Yasutomo Ota

List of Publications by Year in descending order

127 papers	2,781 citations	218677 26 h-index	182427 51 g-index
128 all docs	128 docs citations	128 times ranked	2554 citing authors

#	Article	IF	Citations
1	Laser oscillation in a strongly coupled single-quantum-dotâ€“nanocavity system. Nature Physics, 2010, 6, 279-283.	16.7	300
2	Photonic crystal nanocavity based on a topological corner state. Optica, 2019, 6, 786.	9.3	274
3	Active topological photonics. Nanophotonics, 2020, 9, 547-567.	6.0	170
4	Room-temperature lasing in a single nanowire with quantum dots. Nature Photonics, 2015, 9, 501-505.	31.4	159
5	Topological photonic crystal nanocavity laser. Communications Physics, 2018, 1, .	5.3	154
6	Spontaneous Two-Photon Emission from a Single Quantum Dot. Physical Review Letters, 2011, 107, 233602.	7.8	124
7	Photonic crystal nanocavity laser with a single quantum dot gain. Optics Express, 2009, 17, 15975.	3.4	110
8	Slow light waveguides in topological valley photonic crystals. Optics Letters, 2020, 45, 2648.	3.3	91
9	Strong coupling between a photonic crystal nanobeam cavity and a single quantum dot. Applied Physics Letters, 2011, 98, .	3.3	84
10	Transfer-printed single-photon sources coupled to wire waveguides. Optica, 2018, 5, 691.	9.3	76
11	A Nanowire-Based Plasmonic Quantum Dot Laser. Nano Letters, 2016, 16, 2845-2850.	9.1	64
12	Recent progress in topological waveguides and nanocavities in a semiconductor photonic crystal platform [Invited]. Optical Materials Express, 2021, 11, 319.	3.0	55
13	Thresholdless quantum dot nanolaser. Optics Express, 2017, 25, 19981.	3.4	53
14	Quantum-dot single-photon source on a CMOS silicon photonic chip integrated using transfer printing. APL Photonics, 2019, 4, 036105.	5.7	48
15	Site-controlled formation of InAs/GaAs quantum-dot-in-nanowires for single photon emitters. Applied Physics Letters, 2012, 100, .	3.3	47
16	Vacuum Rabi splitting with a single quantum dot embedded in a H1 photonic crystal nanocavity. Applied Physics Letters, 2009, 94, .	3.3	41
17	Experimental demonstration of topological slow light waveguides in valley photonic crystals. Optics Express, 2021, 29, 13441.	3.4	40
18	High Q H1 photonic crystal nanocavities with efficient vertical emission. Optics Express, 2012, 20, 28292.	3.4	39

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19	GaAs valley photonic crystal waveguide with light-emitting InAs quantum dots. Applied Physics Express, 2019, 12, 062005.	2.4	39
20	Circular dichroism in a three-dimensional semiconductor chiral photonic crystal. Applied Physics Letters, 2014, 105, .	3.3	38
21	Strongly Coupled Single-Quantum-Dotâ€“Cavity System Integrated on a CMOS-Processed Silicon Photonic Chip. Physical Review Applied, 2019, 11, .	3.8	38
22	Cavity Quantum Electrodynamics and Lasing Oscillation in Single Quantum Dot-Photonic Crystal Nanocavity Coupled Systems. IEEE Journal of Selected Topics in Quantum Electronics, 2012, 18, 1818-1829.	2.9	31
23	Vacuum Rabi Spectra of a Single Quantum Emitter. Physical Review Letters, 2015, 114, 143603.	7.8	31
24	Microcavity-based generation of full PoincarÃ© beams with arbitrary skyrmion numbers. Physical Review Research, 2021, 3, .	3.6	31
25	Surface-passivated high-Q GaAs photonic crystal nanocavity with quantum dots. APL Photonics, 2020, 5, .	5.7	29
26	In situ wavelength tuning of quantum-dot single-photon sources integrated on a CMOS-processed silicon waveguide. Applied Physics Letters, 2020, 116, .	3.3	29
27	Large vacuum Rabi splitting between a single quantum dot and an H0 photonic crystal nanocavity. Applied Physics Letters, 2018, 112, .	3.3	27
28	Highly uniform, multi-stacked InGaAs/GaAs quantum dots embedded in a GaAs nanowire. Applied Physics Letters, 2014, 105, .	3.3	26
29	Transfer-printed quantum-dot nanolasers on a silicon photonic circuit. Applied Physics Express, 2018, 11, 072002.	2.4	24
30	Giant optical rotation in a three-dimensional semiconductor chiral photonic crystal. Optics Express, 2013, 21, 29905.	3.4	23
31	Position dependent optical coupling between single quantum dots and photonic crystal nanocavities. Applied Physics Letters, 2016, 109, .	3.3	23
32	Nanocavity-based self-frequency conversion laser. Optics Express, 2013, 21, 19778.	3.4	21
33	Investigation of the Spectral Triplet in Strongly Coupled Quantum Dotâ€“Nanocavity System. Applied Physics Express, 2009, 2, 122301.	2.4	20
34	Three-dimensional photonic crystal simultaneously integrating a nanocavity laser and waveguides. Optica, 2019, 6, 296.	9.3	20
35	Zero-cell photonic crystal nanocavity laser with quantum dot gain. Applied Physics Letters, 2010, 97, .	3.3	19
36	Synthetic dimension band structures on a Si CMOS photonic platform. Science Advances, 2022, 8, eabk0468.	10.3	19

