

Hugo Zbinden

List of Publications by Year in descending order

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Version: 2024-02-01

171
papers

20,971
citations

19657

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9345

143
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173
all docs

173
docs citations

173
times ranked

8785
citing authors

#	ARTICLE	IF	CITATIONS
1	Operation of parallel SNSPDs at high detection rates. Superconductor Science and Technology, 2021, 34, 024002.	3.5	15
2	Countermeasure Against Quantum Hacking Using Detection Statistics. Physical Review Applied, 2021, 15, .	3.8	4
3	Quantum technologies in space. Experimental Astronomy, 2021, 51, 1677-1694.	3.7	23
4	Quantum Keyless Private Communication Versus Quantum Key Distribution for Space Links. Physical Review Applied, 2021, 16, .	3.8	8
5	The limits of multiplexing quantum and classical channels: Case study of a 2.5 GHz discrete variable quantum key distribution system. Applied Physics Letters, 2021, 119, 124001.	3.3	6
6	Experimental relativistic zero-knowledge proofs. Nature, 2021, 599, 47-50.	27.8	9
7	Performance and security of 5â€‰GHz repetition rate polarization-based quantum key distribution. Applied Physics Letters, 2020, 117, .	3.3	37
8	Fast self-testing quantum random number generator based on homodyne detection. Applied Physics Letters, 2020, 116, .	3.3	14
9	Efficient Time-Bin Encoding for Practical High-Dimensional Quantum Key Distribution. Physical Review Applied, 2020, 14, .	3.8	46
10	An optical chip for self-testing quantum random number generation. APL Photonics, 2020, 5, .	5.7	14
11	Direct measurement of the recovery time of superconducting nanowire single-photon detectors. Journal of Applied Physics, 2020, 128, .	2.5	13
12	Heralded Distribution of Single-Photon Path Entanglement. Physical Review Letters, 2020, 125, 110506.	7.8	12
13	Optical control of single-photon negative-feedback avalanche diode detector. Journal of Applied Physics, 2020, 127, .	2.5	19
14	Intrinsically-limited timing jitter in molybdenum silicide superconducting nanowire single-photon detectors. Journal of Applied Physics, 2019, 126, 164501.	2.5	16
15	Self-testing quantum random-number generator based on an energy bound. Physical Review A, 2019, 100, .	2.5	25
16	High-rate photon pairs and sequential Time-Bin entanglement with Si ₃ N ₄ microring resonators. Optics Express, 2019, 27, 19309.	3.4	38
17	Finite-key analysis for the 1-decoy state QKD protocol. Applied Physics Letters, 2018, 112, .	3.3	79
18	High-detection efficiency and low-timing jitter with amorphous superconducting nanowire single-photon detectors. Applied Physics Letters, 2018, 112, .	3.3	89

