Maxim A Karpov

List of Publications by Year
in descending order

87 papers	4,671 citations	304743 22 h-index	276875 41 g-index
90 all docs	90 docs citations	90 times ranked	2550 citing authors

#	Article	IF	Citations
1	Synthesis of near-diffraction-free orbital-angular-momentum space-time wave packets having a controllable group velocity using a frequency comb. Optics Express, 2022, 30, 16712.	3.4	7
2	Dual chirped microcomb based parallel ranging at megapixel-line rates. Nature Communications, 2022, 13, .	12.8	18
3	Megapixel per second hardware efficient LiDAR based on microcombs. , 2021, , .		1
4	Parallel convolutional processing using an integrated photonic tensor core. Nature, 2021, 589, 52-58.	27.8	723
5	Tuning the morphology and magnetic properties of single-domain SrFe8Al4O19 particles prepared by a citrate auto-combustion method. Mendeleev Communications, 2021, 31, 221-223.	1.6	16
6	Glass-Ceramic Synthesis of Cr-Substituted Strontium Hexaferrite Nanoparticles with Enhanced Coercivity. Nanomaterials, 2021, 11, 924.	4.1	9
7	Submicron particles of Ga-substituted strontium hexaferrite obtained by a citrate auto-combustion method. Journal of Materials Chemistry C, 2021, 9, 13832-13840.	5.5	15
8	Ultrafast optical circuit switching for data centers using integrated soliton microcombs. Nature Communications, 2021, 12, 5867.	12.8	31
9	Chip-based frequency combs for wavelength-division multiplexing applications. , 2020, , 51-102.		1
10	Demonstration of Tunable Optical Aggregation of QPSK to 16-QAM Over Optically Generated Nyquist Pulse Trains Using Nonlinear Wave Mixing and a Kerr Frequency Comb. Journal of Lightwave Technology, 2020, 38, 359-365.	4.6	23
11	Reconfigurable radiofrequency filters based on versatile soliton microcombs. Nature Communications, 2020, 11, 4377.	12.8	38
12	Massively parallel coherent laser ranging using a soliton microcomb. Nature, 2020, 581, 164-170.	27.8	325
13	Photonic microwave generation in the X- and K-band using integrated soliton microcombs. Nature Photonics, 2020, 14, 486-491.	31.4	229
14	Wafer-scale fabrication of ultralow-loss silicon nitride nonlinear photonic circuits. , 2020, , .		1
15	Sub-nanosecond Optical Switching Using Chip-Based Soliton Microcombs. , 2020, , .		3
16	Spectral multiplexing of dissipative Kerr solitons in a single optical microresonator. , 2020, , .		1
17	Massively parallel coherent LiDAR using dissipative Kerr solitons. , 2020, , .		0
18	Massively parallel coherent LiDAR using dissipative Kerr solitons. , 2020, , .		1