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37	Unidirectional output from a quantum-dot single-photon source hybrid integrated on silicon. Optics Express, 2021, 29, 37117.	3.4	16
38	Topologicallyâ€Protected Singleâ€Photon Sources with Topological Slow Light Photonic Crystal Waveguides. Laser and Photonics Reviews, 2022, 16, .	8.7	16
39	Enhanced photon emission and absorption of single quantum dot in resonance with two modes in photonic crystal nanocavity. Applied Physics Letters, 2008, 93, 183114.	3.3	15
40	Method for generating a photonic NOON state with quantum dots in coupled nanocavities. Physical Review A, 2017, 96, .	2.5	15
41	Single Plasmon Generation in an InAs/GaAs Quantum Dot in a Transfer-Printed Plasmonic Microring Resonator. ACS Photonics, 2019, 6, 1106-1110.	6.6	15
42	Large Vacuum Rabi Splitting in Single Self-Assembled Quantum Dot-Nanocavity System. Applied Physics Express, 0, 1, 072102.	2.4	14
43	Photonic band-edge micro lasers with quantum dot gain. Optics Express, 2009, 17, 640.	3.4	14
44	Spin dynamics of excited trion states in a single InAs quantum dot. Physical Review B, 2010, 81, .	3.2	14
45	Growth of InGaAs/GaAs nanowire-quantum dots on AlGaAs/GaAs distributed Bragg reflectors for laser applications. Journal of Crystal Growth, 2017, 468, 144-148.	1.5	13
46	Optical coupling between atomically thin black phosphorus and a two dimensional photonic crystal nanocavity. Applied Physics Letters, 2017, 110, .	3.3	13
47	Circularly polarized vacuum field in three-dimensional chiral photonic crystals probed by quantum dot emission. Physical Review B, 2017, 96, .	3.2	13
48	High guided modeâ€“cavity mode coupling for an efficient extraction of spontaneous emission of a single quantum dot embedded in a photonic crystal nanobeam cavity. Physical Review B, 2012, 86, .	3.2	12
49	Suppression of indefinite peaks in InAs/GaAs quantum dot spectrum by low temperature capping in the indium-flush method. Physica E: Low-Dimensional Systems and Nanostructures, 2010, 42, 2753-2756.	2.7	11
50	Measuring the second-order coherence of a nanolaser by intracavity frequency doubling. Physical Review A, 2014, 89, .	2.5	11
51	Time-resolved vacuum Rabi oscillations in a quantum-dotâ€“nanocavity system. Physical Review B, 2018, 97, .	3.2	11
52	Topological Band Gaps Enlarged in Epsilon-Near-Zero Magneto-Optical Photonic Crystals. ACS Photonics, 2022, 9, 1621-1626.	6.6	11
53	Enhancement of Valence Band Mixing in Individual InAs/GaAs Quantum Dots by Rapid Thermal Annealing. Japanese Journal of Applied Physics, 2013, 52, 125001.	1.5	9
54	Demonstration of a three-dimensional photonic crystal nanocavity in a âŸ¨110âŸ©-layered diamond structure. Applied Physics Letters, 2015, 107, .	3.3	9

