Zhiliang Yuan

List of Publications by Year
in descending order

156 papers	10,413 citations	41344 49 h-index	32842 100 g-index
160 all docs	160 docs citations	160 times ranked	4821 citing authors

#	Article	IF	Citations
1	Electrically Driven Single-Photon Source. Science, 2002, 295, 102-105.	12.6	1,069
2	Field test of quantum key distribution in the Tokyo QKD Network. Optics Express, 2011, 19, 10387.	3.4	816
3	Overcoming the rateâ€“distance limit of quantum key distribution without quantum repeaters. Nature, 2018, 557, 400-403.	27.8	683
4	The SECOQC quantum key distribution network in Vienna. New Journal of Physics, 2009, 11, 075001.	2.9	619
5	Quantum key distribution over 122 km of standard telecom fiber. Applied Physics Letters, 2004, 84, 3762-3764.	3.3	528
6	Practical challenges in quantum key distribution. Npj Quantum Information, 2016, 2, .	6.7	489
7	High speed single photon detection in the near infrared. Applied Physics Letters, 2007, 91, .	3.3	259
8	A quantum access network. Nature, 2013, 501, 69-72.	27.8	220
9	Gigahertz decoy quantum key distribution with 1 Mbit/s secure key rate. Optics Express, 2008, 16, 18790.	3.4	214
10	An avalancheâ€photodiode-based photon-number-resolving detector. Nature Photonics, 2008, 2, 425-428.	31.4	213
11	Experimental quantum key distribution beyond the repeaterless secret key capacity. Nature Photonics, 2019, 13, 334-338.	31.4	212
12	Carrier relaxation and thermal activation of localized excitons in self-organized InAs multilayers grown on GaAs substrates. Physical Review B, 1996, 54, 11528-11531.	3.2	208
13	Quantum key distribution without detector vulnerabilities using optically seeded lasers. Nature Photonics, 2016, 10, 312-315.	31.4	195
14	A high speed, postprocessing free, quantum random number generator. Applied Physics Letters, 2008, 93, .	3.3	180
15	10-Mb/s Quantum Key Distribution. Journal of Lightwave Technology, 2018, 36, 3427-3433.	4.6	155
16	Quantum key distribution for 10 Gb/s dense wavelength division multiplexing networks. Applied Physics Letters, 2014, 104, .	3.3	154
17	Efficient decoy-state quantum key distribution with quantified security. Optics Express, 2013, 21, 24550.	3.4	153
18	Continuous operation of high bit rate quantum key distribution. Applied Physics Letters, 2010, 96, .	3.3	146

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19	Effective-mass theory for InAs/GaAs strained coupled quantum dots. Physical Review B, 1996, 54, 11575-11581.	3.2	145
20	Cambridge quantum network. Npj Quantum Information, 2019, 5, .	6.7	134
21	600-km repeater-like quantum communications with dual-band stabilization. Nature Photonics, 2021, 15, 530-535.	31.4	133
22	Long-distance quantum key distribution secure against coherent attacks. Optica, 2017, 4, 163.	9.3	132
23	Efficient entanglement distribution over 200 kilometers. Optics Express, 2009, 17, 11440.	3.4	125
24	On-demand single-photon source for 1.3Î¼m telecom fiber. Applied Physics Letters, 2005, 86, 201111.	3.3	116
25	Coexistence of High-Bit-Rate Quantum Key Distribution and Data on Optical Fiber. Physical Review X, 2012, 2, .	8.9	115
26	Unconditionally secure one-way quantum key distribution using decoy pulses. Applied Physics Letters, 2007, 90, 011118.	3.3	106
27	Avoiding the blinding attack in QKD. Nature Photonics, 2010, 4, 800-801.	31.4	106
28	Ultra-high bandwidth quantum secured data transmission. Scientific Reports, 2016, 6, 35149.	3.3	95
29	Gigahertz quantum key distribution with InGaAs avalanche photodiodes. Applied Physics Letters, 2008, 92, .	3.3	90
30	Robust random number generation using steady-state emission of gain-switched laser diodes. Applied Physics Letters, 2014, 104, .	3.3	90
31	A photonic integrated quantum secure communication system. Nature Photonics, 2021, 15, 850-856.	31.4	90
32	Gigahertz-gated InGaAs/InP single-photon detector with detection efficiency exceeding 55% at 1550â€‰nm. Journal of Applied Physics, 2015, 117, .	2.5	83
33	Stability of high bit rate quantum key distribution on installed fiber. Optics Express, 2012, 20, 16339.	3.4	79
34	Room temperature single-photon detectors for high bit rate quantum key distribution. Applied Physics Letters, 2014, 104, .	3.3	79
35	Continuous operation of a one-way quantum key distribution system over installed telecom fibre. Optics Express, 2005, 13, 660.	3.4	78
36	Quantum key distribution over multicore fiber. Optics Express, 2016, 24, 8081.	3.4	76

