

Hideaki Taniyama

List of Publications by Year in descending order

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82
papers

3,813
citations

159525

30
h-index

128225

60
g-index

82
all docs

82
docs citations

82
times ranked

3155
citing authors

#	ARTICLE	IF	CITATIONS
1	Simulation technique of quantum optical emission process from multiple two-level atoms based on classical numerical method. Optics Express, 2019, 27, 12070.	1.7	1
2	Room temperature continuous-wave nanolaser diode utilized by ultrahigh-Q few-cell photonic crystal nanocavities. Optics Express, 2018, 26, 26598.	1.7	10
3	Subwavelength Nanowire Lasers on a Silicon Photonic Crystal Operating at Telecom Wavelengths. ACS Photonics, 2017, 4, 355-362.	3.2	35
4	Design of nanowire-induced nanocavities in photonic crystal disks. Optics Letters, 2017, 42, 5121.	1.7	3
5	Design of nanowire-induced nanocavities in grooved 1D and 2D SiN photonic crystals for the ultra-violet and visible ranges. Optics Express, 2016, 24, 26792.	1.7	16
6	Optomechanical oscillator pumped and probed by optically two isolated photonic crystal cavity systems. Optics Express, 2016, 24, 28039.	1.7	4
7	Double optical cavities optomechanically coupled via slab oscillator for spontaneous emission control. , 2016, , .		0
8	Purcell enhancement of fast-dephasing spontaneous emission from electron-hole droplets in high-Qsilicon photonic crystal nanocavities. Physical Review B, 2016, 94, .	1.1	6
9	Deep-subwavelength plasmonic mode converter with large size reduction for Si-wire waveguide. Optica, 2016, 3, 999.	4.8	61
10	Enhanced electron-hole droplet emission from surface-oxidized silicon photonic crystal nanocavities. Optics Express, 2016, 24, 1072.	1.7	3
11	Systematic study of thresholdless oscillation in high- \hat{r}^2 buried multiple-quantum-well photonic crystal nanocavity lasers. Optics Express, 2016, 24, 3441.	1.7	39
12	Connecting deep sub-wavelength plasmonic waveguide to Si photonics waveguides. , 2015, , .		0
13	Ultralow bias power all-optical photonic crystal memory realized with systematically tuned L3 nanocavity. Applied Physics Letters, 2015, 107, .	1.5	11
14	Systematic hole-shifting of L-type nanocavity with an ultrahigh Q factor. Optics Letters, 2014, 39, 5780.	1.7	31
15	Fast calculation of the quality factor for two-dimensional photonic crystal slab nanocavities. Optics Express, 2014, 22, 23349.	1.7	2
16	Movable high-Q nanoresonators realized by semiconductor nanowires on a Si photonic crystal platform. Nature Materials, 2014, 13, 279-285.	13.3	94
17	Photonic crystal lasers using wavelength-scale embedded active region. Journal Physics D: Applied Physics, 2014, 47, 023001.	1.3	29
18	Large-scale integration of wavelength-addressable all-optical memories on a photonic crystal chip. Nature Photonics, 2014, 8, 474-481.	15.6	270