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19	Microresonator Dual-Comb Coherent FMCW LiDAR. , 2020, , .		1
20	Two-soliton Microcombs Enabled Reconfigurable Microwave Photonic Filters. , 2020, , .		0
21	Kramersâ€“Kronig detection of four 20â€‰â€‰Gbaud 16-QAM channels using Kerr combs for a shared phase estimation. Optics Letters, 2020, 45, 1794.	3.3	1
22	Dynamics of soliton crystals in optical microresonators. Nature Physics, 2019, 15, 1071-1077.	16.7	148
23	Demonstration of Multiple Kerr-Frequency-Comb Generation Using Different Lines From Another Kerr Comb Located Up To 50 km Away. Journal of Lightwave Technology, 2019, 37, 579-584.	4.6	15
24	Electrically pumped photonic integrated soliton microcomb. Nature Communications, 2019, 10, 680.	12.8	160
25	Photonic-assisted analog-to-digital conversion using integrated soliton microcombs. , 2019, , .		0
26	High-rate photon pairs and sequential Time-Bin entanglement with Si₃N₄ microring resonators. Optics Express, 2019, 27, 19309.	3.4	38
27	Experimental Generation and Time Multiplexing of Data- Carrying Nyquist Sinc Shaped Channels from a Single Microresonator-based Kerr Frequency Comb. , 2019, , .		1
28	Orthogonally polarized frequency comb generation from a Kerr comb via cross-phase modulation. Optics Letters, 2019, 44, 1472.	3.3	32
29	Electrically driven photonic integrated soliton microcomb. , 2019, , .		3
30	Electrically Driven Ultra-compact Photonic Integrated Soliton Microcomb. , 2019, , .		0
31	Advanced dispersion engineering of dispersive waves in Si3N4 microresonators. , 2019, , .		0
32	Ultralow-power chip-based soliton microcombs for photonic integration. , 2019, , .		0
33	Photonic Integrated K-Band Microwave Oscillator Based on Silicon Nitride Soliton Microcomb. , 2019, , .		0
34	Demonstration of Tunable and Reconfigurable Optical Nyquist Channel Aggregation of QPSK-to-16QAM and BPSK-to-4PAM Using Nonlinear Wave Mixing and a Kerr Frequency Comb. , 2019, , .		3
35	Demonstration of Kramers-Kronig Detection of Four 20-Gbaud 16-QAM Channels after 50-km Transmission Using Kerr Combs to Perform Shared Phase Estimation. , 2019, , .		2
36	Perfect soliton crystals in optical microresonators. , 2019, , .		0

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37	Experimental demonstration of three-fold wavelength multicasting of a 64-QAM 120-Gbit/s data channel using a Kerr frequency comb and nonlinear wave mixing. , 2019, , .		0
38	Multiplexing soliton-combs in optical microresonators. , 2019, , .		0
39	Reconfigurable optical generation of nine Nyquist WDM channels with sinc-shaped temporal pulse trains using a single microresonator-based Kerr frequency comb. Optics Letters, 2019, 44, 1852.	3.3	11
40	Ultrafast optical ranging using microresonator soliton frequency combs. Science, 2018, 359, 887-891.	12.6	509
41	Photonic chip-based soliton frequency combs covering the biological imaging window. Nature Communications, 2018, 9, 1146.	12.8	62
42	Ultralow-power chip-based soliton microcombs for photonic integration. Optica, 2018, 5, 1347.	9.3	143
43	Scalable and Reconfigurable Optical Tap-Delay-Line for Multichannel Equalization and Correlation of 20-Gbaud QPSK Signals using Nonlinear Wave Mixing and a Microresonator Kerr Frequency Comb. , 2018, , .		0
44	Ultralow-Power Photonic Chip-Based Soliton Frequency Combs. , 2018, , .		0
45	Ultra-Low-Power Photonic Chip-Based Soliton Frequency Combs. , 2018, , .		1
46	Spatial multiplexing of soliton microcombs. Nature Photonics, 2018, 12, 699-705.	31.4	100
47	Dissipative Kerr solitons in photonic chip-based microresonators. , 2018, , .		0
48	Effects of erbium-doped fiber amplifier induced pump noise on soliton Kerr frequency combs for 64-quadrature amplitude modulation transmission. Optics Letters, 2018, 43, 2495.	3.3	8
49	Spatially-Multiplexed Solitons in Optical Microresonators. , 2018, , .		0
50	Inter-mode breather solitons in optical microresonators. , 2018, , .		2
51	Scalable and reconfigurable optical tapped-delay-line for multichannel equalization and correlation using nonlinear wave mixing and a Kerr frequency comb. Optics Letters, 2018, 43, 5563.	3.3	13
52	Microresonator soliton frequency combs. , 2018, , .		0
53	Tunable Insertion of Uniform-Amplitude Multiple Coherent Lines into a Kerr Frequency Comb Using Nyquist Pulse Generation. , 2018, , .		1
54	Demonstration of Multiple Kerr-Frequency-Comb Generation Using Different Lines from Another Kerr Comb Located up to a 50 km Distance. , 2018, , .		1