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37	Experimental measurement-device-independent quantum digital signatures. Nature Communications, 2017, 8, 1098.	12.8	76
38	Resilience of gated avalanche photodiodes against bright illumination attacks in quantum cryptography. Applied Physics Letters, 2011, 98, .	3.3	75
39	Practical Security Bounds Against the Trojan-Horse Attack in Quantum Key Distribution. Physical Review X, 2015, 5, .	8.9	75
40	Multi-gigahertz operation of photon counting InGaAs avalanche photodiodes. Applied Physics Letters, 2010, 96, .	3.3	72
41	Field trial of a quantum secured 10â€ŠGb/s DWDM transmission system over a single installed fiber. Optics Express, 2014, 22, 23121.	3.4	72
42	Decoy-state quantum key distribution with a leaky source. New Journal of Physics, 2016, 18, 065008.	2.9	69
43	Quantum key distribution using a triggered quantum dot source emitting near 1.3Î¼m. Applied Physics Letters, 2007, 91, .	3.3	68
44	Electrically driven telecommunication wavelength single-photon source. Applied Physics Letters, 2007, 90, 063512.	3.3	64
45	High speed prototype quantum key distribution system and long term field trial. Optics Express, 2015, 23, 7583.	3.4	61
46	Security of two-way quantum key distribution. Physical Review A, 2013, 88, .	2.5	58
47	Ultrashort dead time of photon-counting InGaAs avalanche photodiodes. Applied Physics Letters, 2009, 94, .	3.3	56
48	Thermal activation and thermal transfer of localized excitons in InAs self-organized quantum dots. Superlattices and Microstructures, 1998, 23, 381-387.	3.1	55
49	Quantum secured gigabit optical access networks. Scientific Reports, 2016, 5, 18121.	3.3	52
50	Patterning-effect mitigating intensity modulator for secure decoy-state quantum key distribution. Optics Letters, 2018, 43, 5110.	3.3	51
51	Experimental Test of Two-Way Quantum Key Distribution in the Presence of Controlled Noise. Physical Review Letters, 2006, 96, 200501.	7.8	49
52	A modulator-free quantum key distribution transmitter chip. Npj Quantum Information, 2019, 5, .	6.7	46
53	Coherent phase transfer for real-world twin-field quantum key distribution. Nature Communications, 2022, 13, 157.	12.8	44
54	Practical gigahertz quantum key distribution based on avalanche photodiodes. New Journal of Physics, 2009, 11, 045019.	2.9	41

