.1	116
65	Superconducting-nanowire single-photon-detector linear array. Applied Physics Letters, 2013, 103, 142602.	3.3	37
66	Photon-counting optical time-domain reflectometry with superconducting nanowire single-photon detectors. , 2013, , .		6
67	Photon-Counting Optical Time-Domain Reflectometry Using a Superconducting Nanowire Single-Photon Detector. Journal of Lightwave Technology, 2012, 30, 2583-2588.	4.6	35
68	Efficient Single Photon Detection from 500 nm to 5 Î¼m Wavelength. Nano Letters, 2012, 12, 4799-4804.	9.1	155
69	Geometry-dependent critical currents in superconducting nanocircuits. Physical Review B, 2011, 84, .	3.2	193
70	Single-Photon Detectors Based on Ultranarrow Superconducting Nanowires. Nano Letters, 2011, 11, 2048-2053.	9.1	167
71	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
72	Electrothermal feedback in superconducting nanowire single-photon detectors. Physical Review B, 2009, 79, .	3.2	132

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73	Optical properties of superconducting nanowire single-photon detectors. Optics Express, 2008, 16, 10750.	3.4	146
74	Modeling the Electrical and Thermal Response of Superconducting Nanowire Single-Photon Detectors. IEEE Transactions on Applied Superconductivity, 2007, 17, 581-585.	1.7	174
75	Constriction-limited detection efficiency of superconducting nanowire single-photon detectors. Applied Physics Letters, 2007, 90, 101110.	3.3	163
76	Kinetic-inductance-limited reset time of superconducting nanowire photon counters. Applied Physics Letters, 2006, 88, 111116.	3.3	358
77	781 Mbit/s photon-counting optical communications using a superconducting nanowire detector. Optics Letters, 2006, 31, 444.	3.3	161
78	Nanowire single-photon detector with an integrated optical cavity and anti-reflection coating. Optics Express, 2006, 14, 527.	3.4	350
79	1.25-Gbit/s photon-counting optical communications using a two-element superconducting nanowire single photon detector. , 2006, 6372, 286.		27