

# Kiichi Hamamoto

## List of Publications by Year in descending order

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106  
papers

995  
citations

623734

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h-index

477307

29  
g-index

108  
all docs

108  
docs citations

108  
times ranked

466  
citing authors

#	ARTICLE	IF	CITATIONS
1	Space-mode compressor by using nano-pixel. Japanese Journal of Applied Physics, 2022, 61, SK1022.	1.5	2
2	Vertical field enhancement of a spot-size converter using a nanopixel waveguide and window structure. Optics Express, 2021, 29, 2757.	3.4	5
3	Concept Demonstration of 3D Waveguides Shuffle Converter for Multi-Core Fiber/Single-Mode Fiber Fan-in Fan-out Configuration Toward Over 1,000 Port Count. IEICE Transactions on Electronics, 2021, E104.C, 34-36.	0.6	0
4	Asymmetric-ratio optical power couplers based on nano-pixel structure. OSA Continuum, 2021, 4, 556.	1.8	4
5	Spatial Single Dimensional Mode Based De-Multiplexer Using Slab Waveguide. IEICE Transactions on Electronics, 2021, E104.C, 164-167.	0.6	1
6	Active-MMI SOA on Quantum-Dots toward High Saturation Output Power under High Temperature. , 2021, , .		0
7	Demonstration of Equal Input (Intensity and Phase) MMI Like Power Coupler by using Nano-Pixel Structure. , 2021, , .		1
8	Rapid automatic waveguide recognition using YOLO for 3D waveguide drawing. , 2021, , .		0
9	Affection analysis of frequency response with photon-photon-resonance (PPR) to directly modulated 40 Gbps signal. , 2021, , .		1
10	Proposal of space-mode compressor by using nano-pixel. , 2021, , .		0
11	ASE Spectrum Analysis on Active-MMI SOA toward High Saturation Output Power at High Temperature. , 2021, , .		0
12	1:9 and 1:99 Optical Power Couplers Based on Nano-Pixel Structure. , 2020, , .		1
13	Fabrication and analysis of low-loss silicon high-mesa waveguides. Applied Optics, 2020, 59, 4964.	1.8	5
14	Integrated optical waveguide gas sensing using amplifier assisted technique. , 2020, , .		2
15	Feasibility study of 1 $\times$ 4 optical mode switch based on single dimensional mode-set. , 2020, , .		0
16	Vertical Field Enhancement of Spot Size Converter by Using Nano-Pixel Waveguide and Window Structure. , 2020, , .		1
17	Sensing Accuracy Improvement for Waveguide CRDS toward Compact Breath Sensing. , 2020, , .		0
18	Amplifier-assisted CRDS (cavity ring-down spectroscopy) toward compact breath sensing. Japanese Journal of Applied Physics, 2019, 58, SJJ01.	1.5	17

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19	Proposal of two tangent air hole structure for higher sensitivity gas sensor. Japanese Journal of Applied Physics, 2019, 58, SJJ03.	1.5	5
20	Proposal of 1xN Optical Mode Switch Based on Spatial Single Dimensional Mode. , 2019, , .		1
21	A space mode selective light source with over 40 GHz direct modulation bandwidth. Japanese Journal of Applied Physics, 2019, 58, SJA05.	1.5	0
22	Surface improvement investigation of sol-gel SiO <sub>2</sub> cladding for waveguide device passivation. Japanese Journal of Applied Physics, 2019, 58, SJB04.	1.5	2
23	Greetings from the General Co-Chairs of OECC/PSC 2019. , 2019, , .		0
24	Spatial Single Dimensional Mode De-multiplexer Based on Rowland Circle Waveguide. , 2019, , .		1
25	Significant Propagation Loss Reduction on Silicon High-Mesa Waveguides Using Thermal Oxidation Technique. , 2019, , .		0
26	Observation of 60 GHz and 20 GHz Multiple Photon-Photon Resonances Using Active Multimode Interferometer Laser Diodes. , 2019, , .		1
27	Propagation Mode Retention Using Strongly Coupled Multi-Core Fiber. , 2019, , .		0
28	Mode Crosstalk Improvement of Active-MMI Mode Selective Laser Diode using Slit Structure. , 2019, , .		0
29	Mode Selective Active Multimode Interferometer Laser Diode " Mode Selection Principle, and High Speed Modulation ". IEICE Transactions on Electronics, 2019, E102.C, 364-370.	0.6	3
30	Microoptics. Japanese Journal of Applied Physics, 2019, 58, SJ0001.	1.5	0
31	Multi-layer stacking scheme of sol-gel based SiO <sub>2</sub> towards thicker (>0.8 Åµm) cladding layers for optical waveguides. IEICE Electronics Express, 2018, 15, 20180783-20180783.	0.8	1
32	Mode Selective Active Multimode Interferometer Laser Diode with over 40 GHz Direct Modulation Bandwidth. , 2018, , .		4
33	Active-MMI laser diode toward high-speed direct modulation based on multiple photon-photon resonance. , 2018, , .		1
34	Bandwidth enhancement scheme demonstration on direct modulation active-MMI laser diode using multiple photon photon resonance. Applied Physics Letters, 2017, 111, .	3.3	13
35	Bandwidth Enhancement Scheme Demonstration (from 5 GHz to 34 GHz) on Direct Modulation Laser Diode Using Multiple PPR (Photon-Photon Resonance) Active MMI. , 2017, , .		3
36	Multiple photon photon resonance by using active-multimode interferometer laser diode. , 2017, , .		1

