Gregor Weihs

List of Publications by Year in Descending Order

112 papers	9,385 citations	35 h-index	96 g-index
159 ext. papers	10,876 ext. citations	7.3 avg, IF	5.78 L-index

#	Paper	IF	Citations
112	Demonstration and modeling of time-bin entangled photons from a quantum dot in a nanowire. *AIP Advances*, **2022**, 12, 055115	1.5	1
111	Symmetry Allows for Distinguishability in Totally Destructive Many-Particle Interference. *PRX Quantum*, **2021**, 2,	6.1	2
110	Understanding photoluminescence in semiconductor Bragg-reflection waveguides. *Journal of Optics (United Kingdom)*, **2021**, 23, 035801	1.7	3
109	Difference-frequency generation in an AlGaAs Bragg-reflection waveguide using an on-chip electrically-pumped quantum dot laser. *Journal of Optics (United Kingdom)*, **2021**, 23, 085802	1.7	1
108	Optical Stark shift to control the dark exciton occupation of a quantum dot in a tilted magnetic field. *Physical Review B*, **2021**, 104,	3.3	1
107	Towards probing for hypercomplex quantum mechanics in a waveguide interferometer. *New Journal of Physics*, **2021**, 23, 093038	2.9	0
106	Approaching the Tsirelson bound with a Sagnac source of polarization-entangled photons. *SciPost Physics*, **2021**, 10,	6.1	2
105	Optimizing the spectro-temporal properties of photon pairs from Bragg-reflection waveguides. *Journal of Optics (United Kingdom)*, **2019**, 21, 054001	1.7	3
104	Photon-number parity of heralded single photons from a Bragg-reflection waveguide reconstructed loss-tolerantly via moment generating function. *New Journal of Physics*, **2019**, 21, 103025	2.9	2
103	Semi-automatic engineering and tailoring of high-efficiency Bragg-reflection waveguide samples for quantum photonic applications. *Quantum Science and Technology*, **2018**, 3, 024002	5.5	7
102	Invited Article: Time-bin entangled photon pairs from Bragg-reflection waveguides. *APL Photonics*, **2018**, 3, 080804	5.2	10
101	Totally Destructive Many-Particle Interference. *Physical Review Letters*, **2018**, 120, 240404	7.4	19
100	Totally destructive interference for permutation-symmetric many-particle states. *Physical Review A*, **2018**, 97,	2.6	12
99	Hyperentanglement of Photons Emitted by a Quantum Dot. *Physical Review Letters*, **2018**, 121, 110503	7.4	30
98	Space QUEST mission proposal: experimentally testing decoherence due to gravity. *New Journal of Physics*, **2018**, 20, 063016	2.9	20
97	Obtaining tight bounds on higher-order interferences with a 5-path interferometer. *New Journal of Physics*, **2017**, 19, 033017	2.9	27
96	A solid state source of photon triplets based on quantum dot molecules. *Nature Communications*, **2017**, 8, 15716	17.4	28

