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	Synthetic dimension band structures on a Si CMOS photonic platform. Science Advances, 2022, 8, eabk0468.	10.3	19
2	A large-scale single-mode array laser based on a topological edge mode. Nanophotonics, 2022, 11, 2169-2181.	6.0	8
3	Time-resolved physical spectrum in cavity quantum electrodynamics. Physical Review Research, 2022, 4, .	3.6	2
4	Topological Band Gaps Enlarged in Epsilon-Near-Zero Magneto-Optical Photonic Crystals. ACS Photonics, 2022, 9, 1621-1626.	6.6	11
5	Topologicallyâ€Protected Singleâ€Photon Sources with Topological Slow Light Photonic Crystal Waveguides. Laser and Photonics Reviews, 2022, 16, .	8.7	16
6	Synthetic Dimension Photonics on a Si CMOS Platform. , 2021, , .		0
7	Single photon generation in a topological slow light waveguide. , 2021, , .		0
8	Recent progress in topological waveguides and nanocavities in a semiconductor photonic crystal platform [Invited]. Optical Materials Express, 2021, 11, 319.	3.0	55
9	Experimental demonstration of topological slow light waveguides in valley photonic crystals. Optics Express, 2021, 29, 13441.	3.4	40
10	Microcavity-based generation of full PoincarÃ© beams with arbitrary skyrmion numbers. Physical Review Research, 2021, 3, .	3.6	31
11	Unidirectional output from a quantum-dot single-photon source hybrid integrated on silicon. Optics Express, 2021, 29, 37117.	3.4	16
12	Fabrication of valley photonic crystals with CMOS-compatible process. , 2021, , .		0
13	Hybrid integrated light sources on silicon assembled by transfer printing. , 2021, , .		0
14	Surface-passivated high-Q GaAs photonic crystal nanocavity with quantum dots. APL Photonics, 2020, 5, .	5.7	29
15	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
16	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
17	Slow light waveguides in topological valley photonic crystals. Optics Letters, 2020, 45, 2648.	3.3	91
18	Active topological photonics. Nanophotonics, 2020, 9, 547-567.	6.0	170

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19	Slow Light Waveguide Based on Topological Edge States in Valley Photonic Crystals. , 2020, , .		0
20	Strong coupling between a single quantum dot and an L4/3 photonic crystal nanocavity. Applied Physics Express, 2020, 13, 082009.	2.4	2
21	Efficient single photon sources transfer-printed on Si with unidirectional light output. , 2020, , .		0
22	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
23	GaAs valley photonic crystal waveguide with light-emitting InAs quantum dots. Applied Physics Express, 2019, 12, 062005.	2.4	39
24	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
25	Strongly Coupled Single-Quantum-Dotâ€“Cavity System Integrated on a CMOS-Processed Silicon Photonic Chip. Physical Review Applied, 2019, 11, .	3.8	38
26	Quantum-dot single-photon source on a CMOS silicon photonic chip integrated using transfer printing. APL Photonics, 2019, 4, 036105.	5.7	48
27	Spin-dependent directional emission from a quantum dot ensemble embedded in an asymmetric waveguide. Optics Letters, 2019, 44, 3749.	3.3	3
28	Three-dimensional photonic crystal simultaneously integrating a nanocavity laser and waveguides. Optica, 2019, 6, 296.	9.3	20
29	Photonic crystal nanocavity based on a topological corner state. Optica, 2019, 6, 786.	9.3	274
30	Quantum-dot single-photon source on a CMOS-processed silicon waveguide. , 2019, , .		0
31	An On-chip Full PoincarÃ© Beam Emitter Based on an Optical Micro-ring Cavity. , 2019, , .		1
32	Hybrid integration of quantum dot-nanocavity systems on silicon. , 2019, , .		0
33	Nanocavity based on a topological corner state in a two-dimensional photonic crystal. , 2019, , .		2
34	Topological Photonic Crystal Nanocavities. The Review of Laser Engineering, 2019, 47, 351.	0.0	0
35	Local tuning of transfer-printed quantum-dot single-photon sources on a CMOS silicon chip. , 2019, , .		0
36	Large vacuum Rabi splitting between a single quantum dot and an H0 photonic crystal nanocavity. Applied Physics Letters, 2018, 112, .	3.3	27