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19	Simple and high-speed polarization-based QKD. Applied Physics Letters, 2018, 112, .	3.3	48
20	Simple 2.5â€‰GHz time-bin quantum key distribution. Applied Physics Letters, 2018, 112, .	3.3	64
21	Security proof for a simplified Bennett-Brassard 1984 quantum-key-distribution protocol. Physical Review A, 2018, 98, .	2.5	36
22	Secure Quantum Key Distribution over 421Åkm of Optical Fiber. Physical Review Letters, 2018, 121, 190502.	7.8	447
23	Cyclopeptidic photosensitizer prodrugs as proteolytically triggered drug delivery systems of pheophorbide A: part II â€“ co-loading of pheophorbide A and black hole quencher. Photochemical and Photobiological Sciences, 2018, 17, 1739-1748.	2.9	3
24	Cyclopeptidic photosensitizer prodrugs as proteolytically triggered drug delivery systems of pheophorbide A: part Iâ€“self-quenched prodrugs. Photochemical and Photobiological Sciences, 2018, 17, 1728-1738.	2.9	8
25	Optically probing the detection mechanism in a molybdenum silicide superconducting nanowire single-photon detector. Applied Physics Letters, 2017, 110, .	3.3	32
26	Megahertz-Rate Semi-Device-Independent Quantum Random Number Generators Based on Unambiguous State Discrimination. Physical Review Applied, 2017, 7, .	3.8	72
27	Integrated AlGaAs source of highly indistinguishable and energy-time entangled photons. Optica, 2016, 3, 143.	9.3	49
28	Temporal jitter in free-running InGaAs/InP single-photon avalanche detectors. Optics Letters, 2016, 41, 5728.	3.3	15
29	Detector-device-independent quantum key distribution: Security analysis and fast implementation. Journal of Applied Physics, 2016, 120, .	2.5	10
30	24-Hour Relativistic Bit Commitment. Physical Review Letters, 2016, 117, 140506.	7.8	21
31	Demonstration of Einstein-Podolsky-Rosen Steering Using Single-Photon Path Entanglement and Displacement-Based Detection. Physical Review Letters, 2016, 117, 070404.	7.8	37
32	Heralded amplification of photonic qubits. Optics Express, 2016, 24, 125.	3.4	21
33	Perfectly secure steganography: Hiding information in the quantum noise of a photograph. Physical Review A, 2016, 93, .	2.5	7
34	Resource-Efficient Measurement-Device-Independent Entanglement Witness. Physical Review Letters, 2016, 116, 190501.	7.8	33
35	Time-resolved singlet-oxygen luminescence detection with an efficient and practical semiconductor single-photon detector. Biomedical Optics Express, 2016, 7, 211.	2.9	29
36	High-efficiency superconducting nanowire single-photon detectors fabricated from MoSi thin-films. Optics Express, 2015, 23, 33792.	3.4	109

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37	Practical Relativistic Bit Commitment. Physical Review Letters, 2015, 115, 030502.	7.8	35
38	Development of photon pair sources using periodically poled lithium niobate waveguide technology and fiber optic components. Journal of Modern Optics, 2015, 62, 1722-1731.	1.3	5
39	Challenging preconceptions about Bell tests with photon pairs. Physical Review A, 2015, 91, .	2.5	24
40	Random Variation of Detector Efficiency: A Countermeasure Against Detector Blinding Attacks for Quantum Key Distribution. IEEE Journal of Selected Topics in Quantum Electronics, 2015, 21, 192-196.	2.9	36
41	Provably secure and practical quantum key distribution over 307â€¦km of optical fibre. Nature Photonics, 2015, 9, 163-168.	31.4	378
42	Self-Testing Quantum Random Number Generator. Physical Review Letters, 2015, 114, 150501.	7.8	140
43	Comparing different approaches for generating random numbers device-independently using a photon pair source. New Journal of Physics, 2015, 17, 023023.	2.9	16
44	Revealing Genuine Optical-Path Entanglement. Physical Review Letters, 2015, 114, 170504.	7.8	33
45	Quantum Random Number Generation for 1.25-GHz Quantum Key Distribution Systems. Journal of Lightwave Technology, 2015, 33, 2855-2859.	4.6	28
46	Afterpulsing studies of low-noise InGaAs/InP single-photon negative-feedback avalanche diodes. Journal of Modern Optics, 2015, 62, 1151-1157.	1.3	31
47	Advances in InGaAs/InP single-photon detector systems for quantum communication. Light: Science and Applications, 2015, 4, e286-e286.	16.6	284
48	Detector-device-independent quantum key distribution. Applied Physics Letters, 2014, 105, .	3.3	25
49	Quantum metropolitan optical network based on wavelength division multiplexing. Optics Express, 2014, 22, 1576.	3.4	66
50	Absolute calibration of fiber-coupled single-photon detector. Optics Express, 2014, 22, 18078.	3.4	12
51	Narrowband photon pair source for quantum networks. Optics Express, 2014, 22, 4371.	3.4	30
52	Free-running InGaAs single photon detector with 1 dark count per second at 10% efficiency. Applied Physics Letters, 2014, 104, 081108.	3.3	75
53	Quantum Random Number Generation on a Mobile Phone. Physical Review X, 2014, 4, .	8.9	72
54	High-efficiency WSi superconducting nanowire single-photon detectors operating at 2.5â€‰K. Applied Physics Letters, 2014, 105, .	3.3	53