95	Observation of Genuine Three-Photon Interference. *Physical Review Letters*, **2017**, 118, 153602	7.4	48
94	Many-body quantum interference on hypercubes. *Quantum Science and Technology*, **2017**, 2, 015003	5.5	19
93	Interfacing a quantum dot with a spontaneous parametric down-conversion source. *Quantum Science and Technology*, **2017**, 2, 034016	5.5	3
92	Many-particle interference in a two-component bosonic Josephson junction: an all-optical simulation. *New Journal of Physics*, **2017**, 19, 125015	2.9	8
91	Observation of Genuine Three-Photon Interference **2017**,		2
90	Hyper-Entanglement of Photons Emitted by a Quantum Dot **2017**,		1
89	Temporally versatile polarization entanglement from Bragg reflection waveguides. *Optics Letters*, **2017**, 42, 2102-2105	3	10
88	Time-Bin Entanglement from Quantum Dots. *Nano-optics and Nanophotonics*, **2017**, 267-284	0	1
87	An Early Long-Distance Quantum Experiment. *The Frontiers Collection*, **2017**, 425-432	0.3	
86	Coherence and degree of time-bin entanglement from quantum dots. *Physical Review B*, **2016**, 93,	3.3	16
85	Universal Sign Control of Coupling in Tight-Binding Lattices. *Physical Review Letters*, **2016**, 116, 213901	7.4	41
84	Implementation of quantum and classical discrete fractional Fourier transforms. *Nature Communications*, **2016**, 7, 11027	17.4	54
83	Effects of photo-neutralization on the emission properties of quantum dots. *Optics Express*, **2016**, 24, 21794-801	3.3	2
82	Hybrid waveguide-bulk multi-path interferometer with switchable amplitude and phase. *APL Photonics*, **2016**, 1, 081302	5.2	8
81	Uncovering dispersion properties in semiconductor waveguides to study photon-pair generation. *Nanotechnology*, **2016**, 27, 434003	3.4	8
80	Liquid-nitrogen cooled, free-running single-photon sensitive detector at telecommunication wavelengths. *Applied Physics B: Lasers and Optics*, **2015**, 118, 489-495	1.9	2
79	Foucault's method for measuring the speed of light with modern apparatus. *European Journal of Physics*, **2015**, 36, 035013	0.8	5
78	Direct measurement of second-order coupling in a waveguide lattice. *Applied Physics Letters*, **2015**, 107, 241104	3.4	14

77	Broadband indistinguishability from bright parametric downconversion in a semiconductor waveguide. *Journal of Optics (United Kingdom)*, **2015**, 17, 125201	1.7	14
76	Optimal excitation conditions for indistinguishable photons from quantum dots. *New Journal of Physics*, **2015**, 17, 123025	2.9	21
75	Polarization entanglement generation in microcavity polariton devices. *Physica Status Solidi (B): Basic Research*, **2015**, 252, 1749-1756	1.3	4
74	Mode-resolved Fabry-Perot experiment in low-loss Bragg-reflection waveguides. *Optics Express*, **2015**, 23, 33608-21	3.3	10
73	Experimental three-photon quantum nonlocality under strict locality conditions. *Nature Photonics*, **2014**, 8, 292-296	33.9	72
72	Time-bin entangled photons from a quantum dot. *Nature Communications*, **2014**, 5, 4251	17.4	88
71	Rayleigh scattering in coupled microcavities: theory. *Journal of Physics Condensed Matter*, **2014**, 26, 485308		8
70	Generation of hyper-entangled photon pairs in coupled microcavities. *New Journal of Physics*, **2014**, 16, 063030	2.9	16
69	Efficiency vs. multi-photon contribution test for quantum dots. *Optics Express*, **2014**, 22, 4789-98	3.3	31
68	Quantum non-Gaussian Depth of Single-Photon States. *Physical Review Letters*, **2014**, 113, 223603	7.4	40
67	Polarization entangled photons from quantum dots embedded in nanowires. *Nano Letters*, **2014**, 14, 7107-14	11.5	60
66	An experimental implementation of oblivious transfer in the noisy storage model. *Nature Communications*, **2014**, 5, 3418	17.4	31
65	Measurement and modeling of the nonlinearity of photovoltaic and Geiger-mode photodiodes. *Review of Scientific Instruments*, **2014**, 85, 063102	1.7	8
64	QEYSSAT: a mission proposal for a quantum receiver in space **2014**,		15
63	Measurement and modification of biexciton-exciton time correlations. *Optics Express*, **2013**, 21, 9890-8	3.3	11
62	Deterministic photon pairs and coherent optical control of a single quantum dot. *Physical Review Letters*, **2013**, 110, 135505	7.4	92
61	Inherent polarization entanglement generated from a monolithic semiconductor chip. *Scientific Reports*, **2013**, 3, 2314	4.9	57
60	Studying free-space transmission statistics and improving free-space quantum key distribution in the turbulent atmosphere. *New Journal of Physics*, **2012**, 14, 123018	2.9	44

