Minghao Qi

List of Publications by Year
in descending order

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151	6,211	76326	76900
papers	citations	40 h-index	74 g-index

154	154	154	4979
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	An All-Silicon Passive Optical Diode. Science, 2012, 335, 447-450.	12.6	621
2	Mode-locked dark pulse Kerr combs in normal-dispersion microresonators. Nature Photonics, 2015, 9, 594-600.	31.4	459
3	A three-dimensional optical photonic crystal with designed point defects. Nature, 2004, 429, 538-542.	27.8	457
4	Ultrabroad-bandwidth arbitrary radiofrequency waveform generation with a silicon photonic chip-based spectral shaper. Nature Photonics, 2010, 4, 117-122.	31.4	335
5	Investigation of mode coupling in normal-dispersion silicon nitride microresonators for Kerr frequency comb generation. Optica, 2014, 1, 137.	9.3	186
6	High-order coherent communications using mode-locked dark-pulse Kerr combs from microresonators. Nature Communications, 2018, 9, 1598.	12.8	167
7	Normalâ€dispersion microcombs enabled by controllable mode interactions. Laser and Photonics Reviews, 2015, 9, L23.	8.7	159
8	Large-scale nanoshaping of ultrasmooth 3D crystalline metallic structures. Science, 2014, 346, 1352-1356.	12.6	153
9	Microresonator Kerr frequency combs with high conversion efficiency. Laser and Photonics Reviews, 2017, 11, 1600276.	8.7	153
10	High-Q silicon nitride microresonators exhibiting low-power frequency comb initiation. Optica, 2016, 3, 1171.	9.3	148
11	Multiple-channel silicon micro-resonator based filters for WDM applications. Optics Express, 2007, 15, 7489.	3.4	145
12	Controlling evanescent waves using silicon photonic all-dielectric metamaterials for dense integration. Nature Communications, 2018, 9, 1893.	12.8	140
13	Programmable Single-Bandpass Photonic RF Filter Based on Kerr Comb from a Microring. Journal of Lightwave Technology, 2014, 32, 3557-3565.	4.6	136
14	50-GHz-spaced comb of high-dimensional frequency-bin entangled photons from an on-chip silicon nitride microresonator. Optics Express, 2018, 26, 1825.	3.4	134
15	Modeling and measurement of losses in silicon-on-insulator resonators and bends. Optics Express, 2007, 15, 10553.	3.4	129
16	A highly compact third-order silicon microring add-drop filter with a very large free spectral range, a flat passband and a low delay dispersion. Optics Express, 2007, 15, 14765.	3.4	127
17	Compact silicon microring resonators with ultra-low propagation loss in the C band. Optics Express, 2007, 15, 14467.	3.4	119
18	Thermal tuning of Kerr frequency combs in silicon nitride microring resonators. Optics Express, 2016, 24, 687.	3.4	118

