

Makoto Okano

List of Publications by Year in descending order

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papers

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citations

304602

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docs citations

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times ranked

1734
citing authors

#	ARTICLE	IF	CITATIONS
1	CMOS-Compatible Silicon Nitride Waveguide on Silicon Photonics Platform. , 2021, , .		1
2	Low temperature deformation mechanism of semiconductor single crystal and molding of Ge microlens array by direct electrical heating. AIP Advances, 2020, 10, .	0.6	1
3	Simple and fully CMOS-compatible low-loss fiber coupling structure for a silicon photonics platform. Optics Letters, 2020, 45, 2095.	1.7	22
4	Raman silicon laser based on a nanocavity fabricated by photolithography. OSA Continuum, 2020, 3, 814.	1.8	16
5	Inter-layer light transition in hybrid III-V/Si waveguides integrated by $\hat{\mu}$ -transfer printing. Optics Express, 2020, 28, 19772.	1.7	11
6	Interferometer-based Photonic Circuit Classifier Showing >90% Accuracy for Well-known Iris Dataset without Utilizing Nonlinear Activation Function. , 2020, , .		1
7	Performance of On-Chip Autocorrelator with Digital Delay Lines. , 2019, , .		0
8	Automated Function Reconfiguration of Silicon Optical Modulator by Simulated Annealing Algorithm. , 2019, , .		1
9	Arbitrary reconfiguration of universal silicon photonic circuits by bacteria foraging algorithm to achieve reconfigurable photonic digital-to-analog conversion. Optics Express, 2019, 27, 24914.	1.7	10
10	Implementing a Raman silicon nanocavity laser for integrated optical circuits by using a (100) SOI wafer with a 45-degree-rotated top silicon layer. OSA Continuum, 2019, 2, 2098.	1.8	20
11	Photonic Crystal Nanocavities With an Average Q Factor of 1.9 Million Fabricated on a 300-mm-Wide SOI Wafer Using a CMOS-Compatible Process. Journal of Lightwave Technology, 2018, 36, 4774-4782.	2.7	21
12	Interferometric autocorrelation of ultrafast optical pulses in silicon sub-micrometer p-i-n waveguides. Optics Express, 2018, 26, 15090.	1.7	6
13	Silicon traveling-wave Mach-Zehnder modulator under distributed-bias driving. Optics Letters, 2018, 43, 403.	1.7	9
14	Nondetrimental Surface Modification of Ultrahigh-Q Photonic Crystal Silicon Nanocavities. , 2018, , .		0
15	High-sensitivity Autocorrelation Measurement of Ultrafast Optical Pulses Using Silicon Wire P-I-N Waveguides. , 2017, , .		1
16	High-efficiency silicon Mach-Zehnder modulator with vertical PN junction based on fabrication-friendly strip-loaded waveguide. , 2017, , .		0
17	Novel adaptive driving method enabling better high-frequency performance for silicon Mach-Zehnder modulator. , 2017, , .		0
18	Ultrahigh-Q photonic crystal nanocavities fabricated by CMOS process technologies. Optics Express, 2017, 25, 18165.	1.7	41

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19	High-efficiency strip-loaded waveguide based silicon Mach-Zehnder modulator with vertical p-n junction phase shifter. Optics Express, 2017, 25, 31407.	1.7	14
20	Completely CMOS compatible SiN-waveguide-based fiber coupling structure for Si wire waveguides. Optics Express, 2016, 24, 16856.	1.7	22
21	Optical autocorrelation performance of silicon wire p-i-n waveguides utilizing the enhanced two-photon absorption. Optics Express, 2016, 24, 29452.	1.7	7
22	Strip-loaded waveguide-based optical phase shifter for high-efficiency silicon optical modulators. Photonics Research, 2016, 4, 222.	3.4	13
23	High-efficiency and high-speed silicon optical modulator based on amorphous silicon loaded SOI waveguide. , 2016, , .		0
24	Interlayer Polarization Beam Splitter Based on Asymmetrical Si Wire Directional Coupler. IEEE Photonics Technology Letters, 2016, 28, 1545-1548.	1.3	7
25	In-plane switching mode-based liquid-crystal hybrid Si wired Mach-Zehnder optical switch. Japanese Journal of Applied Physics, 2016, 55, 118003.	0.8	7
26	Hydrogenated amorphous silicon waveguide with vertical pin structure for infrared detection. Electronics Letters, 2016, 52, 1705-1707.	0.5	1
27	Hydrogenated amorphous silicon photonic devices on synthetic quartz glass substrate. , 2015, , .		0
28	Quantum Dot Laser for a Light Source of an Athermal Silicon Optical Interposer. Photonics, 2015, 2, 355-364.	0.9	5
29	Design of feasible silicon interlayer polarization beam splitter toward 3D optical integrated circuits. , 2015, , .		0
30	Spot-size converter with a SiO ₂ spacer layer between tapered Si and SiON waveguides for fiber-to-chip coupling. Optics Express, 2015, 23, 21287.	1.7	25
31	Multi-channel Hybrid Integrated Light Source for Ultra-high-bandwidth Optical Interconnections and Its Structural Optimization for Low Power Consumption by Considering Thermal Interference between LD Arrays. Transactions of the Japan Institute of Electronics Packaging, 2014, 7, 94-103.	0.3	6
32	Over-1000-channel hybrid integrated light source with laser diode arrays on a silicon waveguide platform for ultra-high-bandwidth optical interconnections. , 2014, , .		3
33	Demonstration of 25-Gbps optical data links on silicon optical interposer using FPGA transceiver. , 2014, , .		4
34	Athermal silicon optical interposers with quantum dot lasers operating from 25 to 125°C. Electronics Letters, 2014, 50, 1377-1378.	0.5	0
35	Silicon knife-edge taper fiber coupler using CMOS backend compatible process. , 2014, , .		1
36	Multichannel and high-density hybrid integrated light source with a laser diode array on a silicon optical waveguide platform for interchip optical interconnection. Photonics Research, 2014, 2, A19.	3.4	32