59	Monolithic source of photon pairs. *Physical Review Letters*, **2012**, 108, 153605	7.4	79
58	Experimental Implementation of Oblivious Transfer in the Noisy Storage Model **2012**,		1
57	Testing Born's Rule in Quantum Mechanics for Three Mutually Exclusive Events. *Foundations of Physics*, **2012**, 42, 742-751	1.2	32
56	Preface of the Special Issue Quantum Foundations: Theory and Experiment. *Foundations of Physics*, **2012**, 42, 721-724	1.2	7
55	Pulsed Sagnac source of polarization entangled photon pairs. *Optics Express*, **2012**, 20, 25022-9	3.3	28
54	Multi-dimensional laser spectroscopy of exciton polaritons with spatial light modulators. *Applied Physics Letters*, **2012**, 100, 072109	3.4	1
53	Improving entangled free-space quantum key distribution in the turbulent atmosphere **2011**,		1
52	Quantum entanglement distribution with 810 nm photons through telecom fibers. *Applied Physics Letters*, **2010**, 97, 031117	3.4	10
51	Ruling out multi-order interference in quantum mechanics. *Science*, **2010**, 329, 418-21	33.3	113
50	Best□igung f□ Bornsche Regel. *Physik in Unserer Zeit*, **2010**, 41, 267-268	0.1	
49	Entanglement Based Quantum Key Distribution Using a Bright Sagnac Entangled Photon Source. *Lecture Notes of the Institute for Computer Sciences, Social-Informatics and Telecommunications Engineering*, **2010**, 108-116	0.2	5
48	Cluster-state quantum computing enhanced by high-fidelity generalized measurements. *Physical Review Letters*, **2009**, 103, 240504	7.4	27
47	Entangled quantum key distribution with a biased basis choice. *New Journal of Physics*, **2009**, 11, 045025	2.9	15
46	Coherence measures for heralded single-photon sources. *Physical Review A*, **2009**, 79,	2.6	42
45	Characterizing heralded single-photon sources with imperfect measurement devices. *Journal of Physics B: Atomic, Molecular and Optical Physics*, **2009**, 42, 114013	1.3	26
44	Space-quest, experiments with quantum entanglement in space. *Europhysics News*, **2009**, 40, 26-29	0.2	60
43	Testing Born's Rule in Quantum Mechanics with a Triple Slit Experiment **2009**,		16
42	Loopholes in Experiments **2009**, 348-355		1

41	Multiple quantum well AlGaAs nanowires. *Nano Letters*, **2008**, 8, 495-9	11.5	25
40	Entangled quantum key distribution over two free-space optical links. *Optics Express*, **2008**, 16, 16840-53	3.3	58
39	Growth and characterization of GaAs nanowires on carbon nanotube composite films: toward flexible nanodevices. *Nano Letters*, **2008**, 8, 4075-80	11.5	19
38	Entanglement based free-space quantum key distribution **2008**,		1
37	Self-directed growth of AlGaAs core-shell nanowires for visible light applications. *Nano Letters*, **2007**, 7, 2584-9	11.5	66
36	Entangled free-space quantum key distribution **2007**,		1
35	A Test of Bell's Inequality with Spacelike Separation. *AIP Conference Proceedings*, **2007**,	0	3
34	PARAMETRIC DOWN-CONVERSION IN PHOTONIC CRYSTAL WAVEGUIDES. *International Journal of Modern Physics B*, **2006**, 20, 1543-1550	1.1	4
33	Experimental quantum cryptography with qutrits. *New Journal of Physics*, **2006**, 8, 75-75	2.9	273
32	Happy centenary, photon. *Nature*, **2005**, 433, 230-8	50.4	80
31	Polariton lasing in a microcavity. *Physica Status Solidi A*, **2004**, 201, 625-632		16
30	Semiconductor microcavity as a spin-dependent optoelectronic device. *Physical Review B*, **2004**, 70,	3.3	63
29	Comment on "Exclusion of time in the theorem of Bell" by K. Hess and W. Philipp. *Europhysics Letters*, **2003**, 61, 282-283	1.6	11
28	Photon Statistics and Quantum Teleportation Experiments. *Journal of the Physical Society of Japan*, **2003**, 72, 168-173	1.5	3
27	Experimental extract and empirical formulas of refractive indices of GaAs and AlAs at high temperature by HRXRD and optical reflectivity measurement. *Journal of Crystal Growth*, **2003**, 251, 777-781	1.6	5
26	Experimental entanglement purification of arbitrary unknown states. *Nature*, **2003**, 423, 417-22	50.4	364
25	Polariton lasing vs. photon lasing in a semiconductor microcavity. *Proceedings of the National Academy of Sciences of the United States of America*, **2003**, 100, 15318-23	11.5	301
24	Exciton-polariton lasing in a microcavity. *Semiconductor Science and Technology*, **2003**, 18, S386-S394	1.8	22

