

Christine Silberhorn

List of Publications by Year in descending order

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148
papers

8,109
citations

44069

48
h-index

48315

88
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148
all docs

148
docs citations

148
times ranked

4047
citing authors

#	ARTICLE	IF	CITATIONS
1	Cryogenic integrated spontaneous parametric down-conversion. <i>Optica</i> , 2022, 9, 108.	9.3	6
2	Waveguide resonator with an integrated phase modulator for second harmonic generation. <i>Optics Express</i> , 2021, 29, 1991.	3.4	5
3	Statistical Benchmarking of Scalable Photonic Quantum Systems. <i>Physical Review Letters</i> , 2021, 126, 023601.	7.8	5
4	Cryogenic Second-Harmonic Generation in Periodically Poled Lithium Niobate Waveguides. <i>Physical Review Applied</i> , 2021, 15, .	3.8	11
5	Improved non-linear devices for quantum applications. <i>New Journal of Physics</i> , 2021, 23, 063082.	2.9	4
6	General analytic theory of classical collinear three-wave mixing in a monolithic cavity. <i>Journal of Optics (United Kingdom)</i> , 2021, 23, 085803.	2.2	1
7	Universal compressive tomography in the time-frequency domain. <i>Optica</i> , 2021, 8, 1296.	9.3	12
8	Nonlinear focal mapping of ferroelectric domain walls in LiNbO ₃ : Analysis of the SHG microscopy contrast mechanism. <i>Journal of Applied Physics</i> , 2020, 128, 234102.	2.5	14
9	Single-photon sources: Approaching the ideal through multiplexing. <i>Review of Scientific Instruments</i> , 2020, 91, 041101.	1.3	97
10	Free and defect-bound (bi)polarons in LiNbO_3 : Atomic structure and spectroscopic signatures from <i>ab initio</i> calculations. <i>Physical Review Research</i> , 2020, 2, .	3.6	11
11	Counter-propagating photon pair generation in a nonlinear waveguide. <i>Optics Express</i> , 2020, 28, 3215.	3.4	26
12	Interferometric method for determining the losses of spatially multi-mode nonlinear waveguides based on second harmonic generation.. <i>Optics Express</i> , 2020, 28, 5507.	3.4	2
13	Single-channel electronic readout of a multipixel superconducting nanowire single photon detector. <i>Optics Express</i> , 2020, 28, 5528.	3.4	7
14	Remotely projecting states of photonic temporal modes. <i>Optics Express</i> , 2020, 28, 28295.	3.4	6
15	Characterisation of width-dependent diffusion dynamics in rubidium-exchanged KTP waveguides. <i>Optics Express</i> , 2020, 28, 24353.	3.4	9
16	Spatially single mode photon pair source at 800 nm in periodically poled Rubidium exchanged KTP waveguides. <i>Optics Express</i> , 2020, 28, 32925.	3.4	7
17	Cryogenic electro-optic polarisation conversion in titanium in-diffused lithium niobate waveguides. <i>Optics Express</i> , 2020, 28, 28961.	3.4	23
18	Distillation of squeezing using an engineered pulsed parametric down-conversion source. <i>Optics Express</i> , 2020, 28, 30784.	3.4	7

