

Tobias Heindel

List of Publications by Year in descending order

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92
papers

2,570
citations

172457
29
h-index

189892
50
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94
all docs

94
docs citations

94
times ranked

1908
citing authors

#	ARTICLE	IF	CITATIONS
1	Highly indistinguishable photons from deterministic quantum-dot microlenses utilizing three-dimensional in situ electron-beam lithography. <i>Nature Communications</i> , 2015, 6, 7662.	12.8	252
2	Electrically driven quantum dot-micropillar single photon source with 34% overall efficiency. <i>Applied Physics Letters</i> , 2010, 96, .	3.3	176
3	Exploring Dephasing of a Solid-State Quantum Emitter via Time- and Temperature-Dependent Hong-Ou-Mandel Experiments. <i>Physical Review Letters</i> , 2016, 116, 033601.	7.8	144
4	<i>In situ</i> electron-beam lithography of deterministic single-quantum-dot mesa-structures using low-temperature cathodoluminescence spectroscopy. <i>Applied Physics Letters</i> , 2013, 102, .	3.3	94
5	Low threshold electrically pumped quantum dot-micropillar lasers. <i>Applied Physics Letters</i> , 2008, 93, .	3.3	90
6	Single photon emission from a site-controlled quantum dot-micropillar cavity system. <i>Applied Physics Letters</i> , 2009, 94, 111111.	3.3	86
7	Deterministic Integration of Quantum Dots into on-Chip Multimode Interference Beamsplitters Using in Situ Electron Beam Lithography. <i>Nano Letters</i> , 2018, 18, 2336-2342.	9.1	85
8	Quantum key distribution using quantum dot single-photon emitting diodes in the red and near infrared spectral range. <i>New Journal of Physics</i> , 2012, 14, 083001.	2.9	80
9	Single photon emission from positioned GaAs/AlGaAs photonic nanowires. <i>Applied Physics Letters</i> , 2010, 96, 211117.	3.3	77
10	Single site-controlled In(Ga)As/GaAs quantum dots: growth, properties and device integration. <i>Nanotechnology</i> , 2009, 20, 434012.	2.6	71
11	Demonstration of strong coupling via electro-optical tuning in high-quality QD-micropillar systems. <i>Optics Express</i> , 2008, 16, 15006.	3.4	70
12	A stand-alone fiber-coupled single-photon source. <i>Scientific Reports</i> , 2018, 8, 1340.	3.3	68
13	Quantum Communication Using Semiconductor Quantum Dots. <i>Advanced Quantum Technologies</i> , 2022, 5, .	3.9	64
14	Single Quantum Dot with Microlens and 3D-Printed Micro-objective as Integrated Bright Single-Photon Source. <i>ACS Photonics</i> , 2017, 4, 1327-1332.	6.6	63
15	An electrically driven cavity-enhanced source of indistinguishable photons with 61% overall efficiency. <i>APL Photonics</i> , 2016, 1, .	5.7	60
16	A bright triggered twin-photon source in the solid state. <i>Nature Communications</i> , 2017, 8, 14870.	12.8	58
17	Optimized designs for telecom-wavelength quantum light sources based on hybrid circular Bragg gratings. <i>Optics Express</i> , 2019, 27, 36824.	3.4	55
18	Single-photon emission at a rate of 143â€™MHz from a deterministic quantum-dot microlens triggered by a mode-locked vertical-external-cavity surface-emitting laser. <i>Applied Physics Letters</i> , 2015, 107, .	3.3	52