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55	Nonlinear Interaction between Single Photons. Physical Review Letters, 2014, 113, 173601.	7.8	61
56	Concise security bounds for practical decoy-state quantum key distribution. Physical Review A, 2014, 89, .	2.5	248
57	Experimental Bit Commitment Based on Quantum Communication and Special Relativity. Physical Review Letters, 2013, 111, 180504.	7.8	73
58	A high-speed multi-protocol quantum key distribution transmitter based on a dual-drive modulator. Optics Express, 2013, 21, 19579.	3.4	21
59	High efficiency coupling of photon pairs in practice. Optics Express, 2013, 21, 27641.	3.4	33
60	Intrinsically stable light source at telecom wavelengths. Applied Physics Letters, 2013, 103, .	3.3	8
61	MHz rate and efficient synchronous heralding of single photons at telecom wavelengths. Optics Express, 2012, 20, 23846.	3.4	38
62	Sine gating detector with simple filtering for low-noise infra-red single photon detection at room temperature. Journal of Applied Physics, 2012, 112, 063106.	2.5	47
63	Security of Distributed-Phase-Reference Quantum Key Distribution. Physical Review Letters, 2012, 109, 260501.	7.8	36
64	Free-running single-photon detection based on a negative feedback InGaAs APD. Journal of Modern Optics, 2012, 59, 1481-1488.	1.3	51
65	Detector imperfections in photon-pair source characterization. Journal of Physics B: Atomic, Molecular and Optical Physics, 2012, 45, 124016.	1.5	42
66	Single-photon space-like antibunching. Physics Letters, Section A: General, Atomic and Solid State Physics, 2012, 376, 2174-2177.	2.1	12
67	What are single photons good for?. Journal of Modern Optics, 2012, 59, 1458-1464.	1.3	57
68	Applications of quantum cloning. Optics and Spectroscopy (English Translation of Optika i tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 222 To	0.6	1
69	Practical private database queries based on a quantum-key-distribution protocol. Physical Review A, 2011, 83, .	2.5	178
70	Faithful Entanglement Swapping Based on Sum-Frequency Generation. Physical Review Letters, 2011, 106, 120403.	7.8	45
71	Long-term performance of the SwissQuantum quantum key distribution network in a field environment. New Journal of Physics, 2011, 13, 123001.	2.9	243
72	Quantum key distribution and 1â€%Gbps data encryption over a single fibre. New Journal of Physics, 2010, 12, 063027.	2.9	202

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73	Purification of Single-Photon Entanglement. Physical Review Letters, 2010, 104, 180504.	7.8	45
74	Room temperature photon number resolving detector for infrared wavelengths. Optics Express, 2010, 18, 10750.	3.4	35
75	Coherent frequency-down-conversion interface for quantum repeaters. Optics Express, 2010, 18, 22099.	3.4	55
76	Photon Counting OTDR: Advantages and Limitations. Journal of Lightwave Technology, 2010, 28, 952-964.	4.6	107
77	32 bin near-infrared time-multiplexing detector with attojoule single-shot energy resolution. Review of Scientific Instruments, 2010, 81, 103105.	1.3	7
78	Practical fast gate rate InGaAs/InP single-photon avalanche photodiodes. Applied Physics Letters, 2009, 95, .	3.3	71
79	Waveguide-based OPO source of entangled photon pairs. New Journal of Physics, 2009, 11, 113042.	2.9	66
80	Continuous high speed coherent one-way quantum key distribution. Optics Express, 2009, 17, 13326.	3.4	61
81	Comprehensive Characterization of InGaAs-InP Avalanche Photodiodes at 1550 nm With an Active Quenching ASIC. IEEE Journal of Quantum Electronics, 2009, 45, 792-799.	1.9	59
82	Testing the speed of "spooky action at a distance". Nature, 2008, 454, 861-864.	27.8	192
83	Random Numbers for Quantum Key Distribution. , 2008, , .		0
84	Spacelike Separation in a Bell Test Assuming Gravitationally Induced Collapses. Physical Review Letters, 2008, 100, 220404.	7.8	55
85	Phase-noise measurements in long-fiber interferometers for quantum-repeater applications. Physical Review A, 2008, 77, .	2.5	70
86	Tunable upconversion photon detector. Applied Physics Letters, 2008, 93, .	3.3	58
87	Free-running InGaAs-InP avalanche photodiode with active quenching for single photon counting at telecom wavelengths. Applied Physics Letters, 2007, 91, 201114.	3.3	60
88	Quantum Repeaters with Photon Pair Sources and Multimode Memories. Physical Review Letters, 2007, 98, 190503.	7.8	447
89	High resolution optical time domain reflectometer based on 1.55-µm up-conversion photon-counting module. Optics Express, 2007, 15, 8237.	3.4	78
90	SiPM for fast Photon-Counting and Multiphoton Detection. Optics Express, 2007, 15, 14539.	3.4	95

