

# Yu-Ao Chen

## List of Publications by Year in descending order

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Version: 2024-02-01

117  
papers

14,023  
citations

29994

54  
h-index

23472

111  
g-index

118  
all docs

118  
docs citations

118  
times ranked

8185  
citing authors

| #  | ARTICLE   | IF   | CITATIONS |
|----|---|------|-----------|
| 1  | Satellite-to-ground quantum key distribution. <i>Nature</i> , 2017, 549, 43-47.   | 13.7 | 1,040     |
| 2  | Satellite-based entanglement distribution over 1200 kilometers. <i>Science</i> , 2017, 356, 1140-1144.  | 6.0  | 870       |
| 3  | Probing the relaxation towards equilibrium in an isolated strongly correlated one-dimensional Bose gas. <i>Nature Physics</i> , 2012, 8, 325-330.                                       | 6.5  | 762       |
| 4  | Experimental Realization of Strong Effective Magnetic Fields in an Optical Lattice. <i>Physical Review Letters</i> , 2011, 107, 255301.   | 2.9  | 629       |
| 5  | Experimental demonstration of five-photon entanglement and open-destination teleportation. <i>Nature</i> , 2004, 430, 54-58.  | 13.7 | 532       |
| 6  | Ground-to-satellite quantum teleportation. <i>Nature</i> , 2017, 549, 70-73.  | 13.7 | 524       |
| 7  | Satellite-Relayed Intercontinental Quantum Network. <i>Physical Review Letters</i> , 2018, 120, 030501.   | 2.9  | 499       |
| 8  | An integrated space-to-ground quantum communication network over 4,600 kilometres. <i>Nature</i> , 2021, 589, 214-219.  | 13.7 | 415       |
| 9  | Experimental Ten-Photon Entanglement. <i>Physical Review Letters</i> , 2016, 117, 210502.   | 2.9  | 403       |
| 10 | Quantum teleportation and entanglement distribution over 100-kilometre free-space channels. <i>Nature</i> , 2012, 488, 185-188.   | 13.7 | 397       |
| 11 | Experimental demonstration of a BDCZ quantum repeater node. <i>Nature</i> , 2008, 454, 1098-1101.   | 13.7 | 372       |
| 12 | Experimental demonstration of a heralded entanglement source. <i>Nature Photonics</i> , 2010, 4, 549-552.   | 15.6 | 357       |
| 13 | Observation of eight-photon entanglement. <i>Nature Photonics</i> , 2012, 6, 225-228.   | 15.6 | 355       |
| 14 | Entanglement-based secure quantum cryptography over 1,120 kilometres. <i>Nature</i> , 2020, 582, 501-505.   | 13.7 | 350       |
| 15 | 10-Qubit Entanglement and Parallel Logic Operations with a Superconducting Circuit. <i>Physical Review Letters</i> , 2017, 119, 180511.   | 2.9  | 313       |
| 16 | Experimental demonstration of a hyper-entangled ten-qubit Schrödinger cat state. <i>Nature Physics</i> , 2010, 6, 331-335.  | 6.5  | 282       |
| 17 | 12-Photon Entanglement and Scalable Scattershot Boson Sampling with Optimal Entangled-Photon Pairs from Parametric Down-Conversion. <i>Physical Review Letters</i> , 2018, 121, 250505. | 2.9  | 249       |
| 18 | Direct and full-scale experimental verifications towards ground-to-satellite quantum key distribution. <i>Nature Photonics</i> , 2013, 7, 387-393.                                      | 15.6 | 247       |

