Michael J Strain

List of Publications by Year
in descending order

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	Nanowires: a New Horizon for Polarization-resolved Terahertz Time-domain Spectroscopy. , 2021, , .		0
2	Synchronization-free top-down illumination photometric stereo imaging using light-emitting diodes and a mobile device. Optics Express, 2021, 29, 1502.	3.4	6
3	High-sensitivity inter-satellite optical communications using chip-scale LED and single-photon detector hardware. Optics Express, 2021, 29, 10749.	3.4	7
4	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
5	Combining Time of Flight and Photometric Stereo Imaging for 3D Reconstruction of Discontinuous Scenes. Optics Letters, 2021, 46, 3612-3615.	3.3	7
6	Terahertz Full-polarization-state Detection by Nanowires. , 2021, , .		0
7	LED Excitation of an Imaging Cytometer for Bead-Based Immunoassay. IEEE Photonics Technology Letters, 2021, 33, 892-895.	2.5	1
8	High precision integrated photonic thermometry enabled by a transfer printed diamond resonator on GaN waveguide chip. Optics Express, 2021, 29, 29095.	3.4	6
9	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
10	Transfer-printing enables multi-material assembly of integrated photonic systems. , 2021, , .		0
11	Enhancing self-assembled colloidal quantum dot microsphere lasers. , 2021, , .		5
12	Sub-micron-accuracy automated position and rotation registration method for transferred devices. , 2021, , .		1
13	Automated Nanoscale Absolute Accuracy Alignment System for Transfer Printing. ACS Applied Nano Materials, 2020, 3, 10326-10332.	5.0	27
14	High-Throughput Electrical Characterization of Nanomaterials from Room to Cryogenic Temperatures. ACS Nano, 2020, 14, 15293-15305.	14.6	5
15	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
16	Combined Time of Flight and Photometric Stereo Imaging for Surface Reconstruction. , 2020, , .		0
17	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
18	Characterization, Selection, and Microassembly of Nanowire Laser Systems. Nano Letters, 2020, 20, 1862-1868.	9.1	17

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19	Three-dimensional cross-nanowire networks recover full terahertz state. Science, 2020, 368, 510-513.	12.6	81
20	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
21	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
22	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
23	All-optical tuning of a diamond micro-disk resonator on silicon. Photonics Research, 2020, 8, 318.	7.0	10
24	Discrete Power-Stepping Pulse Amplitude Modulation for Optical Camera Communications Employing a CMOS-Integrated GaN ÂµLED Array. , 2020, , .		0
25	LED Excitation of an On-chip Imaging Flow Cytometer for Bead-based Immunoassay. , 2020, , .		1
26	Integration of an LED/SPAD Optical Wireless Transceiver with CubeSat On-board Systems. , 2020, , .		0
27	Design of an Athermal Interferometer Based on Tailored Subwavelength Metamaterials for On-Chip Microspectrometry. IEEE Photonics Journal, 2019, 11, 1-11.	2.0	5
28	Active On-Chip Dispersion Control Using a Tunable Silicon Bragg Grating. Micromachines, 2019, 10, 569.	2.9	16
29	Roadmap on all-optical processing. Journal of Optics (United Kingdom), 2019, 21, 063001.	2.2	128
30	High-frequency dynamics of evanescently-coupled nanowire lasers. Scientific Reports, 2019, 9, 6126.	3.3	6
31	Temperature Insensitive Waveguide Interferometer based on Subwavelength Gratings. , 2019, , .		0
32	Micro-LED Arrays for Spatio-Temporally Correlated Multi-Mode Operation. , 2019, , .		0
33	Deep Three-Dimensional Solid-State Qubit Arrays with Long-Lived Spin Coherence. Physical Review Applied, 2019, 12, .	3.8	27
34	Towards using LED Arrays for Relative Alignment of Cube Satellite Clusters. , 2019, , .		2
35	Scalable visible light communications with a micro-LED array projector and high-speed smartphone camera. Optics Express, 2019, 27, 15585.	3.4	21
36	Multispectral time-of-flight imaging using light-emitting diodes. Optics Express, 2019, 27, 35485.	3.4	12

