

Michael J Strain

List of Publications by Year in descending order

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171
papers

3,391
citations

201674

27
h-index

149698

56
g-index

171
all docs

171
docs citations

171
times ranked

3588
citing authors

#	ARTICLE	IF	CITATIONS
1	Integrated Compact Optical Vortex Beam Emitters. <i>Science</i> , 2012, 338, 363-366.	12.6	773
2	Micrometer-scale integrated silicon source of time-energy entangled photons. <i>Optica</i> , 2015, 2, 88.	9.3	212
3	Ultra-low power generation of twin photons in a compact silicon ring resonator. <i>Optics Express</i> , 2012, 20, 23100.	3.4	184
4	Qubit entanglement between ring-resonator photon-pair sources on a silicon chip. <i>Nature Communications</i> , 2015, 6, 7948.	12.8	178
5	Fast electrical switching of orbital angular momentum modes using ultra-compact integrated vortex emitters. <i>Nature Communications</i> , 2014, 5, 4856.	12.8	149
6	Roadmap on all-optical processing. <i>Journal of Optics (United Kingdom)</i> , 2019, 21, 063001.	2.2	128
7	Non-Invasive On-Chip Light Observation by Contactless Waveguide Conductivity Monitoring. <i>IEEE Journal of Selected Topics in Quantum Electronics</i> , 2014, 20, 292-301.	2.9	122
8	Tunable silicon photonics directional coupler driven by a transverse temperature gradient. <i>Optics Letters</i> , 2013, 38, 863.	3.3	103
9	Non-invasive monitoring and control in silicon photonics using CMOS integrated electronics. <i>Optica</i> , 2014, 1, 129.	9.3	100
10	Three-dimensional cross-nanowire networks recover full terahertz state. <i>Science</i> , 2020, 368, 510-513.	12.6	81
11	From classical four-wave mixing to parametric fluorescence in silicon microring resonators. <i>Optics Letters</i> , 2012, 37, 3807.	3.3	77
12	Integration of Semiconductor Nanowire Lasers with Polymeric Waveguide Devices on a Mechanically Flexible Substrate. <i>Nano Letters</i> , 2017, 17, 5990-5994.	9.1	55
13	Photonic Integrated Filter With Widely Tunable Bandwidth. <i>Journal of Lightwave Technology</i> , 2014, 32, 897-907.	4.6	50
14	Automated Routing and Control of Silicon Photonic Switch Fabrics. <i>IEEE Journal of Selected Topics in Quantum Electronics</i> , 2016, 22, 169-176.	2.9	45
15	Time and frequency domain measurements of solitons in subwavelength silicon waveguides using a cross-correlation technique. <i>Optics Express</i> , 2010, 18, 26625.	3.4	44
16	Unidirectional Bistability in AlGaInAs Microring and Microdisk Semiconductor Lasers. <i>IEEE Photonics Technology Letters</i> , 2009, 21, 88-90.	2.5	40
17	Reconfigurable silicon filter with continuous bandwidth tunability. <i>Optics Letters</i> , 2012, 37, 3669.	3.3	40
18	Design and Fabrication of Integrated Chirped Bragg Gratings for On-Chip Dispersion Control. <i>IEEE Journal of Quantum Electronics</i> , 2010, 46, 774-782.	1.9	39