| #  | ARTICLE  | IF   | CITATIONS |
|----|--|------|-----------|
| 19 | A millisecond quantum memory for scalable quantum networks. <i>Nature Physics</i> , 2009, 5, 95-99.  | 6.5  | 217       |
| 20 | Experimental Realization of Entanglement Concentration and a Quantum Repeater. <i>Physical Review Letters</i> , 2003, 90, 207901.                                | 2.9  | 203       |
| 21 | Experimental Violation of Local Realism by Four-Photon Greenberger-Horne-Zeilinger Entanglement. <i>Physical Review Letters</i> , 2003, 91, 180401.              | 2.9  | 190       |
| 22 | Robust Creation of Entanglement between Remote Memory Qubits. <i>Physical Review Letters</i> , 2007, 98, 240502.   | 2.9  | 179       |
| 23 | Experimental quantum teleportation of a two-qubit composite system. <i>Nature Physics</i> , 2006, 2, 678-682.  | 6.5  | 174       |
| 24 | Memory-built-in quantum teleportation with photonic and atomic qubits. <i>Nature Physics</i> , 2008, 4, 103-107.   | 6.5  | 170       |
| 25 | Satellite-to-Ground Entanglement-Based Quantum Key Distribution. <i>Physical Review Letters</i> , 2017, 119, 200501.   | 2.9  | 166       |
| 26 | Experimental Realization of One-Way Quantum Computing with Two-Photon Four-Qubit Cluster States. <i>Physical Review Letters</i> , 2007, 99, 120503.              | 2.9  | 165       |
| 27 | Experimental demonstration of topological error correction. <i>Nature</i> , 2012, 482, 489-494.  | 13.7 | 162       |
| 28 | Large scale quantum key distribution: challenges and solutions [Invited]. <i>Optics Express</i> , 2018, 26, 24260.   | 1.7  | 148       |
| 29 | Controlling Correlated Tunneling and Superexchange Interactions with ac-Driven Optical Lattices. <i>Physical Review Letters</i> , 2011, 107, 210405.             | 2.9  | 142       |
| 30 | Experimental Quantum Secret Sharing and Third-Man Quantum Cryptography. <i>Physical Review Letters</i> , 2005, 95, 200502.                                       | 2.9  | 137       |
| 31 | Robust and efficient quantum repeaters with atomic ensembles and linear optics. <i>Physical Review A</i> , 2008, 77, .   | 1.0  | 135       |
| 32 | Implementation of quantum key distribution surpassing the linear rate-transmittance bound. <i>Nature Photonics</i> , 2020, 14, 422-425.                          | 15.6 | 130       |
| 33 | Experimental Demonstration of a Nondestructive Controlled-NOT Quantum Gate for Two Independent Photon Qubits. <i>Physical Review Letters</i> , 2005, 94, 030501. | 2.9  | 128       |
| 34 | Deterministic and Storable Single-Photon Source Based on a Quantum Memory. <i>Physical Review Letters</i> , 2006, 97, 173004.                                    | 2.9  | 127       |
| 35 | Many-body Landau-Zener dynamics in coupled one-dimensional Bose liquids. <i>Nature Physics</i> , 2011, 7, 61-67.   | 6.5  | 124       |
| 36 | Fault-tolerant quantum repeater with atomic ensembles and linear optics. <i>Physical Review A</i> , 2007, 76, .  | 1.0  | 108       |