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37	Thermally tuneable integrated diamond micro-disk resonators fabricated by micro-assembly. , 2019, , .		0
38	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
39	LED-Based Photometric Stereo-Imaging Employing Frequency-Division Multiple Access. , 2018, , .		3
40	Lighting as a Service That Provides Simultaneous 3D Imaging and Optical Wireless Connectivity. , 2018, , .		2
41	Hyperspectral Imaging Under Low Illumination with a Single Photon Camera. , 2018, , .		1
42	Towards 3D optical integration by micro-transfer printing of ultra-thin membrane devices. , 2018, , .		0
43	Nanoscale Accurate Heterogeneous Integration of Waveguide Devices by Transfer Printing. , 2018, , .		0
44	Heterogeneous Integration of Silicon and AlGaAs Micro-Ring Resonators by Transfer Printing. , 2018, , .		0
45	Temporal Encoding to Reject Background Signals in a Low Complexity, Photon Counting Communication Link. Materials, 2018, 11, 1671.	2.9	4
46	Positioning and Data Broadcasting Using Illumination Pattern Sequences Displayed by LED Arrays. IEEE Transactions on Communications, 2018, 66, 5582-5592.	7.8	11
47	High accuracy transfer printing of single-mode membrane silicon photonic devices. Optics Express, 2018, 26, 16679.	3.4	33
48	Thin film diamond membranes bonded on-demand with SOI ring resonators. Diamond and Related Materials, 2018, 88, 215-221.	3.9	15
49	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
50	High precision transfer printing for hybrid integration of multi-material waveguide devices. , 2018, , .		0
51	Micro-assembly of hybrid diamond-Si resonator devices. , 2018, , .		0
52	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
53	Integration of Semiconductor Nanowire Lasers with Polymeric Waveguide Devices on a Mechanically Flexible Substrate. Nano Letters, 2017, 17, 5990-5994.	9.1	55
54	Silicon photonic processor of two-qubit entangling quantum logic. Journal of Optics (United) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 62 T	2.2	29

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55	High-extinction-ratio TE/TM selective Bragg grating filters on silicon-on-insulator. Optics Letters, 2017, 42, 3040.	3.3	16
56	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
57	High extinction ratio polarization selective TE/TM Bragg gratings filters on silicon-on-insulator. , 2017, , .		0
58	Control of automated systems with a structured light illumination source. , 2016, , .		3
59	Integrated microrings for on-chip filtering and efficient FWM generation. , 2016, , .		0
60	Photonic integrated devices for exploiting the orbital angular momentum of light in optical communications. Frontiers of Optoelectronics, 2016, 9, 518-525.	3.7	3
61	Integrated TE/TM grating filters with high extinction ratio. , 2016, , .		0
62	High speed spatial encoding enabled by CMOS-controlled micro-LED arrays. , 2016, , .		8
63	Automated Routing and Control of Silicon Photonic Switch Fabrics. IEEE Journal of Selected Topics in Quantum Electronics, 2016, 22, 169-176.	2.9	45
64	A Micro-Processor-Based Feedback Stabilization Scheme for High-Q, Non-Linear Silicon Resonators. Applied Sciences (Switzerland), 2016, 6, 316.	2.5	1
65	Concept of a GaN-LED-based positioning system using structured illumination. , 2015, , .		3
66	Pattern manipulation via on-chip phase modulation between orbital angular momentum beams. Applied Physics Letters, 2015, 107, 051102.	3.3	9
67	Ultrafast pulse generation in semiconductor lasers. , 2015, , .		0
68	Polarisation selective Bragg filters on silicon-on-insulator. , 2015, , .		1
69	Feedback-controlled tuning, switching, and locking of photonic integrated circuits. , 2015, , .		1
70	Photonic integrated devices for exploiting the orbital angular momentum (OAM) of light in optical communications. , 2015, , .		1
71	Fiber-to-Waveguide Alignment Assisted by a Transparent Integrated Light Monitor. IEEE Photonics Technology Letters, 2015, 27, 510-513.	2.5	15
72	Micrometer-scale integrated silicon source of time-energy entangled photons. Optica, 2015, 2, 88.	9.3	212

