

# Masahiko Mori

## List of Publications by Year in descending order

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113  
papers

1,320  
citations

361413

20  
h-index

395702

33  
g-index

113  
all docs

113  
docs citations

113  
times ranked

1141  
citing authors

#	ARTICLE	IF	CITATIONS
1	A Hybrid Integrated Light Source on a Silicon Platform Using a Trident Spot-Size Converter. Journal of Lightwave Technology, 2014, 32, 1329-1336.	4.6	152
2	Ultrafast nonlinear effects in hydrogenated amorphous silicon wire waveguide. Optics Express, 2010, 18, 5668.	3.4	99
3	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.	3.4	53
4	Silicon knife-edge taper waveguide for ultralow-loss spot-size converter fabricated by photolithography. Applied Physics Letters, 2013, 102, .	3.3	44
5	Miniband formation in InGaAs quantum dot superlattice. Applied Physics Letters, 2010, 97, .	3.3	41
6	Ultrahigh-Q photonic crystal nanocavities fabricated by CMOS process technologies. Optics Express, 2017, 25, 18165.	3.4	41
7	Sub-1 dB/cm submicrometer-scale amorphous silicon waveguide for backend on-chip optical interconnect. Optics Express, 2014, 22, 4779.	3.4	39
8	Pattern-effect-free all-optical wavelength conversion using a hydrogenated amorphous silicon waveguide with ultra-fast carrier decay. Optics Letters, 2012, 37, 1382.	3.3	37
9	Vertical silicon waveguide coupler bent by ion implantation. Optics Express, 2015, 23, 29449.	3.4	33
10	Photoluminescence of Mg-doped GaAs grown by molecular beam epitaxy using Mg <sub>3</sub> As <sub>2</sub> as a Mg source: A comparison with Mg-ion implantation. Applied Physics Letters, 1986, 49, 1184-1186.	3.3	32
11	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.	7.0	32
12	Silicon waveguide optical modulator driven by metal-insulator transition of vanadium dioxide cladding layer. Optics Express, 2019, 27, 4147.	3.4	31
13	Laser-plasma scanning 3D display for putting digital contents in free space. , 2008, , .		29
14	High density hybrid integrated light source with a laser diode array on a silicon optical waveguide platform for inter-chip optical interconnection. , 2011, , .		29
15	A theoretical explanation for the red energy shift of a newly discovered, exclusively acceptor-associated emission in GaAs. Journal of Applied Physics, 1987, 62, 1833-1836.	2.5	28
16	Microdisk lasers and field effect transistors of thiophene/phenylene co-oligomers by using high temperature deposition method. Organic Electronics, 2010, 11, 1192-1198.	2.6	27
17	Spot-size converter with a SiO <sub>2</sub> spacer layer between tapered Si and SiON waveguides for fiber-to-chip coupling. Optics Express, 2015, 23, 21287.	3.4	25
18	Highly Stacked and High-Quality Quantum Dots Fabricated by Intermittent Deposition of InGaAs. Japanese Journal of Applied Physics, 2010, 49, 030211.	1.5	24