| #  | ARTICLE   | IF   | CITATIONS |
|----|---|------|-----------|
| 37 | Demonstration of a Stable Atom-Photon Entanglement Source for Quantum Repeaters. Physical Review Letters, 2007, 99, 180505.   | 2.9  | 108       |
| 38 | Genuine High-Order Einstein-Podolsky-Rosen Steering. Physical Review Letters, 2015, 115, 010402.  | 2.9  | 107       |
| 39 | Multistage Entanglement Swapping. Physical Review Letters, 2008, 101, 080403.   | 2.9  | 101       |
| 40 | Experimental quantum repeater without quantum memory. Nature Photonics, 2019, 13, 644-648.  | 15.6 | 93        |
| 41 | Controlling and Detecting Spin Correlations of Ultracold Atoms in Optical Lattices. Physical Review Letters, 2010, 105, 265303.                                     | 2.9  | 91        |
| 42 | Observation of Coupled Vortex Lattices in a Mass-Imbalance Bose and Fermi Superfluid Mixture. Physical Review Letters, 2016, 117, 145301.                           | 2.9  | 88        |
| 43 | Experimental Realization of Optimal Asymmetric Cloning and Telecloning via Partial Teleportation. Physical Review Letters, 2005, 95, 030502.                        | 2.9  | 87        |
| 44 | Experimental Quantum Generative Adversarial Networks for Image Generation. Physical Review Applied, 2021, 16, .   | 1.5  | 87        |
| 45 | High-Speed Device-Independent Quantum Random Number Generation without a Detection Loophole. Physical Review Letters, 2018, 120, 010503.                            | 2.9  | 85        |
| 46 | Four-body ring-exchange interactions and anyonic statistics within a minimal toric-code Hamiltonian. Nature Physics, 2017, 13, 1195-1200.                           | 6.5  | 82        |
| 47 | Experimental Quantum Switching for Exponentially Superior Quantum Communication Complexity. Physical Review Letters, 2019, 122, 120504.                             | 2.9  | 82        |
| 48 | Experimental Realization of Plaquette Resonating Valence-Bond States with Ultracold Atoms in Optical Superlattices. Physical Review Letters, 2012, 108, 205301.     | 2.9  | 80        |
| 49 | Distributed quantum phase estimation with entangled photons. Nature Photonics, 2021, 15, 137-142.   | 15.6 | 71        |
| 50 | Direct counterfactual communication via quantum Zeno effect. Proceedings of the National Academy of Sciences of the United States of America, 2017, 114, 4920-4924. | 3.3  | 68        |
| 51 | Secret Sharing of a Quantum State. Physical Review Letters, 2016, 117, 030501.  | 2.9  | 65        |
| 52 | Generation and detection of atomic spin entanglement in optical lattices. Nature Physics, 2016, 12, 783-787.  | 6.5  | 65        |
| 53 | Experimental quasi-single-photon transmission from satellite to earth. Optics Express, 2013, 21, 20032.   | 1.7  | 63        |
| 54 | Experimental construction of optical multiqubit cluster states from Bell states. Physical Review A, 2006, 73, .   | 1.0  | 56        |

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|----|---|------|-----------|
| 55 | Synchronized Independent Narrow-Band Single Photons and Efficient Generation of Photonic Entanglement. <i>Physical Review Letters</i> , 2007, 98, 180503.   | 2.9  | 56        |
| 56 | Experimental realization of strong effective magnetic fields in optical superlattice potentials. <i>Applied Physics B: Lasers and Optics</i> , 2013, 113, 1-11.                                   | 1.1  | 53        |
| 57 | Observation of ten-photon entanglement using thin BiB <sub>3</sub> O <sub>6</sub> crystals. <i>Optica</i> , 2017, 4, 77.  | 4.8  | 52        |
| 58 | Heralded Generation of an Atomic NOON State. <i>Physical Review Letters</i> , 2010, 104, 043601.  | 2.9  | 50        |
| 59 | Controlled state-to-state atom-exchange reaction in an ultracold atom-dimer mixture. <i>Nature Physics</i> , 2017, 13, 699-703.   | 6.5  | 48        |
| 60 | Space-to-Ground Quantum Key Distribution Using a Small-Sized Payload on Tiangong-2 Space Lab. <i>Chinese Physics Letters</i> , 2017, 34, 090302.  | 1.3  | 48        |
| 61 | Experimental nested purification for a linear optical quantum repeater. <i>Nature Photonics</i> , 2017, 11, 695-699.  | 15.6 | 46        |
| 62 | Teleportation-based realization of an optical quantum two-qubit entangling gate. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2010, 107, 20869-20874. | 3.3  | 44        |
| 63 | Implementation of a Measurement-Device-Independent Entanglement Witness. <i>Physical Review Letters</i> , 2014, 112, 140506.  | 2.9  | 44        |
| 64 | Towards satellite-based quantum-secure time transfer. <i>Nature Physics</i> , 2020, 16, 848-852.  | 6.5  | 43        |
| 65 | Satellite testing of a gravitationally induced quantum decoherence model. <i>Science</i> , 2019, 366, 132-135.  | 6.0  | 40        |
| 66 | Experimental realization of a concatenated Greenberger-Horne-Zeilinger state for macroscopic quantum superpositions. <i>Nature Photonics</i> , 2014, 8, 364-368.                                  | 15.6 | 38        |
| 67 | Increasing the Statistical Significance of Entanglement Detection in Experiments. <i>Physical Review Letters</i> , 2010, 104, 210401.   | 2.9  | 32        |
| 68 | Bell Test over Extremely High-Loss Channels: Towards Distributing Entangled Photon Pairs between Earth and the Moon. <i>Physical Review Letters</i> , 2018, 120, 140405.                          | 2.9  | 32        |
| 69 | Experimental quantum network coding. <i>Npj Quantum Information</i> , 2019, 5, .  | 2.8  | 31        |
| 70 | Landau-Zener Sweeps and Sudden Quenches in Coupled Bose-Hubbard Chains. <i>Physical Review Letters</i> , 2011, 106, 155302.   | 2.9  | 30        |
| 71 | Production of large $K$ Bose-Einstein condensates using $D$ molasses. <i>Physical Review A</i> , 2016, 94, .  | 1.0  | 26        |
| 72 | Two-Hierarchy Entanglement Swapping for a Linear Optical Quantum Repeater. <i>Physical Review Letters</i> , 2017, 119, 170502.  | 2.9  | 26        |

