Chao-Yang Lu

List of Publications by Year
in descending order

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127 papers	17,838 citations	23500 58 h-index	20307 116 g-index
132 all docs	132 docs citations	132 times ranked	10031 citing authors

#	Article	IF	Citations
1	Benchmarking 50-Photon Gaussian Boson Sampling on the Sunway TaihuLight. IEEE Transactions on Parallel and Distributed Systems, 2022, 33, 1357-1372.	4.0	4
2	Quantum computational advantage via 60-qubit 24-cycle random circuit sampling. Science Bulletin, 2022, 67, 240-245.	4.3	114
3	Ruling Out Real-Valued Standard Formalism of Quantum Theory. Physical Review Letters, 2022, 128, 040403.	2.9	31
4	Floquet prethermal phase protected by U(1) symmetry on a superconducting quantum processor. Physical Review A, 2022, 105, .	1.0	8
5	The potential and global outlook of integrated photonics for quantum technologies. Nature Reviews Physics, 2022, 4, 194-208.	11.9	151
6	Quantum State Transfer over 1200Âkm Assisted by Prior Distributed Entanglement. Physical Review Letters, 2022, 128, 170501.	2.9	15
7	Closing the Locality and Detection Loopholes in Multiparticle Entanglement Self-Testing. Physical Review Letters, 2022, 128, .	2.9	6
8	Realization of an Error-Correcting Surface Code with Superconducting Qubits. Physical Review Letters, 2022, 129, .	2.9	94
9	An integrated space-to-ground quantum communication network over 4,600 kilometres. Nature, 2021, 589, 214-219.	13.7	415
10	Suppression of background emission for efficient single-photon generation in micropillar cavities. Applied Physics Letters, 2021, 118, 114003.	1.5	9
11	Entanglement-free witnessing of quantum incompatibility in a high-dimensional system. Physical Review Research, 2021, 3, .	1.3	3
12	Heralded Nondestructive Quantum Entangling Gate with Single-Photon Sources. Physical Review Letters, 2021, 126, 140501.	2.9	20
13	Quantum walks on a programmable two-dimensional 62-qubit superconducting processor. Science, 2021, 372, 948-952.	6.0	202
14	Directly Measuring a Multiparticle Quantum Wave Function via Quantum Teleportation. Physical Review Letters, 2021, 127, 030402.	2.9	7
15	Experimental Quantum Generative Adversarial Networks for Image Generation. Physical Review Applied, 2021, 16, .	1.5	87
16	Quantum teleportation of physical qubits into logical code spaces. Proceedings of the National Academy of Sciences of the United States of America, 2021, 118, .	3.3	21
17	Strong Quantum Computational Advantage Using a Superconducting Quantum Processor. Physical Review Letters, 2021, 127, 180501.	2.9	491
18	Phase-Programmable Gaussian Boson Sampling Using Stimulated Squeezed Light. Physical Review Letters, 2021, 127, 180502.	2.9	208

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19	Robust Self-Testing of Multiparticle Entanglement. Physical Review Letters, 2021, 127, 230503.	2.9	9
20	Quantum-dot single-photon sources for the quantum internet. Nature Nanotechnology, 2021, 16, 1294-1296.	15.6	40
21	Quantum Beat between Sunlight and Single Photons. Nano Letters, 2020, 20, 152-157.	4.5	5
22	Observation of Intensity Squeezing in Resonance Fluorescence from a Solid-State Device. Physical Review Letters, 2020, 125, 153601.	2.9	11
23	Cloning of Quantum Entanglement. Physical Review Letters, 2020, 125, 210502.	2.9	7
24	Demonstration of Adiabatic Variational Quantum Computing with a Superconducting Quantum Coprocessor. Physical Review Letters, 2020, 125, 180501.	2.9	33
25	Micropillar single-photon source design for simultaneous near-unity efficiency and indistinguishability. Physical Review B, 2020, 102, .	1.1	22
26	Entanglement-based secure quantum cryptography over 1,120 kilometres. Nature, 2020, 582, 501-505.	13.7	350
27	Multiphoton Graph States from a Solid-State Single-Photon Source. ACS Photonics, 2020, 7, 1603-1610.	3.2	16
28	Photonic Quantum Technologies. Advanced Quantum Technologies, 2020, 3, 2000007.	1.8	3
29	Quantum-Teleportation-Inspired Algorithm for Sampling Large Random Quantum Circuits. Physical Review Letters, 2020, 124, 080502.	2.9	14
30	Long-Distance Free-Space Measurement-Device-Independent Quantum Key Distribution. Physical Review Letters, 2020, 125, 260503.	2.9	95
31	Quantum computational advantage using photons. Science, 2020, 370, 1460-1463.	6.0	1,250
32	Proof-of-principle demonstration of compiled Shorâ€™s algorithm using a quantum dot single-photon source. Optics Express, 2020, 28, 18917.	1.7	15
33	A fiber opticâ€“nanophotonic approach to the detection of antibodies and viral particles of COVID-19. Nanophotonics, 2020, 10, 235-246.	2.9	15
34	Quantum computing with 20 photons in 60 modes. , 2020, , .		0
35	High-performance single-photon sources from solid-state quantum emitters. , 2020, , .		0
36	A micropillar single-photon source design numerically optimized for high efficiency and high indistinguishability. , 2020, , .		0