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19	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.	3.3	23
20	Low-loss and low wavelength-dependence vertical interlayer transition for 3D silicon photonics. Optics Express, 2015, 23, 18602.	3.4	23
21	Vertically Curved Si Waveguide Coupler with Low Loss and Flat Wavelength Window. Journal of Lightwave Technology, 2016, 34, 1567-1571.	4.6	23
22	Spectral interferometric optical coherence tomography with nonlinear $\hat{I}^2$ -barium borate time gating. Optics Letters, 2002, 27, 403.	3.3	22
23	Ultrannarrow Silicon Inverse Taper Waveguide Fabricated with Double-Patterning Photolithography for Low-Loss Spot-Size Converter. Applied Physics Express, 2012, 5, 052202.	2.4	22
24	Optical coherence tomography by spectral interferometric joint transform correlator. Optics Communications, 2000, 186, 51-56.	2.1	21
25	Optical Learning Neural Network Using Selfoc Microlens Array. Japanese Journal of Applied Physics, 1992, 31, 1689-1693.	1.5	20
26	Reduced Lasing Threshold in Thiophene/Phenylene Co-Oligomer Crystalline Microdisks. Applied Physics Express, 2010, 3, 012702.	2.4	20
27	Hydrogenated Amorphous Silicon Carbide Optical Waveguide for Telecommunication Wavelength Applications. Applied Physics Express, 2010, 3, 122201.	2.4	20
28	Highly stacked InGaAs quantum dot structures grown with two species of As. Journal of Vacuum Science and Technology B: Nanotechnology and Microelectronics, 2010, 28, C3C4-C3C8.	1.2	19
29	Transverse Mode Characteristics of a DBR-Surface Emitting Laser with Buried Heterostructure. Japanese Journal of Applied Physics, 1991, 30, 3879-3882.	1.5	18
30	Experimental Demonstration of Optical Three-Layer Neural Network. Japanese Journal of Applied Physics, 1990, 29, L1565-L1568.	1.5	17
31	Compact and phase-error-robust multilayered AWG-based wavelength selective switch driven by a single LCOS. Optics Express, 2013, 21, 17131.	3.4	17
32	45-degree curved micro-mirror for vertical optical I/O of silicon photonics chip. Optics Express, 2019, 27, 19749.	3.4	16
33	Analysis of two-dimensional photonic crystal L-type cavities with low-refractive-index material cladding. Journal of Optics (United Kingdom), 2010, 12, 075101.	2.2	14
34	Switching dynamics of silicon waveguide optical modulator driven by photothermally induced metal-insulator transition of vanadium dioxide cladding layer. Optics Express, 2020, 28, 37188.	3.4	12
35	25-Gb/s Operation of a Polymer Optical Waveguide on an Electrical Hybrid LSI Package Substrate With Optical Card Edge Connector. Journal of Lightwave Technology, 2016, 34, 3006-3011.	4.6	10
36	Liquid-phase epitaxy of heavily Mg-doped GaAs: Formation of a new near-band-edge emission exclusively pertinent to acceptor impurities. Journal of Applied Physics, 1987, 62, 3212-3215.	2.5	9

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37	Optical learning neural network with a Pockels readout optical modulator. Applied Optics, 1998, 37, 2852.	2.1	9
38	Phase-resolved correlation and its application to analysis of low-coherence interferograms. Optics Letters, 2001, 26, 90.	3.3	9
39	Reversal-input superposing technique for all-optical neural networks. Applied Optics, 1994, 33, 1477.	2.1	8
40	Terminal Attractor Optical Associative Memory for Pattern Recognition. Japanese Journal of Applied Physics, 2000, 39, 908-911.	1.5	8
41	Broadband and Polarization-Independent Efficient Vertical Optical Coupling With 45° Mirror for Optical I/O of Si Photonics. Journal of Lightwave Technology, 2016, 34, 3012-3018.	4.6	8
42	Broadband and Polarization-Independent Efficient Vertical Optical Coupling With 45° Mirror for Optical I/O of Si Photonics. Journal of Lightwave Technology, 2016, 34, 978-984.	4.6	8
43	Interlayer Polarization Beam Splitter Based on Asymmetrical Si Wire Directional Coupler. IEEE Photonics Technology Letters, 2016, 28, 1545-1548.	2.5	7
44	In-plane switching mode-based liquid-crystal hybrid Si wired Mach-Zehnder optical switch. Japanese Journal of Applied Physics, 2016, 55, 118003.	1.5	7
45	Mirror-based polarization-insensitive broadband vertical optical coupling for Si waveguide. Japanese Journal of Applied Physics, 2017, 56, 090302.	1.5	7
46	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.	0.4	6
47	Diffusion Properties of Mg in Al <sub>x</sub> Ga <sub>1-x</sub> As. Japanese Journal of Applied Physics, 1989, 28, L1-L3.	1.5	5
48	Optical Learning Neural Network Using a Selfoc Microlens Array for Pattern Recognition. Optical Review, 1994, 1, 44-46.	2.0	5
49	MEMS mirror with slot structures suitable for flexible-grid WSS. IEICE Electronics Express, 2013, 10, 20120924-20120924.	0.8	5
50	Quantum Dot Laser for a Light Source of an Athermal Silicon Optical Interposer. Photonics, 2015, 2, 355-364.	2.0	5
51	Low-Loss Characteristics of a Multimode Polymer Optical Waveguide at 1.3 μm Wavelength on an Electrical Hybrid LSI Package Substrate. , 2016, , .		5
52	Demonstration of over 1000-Channel Hybrid Integrated Light Source for Ultra-High Bandwidth Interchip Optical Interconnection. , 2014, , .		5
53	<title>Optical learning neural networks with two-dimensional structure</title>. , 1998, 3402, 226.		4
54	Time-space conversion of femtosecond light pulse by spatio-temporal joint transform correlator. Optics Communications, 2000, 177, 135-139.	2.1	4