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19	Integrated microspectrometer for fluorescence based analysis in a microfluidic format. Lab on A Chip, 2012, 12, 2850.	6.0	36
20	Multi-wavelength filters in silicon using superposition sidewall Bragg grating devices. Optics Letters, 2014, 39, 413.	3.3	35
21	Integrated nonlinear Mach Zehnder for 40 Gbit/s all-optical switching. Optics Express, 2013, 21, 21587.	3.4	34
22	Bandpass integrated Bragg gratings in silicon-on-insulator with well-controlled amplitude and phase responses. Optics Letters, 2015, 40, 736.	3.3	33
23	High accuracy transfer printing of single-mode membrane silicon photonic devices. Optics Express, 2018, 26, 16679.	3.4	33
24	Ultrafast all-optical temporal differentiators based on CMOS-compatible integrated-waveguide Bragg gratings. Optics Express, 2011, 19, 19514.	3.4	32
25	Gallium nitride micro-light-emitting diode structured light sources for multi-modal optical wireless communications systems. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2020, 378, 20190185.	3.4	32
26	Tunable Q-factor silicon microring resonators for ultra-low power parametric processes. Optics Letters, 2015, 40, 1274.	3.3	31
27	Silicon photonic processor of two-qubit entangling quantum logic. Journal of Optics (United Kingdom) Tj ETQq1 1 0.784314,rgBT /Overlock 10	3.3	29
28	Deep Three-Dimensional Solid-State Qubit Arrays with Long-Lived Spin Coherence. Physical Review Applied, 2019, 12, .	3.8	27
29	Automated Nanoscale Absolute Accuracy Alignment System for Transfer Printing. ACS Applied Nano Materials, 2020, 3, 10326-10332.	5.0	27
30	Integrated III-V Bragg Gratings for Arbitrary Control Over Chirp and Coupling Coefficient. IEEE Photonics Technology Letters, 2008, 20, 1863-1865.	2.5	24
31	Integrated Microspectrometer with Elliptical Bragg Mirror Enhanced Diffraction Grating on Silicon on Insulator. ACS Photonics, 2014, 1, 430-436.	6.6	22
32	Scalable visible light communications with a micro-LED array projector and high-speed smartphone camera. Optics Express, 2019, 27, 15585.	3.4	21
33	Hybrid integration of an evanescently coupled AlGaAs microdisk resonator with a silicon waveguide by nanoscale-accuracy transfer printing. Optics Letters, 2018, 43, 4883.	3.3	21
34	Positioning and Space-Division Multiple Access Enabled by Structured Illumination With Light-Emitting Diodes. Journal of Lightwave Technology, 2017, 35, 2339-2345.	4.6	20
35	Direct integration of micro-LEDs and a SPAD detector on a silicon CMOS chip for data communications and time-of-flight ranging. Optics Express, 2020, 28, 6909.	3.4	20
36	Gigabit per second visible light communication based on AlGaInP red micro-LED micro-transfer printed onto diamond and glass. Optics Express, 2020, 28, 12149.	3.4	20

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37	Passively Mode-Locked Lasers With Integrated Chirped Bragg Grating Reflectors. IEEE Journal of Quantum Electronics, 2011, 47, 492-499.	1.9	19
38	Post-Growth Fabrication of Multiple Wavelength DFB Laser Arrays With Precise Wavelength Spacing. IEEE Photonics Technology Letters, 2012, 24, 1063-1065.	2.5	19
39	BER Evaluation of a Passive SOI WDM Router. IEEE Photonics Technology Letters, 2013, 25, 2285-2288.	2.5	19
40	Picosecond linear optical pulse shapers based on integrated waveguide Bragg gratings. Optics Letters, 2008, 33, 2425.	3.3	18
41	Characterization, Selection, and Microassembly of Nanowire Laser Systems. Nano Letters, 2020, 20, 1862-1868.	9.1	17
42	Spatially dense integration of micron-scale devices from multiple materials on a single chip via transfer-printing. Optical Materials Express, 2021, 11, 3567.	3.0	17
43	Monolithically Integrated DFB Lasers for Tunable and Narrow Linewidth Millimeter-Wave Generation. IEEE Journal of Selected Topics in Quantum Electronics, 2013, 19, 1500406-1500406.	2.9	16
44	High-extinction-ratio TE/TM selective Bragg grating filters on silicon-on-insulator. Optics Letters, 2017, 42, 3040.	3.3	16
45	Active On-Chip Dispersion Control Using a Tunable Silicon Bragg Grating. Micromachines, 2019, 10, 569.	2.9	16
46	Fiber-to-Waveguide Alignment Assisted by a Transparent Integrated Light Monitor. IEEE Photonics Technology Letters, 2015, 27, 510-513.	2.5	15
47	Thin film diamond membranes bonded on-demand with SOI ring resonators. Diamond and Related Materials, 2018, 88, 215-221.	3.9	15
48	Ultrashort Q-switched pulses from a passively mode-locked distributed Bragg reflector semiconductor laser. Optics Letters, 2012, 37, 4732.	3.3	13
49	Multispectral time-of-flight imaging using light-emitting diodes. Optics Express, 2019, 27, 35485.	3.4	12
50	Post-Growth Fabrication and Characterization of Integrated Chirped Bragg Gratings on GaAs/AlGaAs. IEEE Photonics Technology Letters, 2006, 18, 2566-2568.	2.5	11
51	All-Optical Directional Switching in Bistable Semiconductor-Ring Lasers. IEEE Journal of Quantum Electronics, 2013, 49, 877-885.	1.9	11
52	Positioning and Data Broadcasting Using Illumination Pattern Sequences Displayed by LED Arrays. IEEE Transactions on Communications, 2018, 66, 5582-5592.	7.8	11
53	Transfer printing of AlGaAs-on-SOI microdisk resonators for selective mode coupling and low-power nonlinear processes. Optics Letters, 2020, 45, 881.	3.3	11
54	Modulational instability in a silicon-on-insulator directional coupler: role of the coupling-induced group velocity dispersion. Optics Letters, 2012, 37, 668.	3.3	10