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19	Understanding gray track formation in KTP: Ti ³⁺ centers studied from first principles. <i>Physical Review Materials</i> , 2020, 4, .	2.4	4
20	Improving SPDC single-photon sources via extended heralding and feed-forward control. <i>New Journal of Physics</i> , 2019, 21, 053038.	2.9	10
21	On the Prospects of Multiport Devices for Photon-Number-Resolving Detection. <i>Quantum Reports</i> , 2019, 1, 162-180.	1.3	3
22	Fabrication limits of waveguides in nonlinear crystals and their impact on quantum optics applications. <i>New Journal of Physics</i> , 2019, 21, 033038.	2.9	37
23	Characterisation of fabrication inhomogeneities in Ti:LiNbO ₃ waveguides. <i>New Journal of Physics</i> , 2019, 21, 123005.	2.9	11
24	Nonlinear integrated quantum electro-optic circuits. <i>Science Advances</i> , 2019, 5, eaat1451.	10.3	65
25	A high dynamic range optical detector for measuring single photons and bright light. <i>Optics Express</i> , 2019, 27, 1.	3.4	31
26	General framework for the analysis of imperfections in nonlinear systems. <i>Optics Letters</i> , 2019, 44, 5398.	3.3	11
27	Efficient C-band single-photon upconversion with chip-scale Ti-indiffused pp-LiNbO ₃ waveguides. <i>Applied Optics</i> , 2019, 58, 5910.	1.8	3
28	Proposal for Quantum Simulation via All-Optically-Generated Tensor Network States. <i>Physical Review Letters</i> , 2018, 120, 130501.	7.8	27
29	Quantum state and mode profile tomography by the overlap. <i>New Journal of Physics</i> , 2018, 20, 033003.	2.9	9
30	Tomography and Purification of the Temporal-Mode Structure of Quantum Light. <i>Physical Review Letters</i> , 2018, 120, 213601.	7.8	51
31	High-power waveguide resonator second harmonic device with external conversion efficiency up to 75%. <i>Journal of Optics (United Kingdom)</i> , 2018, 20, 065501.	2.2	8
32	Probing measurement-induced effects in quantum walks via recurrence. <i>Science Advances</i> , 2018, 4, eaar6444.	10.3	32
33	Heralded generation of high-purity ultrashort single photons in programmable temporal shapes. <i>Optics Express</i> , 2018, 26, 2764.	3.4	42
34	Tailoring nonlinear processes for quantum optics with pulsed temporal-mode encodings. <i>Optica</i> , 2018, 5, 534.	9.3	92
35	Periodically poled ridge waveguides in KTP for second harmonic generation in the UV regime. <i>Optics Express</i> , 2018, 26, 28827.	3.4	16
36	High-performance source of spectrally pure, polarization entangled photon pairs based on hybrid integrated-bulk optics. <i>Optics Express</i> , 2018, 26, 32475.	3.4	41

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37	Compressive characterization of telecom photon pairs in the spatial and spectral degrees of freedom. <i>Optica</i> , 2018, 5, 1418.	9.3	13
38	Gaussian Boson Sampling. <i>Physical Review Letters</i> , 2017, 119, 170501.	7.8	268
39	Harnessing temporal modes for multi-photon quantum information processing based on integrated optics. <i>Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences</i> , 2017, 375, 20160244.	3.4	2
40	Toolbox for the design of LiNbO ₃ -based passive and active integrated quantum circuits. <i>New Journal of Physics</i> , 2017, 19, 123009.	2.9	53
41	Extracting the physical sector of quantum states. <i>New Journal of Physics</i> , 2017, 19, 093008.	2.9	1
42	Temporal correlations of spectrally narrowband photon pair sources. <i>Quantum Science and Technology</i> , 2017, 2, 024002.	5.8	3
43	Driven discrete time quantum walks. <i>New Journal of Physics</i> , 2016, 18, 073008.	2.9	9
44	Single-Mode Parametric-Down-Conversion States with 50 Photons as a Source for Mesoscopic Quantum Optics. <i>Physical Review Letters</i> , 2016, 116, 143601.	7.8	149
45	Quantum walks with dynamical control: graph engineering, initial state preparation and state transfer. <i>New Journal of Physics</i> , 2016, 18, 063017.	2.9	36
46	On-chip generation of photon-triplet states. <i>Optics Express</i> , 2016, 24, 2836.	3.4	29
47	Dual-path source engineering in integrated quantum optics. <i>Physical Review A</i> , 2015, 92, .	2.5	37
48	Uncovering Quantum Correlations with Time-Multiplexed Click Detection. <i>Physical Review Letters</i> , 2015, 115, 023601.	7.8	47
49	Photon Temporal Modes: A Complete Framework for Quantum Information Science. <i>Physical Review X</i> , 2015, 5, .	8.9	190
50	Quantum walk coherences on a dynamical percolation graph. <i>Scientific Reports</i> , 2015, 5, 13495.	3.3	24
51	Storage of hyperentanglement in a solid-state quantum memory. <i>Optica</i> , 2015, 2, 279.	9.3	37
52	Direct generation of genuine single-longitudinal-mode narrowband photon pairs. <i>New Journal of Physics</i> , 2015, 17, 073039.	2.9	72
53	Full-field reconstruction of ultrashort waveforms by time to space conversion interferogram analysis. <i>Optics Express</i> , 2014, 22, 20205.	3.4	4
54	Time-multiplexed measurements of nonclassical light at telecom wavelengths. <i>Physical Review A</i> , 2014, 90, .	2.5	22

