

Matthew Collins

List of Publications by Year in descending order

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48
papers

2,442
citations

304368

22
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476904

29
g-index

48
all docs

48
docs citations

48
times ranked

2243
citing authors

#	ARTICLE	IF	CITATIONS
1	Topological protection of photonic mid-gap defect modes. Nature Photonics, 2018, 12, 408-415.	15.6	418
2	Quantum circuits with many photons on a programmable nanophotonic chip. Nature, 2021, 591, 54-60.	13.7	304
3	Quantum computational advantage with a programmable photonic processor. Nature, 2022, 606, 75-81.	13.7	301
4	Integrated spatial multiplexing of heralded single-photon sources. Nature Communications, 2013, 4, 2582.	5.8	228
5	Topological Optical Waveguiding in Silicon and the Transition between Topological and Trivial Defect States. Physical Review Letters, 2016, 116, 163901.	2.9	195
6	Active temporal multiplexing of indistinguishable heralded single photons. Nature Communications, 2016, 7, 10853.	5.8	101
7	Hybrid photonic circuit for multiplexed heralded single photons. Laser and Photonics Reviews, 2014, 8, L42.	4.4	83
8	Broadband quadrature-squeezed vacuum and nonclassical photon number correlations from a nanophotonic device. Science Advances, 2020, 6, .	4.7	80
9	Integrated optical auto-correlator based on third-harmonic generation in a silicon photonic crystal waveguide. Nature Communications, 2014, 5, 3246.	5.8	79
10	Optofluidics: a novel generation of reconfigurable and adaptive compact architectures. Microfluidics and Nanofluidics, 2008, 4, 81-95.	1.0	73
11	Topologically protected entangled photonic states. Nanophotonics, 2019, 8, 1327-1335.	2.9	68
12	Multi-photon absorption limits to heralded single photon sources. Scientific Reports, 2013, 3, 3087.	1.6	63
13	Generation of Nonclassical Biphoton States through Cascaded Quantum Walks on a Nonlinear Chip. Physical Review X, 2014, 4, .	2.8	52
14	High-efficiency frequency conversion in the single-photon regime. Optics Letters, 2013, 38, 947.	1.7	49
15	Low Raman-noise correlated photon-pair generation in a dispersion-engineered chalcogenide As ₂ S ₃ planar waveguide. Optics Letters, 2012, 37, 3393.	1.7	46
16	Heralded single-photon source in a III-V photonic crystal. Optics Letters, 2013, 38, 649.	1.7	34
17	Mode multiplexed single-photon and classical channels in a few-mode fiber. Optics Express, 2013, 21, 28794.	1.7	33
18	Chalcogenide fiber-based distributed temperature sensor with sub-centimeter spatial resolution and enhanced accuracy. Optics Express, 2014, 22, 1560.	1.7	29

#	ARTICLE	IF	CITATIONS
19	Raman scattering effects on correlated photon-pair generation in chalcogenide. Optics Express, 2012, 20, 16807.	1.7	28
20	Bi-photon spectral correlation measurements from a silicon nanowire in the quantum and classical regimes. Scientific Reports, 2015, 5, 12557.	1.6	28
21	Bidirectional multiplexing of heralded single photons from a silicon chip. Optics Letters, 2013, 38, 5176.	1.7	25
22	Characteristics of Correlated Photon Pairs Generated in Ultracompact Silicon Slow-Light Photonic Crystal Waveguides. IEEE Journal of Selected Topics in Quantum Electronics, 2012, 18, 1676-1683.	1.9	23
23	Integrated optical Dirac physics via inversion symmetry breaking. Physical Review A, 2016, 94, .	1.0	23
24	Random number generation from spontaneous Raman scattering. Applied Physics Letters, 2015, 107, .	1.5	22
25	Degenerate photon-pair generation in an ultracompact silicon photonic crystal waveguide. Optics Letters, 2014, 39, 3575.	1.7	16
26	Photonic Crystal Waveguide Sources of Photons for Quantum Communication Applications. IEEE Journal of Selected Topics in Quantum Electronics, 2015, 21, 205-214.	1.9	13
27	Effect of low-Raman window position on correlated photon-pair generation in a chalcogenide Ge _{11.5} As ₂₄ Se _{64.5} nanowire. Journal of Applied Physics, 2012, 112, .	1.1	11
28	High-resolution measurement of spectral quantum correlations in the telecommunication band. Optics Communications, 2014, 327, 45-48.	1.0	8
29	Broadband photon-counting Raman spectroscopy in short optical waveguides. Applied Physics Letters, 2012, 101, 211110.	1.5	5
30	Improved CAR and noise analysis for photon-pair generation in an ultra-compact silicon slow-light photonic crystal waveguide. , 2011, , .		1
31	Nonlinear Photonics: Quantum State Generation and Manipulation. , 2014, , .		1
32	Quantum Random Number Generation using Spontaneous Raman Scattering. , 2014, , .		1
33	Topologically protected path-entangled photonic states. , 2020, , .		1
34	Integrated optical auto-correlator based on THG in a silicon photonic crystal waveguide. , 2012, , .		0
35	High efficiency single photon frequency conversion in the telecommunications band. , 2013, , .		0
36	The Quantum Utility: Comparing Single Photon Sources. , 2013, , .		0

#	ARTICLE	IF	CITATIONS
37	Cross-absorption as a limit to heralded silicon photon pair sources. Proceedings of SPIE, 2014, , .	0.8	0
38	Hybrid integration for spatially multiplexed single-photon generation. Proceedings of SPIE, 2014, , .	0.8	0
39	Nonlinear Optics for Photonic Quantum Networks. Springer Series in Optical Sciences, 2015, , 355-421.	0.5	0
40	Topologically robust entangled states in silicon. , 2019, , .		0
41	Correlated Photon-Pair Generation in the Low-Raman Window of a Chalcogenide Ge _{11.5} As ₂₄ Se _{64.5} nanowire. , 2013, , .		0
42	High Resolution Spectral Entanglement Measurements of Photons Generated via Spontaneous Four-Wave Mixing. , 2013, , .		0
43	Nonlinear Silicon-based Heralded Single Photon Source Mode Multiplexed in a Fiber with a Classical Channel. , 2013, , .		0
44	Bi-directional Multiplexing of Heralded Single Photon Sources from a Single Silicon Photonic Chip. , 2014, , .		0
45	Degenerate Correlated Photon-Pair Generation in an Ultra-Compact Silicon Photonic Crystal Waveguide. , 2014, , .		0
46	Topological Protection of Quantum States in Silicon. , 2016, , .		0
47	Photon pair generation in silicon protected by topology. , 2016, , .		0
48	Topologically protected silicon quantum circuits. , 2019, , .		0