

Masaya Notomi

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

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	Sub-femtojoule all-optical switching using a photonic-crystal nanocavity. <i>Nature Photonics</i> , 2010 , 4, 477-483	33.9	457
74	Optical bistable switching action of Si high-Q photonic-crystal nanocavities. <i>Optics Express</i> , 2005 , 13, 2678-87	3.3	350
73	Ultrahigh-Q photonic crystal nanocavities realized by the local width modulation of a line defect. <i>Applied Physics Letters</i> , 2006 , 88, 041112	3.4	331
72	All-optical switches on a silicon chip realized using photonic crystal nanocavities. <i>Applied Physics Letters</i> , 2005 , 87, 151112	3.4	285
71	Trapping and delaying photons for one nanosecond in an ultrasmall high-Q photonic-crystal nanocavity. <i>Nature Photonics</i> , 2007 , 1, 49-52	33.9	273
70	Manipulating light with strongly modulated photonic crystals. <i>Reports on Progress in Physics</i> , 2010 , 73, 096501	14.4	245
69	High-speed ultracompact buried heterostructure photonic-crystal laser with 13 fJ of energy consumed per bit transmitted. <i>Nature Photonics</i> , 2010 , 4, 648-654	33.9	224
68	Fast bistable all-optical switch and memory on a silicon photonic crystal on-chip. <i>Optics Letters</i> , 2005 , 30, 2575-7	3	212
67	Ultralow-power all-optical RAM based on nanocavities. <i>Nature Photonics</i> , 2012 , 6, 248-252	33.9	196
66	Large-scale integration of wavelength-addressable all-optical memories on a photonic crystal chip. <i>Nature Photonics</i> , 2014 , 8, 474-481	33.9	187
65	Few-fJ/bit data transmissions using directly modulated lambda-scale embedded active region photonic-crystal lasers. <i>Nature Photonics</i> , 2013 , 7, 569-575	33.9	147
64	Ultrafast and energy-efficient all-optical switching with graphene-loaded deep-subwavelength plasmonic waveguides. <i>Nature Photonics</i> , 2020 , 14, 37-43	33.9	127
63	Fast all-optical switching using ion-implanted silicon photonic crystal nanocavities. <i>Applied Physics Letters</i> , 2007 , 90, 031115	3.4	107
62	Photonic Topological Insulating Phase Induced Solely by Gain and Loss. <i>Physical Review Letters</i> , 2018 , 121, 213902	7.4	104
61	Extremely low power optical bistability in silicon demonstrated using 1D photonic crystal nanocavity. <i>Optics Express</i> , 2009 , 17, 21108-17	3.3	89
60	Low power and fast electro-optic silicon modulator with lateral p-i-n embedded photonic crystal nanocavity. <i>Optics Express</i> , 2009 , 17, 22505-13	3.3	84
59	Active topological photonics. <i>Nanophotonics</i> , 2020 , 9, 547-567	6.3	78