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91	Entangling independent photons by time-measurement. Nature Physics, 2007, 3, 692-695.	16.7	221
92	Single-Photon Detection System for Quantum Optics Applications. IEEE Journal of Selected Topics in Quantum Electronics, 2007, 13, 944-951.	2.9	37
93	Quantum superposition and entanglement of mesoscopic plasmons. New Journal of Physics, 2006, 8, 13-13.	2.9	36
94	Trojan-horse attacks on quantum-key-distribution systems. Physical Review A, 2006, 73, .	2.5	431
95	Mid-infrared single-photon counting. Optics Letters, 2006, 31, 1094.	3.3	50
96	Low jitter up-conversion detectors for telecom wavelength GHz QKD. New Journal of Physics, 2006, 8, 32-32.	2.9	119
97	Semiconductor Waveguide Source of Counterpropagating Twin Photons. Physical Review Letters, 2006, 97, 173901.	7.8	74
98	Time-resolved and antibunching experiments on single quantum dots at 1300nm. Applied Physics Letters, 2006, 88, 131102.	3.3	101
99	Advances in Quantum Cryptography and Relays. , 2006, , .		1
100	Quantum Teleportation with a Three-Bell-State Analyzer. Physical Review Letters, 2006, 96, 130502.	7.8	59
101	Detection of mid-IR radiation by sum frequency generation for free space optical communication. Optics and Lasers in Engineering, 2005, 43, 537-544.	3.8	30
102	Four-photon correction in two-photon Bell experiments. European Physical Journal D, 2005, 32, 129-138.	1.3	39
103	A photonic quantum information interface. Nature, 2005, 437, 116-120.	27.8	350
104	GHz quantum key distribution at telecom wavelengths. , 2005, , .		0
105	Fast and simple one-way quantum key distribution. Applied Physics Letters, 2005, 87, 194108.	3.3	229
106	A Fabry-Perot-like two-photon interferometer for high-dimensional time-bin entanglement. Journal of Modern Optics, 2005, 52, 2637-2648.	1.3	25
107	Quantum Information. Optics and Photonics News, 2005, 16, 40.	0.5	25
108	Energy-Time Entanglement Preservation in Plasmon-Assisted Light Transmission. Physical Review Letters, 2005, 94, 110501.	7.8	128

