Philip Walther

List of Publications by Year
in descending order

95 papers	7,340 citations	117453 34 h-index	82410 72 g-index
100 all docs	100 docs citations	100 times ranked	5401 citing authors

#	Article	IF	Citations
1	Experimental one-way quantum computing. Nature, 2005, 434, 169-176.	13.7	1,027
2	Photonic quantum simulators. Nature Physics, 2012, 8, 285-291.	6.5	681
3	Experimental boson sampling. Nature Photonics, 2013, 7, 540-544.	15.6	567
4	De Broglie wavelength of a non-local four-photon state. Nature, 2004, 429, 158-161.	13.7	463
5	Quantum discord as resource for remote stateÂpreparation. Nature Physics, 2012, 8, 666-670.	6.5	397
6	Demonstration of Blind Quantum Computing. Science, 2012, 335, 303-308.	6.0	379
7	High-speed linear optics quantum computing using active feed-forward. Nature, 2007, 445, 65-69.	13.7	300
8	Quantum teleportation across the Danube. Nature, 2004, 430, 849-849.	13.7	261
9	Realization of a Photonic Controlled-NOT Gate Sufficient for Quantum Computation. Physical Review Letters, 2004, 93, 020504.	2.9	261
10	Experimental Realization of Dicke States of up to Six Qubits for Multiparty Quantum Networking. Physical Review Letters, 2009, 103, 020503.	2.9	211
11	Experimental superposition of orders of quantum gates. Nature Communications, 2015, 6, 7913.	5.8	193
12	Continuousâ€Variable Quantum Key Distribution with Gaussian Modulationâ€”The Theory of Practical Implementations. Advanced Quantum Technologies, 2018, 1, 1800011.	1.8	193
13	Long-Distance Free-Space Distribution of Quantum Entanglement. Science, 2003, 301, 621-623.	6.0	177
14	Experimental verification of an indefinite causal order. Science Advances, 2017, 3, e1602589.	4.7	151
15	Quantum simulation of the wavefunction to probe frustrated Heisenberg spin systems. Nature Physics, 2011, 7, 399-405.	6.5	145
16	Heralded generation of entangled photon pairs. Nature Photonics, 2010, 4, 553-556.	15.6	114
17	Distributing entanglement and single photons through an intra-city, free-space quantum channel. Optics Express, 2005, 13, 202.	1.7	112
18	Experimental Violation of a Cluster State Bell Inequality. Physical Review Letters, 2005, 95, 020403.	2.9	108

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19	Full Characterization of a Three-Photon Greenberger-Horne-Zeilinger State Using Quantum State Tomography. Physical Review Letters, 2005, 94, 070402.	2.9	107
20	Experimental verification of quantum computation. Nature Physics, 2013, 9, 727-731.	6.5	104
21	Generalized Multiphoton Quantum Interference. Physical Review X, 2015, 5, .	2.8	87
22	Experimental quantum speed-up in reinforcementÂlearning agents. Nature, 2021, 591, 229-233.	13.7	85
23	Quantum cryptography with highly entangled photons from semiconductor quantum dots. Science Advances, 2021, 7, .	4.7	82
24	A two-qubit photonic quantum processor and its application to solving systems of linear equations. Scientific Reports, 2014, 4, 6115.	1.6	70
25	Local Conversion of Greenberger-Horne-Zeilinger States to ApproximateWStates. Physical Review Letters, 2005, 94, .	2.9	67
26	Experimental photonic quantum memristor. Nature Photonics, 2022, 16, 318-323.	15.6	62
27	Integrated-optics heralded controlled-NOT gate for polarization-encoded qubits. Npj Quantum Information, 2018, 4, .	2.8	59
28	Demonstration of measurement-only blind quantum computing. New Journal of Physics, 2016, 18, 013020.	1.2	56
29	Experimental quantum communication enhancement by superposing trajectories. Physical Review Research, 2021, 3, .	1.3	55
30	Experimental realization of a quantum game on a one-way quantum computer. New Journal of Physics, 2007, 9, 205-205.	1.2	54
31	Quantum computing with graphene plasmons. Npj Quantum Information, 2019, 5, .	2.8	51
32	Giant enhancement of third-harmonic generation in grapheneâ€“metal heterostructures. Nature Nanotechnology, 2021, 16, 318-324.	15.6	47
33	Quantum technology: from research to application. Applied Physics B: Lasers and Optics, 2016, 122, 1.	1.1	42
34	Ligand dynamics on the surface of zirconium oxo clusters. Physical Chemistry Chemical Physics, 2009, 11, 3640.	1.3	40
35	Heralded generation of multiphoton entanglement. Physical Review A, 2007, 75, .	1.0	33
36	Experimental few-copy multipartite entanglement detection. Nature Physics, 2019, 15, 935-940.	6.5	31