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55	Efficient photon number detection with silicon avalanche photodiodes. Applied Physics Letters, 2010, 97, .	3.3	40
56	Efficient and robust quantum random number generation by photon number detection. Applied Physics Letters, 2015, 107, .	3.3	40
57	Quantifying backflash radiation to prevent zero-error attacks in quantum key distribution. Light: Science and Applications, 2017, 6, e16261-e16261.	16.6	40
58	Unconditionally secure quantum key distribution over 50â€…km of standard telecom fibre. Electronics Letters, 2004, 40, 1603.	1.0	38
59	Interference of Short Optical Pulses from Independent Gain-Switched Laser Diodes for Quantum Secure Communications. Physical Review Applied, 2014, 2, .	3.8	33
60	An entangled-LED-driven quantum relay over 1â€‰km. Npj Quantum Information, 2016, 2, .	6.7	33
61	Long-Term Test of a Fast and Compact Quantum Random Number Generator. Journal of Lightwave Technology, 2018, 36, 3778-3784.	4.6	33
62	Gigahertz measurement-device-independent quantum key distribution using directly modulated lasers. Npj Quantum Information, 2021, 7, .	6.7	33
63	Gigacount/second photon detection with InGaAs avalanche photodiodes. Electronics Letters, 2012, 48, 111.	1.0	32
64	Practical quantum key distribution over 60 hours at an optical fiber distance of 20km using weak and vacuum decoy pulses for enhanced security. Optics Express, 2007, 15, 8465.	3.4	29
65	Single-photon-emitting diodes: a review. Physica Status Solidi (B): Basic Research, 2006, 243, 3730-3740.	1.5	25
66	Advanced Laser Technology for Quantum Communications (Tutorial Review). Advanced Quantum Technologies, 2021, 4, 2100062.	3.9	25
67	Two-dimensional excitonic emission in InAs submonolayers. Physical Review B, 1996, 54, 16919-16924.	3.2	24
68	Two-way quantum key distribution at telecommunication wavelength. Physical Review A, 2008, 77, .	2.5	24
69	Practical photon number detection with electric field-modulated silicon avalanche photodiodes. Nature Communications, 2012, 3, 644.	12.8	23
70	Quantum key distribution with hacking countermeasures and long term field trial. Scientific Reports, 2017, 7, 1978.	3.3	23
71	Real-time interferometric quantum random number generation on chip. Journal of the Optical Society of America B: Optical Physics, 2019, 36, B137.	2.1	23
72	Robust unconditionally secure quantum key distribution with two nonorthogonal and uninformative states. Physical Review A, 2009, 80, .	2.5	22

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73	Key to the quantum industry. Physics World, 2007, 20, 24-29.	0.0	20
74	Security Bounds for Efficient Decoy-State Quantum Key Distribution. IEEE Journal of Selected Topics in Quantum Electronics, 2015, 21, 197-204.	2.9	20
75	Simple source device-independent continuous-variable quantum random number generator. Physical Review A, 2019, 99, .	2.5	20
76	Comment on â€œSecure Communication using Mesoscopic Coherent Statesâ€• Physical Review Letters, 2005, 94, 048901; author reply 048902.	7.8	18
77	Probing higher order correlations of the photon field with photon number resolving avalanche photodiodes. Optics Express, 2011, 19, 13268.	3.4	18
78	Quantum communication using single photons from a semiconductor quantum dot emitting at a telecommunication wavelength. Journal of Optics, 2009, 11, 054005.	1.5	17
79	Real-time operation of a multi-rate, multi-protocol quantum key distribution transmitter. Optica, 2021, 8, 911.	9.3	16
80	Near perfect mode overlap between independently seeded, gain-switched lasers. Optics Express, 2016, 24, 17849.	3.4	15
81	Energy relaxation processes of hot quasiâ€twoâ€dimensional excitons in very thin GaAs/AlGaAs quantum wells by excitonâ€“acousticâ€phonon interaction. Journal of Applied Physics, 1996, 79, 424-426.	2.5	13
82	Evolution of locally excited avalanches in semiconductors. Applied Physics Letters, 2010, 96, .	3.3	13
83	Modulatorâ€Free Coherentâ€Oneâ€Way Quantum Key Distribution. Laser and Photonics Reviews, 2017, 11, 1700067.	8.7	13
84	Photoluminescence studies of single submonolayer InAs structures grown on GaAs (001) matrix. Applied Physics Letters, 1995, 67, 1874-1876.	3.3	12
85	Single quantum dot electroluminescence near. Physica E: Low-Dimensional Systems and Nanostructures, 2004, 21, 390-394.	2.7	12
86	Response to â€œComment on â€˜Resilience of gated avalanche photodiodes against bright illumination attacks in quantum cryptographyâ€™â€•[Appl. Phys. Lett. 99, 196101 (2011)]. Applied Physics Letters, 2011, 99, 196102.	3.3	12
87	Quantum key distribution with an entangled light emitting diode. Applied Physics Letters, 2015, 107, .	3.3	12
88	Exciton localization in corrugated GaAs/AlAs superlattices grown on (311) GaAs substrates. Physical Review B, 1995, 51, 7024-7028.	3.2	11
89	Introduction to the Issue on Quantum Communication and Cryptography. IEEE Journal of Selected Topics in Quantum Electronics, 2015, 21, 3-4.	2.9	11
90	Intensity modulation as a preemptive measure against blinding of single-photon detectors based on self-differencing cancellation. Physical Review A, 2018, 98, .	2.5	10