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37	Topological photonic crystal nanocavity laser. Communications Physics, 2018, 1, .	5.3	154
38	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
39	Nanowireâ€“quantum-dot lasers on flexible membranes. Applied Physics Express, 2018, 11, 065002.	2.4	7
40	Highâ€•Q nanocavities in semiconductorâ€based threeâ€dimensional photonic crystals. Electronics Letters, 2018, 54, 305-307.	1.0	6
41	Advanced Photonic Crystal Nanocavity Quantum Dot Lasers. IEICE Transactions on Electronics, 2018, E101.C, 553-560.	0.6	1
42	Transfer-printed single-photon sources coupled to wire waveguides. Optica, 2018, 5, 691.	9.3	76
43	Time-resolved vacuum Rabi oscillations in a quantum-dotâ€“nanocavity system. Physical Review B, 2018, 97, .	3.2	11
44	Transfer-printed quantum-dot nanolasers on a silicon photonic circuit. Applied Physics Express, 2018, 11, 072002.	2.4	24
45	Scheme for media conversion between electronic spin and photonic orbital angular momentum based on photonic nanocavity. Optics Express, 2018, 26, 21219.	3.4	8
46	Quantum-dot nanolasers on Si photonic circuits. , 2018, , .		0
47	Topological confinement of light in photonic crystals. , 2018, , .		0
48	Lasing in a topological photonic crystal nanocavity. , 2018, , .		0
49	Quantum dot single photon sources transfer-printed on wire waveguides. , 2018, , .		0
50	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
51	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
52	Optical coupling between atomically thin black phosphorus and a two dimensional photonic crystal nanocavity. Applied Physics Letters, 2017, 110, .	3.3	13
53	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
54	Manipulation of dynamic nuclear spin polarization in single quantum dots by photonic environment engineering. Physical Review B, 2017, 95, .	3.2	3

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55	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
56	Method for generating a photonic NOON state with quantum dots in coupled nanocavities. Physical Review A, 2017, 96, .	2.5	15
57	Circularly polarized vacuum field in three-dimensional chiral photonic crystals probed by quantum dot emission. Physical Review B, 2017, 96, .	3.2	13
58	A photonic crystal nanocavity with a quantum dot active region embedded by MBE regrowth. , 2017, , .		1
59	Thresholdless quantum dot nanolaser. Optics Express, 2017, 25, 19981.	3.4	53
60	Guiding of laser light from a nanocavity in a three-dimensional photonic crystal. , 2017, , .		0
61	Time-Domain Observation of Vacuum Rabi Oscillations in a Strongly Coupled Quantum Dot-Nanocavity System. , 2017, , .		0
62	Thresholdless lasing with quantum dot gain. , 2017, , .		0
63	Control of quantum dot light emission by chiral photonic crystal structures. , 2016, , .		0
64	A Nanowire-Based Plasmonic Quantum Dot Laser. Nano Letters, 2016, 16, 2845-2850.	9.1	64
65	Demonstration of a plasmonic laser using quantum dot gain medium. , 2016, , .		0
66	<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
67	Position dependent optical coupling between single quantum dots and photonic crystal nanocavities. Applied Physics Letters, 2016, 109, .	3.3	23
68	Control of Light Polarization using Photonic and Phononic Crystals. , 2016, , .		0
69	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
70	Influence of the relative positions of quantum dots and nanocavities on the optical coupling strength. , 2015, , .		0
71	Circularly Polarized Light Emission of Quantum Dots at the Band Edge of Three-Dimensional Chiral Photonic Crystals. , 2015, , .		0
72	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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73	Effect of metal side claddings on emission decay rate of single quantum dots embedded in a subwavelength semiconductor waveguide. , 2015, , .		0
74	Vacuum Rabi Spectra of a Single Quantum Emitter. Physical Review Letters, 2015, 114, 143603.	7.8	31
75	Room-temperature lasing in a single nanowire with quantum dots. Nature Photonics, 2015, 9, 501-505.	31.4	159
76	Room-temperature lasing in GaAs nanowires embedding multi-stacked InGaAs/GaAs quantum dots. , 2015, , .		1
77	Asymmetric out-of-plane power distribution in a two-dimensional photonic crystal nanocavity. Optics Letters, 2015, 40, 3372.	3.3	8
78	Single Emitter Vacuum Rabi Splitting Measured Through Direct Free Space Spontaneous Emission. , 2015, , .		0
79	Measurement of the Second Order Coherence of a Nanolaser Through Its Intra-cavity Second Harmonic Generation. , 2014, , .		0
80	Circular dichroism in a three-dimensional semiconductor chiral photonic crystal. Applied Physics Letters, 2014, 105, .	3.3	38
81	Highly uniform, multi-stacked InGaAs/GaAs quantum dots embedded in a GaAs nanowire. Applied Physics Letters, 2014, 105, .	3.3	26
82	Measuring the second-order coherence of a nanolaser by intracavity frequency doubling. Physical Review A, 2014, 89, .	2.5	11
83	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
84	Self-frequency summing in photonic crystal nanocavity quantum dot lasers. , 2013, , .		0
85	Nonlinear photonics in single quantum dot-photonic crystal nanocavity couples systems. , 2013, , .		0
86	Large vacuum Rabi splitting in an H0 photonic crystal nanocavity-quantum dot system. , 2013, , .		0
87	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
88	Nanocavity-based self-frequency conversion laser. Optics Express, 2013, 21, 19778.	3.4	21
89	Giant optical rotation in a three-dimensional semiconductor chiral photonic crystal. Optics Express, 2013, 21, 29905.	3.4	23
90	Wide range Q-factor control in a photonic crystal nanobeam cavity incorporating quantum dots. , 2013, , .		0