58	Movable high-Q nanoresonators realized by semiconductor nanowires on a Si photonic crystal platform. <i>Nature Materials</i> , 2014 , 13, 279-85	27	72
57	Ultralow Operating Energy Electrically Driven Photonic Crystal Lasers. <i>IEEE Journal of Selected Topics in Quantum Electronics</i> , 2013 , 19, 4900311-4900311	3.8	57
56	Carrier Diffusion and Recombination in Photonic Crystal Nanocavity Optical Switches. <i>Journal of Lightwave Technology</i> , 2008 , 26, 1396-1403	4	55
55	Novel frontier of photonics for data processing Photonic accelerator. <i>APL Photonics</i> , 2019 , 4, 090901	5.2	52
54	All-optical on-chip bit memory based on ultra high Q InGaAsP photonic crystal. <i>Optics Express</i> , 2008 , 16, 19382-7	3.3	52
53	Slow light enhanced optical nonlinearity in a silicon photonic crystal coupled-resonator optical waveguide. <i>Optics Express</i> , 2011 , 19, 19861-74	3.3	47
52	Continuous-wave operation and 10-Gb/s direct modulation of InAsP/InP sub-wavelength nanowire laser on silicon photonic crystal. <i>APL Photonics</i> , 2017 , 2, 046106	5.2	44
51	Photonic-crystal nano-photodetector with ultrasmall capacitance for on-chip light-to-voltage conversion without an amplifier. <i>Optica</i> , 2016 , 3, 483	8.6	43
50	On-demand ultrahigh-Q cavity formation and photon pinning via dynamic waveguide tuning. <i>Optics Express</i> , 2008 , 16, 18657-66	3.3	43
49	Telecom-band lasing in single InP/InAs heterostructure nanowires at room temperature. <i>Science Advances</i> , 2019 , 5, eaat8896	14.3	42
48	Toward FJ/bit optical communication in a chip. <i>Optics Communications</i> , 2014 , 314, 3-17	2	42
47	Femtofarad optoelectronic integration demonstrating energy-saving signal conversion and nonlinear functions. <i>Nature Photonics</i> , 2019 , 13, 454-459	33.9	41
46	Single point defect photonic crystal nanocavity with ultrahigh quality factor achieved by using hexapole mode. <i>Applied Physics Letters</i> , 2007 , 91, 021110	3.4	37
45	Deep-subwavelength plasmonic mode converter with large size reduction for Si-wire waveguide. <i>Optica</i> , 2016 , 3, 999	8.6	32
44	Systematic study of thresholdless oscillation in high- Γ buried multiple-quantum-well photonic crystal nanocavity lasers. <i>Optics Express</i> , 2016 , 24, 3441-50	3.3	31
43	Subwavelength Nanowire Lasers on a Silicon Photonic Crystal Operating at Telecom Wavelengths. <i>ACS Photonics</i> , 2017 , 4, 355-362	6.3	27
42	Nanomanipulating and Tuning Ultraviolet ZnO-Nanowire-Induced Photonic Crystal Nanocavities. <i>ACS Photonics</i> , 2017 , 4, 1040-1047	6.3	27
41	. <i>IEEE Journal of Selected Topics in Quantum Electronics</i> , 2015 , 21, 728-737	3.8	22

40	Generation and Annihilation of Topologically Protected Bound States in the Continuum and Circularly Polarized States by Symmetry Breaking. <i>Physical Review Letters</i> , 2020 , 125, 053902	7.4	22
39	Systematic hole-shifting of L-type nanocavity with an ultrahigh Q factor. <i>Optics Letters</i> , 2014 , 39, 5780-33		21
38	InGaAs nano-photodetectors based on photonic crystal waveguide including ultracompact buried heterostructure. <i>Optics Express</i> , 2013 , 21, 19022-8	3.3	21
37	All-Optical InAsP/InP Nanowire Switches Integrated in a Si Photonic Crystal. <i>ACS Photonics</i> , 2020 , 7, 101661-20	6.5	20
36	Ultralow-energy electro-absorption modulator consisting of InGaAsP-embedded photonic-crystal waveguide. <i>APL Photonics</i> , 2017 , 2, 056105	5.2	17
35	All-optical switching for 10-Gb/s packet data by using an ultralow-power optical bistability of photonic-crystal nanocavities. <i>Optics Express</i> , 2015 , 23, 30379-92	3.3	17
34	Design for ultrahigh-Q position-controlled nanocavities of single semiconductor nanowires in two-dimensional photonic crystals. <i>Journal of Applied Physics</i> , 2012 , 112, 113106	2.5	17
33	Mid-Infrared Lasing of Single Wurtzite InAs Nanowire. <i>Nano Letters</i> , 2019 , 19, 8059-8065	11.5	16
32	Direct modulation of a single InP/InAs nanowire light-emitting diode. <i>Applied Physics Letters</i> , 2018 , 112, 251106	3.4	14
31	Controlled 1.1-1.6 μm luminescence in gold-free multi-stacked InAs/InP heterostructure nanowires. <i>Nanotechnology</i> , 2015 , 26, 115704	3.4	13
30	Enhanced and suppressed spontaneous emission from a buried heterostructure photonic crystal cavity. <i>Applied Physics Letters</i> , 2013 , 103, 091113	3.4	13
29	PT-Symmetric Coupled-Resonator Waveguide Based on Buried Heterostructure Nanocavities. <i>Physical Review Applied</i> , 2017 , 7,	4.3	13
28	Design of nanowire-induced nanocavities in grooved 1D and 2D SiN photonic crystals for the ultra-violet and visible ranges. <i>Optics Express</i> , 2016 , 24, 26792-26808	3.3	13
27	Quality factor control and lasing characteristics of InAs/InGaAs quantum dots embedded in photonic-crystal nanocavities. <i>Optics Express</i> , 2008 , 16, 5199-205	3.3	12
26	An Integrated Nanophotonic Parallel Adder. <i>ACM Journal on Emerging Technologies in Computing Systems</i> , 2018 , 14, 1-20	1.7	11
25	Amplifier-Free Bias-Free Receiver Based on Low-Capacitance Nanophotodetector. <i>IEEE Journal of Selected Topics in Quantum Electronics</i> , 2018 , 24, 1-11	3.8	10
24	Subliming GaN into Ordered Nanowire Arrays for Ultraviolet and Visible Nanophotonics. <i>ACS Photonics</i> , 2019 , 6, 3321-3330	6.3	10
23	Lasing thresholds and photon statistics in high-buried multiple quantum well photonic crystal nanocavity lasers. <i>Physical Review A</i> , 2019 , 99,	2.6	9