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73	Tunable Q-factor silicon microring resonators for ultra-low power parametric processes. Optics Letters, 2015, 40, 1274.	3.3	31
74	Bandpass integrated Bragg gratings in silicon-on-insulator with well-controlled amplitude and phase responses. Optics Letters, 2015, 40, 736.	3.3	33
75	Qubit entanglement between ring-resonator photon-pair sources on a silicon chip. Nature Communications, 2015, 6, 7948.	12.8	178
76	Compact multi-wavelength filters in SOI using superimposed sidewall Bragg gratings. , 2014, , .		0
77	Silicon-on-insulator single channel-extraction filter for DWDM applications. , 2014, , .		2
78	Measuring the angular emission of optical vortex beams from integrated devices. , 2014, , .		0
79	Non-invasive monitoring and control in silicon photonics using CMOS integrated electronics. Optica, 2014, 1, 129.	9.3	100
80	Passive mode-locking in semiconductor lasers with saturable absorbers bandgap shifted through quantum well intermixing. Photonics Research, 2014, 2, 186.	7.0	6
81	Multi-wavelength filters in silicon using superposition sidewall Bragg grating devices. Optics Letters, 2014, 39, 413.	3.3	35
82	Multiwavelength super-structured Bragg grating laser for tunable repetition rate mode-locked operation. Optics Express, 2014, 22, 17050.	3.4	2
83	Ultra-low power Four Wave Mixing wavelength conversion in silicon micro-ring resonators with tunable Q-factor. , 2014, , .		1
84	Photonic Integrated Filter With Widely Tunable Bandwidth. Journal of Lightwave Technology, 2014, 32, 897-907.	4.6	50
85	Non-Invasive On-Chip Light Observation by Contactless Waveguide Conductivity Monitoring. IEEE Journal of Selected Topics in Quantum Electronics, 2014, 20, 292-301.	2.9	122
86	Optimized Coupler Design for Slot Waveguide Ring Resonators. IEEE Photonics Technology Letters, 2014, 26, 224-226.	2.5	1
87	Dual-Mode Coupled-Resonator Integrated Optical Filters. IEEE Photonics Technology Letters, 2014, 26, 929-932.	2.5	10
88	In-band OSNR monitoring with a high sensitivity silicon photonics system-on-chip. , 2014, , .		0
89	Generation of time-energy entangled photons on a silicon chip. , 2014, , .		0
90	Non-invasive monitoring of silicon microring resonators through contactless integrated photonics probes. , 2014, , .		1

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91	Fast electrical switching of orbital angular momentum modes using ultra-compact integrated vortex emitters. Nature Communications, 2014, 5, 4856.	12.8	149
92	Integrated Microspectrometer with Elliptical Bragg Mirror Enhanced Diffraction Grating on Silicon on Insulator. ACS Photonics, 2014, 1, 430-436.	6.6	22
93	Non-Invasive Integrated Light Probe. , 2014, , .		0
94	Emission of time-energy entangled photon pairs from an integrated silicon ring resonator. , 2014, , .		0
95	Actively reconfigurable compact vortex beam emitters. , 2014, , .		0
96	On-chip Electrical Modulation of Phase Shift between Optical Vortices with Opposite Topological Charge. , 2014, , .		1
97	On-chip generation and analysis of maximal path-frequency entanglement. , 2014, , .		0
98	Fast Switching of Optical Vortex Beam Mode Orders Generated Using a Fully Integrated SOI Device. , 2014, , .		0
99	Generation of ultra-high repetition rate optical pulses through external injection in passively mode-locked monolithical semiconductor lasers. , 2013, , .		0
100	BER Evaluation of a Passive SOI WDM Router. IEEE Photonics Technology Letters, 2013, 25, 2285-2288.	2.5	19
101	Integrated optically isolated laser source via non-reciprocal counter-propapagating four-wave mixing. , 2013, , .		0
102	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
103	40 GHz nonlinear all optical switching in a Mach-Zehnder interferometer integrated device. , 2013, , .		0
104	High-Power AlGaInAs Mode-Locked DBR Laser With Integrated Tapered Optical Amplifier. IEEE Photonics Technology Letters, 2013, 25, 253-256.	2.5	3
105	Integrated microfluidic spectroscopic sensor using arrayed waveguide grating. Proceedings of SPIE, 2013, , .	0.8	0
106	Tunable silicon photonics directional coupler driven by a transverse temperature gradient. Optics Letters, 2013, 38, 863.	3.3	103
107	Integrated nonlinear Mach Zehnder for 40 Gbit/s all-optical switching. Optics Express, 2013, 21, 21587.	3.4	34
108	Signal processing subsystems for optical interconnects. , 2013, , .		0

