

Matthew Collins

List of Publications by Year in descending order

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48
papers

2,442
citations

304743
22
h-index

477307
29
g-index

48
all docs

48
docs citations

48
times ranked

2243
citing authors

#	ARTICLE	IF	CITATIONS
1	Quantum computational advantage with a programmable photonic processor. Nature, 2022, 606, 75-81.	27.8	301
2	Quantum circuits with many photons on a programmable nanophotonic chip. Nature, 2021, 591, 54-60.	27.8	304
3	Broadband quadrature-squeezed vacuum and nonclassical photon number correlations from a nanophotonic device. Science Advances, 2020, 6, .	10.3	80
4	Topologically protected path-entangled photonic states. , 2020, , .		1
5	Topologically robust entangled states in silicon. , 2019, , .		0
6	Topologically protected entangled photonic states. Nanophotonics, 2019, 8, 1327-1335.	6.0	68
7	Topologically protected silicon quantum circuits. , 2019, , .		0
8	Topological protection of photonic mid-gap defect modes. Nature Photonics, 2018, 12, 408-415.	31.4	418
9	Integrated optical Dirac physics via inversion symmetry breaking. Physical Review A, 2016, 94, .	2.5	23
10	Active temporal multiplexing of indistinguishable heralded single photons. Nature Communications, 2016, 7, 10853.	12.8	101
11	Topological Optical Waveguiding in Silicon and the Transition between Topological and Trivial Defect States. Physical Review Letters, 2016, 116, 163901.	7.8	195
12	Topological Protection of Quantum States in Silicon. , 2016, , .		0
13	Photon pair generation in silicon protected by topology. , 2016, , .		0
14	Bi-photon spectral correlation measurements from a silicon nanowire in the quantum and classical regimes. Scientific Reports, 2015, 5, 12557.	3.3	28
15	Random number generation from spontaneous Raman scattering. Applied Physics Letters, 2015, 107, .	3.3	22
16	Nonlinear Optics for Photonic Quantum Networks. Springer Series in Optical Sciences, 2015, , 355-421.	0.7	0
17	Photonic Crystal Waveguide Sources of Photons for Quantum Communication Applications. IEEE Journal of Selected Topics in Quantum Electronics, 2015, 21, 205-214.	2.9	13
18	Cross-absorption as a limit to heralded silicon photon pair sources. Proceedings of SPIE, 2014, , .	0.8	0

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19	Hybrid integration for spatially multiplexed single-photon generation. Proceedings of SPIE, 2014, , .	0.8	0
20	Chalcogenide fiber-based distributed temperature sensor with sub-centimeter spatial resolution and enhanced accuracy. Optics Express, 2014, 22, 1560.	3.4	29
21	Degenerate photon-pair generation in an ultracompact silicon photonic crystal waveguide. Optics Letters, 2014, 39, 3575.	3.3	16
22	Generation of Nonclassical Biphoton States through Cascaded Quantum Walks on a Nonlinear Chip. Physical Review X, 2014, 4, .	8.9	52
23	High-resolution measurement of spectral quantum correlations in the telecommunication band. Optics Communications, 2014, 327, 45-48.	2.1	8
24	Integrated optical auto-correlator based on third-harmonic generation in a silicon photonic crystal waveguide. Nature Communications, 2014, 5, 3246.	12.8	79
25	Nonlinear Photonics: Quantum State Generation and Manipulation. , 2014, , .		1
26	Hybrid photonic circuit for multiplexed heralded single photons. Laser and Photonics Reviews, 2014, 8, L42.	8.7	83
27	Quantum Random Number Generation using Spontaneous Raman Scattering. , 2014, , .		1
28	Bi-directional Multiplexing of Heralded Single Photon Sources from a Single Silicon Photonic Chip. , 2014, , .		0
29	Degenerate Correlated Photon-Pair Generation in an Ultra-Compact Silicon Photonic Crystal Waveguide. , 2014, , .		0
30	Integrated spatial multiplexing of heralded single-photon sources. Nature Communications, 2013, 4, 2582.	12.8	228
31	Mode multiplexed single-photon and classical channels in a few-mode fiber. Optics Express, 2013, 21, 28794.	3.4	33
32	Multi-photon absorption limits to heralded single photon sources. Scientific Reports, 2013, 3, 3087.	3.3	63
33	Heralded single-photon source in a III-V photonic crystal. Optics Letters, 2013, 38, 649.	3.3	34
34	Bidirectional multiplexing of heralded single photons from a silicon chip. Optics Letters, 2013, 38, 5176.	3.3	25
35	High efficiency single photon frequency conversion in the telecommunications band. , 2013, , .		0
36	High-efficiency frequency conversion in the single-photon regime. Optics Letters, 2013, 38, 947.	3.3	49

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37	The Quantum Utility: Comparing Single Photon Sources. , 2013, , .		0
38	Correlated Photon-Pair Generation in the Low-Raman Window of a Chalcogenide Ge _{11.5} As ₂₄ Se _{64.5} nanowire. , 2013, , .		0
39	High Resolution Spectral Entanglement Measurements of Photons Generated via Spontaneous Four-Wave Mixing. , 2013, , .		0
40	Nonlinear Silicon-based Heralded Single Photon Source Mode Multiplexed in a Fiber with a Classical Channel. , 2013, , .		0
41	Low Raman-noise correlated photon-pair generation in a dispersion-engineered chalcogenide As ₂ S ₃ planar waveguide. Optics Letters, 2012, 37, 3393.	3.3	46
42	Raman scattering effects on correlated photon-pair generation in chalcogenide. Optics Express, 2012, 20, 16807.	3.4	28
43	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, .	2.5	11
44	Broadband photon-counting Raman spectroscopy in short optical waveguides. Applied Physics Letters, 2012, 101, 211110.	3.3	5
45	Integrated optical auto-correlator based on THG in a silicon photonic crystal waveguide. , 2012, , .		0
46	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.	2.9	23
47	Improved CAR and noise analysis for photon-pair generation in an ultra-compact silicon slow-light photonic crystal waveguide. , 2011, , .		1
48	Optofluidics: a novel generation of reconfigurable and adaptive compact architectures. Microfluidics and Nanofluidics, 2008, 4, 81-95.	2.2	73