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19	Observation of Fermi-Pasta-Ulam Recurrence Induced by Breather Solitons in an Optical Microresonator. Physical Review Letters, 2016, 117, 163901.	7.8	116
20	Dispersion engineering and frequency comb generation in thin silicon nitride concentric microresonators. Nature Communications, 2017, 8, 372.	12.8	108
21	Reconfigurable radio-frequency arbitrary waveforms synthesized in a silicon photonic chip. Nature Communications, 2015, 6, 5957.	12.8	107
22	Intracavity characterization of micro-comb generation in the single-soliton regime. Optics Express, 2016, 24, 10890.	3.4	101
23	High-dimensional optical quantum logic in large operational spaces. Npj Quantum Information, 2019, 5, .	6.7	92
24	Silicon-on-Insulator Microring Add-Drop Filters With Free Spectral Ranges Over 30 nm. Journal of Lightwave Technology, 2008, 26, 228-236.	4.6	91
25	Silicon optical diode with 40ÂdB nonreciprocal transmission. Optics Letters, 2013, 38, 1259.	3.3	87
26	Second-harmonic-assisted four-wave mixing in chip-based microresonator frequency comb generation. Light: Science and Applications, 2017, 6, e16253-e16253.	16.6	83
27	Strain-tunable silicon photonic band gap microcavities in optical waveguides. Applied Physics Letters, 2004, 84, 1242-1244.	3.3	79
28	Low-loss and low-crosstalk 8 Ã— 8 silicon nanowire AWG routers fabricated with CMOS technology. Optics Express, 2014, 22, 9395.	3.4	75
29	Spatial mode-interaction induced single soliton generation in microresonators. Optica, 2017, 4, 1011.	9.3	74
30	Novel ultra-broadband polarization splitter-rotator based on mode-evolution tapers and a mode-sorting asymmetric Y-junction. Optics Express, 2014, 22, 13565.	3.4	73
31	Microcomb-Based True-Time-Delay Network for Microwave Beamforming With Arbitrary Beam Pattern Control. Journal of Lightwave Technology, 2018, 36, 2312-2321.	4.6	68
32	Persistent energyâ€“time entanglement covering multiple resonances of an on-chip biphoton frequency comb. Optica, 2017, 4, 655.	9.3	61
33	Direct soliton generation in microresonators. Optics Letters, 2017, 42, 2519.	3.3	60
34	Direct fabrication of silicon photonic devices on a flexible platform and its application for strain sensing. Optics Express, 2012, 20, 20564.	3.4	59
35	Eight-channel reconfigurable microring filters with tunable frequency, extinction ratio and bandwidth. Optics Express, 2010, 18, 18067.	3.4	53
36	Design of a SiO_2 top-cladding and compact polarization splitter-rotator based on a rib directional coupler. Optics Express, 2014, 22, 4137.	3.4	52

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37	Exceptional coupling in photonic anisotropic metamaterials for extremely low waveguide crosstalk. Optica, 2020, 7, 881.	9.3	50
38	Generative Deep Learning Model for Inverse Design of Integrated Nanophotonic Devices. Laser and Photonics Reviews, 2020, 14, 2000287.	8.7	47
39	Proposal for fabrication-tolerant SOI polarization splitter-rotator based on cascaded MMI couplers and an assisted bi-level taper. Optics Express, 2014, 22, 27869.	3.4	46
40	Normal-dispersion microresonator Kerr frequency combs. Nanophotonics, 2016, 5, 244-262.	6.0	44
41	Dissipative cnoidal waves (Turing rolls) and the soliton limit in microring resonators. Optica, 2019, 6, 1220.	9.3	42
42	Drop-port study of microresonator frequency combs: power transfer, spectra and time-domain characterization. Optics Express, 2013, 21, 22441.	3.4	40
43	Long-haul coherent communications using microresonator-based frequency combs. Optics Express, 2017, 25, 26678.	3.4	40
44	A Theoretical Model for an Optical Diode Built With Nonlinear Silicon Microrings. Journal of Lightwave Technology, 2013, 31, 313-321.	4.6	38
45	Soliton repetition rate in a silicon-nitride microresonator. Optics Letters, 2017, 42, 759.	3.3	37
46	Control of Current Saturation and Threshold Voltage Shift in Indium Oxide Nanowire Transistors with Femtosecond Laser Annealing. ACS Nano, 2011, 5, 1095-1101.	14.6	32
47	Enhanced Photon Management of Thinâ€Film Silicon Solar Cells Using Inverse Opal Photonic Crystals with 3D Photonic Bandgaps. Advanced Optical Materials, 2013, 1, 692-698.	7.3	32
48	Copper nanorod array assisted silicon waveguide polarization beam splitter. Optics Express, 2014, 22, 9508.	3.4	31
49	Polarization rotation and coupling between silicon waveguide and hybrid plasmonic waveguide. Optics Express, 2015, 23, 9968.	3.4	31
50	Switching dynamics of dark-pulse Kerr frequency comb states in optical microresonators. Physical Review A, 2021, 103, .	2.5	30
51	Controlled and Stabilized Lightâ€“Matter Interaction in Graphene: Plasmonic Film with Largeâ€Scale 10â€nm Lithography. Advanced Optical Materials, 2016, 4, 1811-1823.	7.3	28
52	Resistless Nanoimprinting in Metal for Plasmonic Nanostructures. Small, 2013, 9, 3778-3783.	10.0	27
53	Nanoimprinted plasmonic nanocavity arrays. Optics Express, 2013, 21, 15081.	3.4	26
54	Mode-evolution-based polarization rotation and coupling between silicon and hybrid plasmonic waveguides. Scientific Reports, 2015, 5, 18378.	3.3	26