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55	Asymmetric out-of-plane power distribution in a two-dimensional photonic crystal nanocavity. Optics Letters, 2015, 40, 3372.	3.3	8
56	Scheme for media conversion between electronic spin and photonic orbital angular momentum based on photonic nanocavity. Optics Express, 2018, 26, 21219.	3.4	8
57	A large-scale single-mode array laser based on a topological edge mode. Nanophotonics, 2022, 11, 2169-2181.	6.0	8
58	Effects of growth temperature of partial GaAs cap on InAs quantum dots in Inâ€flush process for single dot spectroscopy. Physica Status Solidi C: Current Topics in Solid State Physics, 2011, 8, 248-250.	0.8	7
59	Self-frequency summing in quantum dot photonic crystal nanocavity lasers. Applied Physics Letters, 2013, 103, 243115.	3.3	7
60	Nanowireâ€“quantum-dot lasers on flexible membranes. Applied Physics Express, 2018, 11, 065002.	2.4	7
61	Charged and neutral biexcitonâ€“exciton cascade in a single quantum dot within a photonic bandgap. Physica E: Low-Dimensional Systems and Nanostructures, 2010, 42, 2563-2566.	2.7	6
62	Growth of highâ€quality InAs quantum dots embedded in GaAs nanowire structures on Si substrates. Physica Status Solidi C: Current Topics in Solid State Physics, 2013, 10, 1496-1499.	0.8	6
63	Electro-Mechanical Q Factor Control of Photonic Crystal Nanobeam Cavity. Japanese Journal of Applied Physics, 2013, 52, 04CG01.	1.5	6
64	Highâ€•Q nanocavities in semiconductorâ€based threeâ€dimensional photonic crystals. Electronics Letters, 2018, 54, 305-307.	1.0	6
65	Fabrication and optical characterization of photonic crystal nanocavities with electrodes for gate-defined quantum dots. Japanese Journal of Applied Physics, 2020, 59, SGGI05.	1.5	6
66	Competing influence of an in-plane electric field on the Stark shifts in a semiconductor quantum dot. Applied Physics Letters, 2011, 99, 181109.	3.3	5
67	Formation and optical properties of multi-stack InGaAs quantum dots embedded in GaAs nanowires by selective metalorganic chemical vapor deposition. Journal of Crystal Growth, 2013, 370, 299-302.	1.5	5
68	Demonstration of lasing oscillation in a plasmonic microring resonator containing quantum dots fabricated by transfer printing. Japanese Journal of Applied Physics, 2017, 56, 102001.	1.5	5
69	Neutralization of positively charged excitonic state in single InAs quantum dot by Si delta doping. Journal of Physics: Conference Series, 2010, 245, 012088.	0.4	4
70	Observation of unique photon statistics of single artificial atom laser. Physica E: Low-Dimensional Systems and Nanostructures, 2010, 42, 2489-2492.	2.7	3
71	<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mi>p</mml:mi></mml:math>-shell carrier assisted dynamic nuclear spin polarization in single quantum dots at zero external magnetic field. Physical Review B, 2016, 93, .	3.2	3
72	Enhanced optical Stark shifts in a single quantum dot embedded in an H1 photonic crystal nanocavity. Applied Physics Express, 2017, 10, 062002.	2.4	3

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73	Manipulation of dynamic nuclear spin polarization in single quantum dots by photonic environment engineering. Physical Review B, 2017, 95, .	3.2	3
74	Photoluminescence properties as a function of growth mechanism for GaSb/GaAs quantum dots grown on Ge substrates. Journal of Applied Physics, 2019, 126, .	2.5	3
75	Spin-dependent directional emission from a quantum dot ensemble embedded in an asymmetric waveguide. Optics Letters, 2019, 44, 3749.	3.3	3
76	New method to isolate and distribute photoluminescence emissions from InAs quantum dots over a wide-wavelength range. Journal of Crystal Growth, 2011, 323, 250-253.	1.5	2
77	Optical Properties of Site-Controlled InGaAs Quantum Dots Embedded in GaAs Nanowires by Selective Metalorganic Chemical Vapor Deposition. Japanese Journal of Applied Physics, 2012, 51, 11PE13.	1.5	2
78	Nanocavity based on a topological corner state in a two-dimensional photonic crystal. , 2019, , .		2
79	Strong coupling between a single quantum dot and an L4/3 photonic crystal nanocavity. Applied Physics Express, 2020, 13, 082009.	2.4	2
80	Time-resolved physical spectrum in cavity quantum electrodynamics. Physical Review Research, 2022, 4, .	3.6	2
81	Optical Properties of Site-Controlled InGaAs Quantum Dots Embedded in GaAs Nanowires by Selective Metalorganic Chemical Vapor Deposition. Japanese Journal of Applied Physics, 2012, 51, 11PE13.	1.5	1
82	Nanocavity-enhanced Optical Stark Shift in a Single Quantum Dot under Extremely Low Excitation Power. , 2012, , .		1
83	Intra-cavity frequency doubling in photonic crystal nanocavity quantum dot lasers. , 2012, , .		1
84	Room-temperature lasing in GaAs nanowires embedding multi-stacked InGaAs/GaAs quantum dots. , 2015, , .		1
85	A photonic crystal nanocavity with a quantum dot active region embedded by MBE regrowth. , 2017, , .		1
86	Two dimensional photonic crystal nanocavities with InAs/GaAs quantum dot active regions embedded by MBE regrowth. Japanese Journal of Applied Physics, 2018, 57, 08PD03.	1.5	1
87	Advanced Photonic Crystal Nanocavity Quantum Dot Lasers. IEICE Transactions on Electronics, 2018, E101.C, 553-560.	0.6	1
88	Photonic Crystal Nanocavity Laser with Single Quantum Dot Gain. , 2009, , .		1
89	An On-chip Full PoincarÃ© Beam Emitter Based on an Optical Micro-ring Cavity. , 2019, , .		1
90	Fabrication and characterization of photonic crystal nanocavity with degenerated cavity modes for generating entangled photon pairs using quantum dots. , 2007, , .		0

