Masaya Notomi

List of Publications by Year in Descending Order

75 papers	4,622 citations	31 h-index	67 g-index
90 ext. papers	5,873 ext. citations	8.5 avg, IF	5.77 L-index

#	Paper	IF	Citations
75	Far-field optical imaging of topological edge states in zigzag plasmonic chains. *Nanophotonics*, **2022**,	6.3	1
74	Excitonic nonlinear shifts in photonic crystal nanocavities with buried multiple quantum wells. *Applied Physics Letters*, **2021**, 118, 111101	3.4	
73	Emulating the local Kuramoto model with an injection-locked photonic crystal laser array. *Scientific Reports*, **2021**, 11, 8587	4.9	0
72	Thermal effect of InP/InAs nanowire lasers integrated on different optical platforms. *OSA Continuum*, **2021**, 4, 1838	1.4	2
71	Low- and high- lasers in the class-A limit: photon statistics, linewidth, and the laser-phase transition analogy. *Journal of the Optical Society of America B: Optical Physics*, **2021**, 38, 699	1.7	7
70	Observing exceptional point degeneracy of radiation with electrically pumped photonic crystal coupled-nanocavity lasers. *Optica*, **2021**, 8, 184	8.6	6
69	Lasing up to 380 K in a sublimated GaN nanowire. *Applied Physics Letters*, **2020**, 116, 223101	3.4	6
68	All-Optical InAsP/InP Nanowire Switches Integrated in a Si Photonic Crystal. *ACS Photonics*, **2020**, 7, 1016-1021	6.5	20
67	Low-Threshold Lasing up to 360 K in All-Dielectric Subwavelength-Nanowire Nanocavities. *ACS Photonics*, **2020**, 7, 1104-1110	6.3	3
66	Photon-correlation measurements of stochastic limit cycles emerging from high-Q nonlinear silicon photonic crystal microcavities. *Physical Review A*, **2020**, 102,	2.6	2
65	Designs toward synchronization of optical limit cycles with coupled silicon photonic crystal microcavities. *Optics Express*, **2020**, 28, 27657-27675	3.3	3
64	Nanowire photonics toward wide wavelength range and subwavelength confinement [Invited]. *Optical Materials Express*, **2020**, 10, 2560	2.6	2
63	Active topological photonics. *Nanophotonics*, **2020**, 9, 547-567	6.3	78
62	Ultrafast and energy-efficient all-optical switching with graphene-loaded deep-subwavelength plasmonic waveguides. *Nature Photonics*, **2020**, 14, 37-43	33.9	127
61	Hybrid Nanowire Photodetector Integrated in a Silicon Photonic Crystal. *ACS Photonics*, **2020**, 7, 3467-3473	6.3	9
60	Generation and Annihilation of Topologically Protected Bound States in the Continuum and Circularly Polarized States by Symmetry Breaking. *Physical Review Letters*, **2020**, 125, 053902	7.4	22
59	Novel frontier of photonics for data processing Photonic accelerator. *APL Photonics*, **2019**, 4, 090901	5.2	52

