Junqiu Liu

List of Publications by Year
in descending order

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95 papers	4,549 citations	136740 32 h-index	182168 51 g-index
99 all docs	99 docs citations	99 times ranked	2403 citing authors

#	Article	IF	Citations
1	Parallel convolutional processing using an integrated photonic tensor core. Nature, 2021, 589, 52-58.	13.7	723
2	Massively parallel coherent laser ranging using a soliton microcomb. Nature, 2020, 581, 164-170.	13.7	325
3	Integrated turnkey soliton microcombs. Nature, 2020, 582, 365-369.	13.7	295
4	Photonic microwave generation in the X- and K-band using integrated soliton microcombs. Nature Photonics, 2020, 14, 486-491.	15.6	229
5	A microphotonic astrocomb. Nature Photonics, 2019, 13, 31-35.	15.6	215
6	Octave-spanning dissipative Kerr soliton frequency combs in Si_3N_4 microresonators. Optica, 2017, 4, 684.	4.8	208
7	Laser soliton microcombs heterogeneously integrated on silicon. Science, 2021, 373, 99-103.	6.0	173
8	Electrically pumped photonic integrated soliton microcomb. Nature Communications, 2019, 10, 680.	5.8	160
9	High-yield, wafer-scale fabrication of ultralow-loss, dispersion-engineered silicon nitride photonic circuits. Nature Communications, 2021, 12, 2236.	5.8	157
10	Dynamics of soliton crystals in optical microresonators. Nature Physics, 2019, 15, 1071-1077.	6.5	148
11	Ultra-smooth silicon nitride waveguides based on the Damascene reflow process: fabrication and loss origins. Optica, 2018, 5, 884.	4.8	147
12	Ultralow-power chip-based soliton microcombs for photonic integration. Optica, 2018, 5, 1347.	4.8	143
13	Monolithic piezoelectric control of soliton microcombs. Nature, 2020, 583, 385-390.	13.7	109
14	Photonic Damascene Process for Low-Loss, High-Confinement Silicon Nitride Waveguides. IEEE Journal of Selected Topics in Quantum Electronics, 2018, 24, 1-11.	1.9	101
15	A photonic integrated circuitâ€“based erbium-doped amplifier. Science, 2022, 376, 1309-1313.	6.0	95
16	Dynamics of soliton self-injection locking in optical microresonators. Nature Communications, 2021, 12, 235.	5.8	86
17	Thermorefractive noise in silicon-nitride microresonators. Physical Review A, 2019, 99, .	1.0	74
18	Integrated photonics enables continuous-beam electron phase modulation. Nature, 2021, 600, 653-658.	13.7	74

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19	Observation of Stimulated Brillouin Scattering in Silicon Nitride Integrated Waveguides. Physical Review Letters, 2020, 124, 013902.	2.9	67
20	Magnetic-free silicon nitride integrated optical isolator. Nature Photonics, 2021, 15, 828-836.	15.6	67
21	Hybrid integrated photonics using bulk acoustic resonators. Nature Communications, 2020, 11, 3073.	5.8	65
22	Photonic chip-based soliton frequency combs covering the biological imaging window. Nature Communications, 2018, 9, 1146.	5.8	62
23	Coupling Ideality of Integrated Planar High-<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mi>Q</mml:mi></mml:math>Microresonators. Physical Review Applied, 2017, 7, .	1.5	57
24	Emergent nonlinear phenomena in a driven dissipative photonic dimer. Nature Physics, 2021, 17, 604-610.	6.5	57
25	Double inverse nanotapers for efficient light coupling to integrated photonic devices. Optics Letters, 2018, 43, 3200.	1.7	50
26	Soliton microcomb based spectral domain optical coherence tomography. Nature Communications, 2021, 12, 427.	5.8	45
27	Nanophotonic supercontinuum-based mid-infrared dual-comb spectroscopy. Optica, 2020, 7, 1181.	4.8	43
28	Platicon microcomb generation using laser self-injection locking. Nature Communications, 2022, 13, 1771.	5.8	39
29	Low-noise frequency-agile photonic integrated lasers for coherent ranging. Nature Communications, 2022, 13, .	5.8	39
30	Reconfigurable radiofrequency filters based on versatile soliton microcombs. Nature Communications, 2020, 11, 4377.	5.8	38
31	Compact, spatial-mode-interaction-free, ultralow-loss, nonlinear photonic integrated circuits. Communications Physics, 2022, 5, .	2.0	36
32	Thermally stable access to microresonator solitons via slow pump modulation. Optics Letters, 2019, 44, 4447.	1.7	35
33	Photonic chip-based resonant supercontinuum via pulse-driven Kerr microresonator solitons. Optica, 2021, 8, 771.	4.8	33
34	Frequency-comb-assisted broadband precision spectroscopy with cascaded diode lasers. Optics Letters, 2016, 41, 3134.	1.7	31
35	Ultrafast optical circuit switching for data centers using integrated soliton microcombs. Nature Communications, 2021, 12, 5867.	5.8	31
36	Intermode Breather Solitons in Optical Microresonators. Physical Review X, 2017, 7, .	2.8	30