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91	A direct GHz-clocked phase and intensity modulated transmitter applied to quantum key distribution. Quantum Science and Technology, 2018, 3, 045010.	5.8	10
92	Worldwide standardization activity for quantum key distribution. , 2014, , .		9
93	Out-of-Band Electromagnetic Injection Attack on a Quantum Random Number Generator. Physical Review Applied, 2021, 15, .	3.8	9
94	Quantum key distribution and beyond: introduction. Journal of the Optical Society of America B: Optical Physics, 2019, 36, QKD1.	2.1	9
95	Optical study of heterointerface configuration in narrow GaAs/AlGaAs single quantum wells prepared with growth interruption. Journal of Applied Physics, 1996, 79, 1073.	2.5	8
96	Tokyo QKD Network and the evolution to Secure Photonic Network. , 2011, , .		8
97	Experimental position-time entanglement with degenerate single photons. Physical Review A, 2008, 77, .	2.5	7
98	Testing the photon-number statistics of a quantum key distribution light source. Optics Express, 2018, 26, 22733.	3.4	7
99	Dynamical Band Gap Renormalization in Self-Organized InAs/GaAs Quantum Dots. Physica Status Solidi A, 2000, 178, 345-348.	1.7	6
100	Manipulating photon coherence to enhance the security of distributed phase reference quantum key distribution. Applied Physics Letters, 2017, 111, .	3.3	6
101	Optical characterization of InAs monolayer quantum structures grown on (311)A, (311)B, and (100) GaAs substrates. IEEE Journal of Selected Topics in Quantum Electronics, 1997, 3, 471-474.	2.9	5
102	Self-assembled quantum dots as a source of single photons and photon pairs. Physica Status Solidi (B): Basic Research, 2003, 238, 353-359.	1.5	5
103	Photoluminescence studies of chemical adsorption of GaAs/AlxGa1 â€“xAs multiquantum well semiconductor. Journal of the Chemical Society Chemical Communications, 1995, , 1439-1440.	2.0	4
104	Recombination of Many-Particle States in InAs Self-Organized Quantum Dots. Physica Status Solidi (B): Basic Research, 2001, 224, 409-412.	1.5	4
105	Compensating the Noise of a Communication Channel via Asymmetric Encoding of Quantum Information. Physical Review Letters, 2010, 105, 140504.	7.8	4
106	Quantum Secured Gigabit Passive Optical Networks. , 2015, , .		4
107	Intrawell and interwell transfer of excitons in growth-interrupted quantum wells. Superlattices and Microstructures, 1998, 24, 163-167.	3.1	3
108	Decoy pulse quantum key distribution for practical purposes. IET Optoelectronics, 2008, 2, 195.	3.3	3