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37	Fast Mode-Switching (60ns) by Using A 2 Å— 2 Silicon Optical Mode Switch. IEICE Transactions on Electronics, 2017, E100.C, 782-788.	0.6	4
38	First Demonstration of Mode Selective Active Multimode Interferometer Laser Diode. IEICE Transactions on Electronics, 2017, E100.C, 775-781.	0.6	3
39	A Multi-Layer Stacked All Sol-Gel Fabrication Technique for Vertical Coupled Waveguide. Evergreen, 2017, 4, 12-17.	0.5	2
40	Optical mode switch and mode selective light source toward flexible mode-division multiplexing network. , 2017, , .		6
41	Demonstration of photon- photon resonance peak enhancement by waveguide configuration modification on active multimode interferometer laser diode. Japanese Journal of Applied Physics, 2016, 55, 08RD04.	1.5	0
42	Electrically controlled optical-mode switch for fundamental mode and first order mode. Japanese Journal of Applied Physics, 2016, 55, 08RB06.	1.5	8
43	Mode Crosstalk Evaluation Method by Using MMI Mode Filter for Optical Mode Switch. IEICE Transactions on Electronics, 2016, E99.C, 825-829.	0.6	2
44	Accurate dry etching technique for germanium waveguide by using CHF <sub>3</sub> based inductively coupled plasma. Electronics Letters, 2016, 52, 1868-1869.	1.0	2
45	Microoptics. Japanese Journal of Applied Physics, 2016, 55, 08R001.	1.5	0
46	Theoretical modelling of photon-photon resonance on active multimode interferometer laser diode toward 40Gbps. , 2015, , .		1
47	Gas sensing demonstration by using silica high-mesa waveguide with amplified cavity ring down spectroscopy technique. IEICE Electronics Express, 2015, 12, 20150574-20150574.	0.8	11
48	Low wavelength dependency design for MMI (multi-mode interference) mode converter. IEICE Electronics Express, 2015, 12, 20150727-20150727.	0.8	7
49	Demonstration of photon-photon resonance peak enhancement by waveguide design modification on active multimode interferometer laser diode. , 2015, , .		1
50	Proposal of 128ch coupled multi-core fiber configuration using coil-shape (MCF). , 2015, , .		0
51	Polarization Beam Splitter With Different Core Widths and Its Application to Dual-Polarization Optical Hybrid. Journal of Lightwave Technology, 2015, 33, 408-414.	4.6	4
52	Design criteria for wavelength independent MMI mode converter. , 2015, , .		0
53	First demonstration of electrically controlled mode switching. , 2015, , .		2
54	Preliminary propagation loss evaluation of core-top etched waveguide for step-core LP21 mode converter. , 2015, , .		0