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55	Demonstration of coherent time-frequency Schmidt mode selection using dispersion-engineered frequency conversion. <i>Physical Review A</i> , 2014, 90, .	2.5	86
56	Real-time coherent detection of phase modulated ultrashort pulses after time-to-space conversion and spatial demultiplexing. <i>Optics Express</i> , 2014, 22, 31138.	3.4	2
57	Quantum teleportation from a telecom-wavelength photon to a solid-state quantum memory. <i>Nature Photonics</i> , 2014, 8, 775-778.	31.4	208
58	Tomography by Noise. <i>Physical Review Letters</i> , 2014, 113, 070403.	7.8	16
59	Driven Quantum Walks. <i>Physical Review Letters</i> , 2014, 113, 083602.	7.8	29
60	A versatile source of single photons for quantum information processing. <i>Nature Communications</i> , 2013, 4, 1818.	12.8	181
61	An optimized photon pair source for quantum circuits. <i>Optics Express</i> , 2013, 21, 13975.	3.4	136
62	Post-selection free, integrated optical source of non-degenerate, polarization entangled photon pairs. <i>Optics Express</i> , 2013, 21, 27981.	3.4	55
63	An efficient integrated two-color source for heralded single photons. <i>New Journal of Physics</i> , 2013, 15, 033010.	2.9	68
64	Theory of quantum frequency conversion and type-II parametric down-conversion in the high-gain regime. <i>New Journal of Physics</i> , 2013, 15, 053038.	2.9	107
65	Characterizing entanglement in pulsed parametric down-conversion using chronocyclic Wigner functions. <i>Physical Review A</i> , 2013, 87, .	2.5	21
66	Increasing the Dimensionality of Quantum Walks Using Multiple Walkers. <i>Journal of Computational and Theoretical Nanoscience</i> , 2013, 10, 1644-1652.	0.4	8
67	Exponentially enhanced quantum communication rate by multiplexing continuous-variable teleportation. <i>New Journal of Physics</i> , 2012, 14, 083007.	2.9	18
68	Characteristics of displaced single photons attained via higher order factorial moments. <i>New Journal of Physics</i> , 2012, 14, 105011.	2.9	8
69	Quantum simulations with a two-dimensional Quantum Walk. , 2012, , .		0
70	High resolution time-to-space conversion of sub-picosecond pulses at 155Åµm by non-degenerate SFG in PPLN crystal. <i>Optics Express</i> , 2012, 20, 27388.	3.4	8
71	Limits on the deterministic creation of pure single-photon states using parametric down-conversion. <i>Physical Review A</i> , 2012, 85, .	2.5	82
72	Bloch oscillations, Landau-Zener tunneling and fractal patterns in a discrete fiber network. , 2012, , .		0