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55	Dual-Mode Coupled-Resonator Integrated Optical Filters. IEEE Photonics Technology Letters, 2014, 26, 929-932.	2.5	10
56	All-optical tuning of a diamond micro-disk resonator on silicon. Photonics Research, 2020, 8, 318.	7.0	10
57	Bistable Micro-Ring Lasers With Compact Footprint and High Output Efficiency. IEEE Journal of Quantum Electronics, 2012, 48, 1023-1030.	1.9	9
58	Pattern manipulation via on-chip phase modulation between orbital angular momentum beams. Applied Physics Letters, 2015, 107, 051102.	3.3	9
59	High power (130 mW) 40 GHz 155 nm mode-locked distributed Bragg reflector lasers with integrated optical amplifiers. Optics Letters, 2012, 37, 344.	3.3	8
60	High speed spatial encoding enabled by CMOS-controlled micro-LED arrays. , 2016, , .		8
61	Silicon photonic filters with high rejection of both TE and TM modes for on-chip four wave mixing applications. Optics Express, 2017, 25, 19711.	3.4	8
62	Optical characterization of a hydrogen silsesquioxane lithography process. Journal of Vacuum Science & Technology B, 2008, 26, 2290-2294.	1.3	7
63	Semiconductor snail lasers. Applied Physics Letters, 2010, 96, 121105.	3.3	7
64	High-sensitivity inter-satellite optical communications using chip-scale LED and single-photon detector hardware. Optics Express, 2021, 29, 10749.	3.4	7
65	Method for inferring the mechanical strain of GaN-on-Si epitaxial layers using optical profilometry and finite element analysis. Optical Materials Express, 2021, 11, 1643.	3.0	7
66	Combining Time of Flight and Photometric Stereo Imaging for 3D Reconstruction of Discontinuous Scenes. Optics Letters, 2021, 46, 3612-3615.	3.3	7
67	Passive mode-locking in semiconductor lasers with saturable absorbers bandgap shifted through quantum well intermixing. Photonics Research, 2014, 2, 186.	7.0	6
68	High-frequency dynamics of evanescently-coupled nanowire lasers. Scientific Reports, 2019, 9, 6126.	3.3	6
69	Synchronization-free top-down illumination photometric stereo imaging using light-emitting diodes and a mobile device. Optics Express, 2021, 29, 1502.	3.4	6
70	High precision integrated photonic thermometry enabled by a transfer printed diamond resonator on GaN waveguide chip. Optics Express, 2021, 29, 29095.	3.4	6
71	Retrieval of Bragg Grating Transmission Spectra by Post-process Removal of Spurious Fabry-Pérot Oscillations. Optics Express, 2009, 17, 13493.	3.4	5
72	Design of an Athermal Interferometer Based on Tailored Subwavelength Metamaterials for On-Chip Microspectrometry. IEEE Photonics Journal, 2019, 11, 1-11.	2.0	5

