Alexander L Gaeta

List of Publications by Year in Descending Order

98 papers	9,482 citations	41 h-index	97 g-index
139 ext. papers	12,716 ext. citations	10.3 avg, IF	6.51 L-index

#	Paper	IF	Citations
98	Picosecond-resolution single-photon time lens for temporal mode quantum processing. *Optica*, **2022**, 9, 364	8.6	1
97	Synchronization of nonsolitonic Kerr combs. *Science Advances*, **2021**, 7, eabi4362	14.3	3
96	Conversion efficiency of soliton Kerr combs. *Optics Letters*, **2021**, 46, 3657-3660	3	6
95	Exploiting Ultralow Loss Multimode Waveguides for Broadband Frequency Combs. *Laser and Photonics Reviews*, **2021**, 15, 2000353	8.3	20
94	Millimeter-scale chip-based supercontinuum generation for optical coherence tomography. *Science Advances*, **2021**, 7, eabg8869	14.3	6
93	Tunable single-mode chip-scale mid-infrared laser. *Communications Physics*, **2021**, 4,	5.4	4
92	Near-Degenerate Quadrature-Squeezed Vacuum Generation on a Silicon-Nitride Chip. *Physical Review Letters*, **2020**, 124, 193601	7.4	34
91	Raman lasing and soliton mode-locking in lithium niobate microresonators. *Light: Science and Applications*, **2020**, 9, 9	16.7	37
90	Frequency-Domain Quantum Interference with Correlated Photons from an Integrated Microresonator. *Physical Review Letters*, **2020**, 124, 143601	7.4	18
89	Nonlinear optical control of chiral charge pumping in a topological Weyl semimetal. *Physical Review B*, **2020**, 102,	3.3	6
88	Ultraviolet to Mid-Infrared Supercontinuum Generation in Lithium-Niobate Waveguides **2020**,		2
87	Chip-based self-referencing using integrated lithium niobate waveguides. *Optica*, **2020**, 7, 702	8.6	29
86	Visible nonlinear photonics via high-order-mode dispersion engineering. *Optica*, **2020**, 7, 135	8.6	27
85	Enhanced harmonic generation in gases using an all-dielectric metasurface. *Nanophotonics*, **2020**, 10, 733-740	6.3	4
84	Frequency-Domain Quantum Interference with Correlated Photons from an Integrated Microresonator **2020**,		1
83	Universal Conversion Efficiency Scaling with Free-Spectral-Range for Soliton Kerr Combs **2020**,		1
82	Demonstration of chip-based coupled degenerate optical parametric oscillators for realizing a nanophotonic spin-glass. *Nature Communications*, **2020**, 11, 4119	17.4	19

81	Strong Nonlinear Coupling in a Si_{3}N_{4} Ring Resonator. *Physical Review Letters*, **2019**, 122, 153906	7.4	16
80	Loss of polarization of elliptically polarized collapsing beams. *Physical Review A*, **2019**, 99,	2.6	6
79	Observation of Arnold Tongues in Coupled Soliton Kerr Frequency Combs. *Physical Review Letters*, **2019**, 123, 153901	7.4	10
78	Chip-based frequency comb sources for optical coherence tomography. *Optics Express*, **2019**, 27, 19896-19905	3.3	13
77	Coherent two-octave-spanning supercontinuum generation in lithium-niobate waveguides. *Optics Letters*, **2019**, 44, 1222-1225	3	61
76	Microfluidic mid-infrared spectroscopy via microresonator-based dual-comb source. *Optics Letters*, **2019**, 44, 4259-4262	3	4
75	Turn-key, high-efficiency Kerr comb source. *Optics Letters*, **2019**, 44, 4475-4478	3	38
74	Photonic-chip-based frequency combs. *Nature Photonics*, **2019**, 13, 158-169	33.9	303
73	Frequency multiplexing for quasi-deterministic heralded single-photon sources. *Nature Communications*, **2018**, 9, 847	17.4	59
72	On-chip dual-comb source for spectroscopy. *Science Advances*, **2018**, 4, e1701858	14.3	155
71	Dissipative Kerr solitons in optical microresonators. *Science*, **2018**, 361,	33.3	455
70	Intrapulse impact processes in dense-gas femtosecond laser filamentation. *Physical Review A*, **2018**, 97,	2.6	4
69	Gas-Phase Microresonator-Based Comb Spectroscopy without an External Pump Laser. *ACS Photonics*, **2018**, 5, 2780-2785	6.3	16
68	Synchronization of coupled optical microresonators. *Nature Photonics*, **2018**, 12, 688-693	33.9	45
67	Battery-operated integrated frequency comb generator. *Nature*, **2018**, 562, 401-405	50.4	245
66	Carrier envelope offset detection via simultaneous supercontinuum and second-harmonic generation in a silicon nitride waveguide. *Optics Letters*, **2018**, 43, 4627-4630	3	27
65	Counter-rotating cavity solitons in a silicon nitride microresonator. *Optics Letters*, **2018**, 43, 547-550	3	26
64	Silicon-chip-based mid-infrared dual-comb spectroscopy. *Nature Communications*, **2018**, 9, 1869	17.4	139