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19	Microcavity enhanced single photon emission from an electrically driven site-controlled quantum dot. Applied Physics Letters, 2012, 100, .	3.3	47
20	Electrically driven single photon source based on a site-controlled quantum dot with self-aligned current injection. Applied Physics Letters, 2012, 101, .	3.3	44
21	Photon-Number-Resolving Transition-Edge Sensors for the Metrology of Quantum Light Sources. Journal of Low Temperature Physics, 2018, 193, 1243-1250.	1.4	43
22	Free space quantum key distribution over 500 meters using electrically driven quantum dot single-photon sources—a proof of principle experiment. New Journal of Physics, 2014, 16, 043003.	2.9	41
23	Deterministically fabricated solid-state quantum-light sources. Journal of Physics Condensed Matter, 2020, 32, 153003.	1.8	41
24	Tools for the performance optimization of single-photon quantum key distribution. Npj Quantum Information, 2020, 6, .	6.7	40
25	Whispering gallery mode lasing in electrically driven quantum dot micropillars. Applied Physics Letters, 2010, 97, .	3.3	34
26	Quantum efficiency and oscillator strength of site-controlled InAs quantum dots. Applied Physics Letters, 2010, 96, .	3.3	34
27	Nonlinear photoluminescence spectra from a quantum-dot“cavity system: Interplay of pump-induced stimulated emission and anharmonic cavity QED. Physical Review B, 2010, 81, .	3.2	31
28	Generating single photons at gigahertz modulation-speed using electrically controlled quantum dot microlenses. Applied Physics Letters, 2016, 108, .	3.3	31
29	Electrically Tunable Single-Photon Source Triggered by a Monolithically Integrated Quantum Dot Microlaser. ACS Photonics, 2017, 4, 790-794.	6.6	31
30	Quantum metrology of solid-state single-photon sources using photon-number-resolving detectors. New Journal of Physics, 2019, 21, 035007.	2.9	31
31	Two-photon interference from remote deterministic quantum dot microlenses. Applied Physics Letters, 2017, 110, .	3.3	30
32	The role of optical excitation power on the emission spectra of a strongly coupled quantum dot-micropillar system. Optics Express, 2009, 17, 12821.	3.4	29
33	Accessing the dark exciton spin in deterministic quantum-dot microlenses. APL Photonics, 2017, 2, .	5.7	28
34	Operating single quantum emitters with a compact Stirling cryocooler. Review of Scientific Instruments, 2015, 86, 013113.	1.3	27
35	Deterministically fabricated quantum dot single-photon source emitting indistinguishable photons in the telecom O-band. Applied Physics Letters, 2020, 116, .	3.3	27
36	Deterministically fabricated spectrally-tunable quantum dot based single-photon source. Optical Materials Express, 2020, 10, 76.	3.0	26

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37	A quantum key distribution testbed using a plug&play telecom-wavelength single-photon source. Applied Physics Reviews, 2022, 9, .	11.3	24
38	Swing-Up of Quantum Emitter Population Using Detuned Pulses. PRX Quantum, 2021, 2, .	9.2	24
39	Efficient single-photon source based on a deterministically fabricated single quantum dot - microstructure with backside gold mirror. Applied Physics Letters, 2017, 111, .	3.3	23
40	All-optical depletion of dark excitons from a semiconductor quantum dot. Applied Physics Letters, 2015, 106, .	3.3	21
41	Bright Single-Photon Sources Based on Anti-Reflection Coated Deterministic Quantum Dot Microlenses. Technologies, 2016, 4, 1.	5.1	21
42	Strong light-matter coupling in the presence of lasing. Physical Review A, 2017, 96, .	2.5	20
43	Electrically Driven Quantum Dot Micropillar Light Sources. IEEE Journal of Selected Topics in Quantum Electronics, 2011, 17, 1670-1680.	2.9	17
44	Advanced <i>in-situ</i> electron-beam lithography for deterministic nanophotonic device processing. Review of Scientific Instruments, 2015, 86, 073903.	1.3	17
45	A Pulsed Nonclassical Light Source Driven by an Integrated Electrically Triggered Quantum Dot Microlaser. IEEE Journal of Selected Topics in Quantum Electronics, 2015, 21, 681-689.	2.9	17
46	On-chip optoelectronic feedback in a micropillar laser-detector assembly. Optica, 2017, 4, 303.	9.3	16
47	Enhancing the photon-extraction efficiency of site-controlled quantum dots by deterministically fabricated microlenses. Optics Communications, 2018, 413, 162-166.	2.1	15
48	Site-controlled In(Ga)As/GaAs quantum dots for integration into optically and electrically operated devices. Journal of Crystal Growth, 2011, 323, 194-197.	1.5	13
49	Correlations between axial and lateral emission of coupled quantum dotâ€micropillar cavities. Physical Review B, 2015, 91, .	3.2	13
50	Micropillars with a controlled number of site-controlled quantum dots. Applied Physics Letters, 2018, 112, .	3.3	11
51	Status and future prospects of laser fusion and high power laser applications. Journal of Physics: Conference Series, 2010, 244, 012005.	0.4	7
52	On-chip light detection using monolithically integrated quantum dot micropillars. Applied Physics Letters, 2016, 108, .	3.3	7
53	Fiber-pigtailing quantum-dot cavity-enhanced light emitting diodes. Applied Physics Letters, 2021, 119, .	3.3	7
54	Radiometric characterization of a triggered narrow-bandwidth single-photon source and its use for the calibration of silicon single-photon avalanche detectors. Metrologia, 2020, 57, 055001.	1.2	7