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109	Energy-Time Entangled Qutrits: Bell Tests and Quantum Communication. AIP Conference Proceedings, 2004, , .	0.4	1
110	Bell-Type Test of Energy-Time Entangled Qutrits. Physical Review Letters, 2004, 93, .	7.8	176
111	Two independent photon pairs versus four-photon entangled states in parametric down conversion. Journal of Modern Optics, 2004, 51, 1637-1649.	1.3	75
112	High-quality asynchronous heralded single-photon source at telecom wavelength. New Journal of Physics, 2004, 6, 163-163.	2.9	176
113	Quantum key distribution over 30 km of standard fiber using energy-time entangled photon pairs: a comparison of two chromatic dispersion reduction methods. European Physical Journal D, 2004, 30, 143-148.	1.3	40
114	Photon counting at telecom wavelengths with commercial InGaAs/InP avalanche photodiodes: Current performance. Journal of Modern Optics, 2004, 51, 1381-1398.	1.3	86
115	Experimental realization of a quantum relay over a significant distance. Journal of Modern Optics, 2004, 51, 1011-1018.	1.3	3
116	Distribution of Time-Bin Entangled Qubits over 50 km of Optical Fiber. Physical Review Letters, 2004, 93, 180502.	7.8	251
117	Two independent photon pairs versus four-photon entangled states in parametric down conversion. Journal of Modern Optics, 2004, 51, 1637-1649.	1.3	11
118	Studies of femtosecond time-bin entangled qubits for quantum communications. Fortschritte Der Physik, 2003, 51, 428-434.	4.4	0
119	Long-distance teleportation of qubits at telecommunication wavelengths. Nature, 2003, 421, 509-513.	27.8	411
120	Quantum Information: Long Distance Quantum Teleportation. Optics and Photonics News, 2003, 14, 39.	0.5	4
121	Quantum entanglement with acousto-optic modulators and 2-photon beatings. , 2003, , .		0
122	Quantum entanglement with acousto-optic modulators: Two-photon beats and Bell experiments with moving beam splitters. Physical Review A, 2003, 67, .	2.5	26
123	Quantum interference with photon pairs created in spatially separated sources. Physical Review A, 2003, 67, .	2.5	93
124	Experimental investigation of the robustness of partially entangled qubits over 11 km. Physical Review A, 2002, 66, .	2.5	85
125	Quantum Correlations with Spacelike Separated Beam Splitters in Motion: Experimental Test of Multisimultaneity. Physical Review Letters, 2002, 88, 120404.	7.8	93
126	Quantum Cloning with an Optical Fiber Amplifier. Physical Review Letters, 2002, 89, 107901.	7.8	84

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127	Quantum key distribution over 67 km with a plug&play system. New Journal of Physics, 2002, 4, 41-41.	2.9	430
128	Coupling Fiber Optics to a Permeation Liquid Membrane for Heavy Metal Sensor Development. Analytical Chemistry, 2002, 74, 664-670.	6.5	36
129	Quantum Optics: Quantum Correlations With Moving Observers. Optics and Photonics News, 2002, 13, 51.	0.5	3
130	Time-bin entangled qubits for quantum communication created by femtosecond pulses. Physical Review A, 2002, 66, .	2.5	182
131	Quantum correlation with moving beamsplitters in relativistic configuration. Pramana - Journal of Physics, 2002, 59, 181-188.	1.8	2
132	Quantum cryptography. Reviews of Modern Physics, 2002, 74, 145-195.	45.6	6,731
133	PPLN waveguide for quantum communication. European Physical Journal D, 2002, 18, 155-160.	1.3	90
134	Creating high-dimensional time-bin entanglement using mode-locked lasers. Quantum Information and Computation, 2002, 2, 425-433.	0.3	36
135	Group delay analysis of chirped fiber Bragg gratings using photon counting. IEEE Photonics Technology Letters, 2001, 13, 615-617.	2.5	5
136	Photon counting for quantum key distribution with peltier cooled InGaAs/InP APDs. Journal of Modern Optics, 2001, 48, 1967-1981.	1.3	117
137	Highly efficient photon-pair source using periodically poled lithium niobate waveguide. Electronics Letters, 2001, 37, 26.	1.0	302
138	Faint laser quantum key distribution: Eavesdropping exploiting multiphoton pulses. Journal of Modern Optics, 2001, 48, 2009-2021.	1.3	47
139	Causality, relativity and quantum correlation experiments with moving reference frames. Pramana - Journal of Physics, 2001, 56, 349-355.	1.8	1
140	Determination of Henry's constant using a photoacoustic sensor. Journal of Chemical Thermodynamics, 2001, 33, 755-764.	2.0	9
141	Faint laser quantum key distribution: eavesdropping exploiting multiphoton pulses. Journal of Modern Optics, 2001, 48, 2009-2021.	1.3	17
142	Cisin, Tittel, and Zbinden Reply:. Physical Review Letters, 2001, 86, 1393-1393.	7.8	3
143	Photon counting for quantum key distribution with Peltier cooled InGaAs/InP APDs. Journal of Modern Optics, 2001, 48, 1967-1981.	1.3	43
144	The speed of quantum information and the preferred frame: analysis of experimental data. Physics Letters, Section A: General, Atomic and Solid State Physics, 2000, 276, 1-7.	2.1	59