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55	Design of two-dimensional photonic crystal nanocavities with low-refractive-index material cladding. Journal of Optics (United Kingdom), 2010, 12, 015108.	2.2	4
56	Basic Study of Coupling on Three-Dimensional Crossing of Si Photonic Wire Waveguide for Optical Interconnection on Inter or Inner Chip. Japanese Journal of Applied Physics, 2012, 51, 04DG12.	1.5	4
57	2.2 pJ/bit operation of hybrid integrated light source on a silicon optical interposer for optical interconnection. , 2013, , .		4
58	Demonstration of 25-Gbps optical data links on silicon optical interposer using FPGA transceiver. , 2014, , .		4
59	Optical-Time-Division Demultiplexing of 172 Gb/s to 43 Gb/s in a-Si:H Waveguides. IEEE Photonics Technology Letters, 2014, 26, 426-429.	2.5	4
60	Transmission Characteristics of Hydrogenated Microcrystalline Silicon Wire Waveguide at a Wavelength of 1.55 $\mu\text{m}$ . Applied Physics Express, 2012, 5, 082501.	2.4	4
61	Optical and electrical properties of C+-implanted GaAs. Nuclear Instruments & Methods in Physics Research B, 1989, 39, 457-460.	1.4	3
62	Terminal attractor optical associative memory with adaptive control parameter. Optics Communications, 1998, 151, 353-365.	2.1	3
63	Optical image transformations for fully parallel optical analog-to-digital conversion. Applied Optics, 1998, 37, 3607.	2.1	3
64	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.	2.0	3
65	Hybrid integration technology of laser source with laser diode arrays on silicon optical waveguide platform by flip-chip bonding for silicon photonics. , 2013, , .		3
66	Over-1000-channel hybrid integrated light source with laser diode arrays on a silicon waveguide platform for ultra-high-bandwidth optical interconnections. , 2014, , .		3
67	A 25-Gbps operation of polymer-based optical and electrical hybrid LSI package substrate with optical card edge connector. , 2015, , .		3
68	Multi-Channel and High-Density Hybrid Integrated Light Source on Silicon Optical Waveguide Platform. , 2012, , .		3
69	Optical Implementation of Semantic Networks Based on Association. Japanese Journal of Applied Physics, 1990, 29, L1321-L1324.	1.5	2
70	Beam Scanning Binary Logic. Japanese Journal of Applied Physics, 1990, 29, L1268-L1269.	1.5	2
71	<title>Renewal method of weight matrix in optical neural network</title>. , 1993, , .		2
72	Capacity of optical associative memory using a terminal attractor model. Optics Communications, 1998, 146, 49-54.	2.1	2