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55	Intrinsic circularly polarized exciton emission in a twisted van der Waals heterostructure. Physical Review B, 2022, 105, .	3.2	6
56	Cesium-Vapor-Based Delay of Single Photons Emitted by Deterministically Fabricated Quantum Dot Microlenses. Advanced Quantum Technologies, 2020, 3, 1900071.	3.9	5
57	Single-Photon Sources Based on Deterministic Quantum-Dot Microlenses. Nano-optics and Nanophotonics, 2017, , 199-232.	0.2	5
58	Controlling the gain contribution of background emitters in few-quantum-dot microlasers. New Journal of Physics, 2018, 20, 023036.	2.9	3
59	Highly efficient electrically triggered quantum dot micropillar single photon source. Journal of Physics: Conference Series, 2010, 245, 012005.	0.4	2
60	Deterministic Quantum Devices for Optical Quantum Communication. Springer Series in Solid-state Sciences, 2020, , 285-359.	0.3	2
61	Stressor-Induced Site Control of Quantum Dots for Single-Photon Sources. Springer Series in Solid-state Sciences, 2020, , 53-90.	0.3	2
62	Cavity quantum electrodynamics studies with site-controlled InGaAs quantum dots integrated into high quality microcavities. , 2011, , .		1
63	Hybrid microcavity for superminiature single quantum dot based emitters. Optoelectronics, Instrumentation and Data Processing, 2017, 53, 178-183.	0.6	1
64	A bright triggered twin-photon source in the solid state. , 2017, , .		1
65	Deterministic Integration of Quantum Dots into On-Chip Multi-Mode Interference Couplers Via in-Situ Electron Beam Lithography. , 2019, , .		1
66	Cavity quantum electrodynamics effects in electrically driven high-Q micropillar cavities. , 2008, , .		0
67	Cavity quantum electrodynamics in electrically addressed quantum dot-micropillar cavities. , 2008, , .		0
68	Quantum Dot Microlasers. , 2009, , .		0
69	Light-matter interaction of a site-controlled quantum dot- micropillar cavity system. , 2009, , .		0
70	Quantum dot micropillar lasers. Proceedings of SPIE, 2009, , .	0.8	0
71	cQED enhanced light detection and emission in electrically contacted quantum dot micropillars. , 2010, , .		0
72	Semiconductor quantum light emitters and sensors. , 2010, , .		0

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73	Highly Efficient Electrically Driven Quantum Dot Micropillar Single Photon Sources. , 2010, , .		0
74	Electrically driven quantum dot micropillar single photon sources. , 2010, , .		0
75	Site-controlled In(Ga)As quantum dots with narrow emission linewidth for integration into nanophotonic devices. , 2011, , .		0
76	Physics of micropillars with quantum dots - growth, patterning, and spectroscopy. , 2011, , .		0
77	Single photon sources for quantum information applications. , 2012, , .		0
78	Self-aligned quantum-dot growth for single-photon sources. , 2013, , .		0
79	Free space quantum key distribution over 500 meters using electrically driven quantum dot single photon sources. , 2013, , .		0
80	Advanced Quantum Light Sources: Modelling and Realization by Deterministic Nanofabrication Technologies. , 2014, , .		0
81	Free Space Quantum Key Distribution over 500 Meters using Electrically Triggered Quantum Dot Single-Photon Sources. , 2014, , .		0
82	Boosting the photon-extraction efficiency of nanophotonic structures by deterministic microlenses. , 2014, , .		0
83	Subminiature emitters based on a single (111) In(Ga)As quantum dot and hybrid microcavity. Semiconductors, 2017, 51, 1399-1402.	0.5	0
84	High- $\hat{\Gamma}^2$ micropillar lasers with site-controlled quantum dots fabricated via a buried stressor approach. , 2017, , .		0
85	Two-photon interference from remote deterministic quantum dot microlenses. , 2017, , .		0
86	Cavity Quantum Electrodynamics in Electrically Driven Quantum Dot-Micropillar Cavities. , 2009, , .		0
87	Magneto-Optical Cavity Quantum Electrodynamics Effects in Quantum Dot Micropillar Systems. , 2010, , .		0
88	Fabrication of Deterministic Quantum Light Sources using Cathodoluminescence Lithography. , 2014, , .		0
89	Indistinguishable Photons from Deterministically Fabricated Quantum Dot Microlenses. , 2015, , .		0
90	Nanolasers operating in the regime of strong coupling (Conference Presentation). , 2018, , .		0

#	ARTICLE	IF	CITATIONS
91	Photon-number-resolving transition-edge sensors for the metrology of photonic microstructures based on semiconductor quantum dots. , 2019, , .		0
92	A Quantum Key Distribution Testbed Using Plug&Play Telecom-Wavelength Single-Photons. , 2021, , .		0