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55	Observation of Breathing Dark Pulses in Normal Dispersion Optical Microresonators. Physical Review Letters, 2018, 121, 257401.	7.8	23
56	A silicon-on-insulator polarization diversity scheme in the mid-infrared. Optics Express, 2015, 23, 15029.	3.4	22
57	Strip-slot direct mode coupler. Optics Express, 2016, 24, 6532.	3.4	22
58	Broadband second-harmonic phase-matching in dispersion engineered slot waveguides. Optics Express, 2016, 24, 773.	3.4	16
59	Selective Contact Anneal Effects on Indium Oxide Nanowire Transistors using Femtosecond Laser. Journal of Physical Chemistry C, 2011, 115, 17147-17153.	3.1	13
60	A Taper to Reduce the Straight-to-Bend Transition Loss in Compact Silicon Waveguides. IEEE Photonics Technology Letters, 2010, 22, 1174-1176.	2.5	12
61	Summary of the 2011 Dielectric Laser Accelerator Workshop. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2014, 734, 51-59.	1.6	12
62	Rapid and Lowâ€Cost Prototyping of 3D Nanostructures with Multiâ€Layer Hydrogen Silsesquioxane Scaffolds. Small, 2013, 9, 4237-4242.	10.0	9
63	Design of a compact mode and polarization converter in three-dimensional photonic crystals. Optics Express, 2012, 20, 20356.	3.4	8
64	Ultrabroadband Silicon-on-Insulator Polarization Beam Splitter Based on Cascaded Mode-Sorting Asymmetric Y-Junctions. IEEE Photonics Journal, 2014, 6, 1-8.	2.0	7
65	Physics-informed recurrent neural network for time dynamics in optical resonances. Nature Computational Science, 2022, 2, 169-178.	8.0	7
66	Achieving nanometer-scale, controllable pattern shifts in x-ray lithography using an assembly-tilting technique. Journal of Vacuum Science & Technology an Official Journal of the American Vacuum Society B, Microelectronics Processing and Phenomena, 2002, 20, 2991.	1.6	6
67	InP high power monolithically integrated widely tunable laser and SOA array for hybrid integration. Optics Express, 2021, 29, 3490.	3.4	6
68	On-chip wavelength-routed photonic networks with comb switches. , 2012, , .		5
69	A Silicon Optical Transistor. , 2012, 2012, .		5
70	First Demonstration of a Tunable Single-Bandpass Photonic Radiofrequency Filter Based on Optical Frequency Comb from a Microring. , 2014, , .		5
71	Bandwidth scaling of a phase-modulated continuous-wave comb through four-wave mixing in a silicon nano-waveguide. Optics Letters, 2014, 39, 6478.	3.3	5
72	Kerr Combs for Stimulated Brillouin Scattering Mitigation in Long-Haul Analog Optical Links. Journal of Lightwave Technology, 2019, 37, 5773-5779.	4.6	5