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91	Self-frequency summing in quantum dot photonic crystal nanocavity lasers. Applied Physics Letters, 2013, 103, 243115.	3.3	7
92	Electro-Mechanical Q Factor Control of Photonic Crystal Nanobeam Cavity. Japanese Journal of Applied Physics, 2013, 52, 04CG01.	1.5	6
93	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
94	Multi-color visible light generation by self-frequency doubling in photonic crystal nanocavity quantum dot lasers. , 2013, , .		0
95	Cavity Quantum Electrodynamics in Semiconductors: Quantum Dot-Photonic Crystal Nanocavity Coupled Systems. The Review of Laser Engineering, 2013, 41, 485.	0.0	0
96	Wavelength Tunable Quantum Dot Single-Photon Source with a Side Gate. Japanese Journal of Applied Physics, 2012, 51, 02BJ05.	1.5	0
97	High Q H1 photonic crystal nanocavities with efficient vertical emission. Optics Express, 2012, 20, 28292.	3.4	39
98	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
99	Site-controlled formation of InAs/GaAs quantum-dot-in-nanowires for single photon emitters. Applied Physics Letters, 2012, 100, .	3.3	47
100	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
101	Nanocavity-enhanced Optical Stark Shift in a Single Quantum Dot under Extremely Low Excitation Power. , 2012, , .		1
102	Intra-cavity frequency doubling in photonic crystal nanocavity quantum dot lasers. , 2012, , .		1
103	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
104	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
105	Spontaneous Two-Photon Emission from a Single Quantum Dot. Physical Review Letters, 2011, 107, 233602.	7.8	124
106	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
107	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
108	Strong coupling between a photonic crystal nanobeam cavity and a single quantum dot. Applied Physics Letters, 2011, 98, .	3.3	84

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109	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
110	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
111	Observation of unique photon statistics of single artificial atom laser. Physica E: Low-Dimensional Systems and Nanostructures, 2010, 42, 2489-2492.	2.7	3
112	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
113	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
114	Laser oscillation in a strongly coupled single-quantum-dotâ€“nanocavity system. Nature Physics, 2010, 6, 279-283.	16.7	300
115	Spin dynamics of excited trion states in a single InAs quantum dot. Physical Review B, 2010, 81, .	3.2	14
116	Zero-cell photonic crystal nanocavity laser with quantum dot gain. Applied Physics Letters, 2010, 97, .	3.3	19
117	Phonon-Induced Asymmetry in Vacuum Rabi Doublet for Coupled Quantum Dot-Cavity System. , 2010, , .		0
118	Vacuum Rabi splitting with a single quantum dot embedded in a H1 photonic crystal nanocavity. Applied Physics Letters, 2009, 94, .	3.3	41
119	Investigation of the Spectral Triplet in Strongly Coupled Quantum Dotâ€“Nanocavity System. Applied Physics Express, 2009, 2, 122301.	2.4	20
120	Photonic band-edge micro lasers with quantum dot gain. Optics Express, 2009, 17, 640.	3.4	14
121	Photonic crystal nanocavity laser with a single quantum dot gain. Optics Express, 2009, 17, 15975.	3.4	110
122	Photonic Crystal Nanocavity Laser with Single Quantum Dot Gain. , 2009, , .		1
123	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
124	Efficient excitation and emission of single quantum dot by simultaneous coupling to two different photonic crystal nanocavity modes. , 2008, , .		0
125	Achievement of ultra-low threshold excitation power (8 nW) in a nearly-single quantum dot nanocavity laser. , 2008, , .		0
126	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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127	Large Vacuum Rabi Splitting in Single Self-Assembled Quantum Dot-Nanocavity System. Applied Physics Express, 0, 1, 072102.	2.4	14