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91	Wavelength Tunable Quantum Dot Single-Photon Source with a Side Gate. Japanese Journal of Applied Physics, 2012, 51, 02BJ05.	1.5	0
92	Self-frequency summing in photonic crystal nanocavity quantum dot lasers. , 2013, , .		0
93	Nonlinear photonics in single quantum dot-photonic crystal nanocavity couples systems. , 2013, , .		0
94	Large vacuum Rabi splitting in an H0 photonic crystal nanocavity-quantum dot system. , 2013, , .		0
95	Wide range Q-factor control in a photonic crystal nanobeam cavity incorporating quantum dots. , 2013, , .		0
96	Multi-color visible light generation by self-frequency doubling in photonic crystal nanocavity quantum dot lasers. , 2013, , .		0
97	Measurement of the Second Order Coherence of a Nanolaser Through Its Intra-cavity Second Harmonic Generation. , 2014, , .		0
98	Influence of the relative positions of quantum dots and nanocavities on the optical coupling strength. , 2015, , .		0
99	Circularly Polarized Light Emission of Quantum Dots at the Band Edge of Three-Dimensional Chiral Photonic Crystals. , 2015, , .		0
100	Effect of metal side claddings on emission decay rate of single quantum dots embedded in a subwavelength semiconductor waveguide. , 2015, , .		0
101	Control of quantum dot light emission by chiral photonic crystal structures. , 2016, , .		0
102	Demonstration of a plasmonic laser using quantum dot gain medium. , 2016, , .		0
103	Publisher's Note: Method for generating a photonic NOON state with quantum dots in coupled nanocavities [Phys. Rev. A 96 , 013853 (2017)]. Physical Review A, 2017, 96, .	2.5	0
104	Synthetic Dimension Photonics on a Si CMOS Platform. , 2021, , .		0
105	Single photon generation in a topological slow light waveguide. , 2021, , .		0
106	Efficient excitation and emission of single quantum dot by simultaneous coupling to two different photonic crystal nanocavity modes. , 2008, , .		0
107	Achievement of ultra-low threshold excitation power (8 nW) in a nearly-single quantum dot nanocavity laser. , 2008, , .		0
108	Phonon-Induced Asymmetry in Vacuum Rabi Doublet for Coupled Quantum Dot-Cavity System. , 2010, , .		0

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109	Cavity Quantum Electrodynamics in Semiconductors: Quantum Dot-Photonic Crystal Nanocavity Coupled Systems. The Review of Laser Engineering, 2013, 41, 485.	0.0	0
110	Single Emitter Vacuum Rabi Splitting Measured Through Direct Free Space Spontaneous Emission. , 2015, , .		0
111	Control of Light Polarization using Photonic and Phononic Crystals. , 2016, , .		0
112	Effect of metal side claddings on emission decay rates of single quantum dots embedded in a sub-wavelength semiconductor waveguide. Japanese Journal of Applied Physics, 2016, 55, 08RC02.	1.5	0
113	Guiding of laser light from a nanocavity in a three-dimensional photonic crystal. , 2017, , .		0
114	Time-Domain Observation of Vacuum Rabi Oscillations in a Strongly Coupled Quantum Dot-Nanocavity System. , 2017, , .		0
115	Thresholdless lasing with quantum dot gain. , 2017, , .		0
116	Quantum-dot nanolasers on Si photonic circuits. , 2018, , .		0
117	Topological confinement of light in photonic crystals. , 2018, , .		0
118	Lasing in a topological photonic crystal nanocavity. , 2018, , .		0
119	Quantum dot single photon sources transfer-printed on wire waveguides. , 2018, , .		0
120	Quantum-dot single-photon source on a CMOS-processed silicon waveguide. , 2019, , .		0
121	Hybrid integration of quantum dot-nanocavity systems on silicon. , 2019, , .		0
122	Topological Photonic Crystal Nanocavities. The Review of Laser Engineering, 2019, 47, 351.	0.0	0
123	Local tuning of transfer-printed quantum-dot single-photon sources on a CMOS silicon chip. , 2019, , .		0
124	Slow Light Waveguide Based on Topological Edge States in Valley Photonic Crystals. , 2020, , .		0
125	Efficient single photon sources transfer-printed on Si with unidirectional light output. , 2020, , .		0
126	Fabrication of valley photonic crystals with CMOS-compatible process. , 2021, , .		0

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127	Hybrid integrated light sources on silicon assembled by transfer printing. , 2021, , .		0