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145	Optical tests of quantum nonlocality: from EPR-Bell tests towards experiments with moving observers. Annalen Der Physik, 2000, 9, 831-841.	2.4	17
146	Practical Aspects of Quantum Cryptographic Key Distribution. Journal of Cryptology, 2000, 13, 207-220.	2.8	43
147	Quantum Cryptography Using Entangled Photons in Energy-Time Bell States. Physical Review Letters, 2000, 84, 4737-4740.	7.8	493
148	Optical quantum random number generator. Journal of Modern Optics, 2000, 47, 595-598.	1.3	208
149	Fast and user-friendly quantum key distribution. Journal of Modern Optics, 2000, 47, 517-531.	1.3	75
150	Bell inequality and the locality loophole: Active versus passive switches. Physics Letters, Section A: General, Atomic and Solid State Physics, 1999, 264, 103-107.	2.1	32
151	A single-photon counter for long-haul telecom. IEEE Circuits and Devices: the Magazine of Electronic and Photonic Systems, 1999, 15, 34-40.	0.4	35
152	Long-distance Bell-type tests using energy-time entangled photons. Physical Review A, 1999, 59, 4150-4163.	2.5	104
153	Pulsed Energy-Time Entangled Twin-Photon Source for Quantum Communication. Physical Review Letters, 1999, 82, 2594-2597.	7.8	555
154	Quantum cryptography. Applied Physics B: Lasers and Optics, 1998, 67, 743-748.	2.2	103
155	Measurement of chromatic dispersion in optical fibers using pairs of correlated photons. Optics Communications, 1998, 151, 35-39.	2.1	41
156	Statistical prediction and experimental verification of concatenations of fiber optic components with polarization dependent loss. Journal of Lightwave Technology, 1998, 16, 332-339.	4.6	41
157	Violation of Bell Inequalities by Photons More Than 10 km Apart. Physical Review Letters, 1998, 81, 3563-3566.	7.8	716
158	Experimental demonstration of quantum correlations over more than 10 km. Physical Review A, 1998, 57, 3229-3232.	2.5	169
159	EXPERIMENTAL QUANTUM CRYPTOGRAPHY. , 1998, , 120-142.		7
160	“Plug and play” systems for quantum cryptography. Applied Physics Letters, 1997, 70, 793-795.	3.3	394
161	Non-local two-photon correlations using interferometers physically separated by 35 meters. Europhysics Letters, 1997, 40, 595-600.	2.0	9
162	“Plug and Play” Quantum Cryptography. Optics and Photonics News, 1997, 8, 38.	0.5	2

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163	Photon-counting optical-fiber sensor for the detection of ammonia in neurochemical applications. Sensors and Actuators B: Chemical, 1997, 38, 183-188.	7.8	6
164	Unambiguous quantum measurement of nonorthogonal states. Physical Review A, 1996, 54, 3783-3789.	2.5	170
165	Quantum cryptography over 23 km in installed under-lake telecom fibre. Europhysics Letters, 1996, 33, 335-340.	2.0	130
166	Underwater quantum coding. Nature, 1995, 378, 449-449.	27.8	64
167	Q-switched Nd:YLF laser end pumped by a diode-laser bar. Optics Letters, 1990, 15, 1014.	3.3	58
168	Measurement of mid-IR laser pulses by sum frequency generation. , 0, , .		0
169	Repeaters for quantum communication. , 0, , .		1
170	Long distance entanglement swapping and perspectives for a real quantum relay. , 0, , .		0
171	Local and scalable detection of genuine multipartite single-photon path entanglement. Quantum - the Open Journal for Quantum Science, 0, 6, 671.	0.0	5