63	Picosecond ionization dynamics in femtosecond filaments at high pressures. *Physical Review A*, **2017**, 95,	2.6	13
62	Breather soliton dynamics in microresonators. *Nature Communications*, **2017**, 8, 14569	17.4	76
61	Coherent, directional supercontinuum generation. *Optics Letters*, **2017**, 42, 4466-4469	3	24
60	Competition between Raman and Kerr effects in microresonator comb generation. *Optics Letters*, **2017**, 42, 2786-2789	3	38
59	Ultra-low-loss on-chip resonators with sub-milliwatt parametric oscillation threshold. *Optica*, **2017**, 4, 619	8.6	233
58	Hong-Ou-Mandel interference in the frequency domain **2017**,		5
57	Microresonator-based high-resolution gas spectroscopy. *Optics Letters*, **2017**, 42, 4442-4445	3	29
56	Gigahertz frequency comb offset stabilization based on supercontinuum generation in silicon nitride waveguides. *Optics Express*, **2016**, 24, 11043-53	3.3	60
55	Mode-locked mid-infrared frequency combs in a silicon microresonator. *Optica*, **2016**, 3, 854	8.6	108
54	Ramsey Interference with Single Photons. *Physical Review Letters*, **2016**, 117, 223601	7.4	63
53	Coherent mid-infrared frequency combs in silicon-microresonators in the presence of Raman effects. *Optics Express*, **2016**, 24, 13044-50	3.3	32
52	Dynamics of mode-coupling-induced microresonator frequency combs in normal dispersion. *Optics Express*, **2016**, 24, 28794-28803	3.3	27
51	Self-organization in Kerr-cavity-soliton formation in parametric frequency combs. *Physical Review A*, **2016**, 94,	2.6	17
50	Thermally controlled comb generation and soliton modelocking in microresonators. *Optics Letters*, **2016**, 41, 2565-8	3	182
49	Quantum random number generator using a microresonator-based Kerr oscillator. *Optics Letters*, **2016**, 41, 4194-7	3	22
48	Silicon-chip mid-infrared frequency comb generation. *Nature Communications*, **2015**, 6, 6299	17.4	228
47	Higher-order nonlinearities revisited and their effect on harmonic generation. *Physical Review Letters*, **2015**, 114, 093901	7.4	27
46	Effects of multiphoton absorption on parametric comb generation in silicon microresonators. *Optics Letters*, **2015**, 40, 2778-81	3	26