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73	High resolution time-to-space imaging of ultra-short pulses at 1.55 μ m by non-degenerate SFG in PPLN crystal. , 2012, , .		0
74	A 2D Quantum Walk Simulation of Two-Particle Dynamics. Science, 2012, 336, 55-58.	12.6	339
75	Continuously adjustable narrow-band heralded single photon source. , 2012, , .		0
76	Photon Propagation in a Discrete Fiber Network: An Interplay of Coherence and Losses. Physical Review Letters, 2011, 107, 233902.	7.8	117
77	High-performance single-photon generation with commercial-grade optical fiber. Physical Review A, 2011, 83, .	2.5	78
78	Decoherence and Disorder in Quantum Walks: From Ballistic Spread to Localization. Physical Review Letters, 2011, 106, 180403.	7.8	300
79	A quantum pulse gate based on spectrally engineered sum frequency generation. Optics Express, 2011, 19, 13770.	3.4	179
80	From quantum pulse gate to quantum pulse shaperâ€”engineered frequency conversion in nonlinear optical waveguides. New Journal of Physics, 2011, 13, 065029.	2.9	111
81	Controlling the correlations in frequency upconversion in PPLN and PPKTP waveguides. Physica Status Solidi C: Current Topics in Solid State Physics, 2011, 8, 1235-1238.	0.8	5
82	Realistic $g^{(2)}$ measurement of a PDC source with single photon detectors in the presence of background. Physica Status Solidi C: Current Topics in Solid State Physics, 2011, 8, 1216-1219.	0.8	4
83	Multi-walker discrete time quantum walks on arbitrary graphs, their properties and their photonic implementation. New Journal of Physics, 2011, 13, 013001.	2.9	57
84	Highly Efficient Single-Pass Source of Pulsed Single-Mode Twin Beams of Light. Physical Review Letters, 2011, 106, 013603.	7.8	186
85	Integrated optical devices for quantum information applications. , 2011, , .		0
86	Quantum pulse gate based on ultrafast frequency upconversion. , 2011, , .		0
87	Multimode ultrafast broadband information coding: State generation, characterization and loss evaluation. , 2011, , .		0
88	Probing multimode squeezing with correlation functions. New Journal of Physics, 2011, 13, 033027.	2.9	193
89	Continuousâ€”variable quantum information processing. Laser and Photonics Reviews, 2010, 4, 337-354.	8.7	117
90	Bridging visible and telecom wavelengths with a single-mode broadband photon pair source. Physical Review A, 2010, 81, .	2.5	64

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91	Probing the Negative Wigner Function of a Pulsed Single Photon Point by Point. Physical Review Letters, 2010, 105, 253603.	7.8	67
92	Assessing the purity of a single photon by the width of the Hongâ€“Ouâ€“Mandel interference. New Journal of Physics, 2010, 12, 113052.	2.9	45
93	Optimized generation of heralded Fock states using parametric down-conversion. New Journal of Physics, 2010, 12, 063001.	2.9	88
94	Direct Observation of Spatial Modes in Waveguided Parametric Downconversion. , 2010, , .		0
95	Characterizing Single Photons by Photon Counting. , 2009, , .		0
96	How colors influence numbers: Photon statistics of parametric down-conversion. Physical Review A, 2009, 80, .	2.5	53
97	Spatial modes in waveguided parametric down-conversion. Physical Review A, 2009, 80, .	2.5	52
98	A waveguided parametric downconversion source for pure heralded single photons at telecommunication wavelength. , 2009, , .		0
99	Fibre assisted single photon spectrograph. , 2009, , .		0
100	Direct Measurement of the Spatial-Spectral Structure of Waveguided Parametric Down-Conversion. Physical Review Letters, 2009, 103, 233901.	7.8	49
101	Multimode states in decoy-based quantum-key-distribution protocols. Physical Review A, 2009, 80, .	2.5	10
102	Demonstrating quantum random with single photons. European Journal of Physics, 2009, 30, 1189-1200.	0.6	20
103	Direct probing of the Wigner function by time-multiplexed detection of photon statistics. New Journal of Physics, 2009, 11, 043012.	2.9	19
104	A proposed testbed for detector tomography. Journal of Modern Optics, 2009, 56, 432-441.	1.3	31
105	Tomography of quantum detectors. Nature Physics, 2009, 5, 27-30.	16.7	267
106	Fiber-assisted single-photon spectrograph. Optics Letters, 2009, 34, 2873.	3.3	146
107	Pure single photon generation by type-I PDC with backward-wave amplification. Optics Express, 2009, 17, 3441.	3.4	46
108	Producing high fidelity single photons with optimal brightness via waveguided parametric down-conversion. Optics Express, 2009, 17, 22823.	3.4	26