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37	Quantum Teleportation in High Dimensions. Physical Review Letters, 2019, 123, 070505.	2.9	228
38	Quantum Interference between Light Sources Separated by 150 Million Kilometers. Physical Review Letters, 2019, 123, 080401.	2.9	57
39	Propagation and Localization of Collective Excitations on a 24-Qubit Superconducting Processor. Physical Review Letters, 2019, 123, 050502.	2.9	87
40	Towards optimal single-photon sources from polarized microcavities. Nature Photonics, 2019, 13, 770-775.	15.6	290
41	Coherently driving a single quantum two-level system with dichromatic laser pulses. Nature Physics, 2019, 15, 941-946.	6.5	58
42	Compatibility of causal hidden-variable theories with a delayed-choice experiment. Physical Review A, 2019, 100, .	1.0	18
43	Satellite testing of a gravitationally induced quantum decoherence model. Science, 2019, 366, 132-135.	6.0	40
44	On-Demand Semiconductor Source of Entangled Photons Which Simultaneously Has High Fidelity, Efficiency, and Indistinguishability. Physical Review Letters, 2019, 122, 113602.	2.9	219
45	Genuine 12-Qubit Entanglement on a Superconducting Quantum Processor. Physical Review Letters, 2019, 122, 110501.	2.9	136
46	Emergence of classical objectivity of quantum Darwinism in a photonic quantum simulator. Science Bulletin, 2019, 64, 580-585.	4.3	30
47	Experimental Gaussian Boson sampling. Science Bulletin, 2019, 64, 511-515.	4.3	51
48	Boson Sampling with 20 Input Photons and a 60-Mode Interferometer in a<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mn>1</mml:mn><mml:msup><mml:mn>0</mml:mn><mml:mn>14</mml:mn></mml:msup></mml:math>-Dimer Hilbert Space. Physical Review Letters, 2019, 123, 250503.	2.9	313
49	Experimental demonstration of quantum pigeonhole paradox. Proceedings of the National Academy of Sciences of the United States of America, 2019, 116, 1549-1552.	3.3	13
50	Demonstration of topologically path-independent anyonic braiding in a nine-qubit planar code. Optica, 2019, 6, 264.	4.8	18
51	Experimental nonlocal measurement of a product observable. Optica, 2019, 6, 1199.	4.8	5
52	Toward â€œquantum supremacyâ€•with photons. , 2019, , .		0
53	High-dimensional Quantum Teleportation, 12-photon Entanglement and Scattershot Boson Sampling based on Spontaneous Parametric Down-Conversion. , 2019, , .		0
54	Satellite-Relayed Intercontinental Quantum Network. Physical Review Letters, 2018, 120, 030501.	2.9	499