22	Nanowire-nanoantenna coupled system fabricated by nanomanipulation. <i>Optics Express</i> , 2016 , 24, 8647-8659	9	
21	Hybrid Nanowire Photodetector Integrated in a Silicon Photonic Crystal. <i>ACS Photonics</i> , 2020 , 7, 3467-3473	9	
20	ZnO-Nanowire-Induced Nanocavities in Photonic Crystal Disks. <i>ACS Photonics</i> , 2019 , 6, 1132-1138	6.3	8
19	Ultralow bias power all-optical photonic crystal memory realized with systematically tuned L3 nanocavity. <i>Applied Physics Letters</i> , 2015 , 107, 221101	3.4	8
18	Low- and high-Q lasers in the class-A limit: photon statistics, linewidth, and the laser-phase transition analogy. <i>Journal of the Optical Society of America B: Optical Physics</i> , 2021 , 38, 699	1.7	7
17	Lasing up to 380 K in a sublimated GaN nanowire. <i>Applied Physics Letters</i> , 2020 , 116, 223101	3.4	6
16	Forward-biased nanophotonic detector for ultralow-energy dissipation receiver. <i>APL Photonics</i> , 2018 , 3, 046101	5.2	6
15	Observing exceptional point degeneracy of radiation with electrically pumped photonic crystal coupled-nanocavity lasers. <i>Optica</i> , 2021 , 8, 184	8.6	6
14	Room temperature continuous-wave nanolaser diode utilized by ultrahigh-Q few-cell photonic crystal nanocavities. <i>Optics Express</i> , 2018 , 26, 26598-26617	3.3	4
13	Low-Threshold Lasing up to 360 K in All-Dielectric Subwavelength-Nanowire Nanocavities. <i>ACS Photonics</i> , 2020 , 7, 1104-1110	6.3	3
12	Design of nanowire-induced nanocavities in photonic crystal disks. <i>Optics Letters</i> , 2017 , 42, 5121-5124	3	3
11	Ultracompact O-E-O converter based on FF-capacitance nanophotonic integration 2018 ,		3
10	Designs toward synchronization of optical limit cycles with coupled silicon photonic crystal microcavities. <i>Optics Express</i> , 2020 , 28, 27657-27675	3.3	3
9	Photon-correlation measurements of stochastic limit cycles emerging from high-Q nonlinear silicon photonic crystal microcavities. <i>Physical Review A</i> , 2020 , 102,	2.6	2
8	Nanowire photonics toward wide wavelength range and subwavelength confinement [Invited]. <i>Optical Materials Express</i> , 2020 , 10, 2560	2.6	2
7	Thermal effect of InP/InAs nanowire lasers integrated on different optical platforms. <i>OSA Continuum</i> , 2021 , 4, 1838	1.4	2
6	An Optical Neural Network Architecture based on Highly Parallelized WDM-Multiplier-Accumulator 2019 ,		2
5	All-Optical Switching using a III-V Nanowire Integrated Si Photonic Crystal Nanocavity 2019 ,		2

4	Far-field optical imaging of topological edge states in zigzag plasmonic chains. <i>Nanophotonics</i> , 2022	6.3	1
3	Emulating the local Kuramoto model with an injection-locked photonic crystal laser array. <i>Scientific Reports</i> , 2021 , 11, 8587	4.9	0
2	Excitonic nonlinear shifts in photonic crystal nanocavities with buried multiple quantum wells. <i>Applied Physics Letters</i> , 2021 , 118, 111101	3.4	
1	High signal-to-noise ratio for high-impedance-loaded nano-photodetector toward attojoule optical reception. <i>Applied Physics Letters</i> , 2019 , 115, 251107	3.4	