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109	Continuously tunable, narrow linewidth mm-wave generation from a monolithically integrated triple DFB laser chip. , 2013, , .		0
110	Multiwavelength laser based on superimposed Bragg gratings on multiquantum well AlGaInAs-InP. , 2013, , .		0
111	Silicon micro-ring resonators with tunable Q-factor for ultra-low power parametric signal generation. , 2013, , .		0
112	All-Optical Directional Switching in Bistable Semiconductor-Ring Lasers. IEEE Journal of Quantum Electronics, 2013, 49, 877-885.	1.9	11
113	Integrated emitters of cylindrically structured light beams. , 2013, , .		0
114	Tailoring of dispersion in silicon vertical slot waveguides. , 2013, , .		0
115	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
116	Spontaneous parametric fluorescence in SOI integrated micoresonators. Proceedings of SPIE, 2013, , .	0.8	1
117	Group IV platforms for the mid-infrared. Proceedings of SPIE, 2013, , .	0.8	0
118	Compact Tunable Directional Couplers in SOI. , 2013, , .		2
119	Four-wave mixing and generation of correlated photon pairs in silicon ring resonators and photonic molecules. , 2013, , .		1
120	Ultrashort Q-switched pulses from a passively mode-locked distributed Bragg reflector semiconductor laser. Optics Letters, 2012, 37, 4732.	3.3	13
121	Ultra-low power generation of twin photons in a compact silicon ring resonator. Optics Express, 2012, 20, 23100.	3.4	184
122	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
123	High power (130ÂmW) 40ÂGHz 155ÂÎ¼m mode-locked distributed Bragg reflector lasers with integrated optical amplifiers. Optics Letters, 2012, 37, 344.	3.3	8
124	From classical four-wave mixing to parametric fluorescence in silicon microring resonators. Optics Letters, 2012, 37, 3807.	3.3	77
125	Reconfigurable silicon filter with continuous bandwidth tunability. Optics Letters, 2012, 37, 3669.	3.3	40
126	Graphene nano-, micro- and macro-photonics. , 2012, , .		0

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127	High average power (200 mW) 40 GHz mode-locked DBR lasers with integrated tapered optical amplifiers. , 2012, , .		2
128	Highly-Sensitive Sonogram for Assessment of Chirp in Semiconductor Mode-Locked Lasers. IEEE Journal of Quantum Electronics, 2012, 48, 995-1003.	1.9	1
129	Integrated nonlinear optics: From classical to quantum phenomena. , 2012, , .		0
130	Post-Growth Fabrication of Multiple Wavelength DFB Laser Arrays With Precise Wavelength Spacing. IEEE Photonics Technology Letters, 2012, 24, 1063-1065.	2.5	19
131	Bistable Micro-Ring Lasers With Compact Footprint and High Output Efficiency. IEEE Journal of Quantum Electronics, 2012, 48, 1023-1030.	1.9	9
132	Integrated microspectrometer for fluorescence based analysis in a microfluidic format. Lab on A Chip, 2012, 12, 2850.	6.0	36
133	Evanescent coupling assisted four-wave mixing in a silicon-on-insulator directional coupler. Proceedings of SPIE, 2012, , .	0.8	0
134	Integrated Compact Optical Vortex Beam Emitters. Science, 2012, 338, 363-366.	12.6	773
135	Photo-induced trimming of chalcogenide-assisted silicon photonic circuits. Proceedings of SPIE, 2012, , .	0.8	0
136	Semiconductor Mode-locked Lasers: Harnessing the Gain Bandwidth. , 2012, , .		0
137	Ultrafast all-optical temporal differentiators based on CMOS-compatible integrated-waveguide Bragg gratings. Optics Express, 2011, 19, 19514.	3.4	32
138	Notch Nonlinear Frequency Shift in AlGaAs Bragg Grating Waveguides. , 2011, , .		1
139	Passively Mode-Locked Lasers With Integrated Chirped Bragg Grating Reflectors. IEEE Journal of Quantum Electronics, 2011, 47, 492-499.	1.9	19
140	Time- and frequency-domain measurements of solitons in subwavelength silicon waveguides using cross-correlation. , 2011, , .		0
141	Post-growth fabrication of a DFB laser array with high precision wavelength spacing. , 2011, , .		0
142	On-chip micro-spectrometer for fluorescence bio-sensing. , 2011, , .		1
143	All-optical differentiation of sub-picosecond pulses in SOI Bragg gratings. , 2011, , .		0
144	Measurement of phase-correlation between optical modes of Semiconductor Lasers. , 2011, , .		0