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55	Phase amplification in optical interferometry with weak measurement. Physical Review A, 2018, 97, .	1.0	24
56	Experimental test of generalized Hardyâ€™s paradox. Science Bulletin, 2018, 63, 1611-1615.	4.3	11
57	12-Photon Entanglement and Scalable Scattershot Boson Sampling with Optimal Entangled-Photon Pairs from Parametric Down-Conversion. Physical Review Letters, 2018, 121, 250505.	2.9	249
58	Quantum communication at 7,600km and beyond. Communications of the ACM, 2018, 61, 42-43.	3.3	13
59	Observation of Topologically Protected Edge States in a Photonic Two-Dimensional Quantum Walk. Physical Review Letters, 2018, 121, 100502.	2.9	86
60	18-Qubit Entanglement with Six Photonsâ€™ Three Degrees of Freedom. Physical Review Letters, 2018, 120, 260502.	2.9	274
61	Demonstration of topological data analysis on a quantum processor. Optica, 2018, 5, 193.	4.8	29
62	Resonance fluorescence from an atomic-quantum-memory compatible single photon source based on GaAs droplet quantum dots. Applied Physics Letters, 2018, 113, 021102.	1.5	2
63	Demonstration of Topological Robustness of Anyonic Braiding Statistics with a Superconducting Quantum Circuit. Physical Review Letters, 2018, 121, 030502.	2.9	40
64	Toward Scalable Boson Sampling with Photon Loss. Physical Review Letters, 2018, 120, 230502.	2.9	97
65	Multi-photon quantum boson-sampling machines. , 2018, , .		0
66	Multi-photon quantum boson-sampling machines. , 2018, , .		0
67	High-efficiency multiphoton boson sampling. Nature Photonics, 2017, 11, 361-365.	15.6	330
68	Satellite-based entanglement distribution over 1200 kilometers. Science, 2017, 356, 1140-1144.	6.0	870
69	Multiphoton Interference in Quantum Fourier Transform Circuits and Applications to Quantum Metrology. Physical Review Letters, 2017, 119, 080502.	2.9	57
70	Experimental test of the irreducible four-qubit Greenberger-Horne-Zeilinger paradox. Physical Review A, 2017, 95, .	1.0	10
71	Experimental Blind Quantum Computing for a Classical Client. Physical Review Letters, 2017, 119, 050503.	2.9	68
72	Quantum State Transfer from a Single Photon to a Distant Quantum-Dot Electron Spin. Physical Review Letters, 2017, 119, 060501.	2.9	35

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73	Satellite-to-ground quantum key distribution. Nature, 2017, 549, 43-47.	13.7	1,040
74	Ground-to-satellite quantum teleportation. Nature, 2017, 549, 70-73.	13.7	524
75	Space-to-Ground Quantum Key Distribution Using a Small-Sized Payload on Tiangong-2 Space Lab. Chinese Physics Letters, 2017, 34, 090302.	1.3	48
76	Satellite-to-Ground Entanglement-Based Quantum Key Distribution. Physical Review Letters, 2017, 119, 200501.	2.9	166
77	Time-Bin-Encoded Boson Sampling with a Single-Photon Device. Physical Review Letters, 2017, 118, 190501.	2.9	123
78	Solving Systems of Linear Equations with a Superconducting Quantum Processor. Physical Review Letters, 2017, 118, 210504.	2.9	76
79	Observation of ten-photon entanglement using thin BiB_3O_6 crystals. Optica, 2017, 4, 77.	4.8	52
80	Space-based quantum communication towards global quantum network. , 2017, , .		2
81	Observation of Ten-photon Entanglement Using Thin BiB3O6 Crystals. , 2017, , .		0
82	Quantum dot-micropillars: A bright source of coherent single photons. , 2016, , .		0
83	Emulating Anyonic Fractional Statistical Behavior in a Superconducting Quantum Circuit. Physical Review Letters, 2016, 117, 110501.	2.9	55
84	Highly indistinguishable on-demand resonance fluorescence photons from a deterministic quantum dot micropillar device with 74% extraction efficiency. Optics Express, 2016, 24, 8539.	1.7	143
85	Experimental quantum data locking. Physical Review A, 2016, 94, .	1.0	16
86	On-Demand Single Photons with High Extraction Efficiency and Near-Unity Indistinguishability from a Resonantly Driven Quantum Dot in a Micropillar. Physical Review Letters, 2016, 116, 020401.	2.9	675
87	Efficient Measurement of Multiparticle Entanglement with Embedding Quantum Simulator. Physical Review Letters, 2016, 116, 070502.	2.9	16
88	Near-Transform-Limited Single Photons from an Efficient Solid-State Quantum Emitter. Physical Review Letters, 2016, 116, 213601.	2.9	150
89	Measurement-Device-Independent Quantum Key Distribution over Untrustful Metropolitan Network. Physical Review X, 2016, 6, .	2.8	120
90	Experimental Ten-Photon Entanglement. Physical Review Letters, 2016, 117, 210502.	2.9	403