58	Lasing thresholds and photon statistics in high-β buried multiple quantum well photonic crystal nanocavity lasers. *Physical Review A*, **2019**, 99,	2.6	9
57	Femtofarad optoelectronic integration demonstrating energy-saving signal conversion and nonlinear functions. *Nature Photonics*, **2019**, 13, 454-459	33.9	41
56	ZnO-Nanowire-Induced Nanocavities in Photonic Crystal Disks. *ACS Photonics*, **2019**, 6, 1132-1138	6.3	8
55	Telecom-band lasing in single InP/InAs heterostructure nanowires at room temperature. *Science Advances*, **2019**, 5, eaat8896	14.3	42
54	Mid-Infrared Lasing of Single Wurtzite InAs Nanowire. *Nano Letters*, **2019**, 19, 8059-8065	11.5	16
53	An Optical Neural Network Architecture based on Highly Parallelized WDM-Multiplier-Accumulator **2019**,		2
52	High signal-to-noise ratio for high-impedance-loaded nano-photodetector toward attojoule optical reception. *Applied Physics Letters*, **2019**, 115, 251107	3.4	
51	All-Optical Switching using a III-V Nanowire Integrated Si Photonic Crystal Nanocavity **2019**,		2
50	Subliming GaN into Ordered Nanowire Arrays for Ultraviolet and Visible Nanophotonics. *ACS Photonics*, **2019**, 6, 3321-3330	6.3	10
49	Forward-biased nanophotonic detector for ultralow-energy dissipation receiver. *APL Photonics*, **2018**, 3, 046101	5.2	6
48	Amplifier-Free Bias-Free Receiver Based on Low-Capacitance Nanophotodetector. *IEEE Journal of Selected Topics in Quantum Electronics*, **2018**, 24, 1-11	3.8	10
47	An Integrated Nanophotonic Parallel Adder. *ACM Journal on Emerging Technologies in Computing Systems*, **2018**, 14, 1-20	1.7	11
46	Ultracompact O-E-O converter based on fF-capacitance nanophotonic integration **2018**,		3
45	Room temperature continuous-wave nanolaser diode utilized by ultrahigh-Q few-cell photonic crystal nanocavities. *Optics Express*, **2018**, 26, 26598-26617	3.3	4
44	Photonic Topological Insulating Phase Induced Solely by Gain and Loss. *Physical Review Letters*, **2018**, 121, 213902	7.4	104
43	Direct modulation of a single InP/InAs nanowire light-emitting diode. *Applied Physics Letters*, **2018**, 112, 251106	3.4	14
42	Subwavelength Nanowire Lasers on a Silicon Photonic Crystal Operating at Telecom Wavelengths. *ACS Photonics*, **2017**, 4, 355-362	6.3	27
41	Nanomanipulating and Tuning Ultraviolet ZnO-Nanowire-Induced Photonic Crystal Nanocavities. *ACS Photonics*, **2017**, 4, 1040-1047	6.3	27

40	Ultralow-energy electro-absorption modulator consisting of InGaAsP-embedded photonic-crystal waveguide. *APL Photonics*, **2017**, 2, 056105	5.2	17
39	Continuous-wave operation and 10-Gb/s direct modulation of InAsP/InP sub-wavelength nanowire laser on silicon photonic crystal. *APL Photonics*, **2017**, 2, 046106	5.2	44
38	Design of nanowire-induced nanocavities in photonic crystal disks. *Optics Letters*, **2017**, 42, 5121-5124	3	3
37	PT-Symmetric Coupled-Resonator Waveguide Based on Buried Heterostructure Nanocavities. *Physical Review Applied*, **2017**, 7,	4.3	13
36	Systematic study of thresholdless oscillation in high-□buried multiple-quantum-well photonic crystal nanocavity lasers. *Optics Express*, **2016**, 24, 3441-50	3.3	31
35	Nanowire-nanoantenna coupled system fabricated by nanomanipulation. *Optics Express*, **2016**, 24, 8647-59	3.3	9
34	Photonic-crystal nano-photodetector with ultrasmall capacitance for on-chip light-to-voltage conversion without an amplifier. *Optica*, **2016**, 3, 483	8.6	43
33	Design of nanowire-induced nanocavities in grooved 1D and 2D SiN photonic crystals for the ultra-violet and visible ranges. *Optics Express*, **2016**, 24, 26792-26808	3.3	13
32	Deep-subwavelength plasmonic mode converter with large size reduction for Si-wire waveguide. *Optica*, **2016**, 3, 999	8.6	32
31	Controlled 1.1-1.6 □m luminescence in gold-free multi-stacked InAs/InP heterostructure nanowires. *Nanotechnology*, **2015**, 26, 115704	3.4	13
30	Ultralow bias power all-optical photonic crystal memory realized with systematically tuned L3 nanocavity. *Applied Physics Letters*, **2015**, 107, 221101	3.4	8
29	. *IEEE Journal of Selected Topics in Quantum Electronics*, **2015**, 21, 728-737	3.8	22
28	All-optical switching for 10-Gb/s packet data by using an ultralow-power optical bistability of photonic-crystal nanocavities. *Optics Express*, **2015**, 23, 30379-92	3.3	17
27	Movable high-Q nanoresonators realized by semiconductor nanowires on a Si photonic crystal platform. *Nature Materials*, **2014**, 13, 279-85	27	72
26	Large-scale integration of wavelength-addressable all-optical memories on a photonic crystal chip. *Nature Photonics*, **2014**, 8, 474-481	33.9	187
25	Systematic hole-shifting of L-type nanocavity with an ultrahigh Q factor. *Optics Letters*, **2014**, 39, 5780-3	3	21
24	Toward fJ/bit optical communication in a chip. *Optics Communications*, **2014**, 314, 3-17	2	42
23	Enhanced and suppressed spontaneous emission from a buried heterostructure photonic crystal cavity. *Applied Physics Letters*, **2013**, 103, 091113	3.4	13