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73	One-way transmission of 10 Gbps data through a silicon optical diode based on nonreciprocal resonance reshaping. Optics Express, 2014, 22, 25739.	3.4	4
74	Comparison and analysis on single-layer Si fiber-to-chip edge couplers with different taper tips. , 2016, , .		4
75	Double slot fiber-to-chip coupler using direct strip-slot mode coupling. , 2017, , .		4
76	Nano-switch for study of gold contact behavior. , 2009, , .		3
77	High-Q Silicon Nitride Microresonator for Low Power Frequency Comb Initiation at Normal Dispersion Regime. , 2015, , .		3
78	Long-Haul Coherent Transmission Using a Silicon Nitride Microresonator-Based Frequency Comb as WDM Source. , 2016, , .		3
79	Characterizing pump line phase offset of a single-soliton Kerr comb by dual comb interferometry. Optics Letters, 2019, 44, 1460.	3.3	3
80	Two-Photon Absorption Induced Thermal-Optic Effect in High-Q Silicon Microring Resonators. Conference Proceedings - Lasers and Electro-Optics Society Annual Meeting-LEOS, 2007, , .	0.0	2
81	Kerr Combs for Single-Span Long-Haul Analog Optical Links. , 2018, , .		2
82	Nano-Optic Broadband Power Splitter Design via Cycle-Consistent Adversarial Deep Learning. , 2021, , .		2
83	Normal Dispersion High Conversion Efficiency Kerr Comb with 50 GHz Repetition Rate. , 2017, , .		2
84	High-Efficiency WDM Sources Based on Microresonator Kerr Frequency Combs. , 2017, , .		2
85	Tunable Frequency Comb Generation from a Microring with a Thermal Heater. , 2014, , .		2
86	Epitaxially grown graphene field-effect transistors with electron mobility exceeding 1500 cm²/Vs and hole mobility exceeding 3400 cm²/Vs. , 2007, , .		1
87	On-chip programmable radio-frequency waveform generation. , 2010, , .		1
88	Efficient Silicon-on-Insulator Polarization Rotator based on Mode Evolution. , 2012, , .		1
89	A Hollowâ€Core Optical Cavity Built in a Threeâ€Layer Silicon Photonic Crystal. Advanced Optical Materials, 2013, 1, 740-746.	7.3	1
90	Far-field polarization characterization of the fundamental modes of a strip silicon waveguide. Optics Letters, 2013, 38, 4785.	3.3	1

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91	Mode-locked Microresonator Combs in the Normal Dispersion Region. , 2015, , .		1
92	Optical Dual-Comb Vernier Division of an Octave-Spanning Kerr Microcomb. , 2021, , .		1
93	An All-Silicon Passive Optical Diode. , 2012, , .		1
94	Low-loss Ultra-compact SOI Microring Add-Drop Filters. , 2007, , .		1
95	Two-qudit deterministic optical quantum logic in a single photon. , 2018, , .		1
96	Frequency Comb Generation in 300 nm-Thick Si3N4 Concentric-Ring-Resonators. , 2016, , .		1
97	Investigation of Mode Interaction in Optical Microresonators for Kerr Frequency Comb Generation. , 2014, , .		1
98	Spectral broadening of Kerr Frequency Combs Generated from a Normal Dispersion Silicon Nitride Microresonator. , 2015, , .		1
99	Experimental Characterization of Pump Power and Detuning in Microresonator Frequency Combs. , 2016, , .		1
100	Stability of cnoidal wave frequency combs in microresonators. , 2018, , .		1
101	Fabrication of three-dimensional photonic crystals with midgap wavelength at 1.55 /spl mu/m. , 2003, , .		0
102	Broadband optical studies of 1D and 3D photonic crystals. , 2005, , .		0
103	Ultralow-Loss Compact Silicon Microring Resonators. , 2007, , .		0
104	Programmable RF waveform generation with thermo-optically tunable multi-channel micro-ring resonators on a silicon chip. , 2008, , .		0
105	Low-power light control with light in high Q/V silicon microring resonators. , 2008, , .		0
106	Eight-channel microring resonator array with accurately controlled channel spacing. , 2008, , .		0
107	Arbitrary Radio-Frequency Waveform Generation with a Silicon Chip-Based Spectral Shaper. , 2009, , .		0
108	Radio-Frequency Arbitrary Waveform Generation on a Silicon Chip. , 2009, , .		0