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19	Ultrafast spontaneous emission of copper-doped silicon enhanced by an optical nanocavity. Scientific Reports, 2014, 4, 5040.	1.6	24
20	Ultralow Operating Energy Electrically Driven Photonic Crystal Lasers. IEEE Journal of Selected Topics in Quantum Electronics, 2013, 19, 4900311-4900311.	1.9	68
21	Few-fj/bit data transmissions using directly modulated lambda-scale embedded active region photonic-crystal lasers. Nature Photonics, 2013, 7, 569-575.	15.6	206
22	Narrow linewidth operation of buried-heterostructure photonic crystal nanolaser. Optics Express, 2012, 20, 11643.	1.7	16
23	Design for ultrahigh-Q position-controlled nanocavities of single semiconductor nanowires in two-dimensional photonic crystals. Journal of Applied Physics, 2012, 112, .	1.1	19
24	Fast Purcell-enhanced single photon source in 1,550-nm telecom band from a resonant quantum dot-cavity coupling. Scientific Reports, 2012, 2, 321.	1.6	120
25	Ultralow-power integrated nanophotonics for future chips. , 2012, , .		0
26	Ultra-low threshold current CW operation of photonic crystal nanocavity laser with InAlAs sacrificial layer. , 2012, , .		4
27	95Å°C CW operation of InGaAlAs multiple-quantum-well photonic-crystal nanocavity laser with ultra-low threshold current. , 2012, , .		2
28	Room-temperature continuous-wave operation of lateral current injection wavelength-scale embedded active-region photonic-crystal laser. Optics Express, 2012, 20, 3773.	1.7	117
29	High-Temperature Operation of Photonic-Crystal Lasers for On-Chip Optical Interconnection. IEICE Transactions on Electronics, 2012, E95.C, 1244-1251.	0.3	4
30	Modulated mode-gap cavities in various forms. , 2011, , .		0
31	20-Gbit/s directly modulated photonic crystal nanocavity laser with ultra-low power consumption. Optics Express, 2011, 19, 2242.	1.7	78
32	Slow light enhanced optical nonlinearity in a silicon photonic crystal coupled-resonator optical waveguide. Optics Express, 2011, 19, 19861.	1.7	60
33	Finite-Difference Time-Domain Analysis of Photonic Crystal Slab Cavities with Two-Level Systems. Optics Express, 2011, 19, 23067.	1.7	6
34	Low-power nanophotonic devices based on photonic crystals towards dense photonic network on chip. IET Circuits, Devices and Systems, 2011, 5, 84.	0.9	60
35	Strong optomechanical interaction in a bilayer photonic crystal. Physical Review B, 2010, 81, .	1.1	47
36	Sub-femtojoule all-optical switching using a photonic-crystal nanocavity. Nature Photonics, 2010, 4, 477-483.	15.6	595

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37	Ultra-high-Q one-dimensional photonic crystal nanocavities with modulated mode-gap barriers on SiO ₂ claddings and on air claddings. Optics Express, 2010, 18, 15859.	1.7	126
38	Electro-optic adiabatic wavelength shifting and Q switching demonstrated using a p-i-n integrated photonic crystal nanocavity. Optics Letters, 2010, 35, 3895.	1.7	32
39	All-silicon sub-Gb/s telecom detector with low dark current and high quantum efficiency on chip. Applied Physics Letters, 2010, 96, .	1.5	92
40	Optomechanical response of photonic crystal with double-slab configuration. , 2009, , .		0
41	High-Q air-slot photonic crystal cavities. , 2009, , .		0
42	Short Pulse Generation by Adiabatic Tuning of Light. Optics and Photonics News, 2009, 20, 41.	0.4	6
43	Dynamic Release of Trapped Light from an Ultra-high-Q Nanocavity via Adiabatic Frequency Tuning. Physical Review Letters, 2009, 102, 043907.	2.9	135
44	All-optical switching with extremely-small control energy in InGaAsP-based photonic crystal nanocavity. , 2009, , .		1
45	All-optical switches and bistable devices using high-Q photonic crystal nanocavities. , 2009, , .		0
46	Carrier Diffusion and Recombination in Photonic Crystal Nanocavity Optical Switches. Journal of Lightwave Technology, 2008, 26, 1396-1403.	2.7	68
47	Ultra-high-Q Nanocavity with 1D Photonic Gap. Optics Express, 2008, 16, 11095.	1.7	225
48	Design of a high-Q air-slot cavity based on a width-modulated line-defect in a photonic crystal slab. Optics Express, 2008, 16, 13809.	1.7	83
49	On-demand ultra-high-Q cavity formation and photon pinning via dynamic waveguide tuning. Optics Express, 2008, 16, 18657.	1.7	57
50	Nonlinear and adiabatic control of light in a photonic crystal chip. , 2008, , .		0
51	S-matrix calculation of radiation characteristics from dipole oscillation in two-dimensional photonic crystal slabs. Journal of Applied Physics, 2008, 103, 083115.	1.1	9
52	Ultra-high-Q nanocavity with 1D periodicity. , 2008, , .		0
53	Ultra-high-Q two-dimensional photonic crystal slab nanocavities in very thin barriers. Applied Physics Letters, 2008, 93, 111112.	1.5	43
54	Strong radiation force induced in two-dimensional photonic crystal slab cavities. Physical Review B, 2008, 78, .	1.1	28