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73	High-Throughput Electrical Characterization of Nanomaterials from Room to Cryogenic Temperatures. ACS Nano, 2020, 14, 15293-15305.	14.6	5
74	Enhancing self-assembled colloidal quantum dot microsphere lasers. , 2021, , .		5
75	Curved facet 90° turning mirrors for integrated optical technologies. Electronics Letters, 2010, 46, 360.	1.0	4
76	Temporal Encoding to Reject Background Signals in a Low Complexity, Photon Counting Communication Link. Materials, 2018, 11, 1671.	2.9	4
77	Integrated device with three mutually coupled DFB lasers for tunable, narrow linewidth, mm-wave signal generation. , 2010, , .		3
78	Generation of Picosecond Pulses Over a 40-nm Wavelength Range Using an Array of Distributed Bragg Grating Mode-Locked Lasers. IEEE Photonics Technology Letters, 2013, 25, 368-370.	2.5	3
79	High-Power AlGaInAs Mode-Locked DBR Laser With Integrated Tapered Optical Amplifier. IEEE Photonics Technology Letters, 2013, 25, 253-256.	2.5	3
80	Concept of a GaN-LED-based positioning system using structured illumination. , 2015, , .		3
81	Control of automated systems with a structured light illumination source. , 2016, , .		3
82	Photonic integrated devices for exploiting the orbital angular momentum of light in optical communications. Frontiers of Optoelectronics, 2016, 9, 518-525.	3.7	3
83	LED-Based Photometric Stereo-Imaging Employing Frequency-Division Multiple Access. , 2018, , .		3
84	Directional bi-stability in micro-ring and micro-disk lasers. , 2008, , .		2
85	High average power (200 mW) 40 GHz mode-locked DBR lasers with integrated tapered optical amplifiers. , 2012, , .		2
86	Compact Tunable Directional Couplers in SOI. , 2013, , .		2
87	Silicon-on-insulator single channel-extraction filter for DWDM applications. , 2014, , .		2
88	Multiwavelength super-structured Bragg grating laser for tunable repetition rate mode-locked operation. Optics Express, 2014, 22, 17050.	3.4	2
89	Lighting as a Service That Provides Simultaneous 3D Imaging and Optical Wireless Connectivity. , 2018, , .		2
90	Towards using LED Arrays for Relative Alignment of Cube Satellite Clusters. , 2019, , .		2

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91	44â€1: Invited Paper: Microâ€LEDs for Technological Convergence between Displays, Optical Communications, and Sensing and Imaging Systems. Digest of Technical Papers SID International Symposium, 2020, 51, 638-641.	0.3	2
92	Compact Semiconductor Tapers for Deep-to-Shallow Etch Transitions. IEEE Photonics Technology Letters, 2007, 19, 1544-1546.	2.5	1
93	Semiconductor micro-ring and micro-disk lasers for all-optical switching. , 2009, , .		1
94	Ultrafast All-Optical Temporal Differentiation in Integrated Silicon-on-Insulator Bragg Gratings. , 2010, , .		1
95	Ultra-fast all-optical integrated differentiators in Bragg gratings. , 2010, , .		1
96	Integrated monolithic device with three mutually coupled DFB lasers for the generation of a tunable narrow linewidth mm-wave signal. Proceedings of SPIE, 2010, , .	0.8	1
97	Notch Nonlinear Frequency Shift in AlGaAs Bragg Grating Waveguides. , 2011, , .		1
98	On-chip micro-spectrometer for fluorescence bio-sensing. , 2011, , .		1
99	Highly-Sensitive Sonogram for Assessment of Chirp in Semiconductor Mode-Locked Lasers. IEEE Journal of Quantum Electronics, 2012, 48, 995-1003.	1.9	1
100	Spontaneous parametric fluorescence in SOI integrated microresonators. Proceedings of SPIE, 2013, , .	0.8	1
101	Ultra-low power Four Wave Mixing wavelength conversion in silicon micro-ring resonators with tunable Q-factor. , 2014, , .		1
102	Optimized Coupler Design for Slot Waveguide Ring Resonators. IEEE Photonics Technology Letters, 2014, 26, 224-226.	2.5	1
103	Non-invasive monitoring of silicon microring resonators through contactless integrated photonics probes. , 2014, , .		1
104	Polarisation selective Bragg filters on silicon-on-insulator. , 2015, , .		1
105	Feedback-controlled tuning, switching, and locking of photonic integrated circuits. , 2015, , .		1
106	Photonic integrated devices for exploiting the orbital angular momentum (OAM) of light in optical communications. , 2015, , .		1
107	Hyperspectral Imaging Under Low Illumination with a Single Photon Camera. , 2018, , .		1
108	LED Excitation of an Imaging Cytometer for Bead-Based Immunoassay. IEEE Photonics Technology Letters, 2021, 33, 892-895.	2.5	1