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37	Gain-switched semiconductor laser driven soliton microcombs. Nature Communications, 2021, 12, 1425.	5.8	27
38	Probing material absorption and optical nonlinearity of integrated photonic materials. Nature Communications, 2022, 13, .	5.8	27
39	Low-Loss Integrated Nanophotonic Circuits with Layered Semiconductor Materials. Nano Letters, 2021, 21, 2709-2718.	4.5	24
40	Visible-near-middle infrared spanning supercontinuum generation in a silicon nitride (Si₃N₄) waveguide. Optical Materials Express, 2019, 9, 2553.	1.6	23
41	Frequency division using a soliton-injected semiconductor gain-switched frequency comb. Science Advances, 2020, 6, .	4.7	21
42	Highly efficient coupling of crystalline microresonators to integrated photonic waveguides. Optics Letters, 2018, 43, 2106.	1.7	20
43	Chip-based soliton microcomb module using a hybrid semiconductor laser. Optics Express, 2020, 28, 2714.	1.7	18
44	Dual chirped microcomb based parallel ranging at megapixel-line rates. Nature Communications, 2022, 13, .	5.8	18
45	Protected generation of dissipative Kerr solitons in supermodes of coupled optical microresonators. Science Advances, 2022, 8, eabm6982.	4.7	16
46	Monolithic piezoelectric control of soliton microcombs. , 2020, , .		12
47	Broadband quasi-phase-matching in dispersion-engineered all-optically poled silicon nitride waveguides. Photonics Research, 2020, 8, 1475.	3.4	10
48	Difference-frequency generation in optically poled silicon nitride waveguides. Nanophotonics, 2021, 10, 1923-1930.	2.9	7
49	Polarization selective ultra-broadband wavelength conversion in silicon nitride waveguides. Optics Express, 2022, 30, 4342.	1.7	7
50	Hybrid Si3N4-LiNbO3 integrated platform for electro-optic conversion. , 2020, , .		2
51	Laser Self-Injection Locked Frequency Combs in a Normal GVD Integrated Microresonator. , 2020, , .		2
52	Dispersion Characterization of Microresonators for Broadband Kerr Frequency Comb Generation. , 2017, , .		2
53	Ultra-Low-Power Photonic Chip-Based Soliton Frequency Combs. , 2018, , .		1
54	Photonic Damascene process with reflow step for ultra-smooth Si3N4 waveguides. , 2018, , .		1