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55	Dry etching for Germanium waveguides by using CHF <sub>3</sub> inductively coupled plasma. , 2015, , .		2
56	Proposal of novel optical mode demultiplexer based on angled-multimode interference (a-MMI) waveguide. , 2015, , .		0
57	Mode crosstalk evaluation on optical mode switch. , 2015, , .		4
58	Single-step dry-etched lateral PIN by using trench structure for optical mode switch. , 2015, , .		0
59	Active MMI devices: concept, proof, and recent progress. Journal Physics D: Applied Physics, 2015, 48, 383001.	2.8	12
60	Optical Mode Switch for High Speed Switching Network. , 2014, , .		5
61	Proposal of optical mode switch. Japanese Journal of Applied Physics, 2014, 53, 08MB10.	1.5	11
62	Low loss silica high-mesa waveguide for infrared sensing. Japanese Journal of Applied Physics, 2014, 53, 022502.	1.5	5
63	High intrinsic modulation bandwidth InGaAsP/InGaAsP 1.55 $\mu\text{m}$ asymmetric active multimode interferometer laser diode by using split pump configuration. Japanese Journal of Applied Physics, 2014, 53, 08MB09.	1.5	3
64	Split pump region in 1.55 $\mu\text{m}$ InGaAsP/InGaAsP asymmetric active multi-mode interferometer laser diode for improved modulation bandwidth. IEICE Transactions on Electronics, 2014, E97.C, 781-786.	0.6	7
65	Reliability Improvement of superluminescent diodes emitting at 1.0 $\mu\text{m}$ band using InGaAsP barrier structure. Electronics Letters, 2013, 49, 409-410.	1.0	3
66	Proposal of multiple-slot silica high-mesa waveguide for infrared absorption. IEICE Electronics Express, 2013, 10, 20130871-20130871.	0.8	1
67	Single-Wavelength Emission by Using 1 $\mu\text{m}$ -N Active Multi-Mode Interferometer Laser Diode. IEICE Transactions on Electronics, 2013, E96.C, 1413-1419.	0.6	3
68	Demonstration of resonance frequency enhancement effect by using split pumping region in active multi-mode interferometer laser diode. , 2013, , .		1
69	CW single-wavelength emission by using novel asymmetric configuration for active multi-mode interferometer laser diodes. IEICE Electronics Express, 2012, 9, 1448-1453.	0.8	9
70	Thermal resistance reduction in high power superluminescent diodes by using active multi-mode interferometer. Applied Physics Letters, 2012, 100, .	3.3	139
71	Proposal of Novel Strip High-Mesa Waveguide for Infrared Absorption Sensing. Applied Physics Express, 2012, 5, 062202.	2.4	4
72	Injection-Locked Flip-Flop Operation of a DBR Laser. IEEE Photonics Technology Letters, 2011, 23, 1261-1263.	2.5	5

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73	All-optical flip-flop operation based on asymmetric active-multimode interferometer bi-stable laser diodes. Optics Express, 2011, 19, B119.	3.4	12
74	High Power and Stable High Coupling Efficiency (66%) Superluminescent Light Emitting Diodes by Using Active Multi-Mode Interferometer. IEICE Transactions on Electronics, 2011, E94-C, 862-864.	0.6	77
75	Low Hysteresis Threshold Current (39 mA) Active Multimode-Interferometer (MMI) Bistable Laser Diodes Using Lateral-Modes Bistability. IEEE Journal of Selected Topics in Quantum Electronics, 2011, 17, 1258-1263.	2.9	4
76	Low hysteresis threshold current (39mA) demonstration using active multi-mode interferometer bi-stable laser diodes. , 2010, , .		0
77	Slot Waveguide by Using Double High-Mesa Structure for Optical Absorption Sensing. Japanese Journal of Applied Physics, 2010, 49, 122503.	1.5	5
78	High-Power (> 110 mW) Superluminescent Diodes by Using Active Multimode Interferometer. IEEE Photonics Technology Letters, 2010, 22, 721-723.	2.5	143
79	Phase-Locked Array Laser Diodes (LDs) by Using $1 \times N$ Active Multimode-Interferometer (MMI). IEEE Photonics Technology Letters, 2009, 21, 176-178.	2.5	5
80	Low loss SOI-based high-mesa waveguides fabricated using neutral loop discharge (NLD) plasma etching for compact breath-sensing system. , 2007, , .		3
81	1 V and Stable Dynamic Operation of Laser Diode Using Active Multi-Mode Interferometer. Japanese Journal of Applied Physics, 2006, 45, L14-L16.	1.5	1
82	First direct observation of self-imaging effect in active multimode-interference semiconductor laser diodes. Applied Physics Letters, 2006, 89, 011106.	3.3	3
83	First demonstration of novel active multi-mode interferometer (MMI) LDs integrated with 1st order-mode permitted waveguides. IEICE Electronics Express, 2005, 2, 399-403.	0.8	18
84	Over 1 W output power with low driving voltage 1.4-µm pump laser diodes using active multimode-interferometer. Electronics Letters, 2004, 40, 1063.	1.0	6
85	High power with low electric power consumption active multi-mode-interferometer laser diode for fibre-amplifier. Electronics Letters, 2002, 38, 517.	1.0	10
86	Single-transverse-mode active multi-mode- interferometer 1.45-µm high power laser diode. Applied Physics B: Lasers and Optics, 2001, 73, 571-574.	2.2	15
87	Active multimode interferometer laser diode demonstrated via 1.48 [µm] high power application. Electronics Letters, 2000, 36, 138.	1.0	12
88	Wavelength-selectable microarray light sources of multiple ranges simultaneously fabricated on single wafer. Electronics Letters, 2000, 36, 745.	1.0	26
89	Active multi-mode-interferometer semiconductor optical amplifier. Electronics Letters, 2000, 36, 1218.	1.0	15
90	1.55-µm wavelength-selectable microarray DFB-LD's with monolithically integrated MMI combiner, SOA, and EA-modulator. IEEE Photonics Technology Letters, 2000, 12, 242-244.	2.5	90