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37	Experimental realization of a photonic Bell-state analyzer. Physical Review A, 2005, 72, .	1.0	27
38	Single-photon test of hyper-complex quantum theories using a metamaterial. Nature Communications, 2017, 8, 15044.	5.8	27
39	Experimental Twoâ€Way Communication with One Photon. Advanced Quantum Technologies, 2019, 2, 1900050.	1.8	27
40	Quantum Nonlocality Obtained from Local States by Entanglement Purification. Physical Review Letters, 2005, 94, 040504.	2.9	24
41	Experimental entanglement of temporal order. Quantum - the Open Journal for Quantum Science, 0, 6, 621.	0.0	24
42	Tapering of femtosecond laser-written waveguides. Applied Optics, 2018, 57, 377.	0.9	23
43	Scalable spinâ€“photon entanglement by time-to-polarization conversion. Npj Quantum Information, 2020, 6, .	2.8	23
44	Modelling parametric down-conversion yielding spectrally pure photon pairs. Optics Express, 2016, 24, 2712.	1.7	20
45	Numerical Investigation of Photon-Pair Generation in Periodically Poled<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:mi>M</mml:mi><mml:mi>TiO</mml:mi><mml:mi>X</mml:mi><mml:msub><mml:mrow><mml:m		

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55	GENERATION OF NARROW-BANDWIDTH SINGLE PHOTONS USING ELECTROMAGNETICALLY INDUCED TRANSPARENCY IN ATOMIC ENSEMBLES. International Journal of Quantum Information, 2007, 05, 51-62.	0.6	12
56	Towards photonic quantum simulation of ground states of frustrated Heisenberg spin systems. Scientific Reports, 2015, 4, 3583.	1.6	12
57	A novel single-crystal & single-pass source for polarisation- and colour-entangled photon pairs. Scientific Reports, 2017, 7, 7235.	1.6	12
58	No-go theorem for passive single-rail linear optical quantum computing. Scientific Reports, 2013, 3, 1394.	1.6	11
59	Trace-free counterfactual communication with a nanophotonic processor. Npj Quantum Information, 2019, 5, .	2.8	11
60	Weakly gravitating isotropic waveguides. Classical and Quantum Gravity, 2018, 35, 244001.	1.5	8
61	Practical and efficient experimental characterization of multiqubit stabilizer states. Physical Review A, 2015, 91, .	1.0	7
62	Fiber-compatible photonic feed-forward with 99% fidelity. Optics Express, 2021, 29, 3425.	1.7	7
63	Cross-Verification of Independent Quantum Devices. Physical Review X, 2021, 11, .	2.8	7
64	Discord in the ranks. Nature Photonics, 2012, 6, 724-725.	15.6	6
65	Probabilistic one-time programs using quantum entanglement. Npj Quantum Information, 2021, 7, .	2.8	6
66	HighâЄHarmonic Generation Enhancement with Graphene Heterostructures. Advanced Optical Materials, 2022, 10, .	3.6	6
67	Experimental Entanglement of Temporal Orders. , 2019, , .		3
68	Inferring work by quantum superposing forward and time-reversal evolutions. Physical Review Research, 2022, 4, .	1.3	3
69	Beating the classical camera. Nature Photonics, 2010, 4, 199-200.	15.6	2
70	Large-scale quantum technology based on luminescent centers in crystals. , 2016, , .		1
71	Photon pair generation in ultra-thin carbon nanotube films without phase-matching. , 2021, , .		1
72	Cross-verification of independent quantum devices. , 2021, , .		1

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73	Advanced Quantum Communications Experiments with Entangled Photons. Optical Science and Engineering, 2005, , 45-81.	0.1	1
74	Fewâ€Copy Entanglement Detection in the Presence of Noise. Annalen Der Physik, 2022, 534, .	0.9	1
75	Nonlocal photon number states for quantum metrology. , 2004, , .		0
76	Spooky teleportation. Nature Physics, 2006, 2, 655-656.	6.5	0
77	QUANTUM ENTANGLEMENT, PURIFICATION, AND LINEAR-OPTICS QUANTUM GATES WITH PHOTONIC QUBITS. , 2006, , .		0
78	Implementation of Quantum Algorithms using Optical Cluster State. , 2007, , .		0
79	Multi-photon entanglement: from quantum curiosity to quantum computing and quantum repeaters. , 2007, , .		0
80	Quantum memory for long-distance and multiphoton entanglement. SPIE Newsroom, 2008, , .	0.1	0
81	Experimental photonic state engineering and quantum control of two optical qubits. , 2011, , .		0
82	Experimental Engineering of Photonic Quantum Entanglement. , 0, , .		0
83	Preface: Quantum Communication, Measurement and Computing (QCMC). , 2014, , .		0
84	Linear-Optical Generation of Eigenstates of the Two-SiteXYModel. Physical Review X, 2015, 5, .	2.8	0
85	Experimental tests of indefinite causal orders. , 2017, , .		0
86	A novel compact and efficient source of photonic entanglement. , 2017, , .		0
87	Nonlinear Enhancement with Graphene Heterostructures. , 2019, , .		0
88	Towards plasmonic-enhanced optical nonlinearities in graphene metal-heterostructures. , 2021, , .		0
89	Experimental Higher-Order Interference in Quantum Mechanics Induced by Optical Nonlinearities. , 2021, , .		0
90	Photonic Quantum Simulation. , 2013, , .		0

#	Article	IF	Citations
91	Experimental Tests of Indefinite Causal Orders. , 2017, , .		0
92	Verifying Multi-Particle Entanglement with a Few Detection Events. , 2019, , .		0
93	Verifying Multi-Partite Entanglement with a Few Detection Events. , 2019, , .		0
94	Experimental Resource-Efficient Entanglement Detection. , 2020, , .		0
95	Experimental Quantum-enhanced Reinforcement Learning. , 2021, , .		0