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55	High-yield, wafer-scale fabrication of ultralow-loss, dispersion-engineered silicon nitride photonic circuits. , 2021, , .		1
56	X-Band Aom on Chip. , 2021, , .		1
57	Wafer-scale fabrication of ultralow-loss silicon nitride nonlinear photonic circuits. , 2020, , .		1
58	Nanophotonic supercontinuum based mid-infrared dual-comb spectroscopy. , 2019, , .		1
59	Thermo-refractive noise in silicon nitride microresonators. , 2019, , .		1
60	Spectral multiplexing of dissipative Kerr solitons in a single optical microresonator. , 2020, , .		1
61	Microresonator Dual-Comb Coherent FMCW LiDAR. , 2020, , .		1
62	Dynamics of Soliton Microcomb Self-Injection Locking in a Silicon Nitride Microresonator. , 2020, , .		1
63	Ultralow-Power Photonic Chip-Based Soliton Frequency Combs. , 2018, , .		0
64	Dissipative Kerr solitons in photonic chip-based microresonators. , 2018, , .		0
65	Efficient coupling of ultra-high Q crystalline microresonators to integrated photonic waveguides. , 2018, , .		0
66	Photonic Integrated Microwave Oscillator Based on Silicon Nitride Soliton Microcomb. , 2019, , .		0
67	Integrated Self-Injection Locked Soliton Microcomb Source. , 2019, , .		0
68	Photonic Chip-Based Soliton Microcomb Driven by a Compact Ultra-Low-Noise Laser. , 2019, , .		0
69	Microresonator soliton based massively parallel coherent LiDAR. , 2020, , .		0
70	Zero-dispersion solitons in microresonators with octave-spanning dispersive wave formation. , 2021, , .		0
71	Optical Gyrator and Microwave-to-Optical Converter using HBAR modes. , 2021, , .		0
72	Continuous-wave electron-light interaction in high-Q whispering gallery microresonators. , 2021, , .		0

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73	Single-pixel massively parallel coherent LiDAR using on dual soliton microcombs. , 2021, , .		0
74	Integrated Magnetic-free Nitride Optical Isolator. , 2021, , .		0
75	Ultra-narrow linewidth lasers and microcombs based on self-injection locking in integrated photonics (Invited). , 2021, , .		0
76	Soliton breathing induced by avoided mode crossing in optical microresonators. , 2017, , .		0
77	Soliton Kerr Frequency Combs with Octave Bandwidth in Integrated Si3N4 Microresonators. , 2017, , .		0
78	Double-inverse tapers for efficient light coupling with arbitrary polarization. , 2018, , .		0
79	Electrically Driven Ultra-compact Photonic Integrated Soliton Microcomb. , 2019, , .		0
80	Broadband Efficient Soliton Microcombs in Pulse-Driven Photonic Microresonators. , 2019, , .		0
81	Advanced dispersion engineering of dispersive waves in Si3N4 microresonators. , 2019, , .		0
82	Ultralow-power chip-based soliton microcombs for photonic integration. , 2019, , .		0
83	Photonic Integrated K-Band Microwave Oscillator Based on Silicon Nitride Soliton Microcomb. , 2019, , .		0
84	Integrated Si3N4 Soliton Microcomb Driven by a Compact Ultra-low-noise Laser. , 2019, , .		0
85	Perfect soliton crystals in optical microresonators. , 2019, , .		0
86	Monolithic piezoelectric control of integrated soliton microcombs. , 2020, , .		0
87	Reconfigurable Radiofrequency Photonic Filters Based on Soliton Microcombs. , 2020, , .		0
88	Massively parallel coherent LiDAR using dissipative Kerr solitons. , 2020, , .		0
89	Two-soliton Microcombs Enabled Reconfigurable Microwave Photonic Filters. , 2020, , .		0
90	A Nitride Ring Isolator. , 2020, , .		0

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91	Frequency Division Using a Soliton-Injected Semiconductor Gain-Switched Frequency Comb. , 2020, , .		0
92	Observation of stimulated Brillouin scattering in silicon nitride integrated waveguides. , 2020, , .		0
93	Resonant dissipative Kerr soliton supercontinuum in the normal dispersion regime. , 2020, , .		0
94	Measurement of Frequency Tuning Curves of Soliton Self-Injection Locking to a Nonlinear Microresonator. , 2020, , .		0
95	Nonlinear Frequency Conversion in the Hybrid Si3N4 - LiNbO3 Integrated Platform. , 2021, , .		0