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73	Improvement of the generalization capability for a pattern-recognition neural network that uses a Gaussian-synapse neuron model. Applied Optics, 2000, 39, 770.	2.1	2
74	Fast aberration-correcting algorithm for an SLM-based optical switch. IEICE Electronics Express, 2010, 7, 1728-1734.	0.8	2
75	Phase error compensation for multilayered AWG in LCOS-based WSS. IEICE Electronics Express, 2011, 8, 2054-2060.	0.8	2
76	First demonstration of a hybrid integrated light source on a Si platform using a quantum dot laser under wide temperature range. , 2013, , .		2
77	Carrier injection refractive index changes in low-temperature grown silicon waveguide. , 2014, , .		2
78	Multi-channel and high-density hybrid integrated light source by thermal management for low power consumption for ultra-high bandwidth optical interconnection. , 2014, , .		2
79	High density optical card edge connector for polymer optical waveguide on printed circuit board. , 2018, , .		2
80	Basic Study of Coupling on Three-Dimensional Crossing of Si Photonic Wire Waveguide for Optical Interconnection on Inter or Inner Chip. Japanese Journal of Applied Physics, 2012, 51, 04DG12.	1.5	2
81	Binary logic operations using a beam-scanning laser diode. Optical Engineering, 1992, 31, 799.	1.0	1
82	Simplification of Space-Variant Parallel Logic Operations Using the Temporal Method. Optical Review, 1997, 4, 305-308.	2.0	1
83	Optical coherence tomography by spatio-temporal joint transform correlator. , 2000, 4087, 1282.		1
84	<title>Optical learning neural network with fuzzy controlling</title>. , 2000, 4089, 676.		1
85	<title>Pattern recognition neural-net by spatial mapping of biology visual field</title>. , 2000, , .		1
86	Fine thickness control of amorphous silicon by wet-etching for low loss wire waveguide. , 2011, , .		1
87	Silicon knife-edge taper fiber coupler using CMOS backend compatible process. , 2014, , .		1
88	Broadband and polarization-independent efficient vertical optical coupling with Si integrated 45 degree mirror. , 2015, , .		1
89	Compact and low-loss liquid crystal loaded Mach-Zehnder optical switch based on Si wire waveguide. IEICE Electronics Express, 2017, 14, 20170110-20170110.	0.8	1
90	Multi-Channel and High-Density Hybrid Integrated Light Source on Silicon Optical Waveguide Platform. , 2012, , .		1

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91	CMOS-compatible Vertical Si-waveguide Coupler Fabricated by Ion Implantation. , 2016, , .		1
92	<title>Recent research on optical neural networks in Japan</title>. , 1991, , .		0
93	Method to Determine the Effective Group Refractive Index of an Optical Waveguide Using a Steplike Optical Frequency Sweep Generator. Japanese Journal of Applied Physics, 1995, 34, L526-L528.	1.5	0
94	<title>Real-time face recognition system with optical learning neural network</title>. , 1998, 3466, 240.		0
95	Photon wall: three-dimensional control of femtosecond light pulse. , 1998, 3491, 700.		0
96	<title>Spatio-temporal joint pulse shaper: analysis of the property by Wigner distribution function</title>. , 2000, 4089, 836.		0
97	Multilayer neural network with a fuzzy controlled learning method for optical pattern training. Optical Engineering, 2000, 39, 2734.	1.0	0
98	Analysis of spatiotemporal coupling in a femtosecond pulse shaper by the Wigner distribution function. Optical Engineering, 2001, 40, 1717.	1.0	0
99	Smart pixels in a focal-plane image compression system. Optics and Laser Technology, 2002, 34, 429-437.	4.6	0
100	Ultra low-power and compact photonic crystal optical switch controlled by micro-heater directly attached on PhC layer. , 2009, , .		0
101	Low threshold current operation of 1.3 &#x00B5;m Quantum Dots Laser with high mirror loss structure. , 2009, , .		0
102	Four-wave mixing in hydrogenated amorphous silicon waveguides at 1.55 &#x00B5;m. , 2010, , .		0
103	High-density hybrid integrated light sources for photonics-electronics convergence system. , 2012, , .		0
104	Plasma deposited &#x00B5;c-Si:H wire waveguide. , 2012, , .		0
105	Observation of spontaneous Raman scattering in hydrogenated amorphous silicon wire waveguide at 1.55 Åµm. Electronics Letters, 2013, 49, 610-612.	1.0	0
106	Athermal silicon optical interposers with quantum dot lasers operating from 25 to 125Å°C. Electronics Letters, 2014, 50, 1377-1378.	1.0	0
107	Highly transparent submicrometer-sclae amorphous silicon waveguide for backend optical interconnect. , 2014, , .		0
108	Hydrogenated amorphous silicon photonic devices on synthetic quartz glass substrate. , 2015, , .		0

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109	A method enabling height-control of chips for edge-emitting laser stacking. Japanese Journal of Applied Physics, 2015, 54, 04DB02.	1.5	0
110	Raman scattering in hydrogenated amorphous silicon waveguides at telecommunication wavelengths. , 2016, , .		0
111	Controlled initial orientation of liquid crystals in silicon optical switches with a groove array. , 2017, , .		0
112	Large-scale optical neural network with high-speed learning. , 1999, , .		0
113	Mirror-based surface optical input/output technology with precise and arbitrary coupling angle for silicon photonic application. Japanese Journal of Applied Physics, 2017, 56, 04CH04.	1.5	0