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109	Biexciton cascade in telecommunication wavelength quantum dots. Journal of Physics: Conference Series, 2010, 210, 012036.	0.4	3
110	Practical treatment of quantum bugs. , 2012, , .		3
111	First quantum secured 10-Gb/s DWDM transmission over the same installed fibre. , 2014, , .		3
112	Round-robin with photons. Nature Photonics, 2015, 9, 781-782.	31.4	3
113	Quantum key distribution using in-line highly birefringent interferometers. Applied Physics Letters, 2018, 113, 031107.	3.3	3
114	Photoluminescence studies on the interaction of near-surface GaAs/AlxGa1â^'xAs quantum wells with chemical adsorbates. Journal of Photochemistry and Photobiology A: Chemistry, 1996, 101, 113-117.	3.9	2
115	Intrinsic Mitigation of the After-Gate Attack in Quantum Key Distribution through Fast-Gated Delayed Detection. Physical Review Applied, 2019, 12, .	3.8	2
116	Comment on â€œHigh-efficiency energy up-conversion at GaAs-GaInP2 interfacesâ€•[Appl. Phys. Lett.67, 2813 (1995)]. Applied Physics Letters, 1997, 70, 1628-1629.	3.3	1
117	Gigahertz Quantum Key Distribution With 1 Mbit/s Secure Key Rate Using Decoy Pulses. , 2009, , .		1
118	Efficient photon number detection with silicon avalanche photodiodes. Proceedings of SPIE, 2011, , .	0.8	1
119	Backflashes from fast-gated avalanche photodiodes in quantum key distribution. Applied Physics Letters, 2020, 116, .	3.3	1
120	Setting best practice criteria for self-differencing avalanche photodiodes in quantum key distribution. , 2017, , .		1
121	Efficient entanglement distribution over 200 kilometers fiber using self-differencing InGaAs avalanche photodiodes. , 2009, , .		1
122	Simplifying Measurement-Device-Independent Quantum Key Distribution with Directly Modulated Laser Sources. , 2021, , .		1
123	Single photon emitting diode. , 2002, , .		0
124	Quantum key distribution over distances as long as 101 km. , 2003, , .		0
125	Optoelectronic devices for single photon generation (Invited Paper). , 2005, , .		0
126	One-way quantum key distribution system with active phase compensation. , 0, , .		0

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127	1.3 μm on-demand single photon source for fibre systems. , 0, , .		0
128	Automated one-way quantum key distribution system based on fibre optics. , 2005, , .		0
129	Practical one-way quantum cryptographic system for telecom networks. , 0, , .		0
130	Unconditionally secure one-way quantum key distribution using decoy pulses. , 2007, , .		0
131	Quantum key distribution using a semiconductor quantum dot source emitting at a telecommunication wavelength. Proceedings of SPIE, 2008, , .	0.8	0
132	Megabit per Second Quantum Key Distribution Using Practical InGaAs APDs. , 2009, , .		0
133	InGaAs Avalanche Photodiodes for Gigahertz Quantum Key Distribution. , 2009, , .		0
134	Multi-Gigahertz Photon Counting Using InGaAs APDs. , 2010, , .		0
135	Actively Stabilised Quantum Key Distribution Operating Continuously at 1 Mbit/s. , 2010, , .		0
136	Single photon detection for high bit rate quantum communication. , 2011, , .		0
137	Gigacounts/s photon detection and its applications. , 2011, , .		0
138	Efficient photon number detection with silicon avalanche photodiodes. , 2011, , .		0
139	Novel technologies for quantum key distribution networks. , 2017, , .		0
140	Complete System Integration of Chip-Based Quantum Key Distribution Devices. , 2021, , .		0
141	An electrically driven microcavity single photon source. , 2006, , .		0
142	Fiber Optic Quantum Key Distribution with Single Photons from Quantum Dots. , 2008, , .		0
143	The physical generation of true random numbers. SPIE Newsroom, 2009, , .	0.1	0
144	Ultra-Long Distance and Efficient Entanglement Distribution over 200 Kilometers. , 2009, , .		0

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145	Multiplexed Classical and Quantum Transmission for High Bitrate Quantum Key Distribution Systems. , 2012, , .		0
146	A Multi-User Quantum Access Network. , 2013, , .		0
147	High bit rate quantum key distribution with 100 dB security. , 2013, , .		0
148	Directly intensity-modulated quantum key distribution. , 2017, , .		0
149	Birefringent Interferometry for Quantum Key Distribution. , 2018, , .		0
150	Quantum key distribution security threat: the backflash light case. , 2018, , .		0
151	High Bit-Rate Quantum Communication Chips. , 2019, , .		0
152	Interferometric quantum random number generation on chip. , 2019, , .		0
153	On-chip modulator-free optical transmitter for quantum and classical communications. , 2019, , .		0
154	Quantum Key Secured Communications Field Trial for Industry 4.0. , 2021, , .		0
155	Quantum cryptography with a full-fledged photonic integrated chip system. , 2021, , .		0
156	Self-tuning quantum key distribution transmitter based on a genetic algorithm. , 2022, , .		0