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91	Deterministic generation of bright single resonance fluorescence photons from a Purcell-enhanced quantum dot-micropillar system. Optics Express, 2015, 23, 32977.	1.7	22
92	Quantum teleportation of multiple degrees of freedom of a single photon. Nature, 2015, 518, 516-519.	13.7	549
93	Dynamically Controlled Resonance Fluorescence Spectra from a Doubly Dressed Single InGaAs Quantum Dot. Physical Review Letters, 2015, 114, 097402.	2.9	47
94	Single quantum emitters in monolayer semiconductors. Nature Nanotechnology, 2015, 10, 497-502.	15.6	749
95	Entanglement-Based Machine Learning on a Quantum Computer. Physical Review Letters, 2015, 114, 110504.	2.9	158
96	Temperature-Dependent Mollow Triplet Spectra from a Single Quantum Dot: Rabi Frequency Renormalization and Sideband Linewidth Insensitivity. Physical Review Letters, 2014, 113, 097401.	2.9	48
97	Push-button photon entanglement. Nature Photonics, 2014, 8, 174-176.	15.6	25
98	Deterministic and Robust Generation of Single Photons from a Single Quantum Dot with 99.5% Indistinguishability Using Adiabatic Rapid Passage. Nano Letters, 2014, 14, 6515-6519.	4.5	129
99	Towards quantum computing and quantum networking with solid-state single spins and single photons. , 2014, , .		0
100	Indistinguishable Tunable Single Photons Emitted by Spin-Flip Raman Transitions in InGaAs Quantum Dots. Physical Review Letters, 2013, 111, 237403.	2.9	60
101	On-demand semiconductor single-photon source with near-unity indistinguishability. Nature Nanotechnology, 2013, 8, 213-217.	15.6	444
102	Single InAs Quantum Dot Grown at the Junction of Branched Gold-Free GaAs Nanowire. Nano Letters, 2013, 13, 1399-1404.	4.5	23
103	Experimental Quantum Computing to Solve Systems of Linear Equations. Physical Review Letters, 2013, 110, 230501.	2.9	114
104	Quantum teleportation between remote atomic-ensemble quantum memories. Proceedings of the National Academy of Sciences of the United States of America, 2012, 109, 20347-20351.	3.3	85
105	Observation of eight-photon entanglement. Nature Photonics, 2012, 6, 225-228.	15.6	355
106	Multiphoton entanglement and interferometry. Reviews of Modern Physics, 2012, 84, 777-838.	16.4	1,007
107	Experimental demonstration of topological error correction. Nature, 2012, 482, 489-494.	13.7	162
108	Experimental measurement-based quantum computing beyond the cluster-state model. Nature Photonics, 2011, 5, 117-123.	15.6	19

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109	Entangled photons and quantum communication. Physics Reports, 2010, 497, 1-40.	10.3	75
110	Experimental demonstration of a hyper-entangled ten-qubit SchrÃ¶dinger cat state. Nature Physics, 2010, 6, 331-335.	6.5	282
111	Bell inequality tests of four-photon six-qubit graph states. Physical Review A, 2010, 82, .	1.0	10
112	Experimental Realization of a Controlled-NOT Gate with Four-Photon Six-Qubit Cluster States. Physical Review Letters, 2010, 104, 020501.	2.9	71
113	Teleportation-based realization of an optical quantum two-qubit entangling gate. Proceedings of the National Academy of Sciences of the United States of America, 2010, 107, 20869-20874.	3.3	44
114	Direct measurement of spin dynamics in InAs/GaAs quantum dots using time-resolved resonance fluorescence. Physical Review B, 2010, 81, .	1.1	58
115	Experimental Multiparticle Entanglement Swapping for Quantum Networking. Physical Review Letters, 2009, 103, 020501.	2.9	73
116	Demonstrating Anyonic Fractional Statistics with a Six-Qubit Quantum Simulator. Physical Review Letters, 2009, 102, 030502.	2.9	111
117	Spin-resolved quantum-dot resonance fluorescence. Nature Physics, 2009, 5, 198-202.	6.5	251
118	Greenberger-Horne-Zeilinger-type violation of local realism by mixed states. Physical Review A, 2008, 78, .	1.0	6
119	Demonstration of a scheme for the generation of â€œevent-readyâ€•entangled photon pairs from a single-photon source. Physical Review A, 2008, 77, .	1.0	35
120	Experimental quantum coding against qubit loss error. Proceedings of the National Academy of Sciences of the United States of America, 2008, 105, 11050-11054.	3.3	63
121	Toolbox for entanglement detection and fidelity estimation. Physical Review A, 2007, 76, .	1.0	92
122	Demonstration of a Compiled Version of Shorâ€™s Quantum Factoring Algorithm Using Photonic Qubits. Physical Review Letters, 2007, 99, 250504.	2.9	186
123	Experimental entanglement of six photons in graph states. Nature Physics, 2007, 3, 91-95.	6.5	554
124	Experimental construction of optical multiqubit cluster states from Bell states. Physical Review A, 2006, 73, .	1.0	56
125	Experimental Quantum Secret Sharing and Third-Man Quantum Cryptography. Physical Review Letters, 2005, 95, 200502.	2.9	137
126	Experimental Realization of Optimal Asymmetric Cloning and Telecloning via Partial Teleportation. Physical Review Letters, 2005, 95, 030502.	2.9	87

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127	Simultaneous teleportation of composite quantum states. SPIE Newsroom, 0, , .	0.1	0