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109	Radio-frequency waveform generation with a CMOS compatible on-chip spectral shaper. , 2010, , .		0
110	Nonreciprocal transmission of 10 Gbps OOK data through an all-silicon passive optical diode. , 2012, , 703-704.		0
111	Ultra high optical nonreciprocity using silicon microring resonators. , 2013, , .		0
112	Photonic Crystals: Enhanced Photon Management of Thin-Film Silicon Solar Cells Using Inverse Opal Photonic Crystals with 3D Photonic Bandgaps (Advanced Optical Materials 10/2013). Advanced Optical Materials, 2013, 1, 680-680.	7.3	0
113	An all-silicon optical diode transmitting 10 Gbps data. , 2013, , .		0
114	Optical Diodes and Transistors on a Silicon Chip. , 2013, , .		0
115	Frequency comb-induced nonlinear coupling effect in microresonators. , 2013, , .		0
116	Neuron-Like Functionality of a Silicon Optical Transistor. , 2013, , .		0
117	Improved performance in Si nanowire AWG routers based on a comparative study of optimization techniques. , 2014, , .		0
118	A fabrication-tolerant SOI polarization splitter-rotator with cascaded MMI couplers and an assisted bi-level taper. , 2014, , .		0
119	Drop-port study of microresonator frequency combs: power transfer, spectra and time-domain characterization: erratum. Optics Express, 2014, 22, 12148.	3.4	0
120	An all-silicon optical diode. , 2014, , .		0
121	Frequency Combs from Normal Dispersion Silicon Nitride Microresonators. , 2014, , .		0
122	Rapidly Reconfigurable RF Arbitrary Waveform Synthesis using a CMOS Silicon Photonic Chip. , 2014, , .		0
123	Dispersion engineered hetero-slot waveguides for broadband on-chip second-harmonic phase-matching. , 2015, , .		0
124	Nonreciprocal transmission through a silicon optical diode. , 2015, , .		0
125	Mode-Locked and Repetition-Rate-Tunable Comb Generation Using Dual Coupled Microrings. , 2015, , .		0
126	Coherent Kerr frequency comb generation in microresonators with Ï‡(2)and Ï‡(3)nonlinearities. , 2016, , .		0

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127	Kerr combs from normal and anomalous dispersion silicon nitride microresonators. , 2017, , .		0
128	Hot-Cavity Spectroscopy of Dark Pulse Kerr Combs in Microresonators. , 2019, , .		0
129	Switching Dynamics of Dark Solitons in Kerr Microresonators. , 2019, , .		0
130	Microcavities in Three-Dimensional Photonic Crystals. , 2005, , .		0
131	Tunable Microcavities in 3D Photonic Crystals for Single-Photon Emission. , 2006, , .		0
132	Hollow-core high-Q micro-cavities in three-dimensional photonic crystals. , 2010, , .		0
133	A Contra-Directional Coupling based Waveguide Mode Converter in 3D Photonic Crystals. , 2011, , .		0
134	40 dB Optical Nonreciprocal Transmission on a Silicon Chip. , 2012, , .		0
135	A Hollow-core Cavity in Three-layer Photonic Crystals. , 2012, , .		0
136	Generation of a 96 GHz Pulse Train through On-Chip Pulse Shaping of an Optical Frequency Comb. , 2013, , .		0
137	One-Way 10 Gbps Data Transmission through a Silicon Optical Diode. , 2013, , .		0
138	Radio-Frequency Arbitrary Waveform Generation with a Programmable SiN Spectral Shaper. , 2013, , .		0
139	A CMOS Photonic Chip for Rapidly Reconfigurable RF Arbitrary Waveform Generation. , 2013, , .		0
140	Retrieving the Complex Intracavity Pump Field of a Kerr Comb from the Through Port Data. , 2014, , .		0
141	Metal Nanorods Array Embedded Silicon Waveguide Polarization Beam Splitter. , 2014, , .		0
142	Frequency Comb-enhanced Coupling in Silicon Nitride Microresonators. , 2015, , .		0
143	Reciprocal Waveforms at Through and Drop Ports in Microcomb Generation. , 2016, , .		0
144	Offset Frequency Tuning of a Microcomb with an Integrated Microheater. , 2016, , .		0

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145	Anomalous Dispersion in 300 nm-Thick Si3N4 Concentric-Ring-Resonators. , 2016, , .		0
146	Measurement of Hot-cavity Detuning in Microcomb Generation Using Fiber Comb Spectroscopy. , 2016, , .		0
147	Intracavity Characterization of Micro-comb Generation in the Single Soliton Regime. , 2016, , .		0
148	Frequency Noise of a Normal Dispersion Microresonator-based Frequency Comb. , 2017, , .		0
149	Directly stabilized solitons in silicon-nitride microresonators. , 2017, , .		0
150	Dispersion immune change of soliton repetition rate in a silicon-nitride microresonator. , 2017, , .		0
151	Optical Division of an Octave-Spanning Comb on an All-Silicon Nitride Platform. , 2021, , .		0