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55	Ultra-high-Q Nanocavities realized by using a very narrow photonic crystal with built-in air Slots. , 2008, , .		0
56	On-Chip All-Optical Switching and Memory by Silicon Photonic Crystal Nanocavities. Advances in Optical Technologies, 2008, 2008, 1-10.	0.8	25
57	Slow pulse propagation in long photonic crystal coupled cavity waveguides. , 2008, , .		1
58	Role of carrier diffusion and recombination in photonic crystal nanocavity optical switches. , 2008, , .		1
59	All-Optical Switching and Control of Ultra-high-Q Photonic-Crystal Nanocavities. , 2007, , .		0
60	Observation of heavy photon state in ultra-high-Q photonic crystal coupled resonator chain. , 2007, , .		3
61	Large pulse delay and small group velocity achieved using ultra-high-Q photonic crystal nanocavities. Optics Express, 2007, 15, 7826.	1.7	44
62	Nonlinear and adiabatic control of high-Q photonic crystal nanocavities. Optics Express, 2007, 15, 17458.	1.7	129
63	Photonic-Crystal-Based Chip-Scale Optical Integration. , 2007, , .		0
64	Photon Trapping, Delaying, and Dynamic-Control using Ultra-small High-Q Photonic Crystal Cavities. , 2007, , .		0
65	Single point defect photonic crystal nanocavity with ultra-high quality factor achieved by using hexapole mode. Applied Physics Letters, 2007, 91, 021110.	1.5	43
66	Trapping and delaying photons for one nanosecond in an ultrasmall high-Q photonic-crystal nanocavity. Nature Photonics, 2007, 1, 49-52.	15.6	360
67	Photonic crystal resonant tunneling filters using ultra-high-Q locally-width-modulated line-defect cavity. , 2006, , .		1
68	Optomechanical Wavelength and Energy Conversion in High-Q Double-Layer Cavities of Photonic Crystal Slabs. Physical Review Letters, 2006, 97, 023903.	2.9	123
69	Dynamic control of light by photonic-crystal resonator-waveguide-coupled system. , 2006, , .		1
70	Propagation characteristics of one-dimensional photonic crystal slab waveguides and radiation loss. Physical Review B, 2005, 71, .	1.1	10
71	Self-consistent calculation of subband occupation and electron-hole plasma effects: Variational approach to quantum well states with Hartree and exchange-correlation interactions. Journal of Applied Physics, 2003, 94, 4489-4501.	1.1	13
72	Waveguide structures using one-dimensional photonic crystal. Journal of Applied Physics, 2002, 91, 3511-3515.	1.1	33

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73	Numerically stable and flexible method for solutions of the Schrodinger equation with self-interaction of carriers in quantum wells. IEEE Journal of Quantum Electronics, 2002, 38, 1372-1383.	1.0	11
74	High-frequency performance of lateral p-n junction photodiodes. IEEE Journal of Quantum Electronics, 2001, 37, 830-836.	1.0	9
75	Steady-state characteristics of lateral p-n junction vertical-cavity surface-emitting lasers. Journal of Applied Physics, 2001, 90, 2654-2659.	1.1	2
76	Numerical simulation of a coupled quantum well resonant tunneling transistor. Journal of Applied Physics, 1994, 75, 5079-5086.	1.1	1
77	Quantum distributed model of the resonant tunneling transistor. IEEE Transactions on Electron Devices, 1994, 41, 294-298.	1.6	8
78	Two-dimensional simulation for resonant tunneling transistor. IEEE Transactions on Electron Devices, 1994, 41, 883-887.	1.6	1
79	Hot-carrier transport in p-GaAs. Semiconductor Science and Technology, 1992, 7, B346-B350.	1.0	4
80	A Monte Carlo study for minority electron transport in p-GaAs. Journal of Applied Physics, 1990, 68, 621-626.	1.1	19
81	Minority electron transport property in p-GaAs under high electric field. Journal of Applied Physics, 1990, 67, 293-299.	1.1	25
82	S-Matrix Analysis of Dipole Radiation from Photonic Crystal Slab Structures. , 0, , .		0