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55	Chip-scale frequency comb generators for high-speed communications and optical metrology. , 2017, , .		0
56	Soliton dynamics in optical micro resonators (Conference Presentation). , 2017, , .		0
57	Microresonator-based solitons for massively parallel coherent optical communications. Nature, 2017, 546, 274-279.	27.8	816
58	Breathing dissipative solitons in optical microresonators. Nature Communications, 2017, 8, 736.	12.8	139
59	Detuning-dependent properties and dispersion-induced instabilities of temporal dissipative Kerr solitons in optical microresonators. Physical Review A, 2017, 95, .	2.5	47
60	Intermode Breather Solitons in Optical Microresonators. Physical Review X, 2017, 7, .	8.9	30
61	Universal dynamics and deterministic switching ofÂdissipative Kerr solitons in optical microresonators. Nature Physics, 2017, 13, 94-102.	16.7	331
62	Universal dynamics and deterministic switching of dissipative Kerr solitons in optical microresonators. , 2017, , .		0
63	Breathing dissipative solitons in microresonators. , 2017, , .		0
64	Tunable insertion of multiple lines into a Kerr frequency comb using electro-optical modulators. Optics Letters, 2017, 42, 3765.	3.3	10
65	Octave-spanning dissipative Kerr soliton frequency combs in Si_3N_4 microresonators. Optica, 2017, 4, 684.	9.3	208
66	Dual-pump generation of high-coherence primary Kerr combs with multiple sub-lines. Optics Letters, 2017, 42, 595.	3.3	17
67	Soliton dual frequency combs in crystalline microresonators. Optics Letters, 2017, 42, 514.	3.3	81
68	Dynamics of soliton crystals in optical microresonators. , 2017, , .		4
69	Pump-linewidth-tolerant wavelength multicasting using soliton Kerr frequency combs. Optics Letters, 2017, 42, 3177.	3.3	14
70	Dependence of a microresonator Kerr frequency comb on the pump linewidth. Optics Letters, 2017, 42, 779.	3.3	21
71	Experimental Generation of a 64-QAM by Optically Aggregating Three Independent QPSK Channels using Nonlinear Wave Mixing of Multiple Kerr Comb Lines. , 2017, , .		8
72	Breathing Dissipative Solitons in Microresonators. , 2017, , .		1

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73	Experimental Demonstration of Dual-Comb Generation by XPM Between Two Polarization States in a Microresonator. , 2017, , .		0
74	Universal dynamics and deterministic switching of dissipative Kerr solitons in optical microresonators. , 2017, , .		1
75	Soliton breathing induced by avoided mode crossing in optical microresonators. , 2017, , .		0
76	Soliton Kerr Frequency Combs with Octave Bandwidth in Integrated Si3N4 Microresonators. , 2017, , .		0
77	Ultrafast Dual-Comb Distance Metrology Using Dissipative Kerr Solitons. , 2017, , .		1
78	Raman Self-Frequency Shift of Dissipative Kerr Solitons in an Optical Microresonator. , 2016, , .		0
79	Demonstration of optical multicasting using Kerr frequency comb lines. Optics Letters, 2016, 41, 3876.	3.3	13
80	Raman Self-Frequency Shift of Dissipative Kerr Solitons in an Optical Microresonator. Physical Review Letters, 2016, 116, 103902.	7.8	187
81	50 Tbit/s Massively Parallel WDM Transmission in C and L Band Using Interleaved Cavity-Soliton Kerr Combs. , 2016, , .		3
82	Coupling Ideality of Integrated Silicon Nitride Microresonators for Nonlinear Photonics. , 2016, , .		0
83	Universal Dynamics and Controlled Switching of Dissipative Kerr Solitons in Optical Microresonators. , 2016, , .		2
84	Experimental Generation of High-Coherence Sub-Prime Comb Lines with Multiple Sub-Lines in a Kerr Frequency Comb using Dual Pumps. , 2016, , .		0
85	Experimental Demonstration of 7-fold Multicasting of a 20-Gbaud QPSK Signal using Kerr Frequency Combs. , 2016, , .		0
86	Full C and L-Band Transmission at 20 Tbit/s Using Cavity-Soliton Kerr Frequency Combs. , 2015, , .		13
87	Metal-insulator transition in epitaxial films of LaMnO3 manganites grown by magnetron sputtering. Technical Physics Letters, 2013, 39, 1027-1030.	0.7	11