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145	Intra-cavity dispersion control in passively mode-locked semiconductor lasers. , 2011, , .		0
146	Semiconductor mode-locked lasers with integrated dispersion control. , 2011, , .		0
147	High peak power (550 mW) 40 GHz mode-locked DBR lasers with integrated optical amplifiers. , 2011, , .		0
148	Ultrafast all-optical temporal differentiation in integrated phase-shifted Bragg gratings. , 2010, , .		0
149	Integrated device with three mutually coupled DFB lasers for tunable, narrow linewidth, mm-wave signal generation. , 2010, , .		3
150	Ultrafast All-Optical Temporal Differentiation in Integrated Silicon-on-Insulator Bragg Gratings. , 2010, , .		1
151	Design and Fabrication of Integrated Chirped Bragg Gratings for On-Chip Dispersion Control. IEEE Journal of Quantum Electronics, 2010, 46, 774-782.	1.9	39
152	Chirp characterization of semiconductor mode-locked laser pulses with a high-sensitivity TPA waveguide detector sonogram. , 2010, , .		0
153	Ultra-fast all-optical integrated differentiators in Bragg gratings. , 2010, , .		1
154	Semiconductor snail lasers. Applied Physics Letters, 2010, 96, 121105.	3.3	7
155	Curved facet 90Â° turning mirrors for integrated optical technologies. Electronics Letters, 2010, 46, 360.	1.0	4
156	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
157	Time and frequency domain measurements of solitons in subwavelength silicon waveguides using a cross-correlation technique. Optics Express, 2010, 18, 26625.	3.4	44
158	Semiconductor Snail Laser. , 2009, , .		0
159	Integrated chirped Bragg gratings with control over complex reflectivity. , 2009, , .		0
160	Semiconductor micro-ring and micro-disk lasers for all-optical switching. , 2009, , .		1
161	Retrieval of Bragg Grating Transmission Spectra by Post-process Removal of Spurious Fabry-PÃ©rot Oscillations. Optics Express, 2009, 17, 13493.	3.4	5
162	Unidirectional Bistability in AlGaInAs Microring and Microdisk Semiconductor Lasers. IEEE Photonics Technology Letters, 2009, 21, 88-90.	2.5	40

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163	Integrated IIIâ€“V Bragg Gratings for Arbitrary Control Over Chirp and Coupling Coefficient. IEEE Photonics Technology Letters, 2008, 20, 1863-1865.	2.5	24
164	Picosecond linear optical pulse shapers based on integrated waveguide Bragg gratings. Optics Letters, 2008, 33, 2425.	3.3	18
165	Optical characterization of a hydrogen silsesquioxane lithography process. Journal of Vacuum Science & Technology B, 2008, 26, 2290-2294.	1.3	7
166	Directional bi-stability in micro-ring and micro-disk lasers. , 2008, , .		2
167	Spectral slicing of femtosecond pulses using semiconductor modulator arrays. Proceedings of SPIE, 2008, , .	0.8	0
168	Integrated Chirped Bragg Gratings on Deeply Etched Tapered III-V Waveguides. , 2007, , .		0
169	Compact Semiconductor Tapers for Deep-to-Shallow Etch Transitions. IEEE Photonics Technology Letters, 2007, 19, 1544-1546.	2.5	1
170	Post-Growth Fabrication and Characterization of Integrated Chirped Bragg Gratings on GaAsâ€“AlGaAs. IEEE Photonics Technology Letters, 2006, 18, 2566-2568.	2.5	11
171	Planar nanophotonic devices and integration technologies. Proceedings of SPIE, 1899, , .	0.8	0