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109	On-chip Electrical Modulation of Phase Shift between Optical Vortices with Opposite Topological Charge. , 2014, , .		1
110	Four-wave mixing and generation of correlated photon pairs in silicon ring resonators and photonic molecules. , 2013, , .		1
111	A Micro-Processor-Based Feedback Stabilization Scheme for High-Q, Non-Linear Silicon Resonators. Applied Sciences (Switzerland), 2016, 6, 316.	2.5	1
112	Sub-micron-accuracy automated position and rotation registration method for transferred devices. , 2021, , .		1
113	LED Excitation of an On-chip Imaging Flow Cytometer for Bead-based Immunoassay. , 2020, , .		1
114	Planar nanophotonic devices and integration technologies. Proceedings of SPIE, 1899, , .	0.8	0
115	Integrated Chirped Bragg Gratings on Deeply Etched Tapered III-V Waveguides. , 2007, , .		0
116	Spectral slicing of femtosecond pulses using semiconductor modulator arrays. Proceedings of SPIE, 2008, , .	0.8	0
117	Semiconductor Snail Laser. , 2009, , .		0
118	Integrated chirped Bragg gratings with control over complex reflectivity. , 2009, , .		0
119	Ultrafast all-optical temporal differentiation in integrated phase-shifted Bragg gratings. , 2010, , .		0
120	Chirp characterization of semiconductor mode-locked laser pulses with a high-sensitivity TPA waveguide detector sonogram. , 2010, , .		0
121	Time- and frequency-domain measurements of solitons in subwavelength silicon waveguides using cross-correlation. , 2011, , .		0
122	Post-growth fabrication of a DFB laser array with high precision wavelength spacing. , 2011, , .		0
123	All-optical differentiation of sub-picosecond pulses in SOI Bragg gratings. , 2011, , .		0
124	Measurement of phase-correlation between optical modes of Semiconductor Lasers. , 2011, , .		0
125	Intra-cavity dispersion control in passively mode-locked semiconductor lasers. , 2011, , .		0
126	Semiconductor mode-locked lasers with integrated dispersion control. , 2011, , .		0