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37	Multi-channel and high-density hybrid integrated light source by thermal management for low power consumption for ultra-high bandwidth optical interconnection. , 2014, , .		2
38	A Hybrid Integrated Light Source on a Silicon Platform Using a Trident Spot-Size Converter. Journal of Lightwave Technology, 2014, 32, 1329-1336.	2.7	152
39	Demonstration of over 1000-Channel Hybrid Integrated Light Source for Ultra-High Bandwidth Interchip Optical Interconnection. , 2014, , .		5
40	Hybrid integration technology of laser source with laser diode arrays on silicon optical waveguide platform by flip-chip bonding for silicon photonics. , 2013, , .		3
41	Low power consumption operation of light sources for inter-chip optical interconnects. , 2013, , .		0
42	First demonstration of a hybrid integrated light source on a Si platform using a quantum dot laser under wide temperature range. , 2013, , .		2
43	2.2 pJ/bit operation of hybrid integrated light source on a silicon optical interposer for optical interconnection. , 2013, , .		4
44	Demonstration of the wide control range Q factor of ring cavity with ultrashort directional coupler and curved photonic-crystal ring waveguide. Journal of the Optical Society of America B: Optical Physics, 2012, 29, 1521.	0.9	2
45	Demonstration of 125-Gbps optical interconnects integrated with lasers, optical splitters, optical modulators and photodetectors on a single silicon substrate. Optics Express, 2012, 20, B256.	1.7	53
46	Enhancement of the Q value of a microring resonator by introducing curved photonic crystal waveguides. Journal of the Optical Society of America B: Optical Physics, 2012, 29, 1599.	0.9	1
47	High-density hybrid integrated light sources for photonics-electronics convergence system. , 2012, , .		0
48	Nanometer-scale thickness control of amorphous silicon using isotropic wet-etching and low loss wire waveguide fabrication with the etched material. Applied Physics Letters, 2012, 100, 251108.	1.5	23
49	Demonstration of 12.5-Gbps Optical Interconnects Integrated with Lasers, Optical Splitters, Optical Modulators and Photodetectors on a Single Silicon Substrate. , 2012, , .		4
50	Analysis of vertical coupling between a 2D photonic crystal cavity and a hydrogenated-amorphous-silicon-wire waveguide. Photonics and Nanostructures - Fundamentals and Applications, 2012, 10, 287-295.	1.0	3
51	Multi-Channel and High-Density Hybrid Integrated Light Source on Silicon Optical Waveguide Platform. , 2012, , .		3
52	High-Density Hybridly Integrated Light Source with a Laser Diode Array on a Silicon Optical Waveguide Platform. , 2012, , .		4
53	Multi-Channel and High-Density Hybrid Integrated Light Source on Silicon Optical Waveguide Platform. , 2012, , .		1
54	Fine thickness control of amorphous silicon by wet-etching for low loss wire waveguide. , 2011, , .		1