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|----|--|------|-----------|
| 73 | Experimental quantum channel simulation. Physical Review A, 2017, 95, .  | 1.0  | 24        |
| 74 | Quantum Memory with Optically Trapped Atoms. Physical Review Letters, 2008, 101, 120501.   | 2.9  | 23        |
| 75 | Entanglement Structure: Entanglement Partitioning in Multipartite Systems and Its Experimental Detection Using Optimizable Witnesses. Physical Review X, 2018, 8, .    | 2.8  | 23        |
| 76 | Coupled dipole oscillations of a mass-imbalanced Bose-Fermi superfluid mixture. Physical Review B, 2018, 97, .   | 1.1  | 22        |
| 77 | Experimental exploration of five-qubit quantum error-correcting code with superconducting qubits. National Science Review, 2022, 9, nwab011.                           | 4.6  | 22        |
| 78 | Degenerate Bose gases near a d-wave shape resonance. Nature Physics, 2019, 15, 570-576.  | 6.5  | 21        |
| 79 | Experimental Quantum Error Rejection for Quantum Communication. Physical Review Letters, 2006, 96, 220504.   | 2.9  | 19        |
| 80 | Experimental measurement-based quantum computing beyond the cluster-state model. Nature Photonics, 2011, 5, 117-123.   | 15.6 | 19        |
| 81 | High-power 671-nm laser by second-harmonic generation with 93% efficiency in an external ring cavity. Optics Letters, 2018, 43, 1666.                                  | 1.7  | 18        |
| 82 | Experimental Violation of Bell's Inequality beyond Tsirelson's Bound. Physical Review Letters, 2006, 97, 170408.   | 2.9  | 17        |
| 83 | Second sound attenuation near quantum criticality. Science, 2022, 375, 528-533.  | 6.0  | 15        |
| 84 | Quantum State Transfer over 1200 km Assisted by Prior Distributed Entanglement. Physical Review Letters, 2022, 128, 170501.  | 2.9  | 15        |
| 85 | Color Erasure Detectors Enable Chromatic Interferometry. Physical Review Letters, 2019, 123, 243601.   | 2.9  | 12        |
| 86 | Measurement-Device-Independent Entanglement Witness of Tripartite Entangled States and Its Applications. Physical Review Letters, 2020, 124, 160503.                   | 2.9  | 12        |
| 87 | Experimental Realization of Programmable Quantum Gate Array for Directly Probing Commutation Relations of Pauli Operators. Physical Review Letters, 2010, 105, 120402. | 2.9  | 11        |
| 88 | A quantum degenerate Bose-Fermi mixture of $^4\text{K}$ and $^6\text{Li}$ . Journal of Physics B: Atomic, Molecular and Optical Physics, 2017, 50, 094001.             | 0.6  | 11        |
| 89 | Narrow-linewidth cooling of $^6\text{Li}$ atoms using the 2S-3P transition. Applied Physics B: Lasers and Optics, 2016, 122, 1.  | 1.1  | 10        |
| 90 | Discriminating quantum correlations with networking quantum teleportation. Physical Review Research, 2020, 2, .  | 1.3  | 10        |