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127	High peak power (550 mW) 40 GHz mode-locked DBR lasers with integrated optical amplifiers. , 2011, , .		0
128	Graphene nano-, micro- and macro-photonics. , 2012, , .		0
129	Integrated nonlinear optics: From classical to quantum phenomena. , 2012, , .		0
130	Evanescent coupling assisted four-wave mixing in a silicon-on-insulator directional coupler. Proceedings of SPIE, 2012, , .	0.8	0
131	Photo-induced trimming of chalcogenide-assisted silicon photonic circuits. Proceedings of SPIE, 2012, , .	0.8	0
132	Generation of ultra-high repetition rate optical pulses through external injection in passively mode-locked monolithical semiconductor lasers. , 2013, , .		0
133	Integrated optically isolated laser source via non-reciprocal counter-propagating four-wave mixing. , 2013, , .		0
134	40 GHz nonlinear all optical switching in a Mach-Zehnder interferometer integrated device. , 2013, , .		0
135	Integrated microfluidic spectroscopic sensor using arrayed waveguide grating. Proceedings of SPIE, 2013, , .	0.8	0
136	Signal processing subsystems for optical interconnects. , 2013, , .		0
137	Continuously tunable, narrow linewidth mm-wave generation from a monolithically integrated triple DFB laser chip. , 2013, , .		0
138	Multiwavelength laser based on superimposed Bragg gratings on multiquantum well AlGaInAs-InP. , 2013, , .		0
139	Silicon micro-ring resonators with tunable Q-factor for ultra-low power parametric signal generation. , 2013, , .		0
140	Integrated emitters of cylindrically structured light beams. , 2013, , .		0
141	Tailoring of dispersion in silicon vertical slot waveguides. , 2013, , .		0
142	Group IV platforms for the mid-infrared. Proceedings of SPIE, 2013, , .	0.8	0
143	Compact multi-wavelength filters in SOI using superimposed sidewall Bragg gratings. , 2014, , .		0
144	Measuring the angular emission of optical vortex beams from integrated devices. , 2014, , .		0

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145	In-band OSNR monitoring with a high sensitivity silicon photonics system-on-chip. , 2014, , .		0
146	Generation of time-energy entangled photons on a silicon chip. , 2014, , .		0
147	Non-Invasive Integrated Light Probe. , 2014, , .		0
148	Emission of time-energy entangled photon pairs from an integrated silicon ring resonator. , 2014, , .		0
149	Actively reconfigurable compact vortex beam emitters. , 2014, , .		0
150	Ultrafast pulse generation in semiconductor lasers. , 2015, , .		0
151	Integrated microrings for on-chip filtering and efficient FWM generation. , 2016, , .		0
152	Integrated TE/TM grating filters with high extinction ratio. , 2016, , .		0
153	High extinction ratio polarization selective TE/TM Bragg gratings filters on silicon-on-insulator. , 2017, , .		0
154	Towards 3D optical integration by micro-transfer printing of ultra-thin membrane devices. , 2018, , .		0
155	Nanoscale Accurate Heterogeneous Integration of Waveguide Devices by Transfer Printing. , 2018, , .		0
156	Heterogeneous Integration of Silicon and AlGaAs Micro-Ring Resonators by Transfer Printing. , 2018, , .		0
157	Temperature Insensitive Waveguide Interferometer based on Subwavelength Gratings. , 2019, , .		0
158	Micro-LED Arrays for Spatio-Temporally Correlated Multi-Mode Operation. , 2019, , .		0
159	Combined Time of Flight and Photometric Stereo Imaging for Surface Reconstruction. , 2020, , .		0
160	Nanowires: a New Horizon for Polarization-resolved Terahertz Time-domain Spectroscopy. , 2021, , .		0
161	Terahertz Full-polarization-state Detection by Nanowires. , 2021, , .		0
162	Semiconductor Mode-locked Lasers: Harnessing the Gain Bandwidth. , 2012, , .		0

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163	On-chip generation and analysis of maximal path-frequency entanglement. , 2014, , .		0
164	Fast Switching of Optical Vortex Beam Mode Orders Generated Using a Fully Integrated SOI Device. , 2014, , .		0
165	High precision transfer printing for hybrid integration of multi-material waveguide devices. , 2018, , .		0
166	Micro-assembly of hybrid diamond-Si resonator devices. , 2018, , .		0
167	Thermally tuneable integrated diamond micro-disk resonators fabricated by micro-assembly. , 2019, , .		0
168	Technique for the measurement of picosecond optical pulses using a non-linear fiber loop mirror and an optical power meter. Optics Express, 2019, 27, 6377.	3.4	0
169	Transfer-printing enables multi-material assembly of integrated photonic systems. , 2021, , .		0
170	Discrete Power-Stepping Pulse Amplitude Modulation for Optical Camera Communications Employing a CMOS-Integrated GaN μ LED Array. , 2020, , .		0
171	Integration of an LED/SPAD Optical Wireless Transceiver with CubeSat On-board Systems. , 2020, , .		0