23	Probabilistic instantaneous quantum computation. *Physical Review A*, **2003**, 67,	2.6	8
22	Concentration of higher dimensional entanglement: qutrits of photon orbital angular momentum. *Physical Review Letters*, **2003**, 91, 227902	7.4	205
21	Experimental nonlocality proof of quantum teleportation and entanglement swapping. *Physical Review Letters*, **2002**, 88, 017903	7.4	177
20	Cloning of symmetric d-level photonic states in physical systems. *Physical Review A*, **2002**, 66,	2.6	11
19	Superpositions of the orbital angular momentum for applications in quantum experiments. *Journal of Optics B: Quantum and Semiclassical Optics*, **2002**, 4, S47-S51		145
18	No time loophole in Bell's theorem: the Hess-Philipp model is nonlocal. *Proceedings of the National Academy of Sciences of the United States of America*, **2002**, 99, 14632-5	11.5	20
17	Experimental two-photon, three-dimensional entanglement for quantum communication. *Physical Review Letters*, **2002**, 89, 240401	7.4	451
16	Quantum Dots: Multidimensional Quantum States of the Angular. *Optics and Photonics News*, **2002**, 13, 54	1.9	10
15	Condensation of semiconductor microcavity exciton polaritons. *Science*, **2002**, 298, 199-202	33.3	598
14	Bell Theorem for Space-Like Separation **2002**, 155-162		
13	Entanglement of the orbital angular momentum states of photons. *Nature*, **2001**, 412, 313-6	50.4	2102
12	Experimental demonstration of four-photon entanglement and high-fidelity teleportation. *Physical Review Letters*, **2001**, 86, 4435-8	7.4	430
11	Photonic entanglement for fundamental tests and quantum communication. *Quantum Information and Computation*, **2001**, 1, 3-56	0.9	215
10	Optimal photon cloning. *Physical Review A*, **2000**, 62,	2.6	25
9	Quantum cryptography with entangled photons. *Physical Review Letters*, **2000**, 84, 4729-32	7.4	608
8	Optimal quantum cloning via stimulated emission. *Physical Review Letters*, **2000**, 84, 2993-6	7.4	128
7	A fast and compact quantum random number generator. *Review of Scientific Instruments*, **2000**, 71, 1675-1680	1.6	265
6	Optimal quantum cloning and universal NOT without quantum gates. *Journal of Modern Optics*, **2000**, 47, 233-246	1.1	13

5	High-Efficiency Quantum Interrogation Measurements via the Quantum Zeno Effect. *Physical Review Letters*, **1999**, 83, 4725-4728	7.4	136
4	A Bell Experiment under Strict Einstein Locality Conditions **1999**, 267-269		
3	Violation of Bell's Inequality under Strict Einstein Locality Conditions. *Physical Review Letters*, **1998**, 81, 5039-5043	7.4	923
2	All-fiber three-path Mach-Zehnder interferometer. *Optics Letters*, **1996**, 21, 302-4	3	64
1	Two-photon interference in optical fiber multiports. *Physical Review A*, **1996**, 54, 893-897	2.6	32