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|-----|---|-----|-----------|
| 91  | 11-watt single-frequency 1342-nm laser based on multi-segmented Nd:YVO <sub>4</sub> crystal. Optics Express, 2019, 27, 31913.   | 1.7 | 9         |
| 92  | Loss-tolerant all-photonic quantum repeater with generalized Shor code. Optica, 2022, 9, 152.   | 4.8 | 9         |
| 93  | Comment on "Quantum Key Distribution with Blind Polarization Bases". Physical Review Letters, 2006, 96, 078901; author reply 078902.  | 2.9 | 8         |
| 94  | Counting Classical Nodes in Quantum Networks. Physical Review Letters, 2020, 124, 180503.   | 2.9 | 8         |
| 95  | 30 W, sub-kHz frequency-locked laser at 532 nm. Optics Express, 2018, 26, 33756.  | 1.7 | 7         |
| 96  | Deterministic spin-wave interferometer based on the Rydberg blockade. Physical Review A, 2011, 83, .  | 1.0 | 6         |
| 97  | Dynamic formation of quasicondensate and spontaneous vortices in a strongly interacting Fermi gas. Physical Review Research, 2021, 3, .   | 1.3 | 6         |
| 98  | Efficient Bipartite Entanglement Detection Scheme with a Quantum Adversarial Solver. Physical Review Letters, 2022, 128, 110501.  | 2.9 | 6         |
| 99  | Oscillatory-like expansion of a Fermionic superfluid. Science Bulletin, 2020, 65, 7-11.   | 4.3 | 5         |
| 100 | Universal Dynamical Scaling of Quasi-Two-Dimensional Vortices in a Strongly Interacting Fermionic Superfluid. Physical Review Letters, 2021, 126, 185302.                               | 2.9 | 5         |
| 101 | Photonic realization of quantum resetting. Optica, 2020, 7, 766.  | 4.8 | 5         |
| 102 | Feshbach spectroscopy of an ultracold K <sup>41</sup> Li <sup>6</sup> mixture and K <sup>41</sup> atoms. Physical Review A, 2018, 98, .   | 1.0 | 4         |
| 103 | Sine wave gating silicon single-photon detectors for multiphoton entanglement experiments. Review of Scientific Instruments, 2017, 88, 083102.  | 0.6 | 3         |
| 104 | Improved Spatial Resolution Achieved by Chromatic Intensity Interferometry. Physical Review Letters, 2021, 127, 103601.   | 2.9 | 3         |
| 105 | High detection efficiency silicon single-photon detector with a monolithic integrated circuit of active quenching and active reset. Review of Scientific Instruments, 2020, 91, 123106. | 0.6 | 3         |
| 106 | Space-based quantum communication towards global quantum network. , 2017, , .   |     | 2         |
| 107 | Verification of a resetting protocol for an uncontrolled superconducting qubit. Npj Quantum Information, 2020, 6, .   | 2.8 | 2         |
| 108 | Observation of state-to-state hyperfine-changing collisions in a Bose-Fermi mixture of $^6\text{Li}$ and $^4\text{K}$ atoms. Physical Review A, 2020, 101, .                            | 1.0 | 2         |

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|-----|---|-----|-----------|
| 109 | Chromatic interferometry with small frequency differences. <i>Optics Express</i> , 2020, 28, 32294.                                   | 1.7 | 2         |
| 110 | A battery-powered floating current source of 100 A for precise and fast control of magnetic field. <i>AIP Advances</i> , 2020, 10, .  | 0.6 | 2         |
| 111 | Experimental random-party entanglement distillation via weak measurement. <i>Physical Review Research</i> , 2020, 2, .                | 1.3 | 2         |
| 112 | Observation of the density dependence of the closed-channel fraction of a 6Li superfluid. <i>National Science Review</i> , 2022, 9, . | 4.6 | 1         |
| 113 | Scalable Quantum Computing with Linear Optics and Quantum Memories. <i>Optics and Photonics News</i> , 2007, 18, 34.                  | 0.4 | 0         |
| 114 | Quantum Information Processing with Photons. , 2014, , .  |     | 0         |
| 115 | High-power High-efficiency Second Harmonic Generation of 1342-nm Laser in LBO and PPKTP. , 2019, , .                                  |     | 0         |
| 116 | Demonstration of an Exponential Advantage in Communication Complexity via the Quantum Switch. , 2020, , .                             |     | 0         |
| 117 | Discriminating Quantum Correlations with Networking Quantum Teleportation. , 2020, , .  |     | 0         |