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55	High density hybrid integrated light source with a laser diode array on a silicon optical waveguide platform for inter-chip optical interconnection. , 2011, , .		29
56	First demonstration of high density optical interconnects integrated with lasers, optical modulators, and photodetectors on single silicon substrate. Optics Express, 2011, 19, B159.	1.7	90
57	Short Photonic-Crystal Directional Coupling Optical Switch of Extended Optical Bandwidth Using Flat Dispersion. Japanese Journal of Applied Physics, 2011, 50, 032201.	0.8	0
58	First Demonstration of High Density Optical Interconnects Integrated with Lasers, Optical Modulators and Photodetectors on a Single Silicon Substrate. , 2011, , .		4
59	Short Photonic-Crystal Directional Coupling Optical Switch of Extended Optical Bandwidth Using Flat Dispersion. Japanese Journal of Applied Physics, 2011, 50, 032201.	0.8	3
60	Design of two-dimensional photonic crystal nanocavities with low-refractive-index material cladding. Journal of Optics (United Kingdom), 2010, 12, 015108.	1.0	4
61	Analysis of two-dimensional photonic crystal L-type cavities with low-refractive-index material cladding. Journal of Optics (United Kingdom), 2010, 12, 075101.	1.0	14
62	Ultrafast nonlinear effects in hydrogenated amorphous silicon wire waveguide. Optics Express, 2010, 18, 5668.	1.7	99
63	Ultra low-power and compact photonic crystal optical switch controlled by micro-heater directly attached on PhC layer. , 2009, , .		0
64	Demonstration of Flat-Band Structure of Two-Dimensional Photonic Crystal Directional Coupler. Japanese Journal of Applied Physics, 2009, 48, 022101.	0.8	4
65	Direct creation of three-dimensional photonic crystals by a top-down approach. Nature Materials, 2009, 8, 721-725.	13.3	134
66	Numerical investigation of emission in finite-sized, three-dimensional photonic crystals with structural fluctuations. Journal of the Optical Society of America B: Optical Physics, 2009, 26, 1157.	0.9	20
67	Three-dimensional photonic crystals developed by double-angled reactive-ion etching technique. , 2009, , .		0
68	Development of curved two-dimensional photonic crystal waveguides. Optics Communications, 2008, 281, 5788-5792.	1.0	13
69	Fabrication and Analysis of GaAs Triangular Two-Dimensional Photonic Crystals on Silicon Wafers. Japanese Journal of Applied Physics, 2008, 47, 7453-7458.	0.8	3
70	Demonstration of a photonic crystal directional coupler switch with ultra short switching length. , 2008, , .		2
71	Resonant Characteristics in a Two-Dimensional Photonic Crystal Ring Resonator with a Triangular Lattice of Air Holes. Japanese Journal of Applied Physics, 2007, 46, L534-L536.	0.8	6
72	Three-Dimensional Photonic Crystals Fabricated by Double-Angled Plasma Etching. , 2007, , .		0

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73	GaAs-based two-dimensional photonic crystal slab ring resonator consisting of a directional coupler and bent waveguides. Journal of the Optical Society of America B: Optical Physics, 2007, 24, 1951.	0.9	34
74	A Double Pulse Generator by 2D Photonic Crystal Waveguide System. Indium Phosphide and Related Materials Conference (IPRM), IEEE International Conference on, 2007, , .	0.0	0
75	Three-dimensional photonic crystals fabricated by double-angled plasma etching. , 2007, , .		0
76	Three-dimensional photonic crystals based on double-angled etching and wafer-fusion techniques. Applied Physics Letters, 2006, 89, 123106.	1.5	31
77	Design of compound-defect waveguides in three-dimensional photonic crystals. Optics Express, 2006, 14, 6303.	1.7	15
78	Development of three-dimensional photonic-crystal waveguides at optical-communication wavelengths. Applied Physics Letters, 2006, 88, 171107.	1.5	41
79	Design of donor-type line-defect waveguides in three-dimensional photonic crystals. Optics Express, 2005, 13, 9774.	1.7	21
80	Analysis of multimode point-defect cavities in three-dimensional photonic crystals using group theory in frequency and time domains. Physical Review B, 2004, 70, .	1.1	28
81	Control of Light Emission by 3D Photonic Crystals. Science, 2004, 305, 227-229.	6.0	368
82	A channel drop filter using a single defect in a 2-D photonic crystal slab - Defect engineering with respect to polarization mode and ratio of emissions from upper and lower sides. Journal of Lightwave Technology, 2003, 21, 1370-1376.	2.7	31
83	Coupling between a point-defect cavity and a line-defect waveguide in three-dimensional photonic crystal. Physical Review B, 2003, 68, .	1.1	48
84	Analysis and design of single-defect cavities in a three-dimensional photonic crystal. Physical Review B, 2002, 66, .	1.1	44
85	<title>Semiconductor photonic crystals and functional devices</title>. , 2002, , .		0
86	Analysis of coupling between two-dimensional photonic crystal waveguide and external waveguide. Applied Physics Letters, 2002, 81, 3729-3731.	1.5	45
87	Wider bandwidth with high transmission through waveguide bends in two-dimensional photonic crystal slabs. Applied Physics Letters, 2002, 80, 1698-1700.	1.5	169
88	Semiconductor three-dimensional and two-dimensional photonic crystals and devices. IEEE Journal of Quantum Electronics, 2002, 38, 726-735.	1.0	82
89	Optical properties of three-dimensional photonic crystals based on III-V semiconductors at infrared to near-infrared wavelengths. Applied Physics Letters, 1999, 75, 905-907.	1.5	120
90	Alignment and stacking of semiconductor photonic bandgaps by wafer-fusion. Journal of Lightwave Technology, 1999, 17, 1948-1955.	2.7	85