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91	Spot-size converter integrated semiconductor optical amplifiers for optical gate applications. IEEE Journal of Quantum Electronics, 1999, 35, 1067-1074.	1.9	6
92	Narrow-stripe selective growth of high-quality MQWs by atmospheric-pressure MOVPE. Journal of Crystal Growth, 1998, 195, 466-473.	1.5	15
93	Single transverse mode active multimode interferometer InGaAsP/InP laser diode. Electronics Letters, 1998, 34, 462.	1.0	13
94	A transceiver PIC for bidirectional optical communication fabricated by bandgap energy controlled selective MOVPE. IEEE Photonics Technology Letters, 1996, 8, 361-363.	2.5	22
95	Insertion-loss-free 1 Å— 4 optical switch fabricated using bandgap-energy-controlled selective MOVPE. Electronics Letters, 1996, 32, 2265.	1.0	12
96	Insertion-loss-free 2 Å—2 InGaAsP/InP optical switch fabricated using bandgap energy controlled selective MOVPE. Electronics Letters, 1995, 31, 1779-1781.	1.0	22
97	High-power 0.98- $\mu\text{m}$ strained quantum-well lasers fabricated using in situ monitored reactive ion beam etching. IEEE Photonics Technology Letters, 1995, 7, 602-604.	2.5	10
98	Extremely low loss 4 Å—4 GaAs/AlGaAs optical matrix switch. Electronics Letters, 1993, 29, 1580.	1.0	22
99	Preliminary Reliability Evaluations of GaAs/AlGaAs Electro-Optic Directional Coupler Switches. Japanese Journal of Applied Physics, 1993, 32, L390-L391.	1.5	1
100	First 8 Å—8 semiconductor optical matrix switches using GaAs/AlGaAs electro-optic guided-wave directional couplers. Electronics Letters, 1992, 28, 441.	1.0	43
101	4*4 GaAs/AlGaAs optical matrix switches with uniform device characteristics using alternating Delta beta electrooptic guided-wave directional couplers. Journal of Lightwave Technology, 1991, 9, 871-878.	4.6	33
102	Electrical properties of hydrogenated amorphous silicon layers on a polymer film substrate under tensile stress. Applied Physics Letters, 1989, 54, 1678-1680.	3.3	1
103	The influence of unsteady state plasma on the properties of a-Si:H films formed by glow discharge-chemical vapour deposition. Thin Solid Films, 1989, 177, 161-170.	1.8	3
104	Low internal loss InP/InGaAsP laser diodes fabricated using inductively coupled plasma etching. , 0, , .		4
105	Novel Active Multi-Mode-Interferometer (MMI) Laser Diodes Integrated with 1st Order-Mode Permitted Waveguides. , 0, , .		0
106	Active multi-mode interferometer semiconductor optical amplifier on quantum-dots toward high saturated output power under high temperature. Japanese Journal of Applied Physics, 0, , .	1.5	0