22	InGaAs nano-photodetectors based on photonic crystal waveguide including ultracompact buried heterostructure. *Optics Express*, **2013**, 21, 19022-8	3.3	21
21	Ultralow Operating Energy Electrically Driven Photonic Crystal Lasers. *IEEE Journal of Selected Topics in Quantum Electronics*, **2013**, 19, 4900311-4900311	3.8	57
20	Few-fJ/bit data transmissions using directly modulated lambda-scale embedded active region photonic-crystal lasers. *Nature Photonics*, **2013**, 7, 569-575	33.9	147
19	Ultralow-power all-optical RAM based on nanocavities. *Nature Photonics*, **2012**, 6, 248-252	33.9	196
18	Design for ultrahigh-Q position-controlled nanocavities of single semiconductor nanowires in two-dimensional photonic crystals. *Journal of Applied Physics*, **2012**, 112, 113106	2.5	17
17	Slow light enhanced optical nonlinearity in a silicon photonic crystal coupled-resonator optical waveguide. *Optics Express*, **2011**, 19, 19861-74	3.3	47
16	High-speed ultracompact buried heterostructure photonic-crystal laser with 13 fJ of energy consumed per bit transmitted. *Nature Photonics*, **2010**, 4, 648-654	33.9	224
15	Sub-femtojoule all-optical switching using a photonic-crystal nanocavity. *Nature Photonics*, **2010**, 4, 477-483	33.9	457
14	Manipulating light with strongly modulated photonic crystals. *Reports on Progress in Physics*, **2010**, 73, 096501	14.4	245
13	Extremely low power optical bistability in silicon demonstrated using 1D photonic crystal nanocavity. *Optics Express*, **2009**, 17, 21108-17	3.3	89
12	Low power and fast electro-optic silicon modulator with lateral p-i-n embedded photonic crystal nanocavity. *Optics Express*, **2009**, 17, 22505-13	3.3	84
11	Carrier Diffusion and Recombination in Photonic Crystal Nanocavity Optical Switches. *Journal of Lightwave Technology*, **2008**, 26, 1396-1403	4	55
10	Quality factor control and lasing characteristics of InAs/InGaAs quantum dots embedded in photonic-crystal nanocavities. *Optics Express*, **2008**, 16, 5199-205	3.3	12
9	On-demand ultrahigh-Q cavity formation and photon pinning via dynamic waveguide tuning. *Optics Express*, **2008**, 16, 18657-66	3.3	43
8	All-optical on-chip bit memory based on ultra high Q InGaAsP photonic crystal. *Optics Express*, **2008**, 16, 19382-7	3.3	52
7	Single point defect photonic crystal nanocavity with ultrahigh quality factor achieved by using hexapole mode. *Applied Physics Letters*, **2007**, 91, 021110	3.4	37
6	Fast all-optical switching using ion-implanted silicon photonic crystal nanocavities. *Applied Physics Letters*, **2007**, 90, 031115	3.4	107
5	Trapping and delaying photons for one nanosecond in an ultrasmall high-Q photonic-crystal nanocavity. *Nature Photonics*, **2007**, 1, 49-52	33.9	273

4	Ultrahigh-Q photonic crystal nanocavities realized by the local width modulation of a line defect. *Applied Physics Letters*, **2006**, 88, 041112	3.4	331
3	Optical bistable switching action of Si high-Q photonic-crystal nanocavities. *Optics Express*, **2005**, 13, 2678-87	3.3	350
2	Fast bistable all-optical switch and memory on a silicon photonic crystal on-chip. *Optics Letters*, **2005**, 30, 2575-7	3	212
1	All-optical switches on a silicon chip realized using photonic crystal nanocavities. *Applied Physics Letters*, **2005**, 87, 151112	3.4	285