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109	Numerical Analysis of Parametric Downconversion. , 2009, , .		7
110	Pure single photon generation by type-I PDC with backward-wave amplification. , 2009, , .		1
111	Experimental verification of high spectral entanglement for pulsed waveguided spontaneous parametric down-conversion. Physical Review A, 2009, 79, .	2.5	37
112	Full characterization of quantum optical detectors. , 2009, , .		0
113	PCF Photon Pair Source Bridging the Visible and NIR. , 2009, , .		0
114	Quantum State Preparation with Waveguides and Photon Counting. , 2009, , .		0
115	Heralded Generation of Ultrafast Single Photons in Pure Quantum States. Physical Review Letters, 2008, 100, 133601.	7.8	502
116	Secure Quantum Key Distribution using Continuous Variables of Single Photons. Physical Review Letters, 2008, 100, 110504.	7.8	78
117	Broadband frequency mode entanglement in waveguided parametric downconversion. Optics Letters, 2008, 33, 1825.	3.3	30
118	Spectral structure and decompositions of optical states, and their applications. New Journal of Physics, 2007, 9, 91-91.	2.9	88
119	Quantum key distribution with passive decoy state selection. Physical Review A, 2007, 75, .	2.5	86
120	Detecting quantum light. Contemporary Physics, 2007, 48, 143-156.	1.8	56
121	Continuous Variables for Single Photons. , 2007, , 367-387.		0
122	Single photon quantum key distribution with continuous variables. , 2006, , .		0
123	Loss-tolerant characterization of nonclassical photonic states. , 2006, , .		0
124	Direct, Loss-Tolerant Characterization of Nonclassical Photon Statistics. Physical Review Letters, 2006, 97, 043602.	7.8	74
125	MANAGING CONTINUOUS VARIABLES FOR SINGLE PHOTONS. , 2005, , .		0
126	Characterization of the nonclassical nature of conditionally prepared single photons. Physical Review A, 2005, 72, .	2.5	45

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127	Characterization and Preparation of Higher Photon Number States. AIP Conference Proceedings, 2004, , .	0.4	2
128	Efficient Conditional Preparation of High-Fidelity Single Photon States for Fiber-Optic Quantum Networks. Physical Review Letters, 2004, 93, 093601.	7.8	142
129	Photon-number-resolving detection using time-multiplexing. Journal of Modern Optics, 2004, 51, 1499-1515.	1.3	137
130	Sub-shot-noise phase quadrature measurement of intense light beams. Optics Letters, 2004, 29, 1936.	3.3	31
131	Photon number resolving detection using time-multiplexing. , 2004, , .		1
132	Efficient conditional preparation of single photons for scalable quantum-optical networking. , 2004, , .		1
133	Fiber-assisted detection with photon number resolution. Optics Letters, 2003, 28, 2387.	3.3	247
134	Experiment towards continuous-variable entanglement swapping: Highly correlated four-partite quantum state. Physical Review A, 2003, 68, .	2.5	60
135	Continuous Variable Quantum Cryptography: Beating the 3ÂdB Loss Limit. Physical Review Letters, 2002, 89, 167901.	7.8	287
136	Polarization squeezing and continuous-variable polarization entanglement. Physical Review A, 2002, 65, .	2.5	239
137	Quantum Key Distribution with Bright Entangled Beams. Physical Review Letters, 2002, 88, 167902.	7.8	115
138	Bright EPR-Entangled Beams for Quantum Communication. , 2002, , 443-447.		0
139	Direct experimental test of non-separability and other quantum techniques using continuous variables of light. European Physical Journal D, 2002, 18, 229-235.	1.3	2
140	Generation of Continuous Variable Einstein-Podolsky-Rosen Entanglement via the Kerr Nonlinearity in an Optical Fiber. Physical Review Letters, 2001, 86, 4267-4270.	7.8	328
141	Squeezed light from microstructured fibres: towards free-space quantum cryptography. Applied Physics B: Lasers and Optics, 2001, 73, 855-859.	2.2	26
142	Scheme for the generation of entangled solitons for quantum communication. Journal of Modern Optics, 1999, 46, 1927-1939.	1.3	40
143	Quantum cryptography with bright entangled beams. , 0, , .		2
144	Fiber solitons-quantum interferometry and entanglement. , 0, , .		0

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145	Continuous variable key distribution: beating the 3 dB loss limit. , 0, , .		0
146	Characterization of parametric downconversion in the photon number basis. , 0, , .		0
147	Pure single photon generation. , 0, , .		0
148	Experimental multiphoton conditional state preparation and analysis. , 0, , .		1