45	On-Chip Optical Squeezing. *Physical Review Applied*, **2015**, 3,	4.3	112
44	Octave-spanning coherent supercontinuum generation in a silicon nitride waveguide. *Optics Letters*, **2015**, 40, 5117-20	3	99
43	Broadband mid-infrared frequency comb generation in a Si(3)N(4) microresonator. *Optics Letters*, **2015**, 40, 4823-6	3	279
42	Ultraviolet surprise: Efficient soft x-ray high-harmonic generation in multiply ionized plasmas. *Science*, **2015**, 350, 1225-31	33.3	111
41	Dual-pumped degenerate Kerr oscillator in a silicon nitride microresonator. *Optics Letters*, **2015**, 40, 5267-70	3	42
40	Low-Noise Quantum Frequency Translation of Single Photons **2015**,		1
39	Bandwidth shaping of microresonator-based frequency combs via dispersion engineering. *Optics Letters*, **2014**, 39, 3535-8	3	82
38	Kuramoto-Like Synchronization in Parametric Frequency Combs **2014**,		1
37	Strong polarization mode coupling in microresonators. *Optics Letters*, **2014**, 39, 5134-7	3	57
36	Octave-spanning mid-infrared supercontinuum generation in silicon nanowaveguides. *Optics Letters* , **2014**, 39, 4518-21	3	83
35	New CMOS-compatible platforms based on silicon nitride and Hydex for nonlinear optics. *Nature Photonics*, **2013**, 7, 597-607	33.9	634
34	Phase modulation at the few-photon level for weak-nonlinearity-based quantum computing. *Nature Photonics*, **2013**, 7, 138-141	33.9	115
33	Route to stabilized ultrabroadband microresonator-based frequency combs. *Optics Letters*, **2013**, 38, 3478-81	3	130
32	Modelocking and femtosecond pulse generation in chip-based frequency combs. *Optics Express*, **2013**, 21, 1335-43	3.3	143
31	Characterization of Nonlinear Optical Crosstalk in Silicon Nanowaveguides. *IEEE Photonics Technology Letters*, **2012**, 24, 185-187	2.2	9
30	High-Performance Silicon-Nitride-Based Multiple-Wavelength Source. *IEEE Photonics Technology Letters*, **2012**, 24, 1375-1377	2.2	50
29	Bright coherent ultrahigh harmonics in the keV x-ray regime from mid-infrared femtosecond lasers. *Science*, **2012**, 336, 1287-91	33.3	1091
28	Loss of phase of collapsing beams. *Physical Review Letters*, **2012**, 108, 043902	7.4	27

27	Breakthroughs in Nonlinear Silicon Photonics 2011. *IEEE Photonics Journal*, **2012**, 4, 601-606	1.8	9
26	Continuous Wavelength Conversion of 40-Gb/s Data Over 100 nm Using a Dispersion-Engineered Silicon Waveguide. *IEEE Photonics Technology Letters*, **2011**, 23, 73-75	2.2	20
25	Filamentation in air with ultrashort mid-infrared pulses. *Optics Express*, **2011**, 19, 9118-26	3.3	55
24	Harmonic generation in silicon nitride ring resonators. *Optics Express*, **2011**, 19, 11415-21	3.3	201
23	Silicon-based monolithic optical frequency comb source. *Optics Express*, **2011**, 19, 14233-9	3.3	132
22	Octave-spanning frequency comb generation in a silicon nitride chip. *Optics Letters*, **2011**, 36, 3398-400	3	344
21	CMOS-compatible multiple-wavelength oscillator for on-chip optical interconnects. *Nature Photonics*, **2010**, 4, 37-40	33.9	600
20	Self-phase modulation at visible wavelengths in nonlinear ZnO channel waveguides. *Applied Physics Letters*, **2010**, 97, 071105	3.4	15
19	Ultrafast waveform compression using a time-domain telescope. *Nature Photonics*, **2009**, 3, 581-585	33.9	103
18	Signal regeneration using low-power four-wave mixing on silicon chip. *Nature Photonics*, **2008**, 2, 35-38	33.9	256
17	A Simplified Optical Correlator and Its Application to Packet-Header Recognition. *IEEE Photonics Technology Letters*, **2008**, 20, 487-489	2.2	19
16	Fiber-Based Slow-Light Technologies. *Journal of Lightwave Technology*, **2008**, 26, 3752-3762	4	40
15	Low-power optical regeneration using four-wave mixing in a silicon chip **2008**,		2
14	Efficient excitation of polarization vortices in a photonic bandgap fiber with ultrashort laser pulses **2008**,		1
13	44-ns Continuously Tunable Dispersionless Optical Delay Element Using a PPLN Waveguide With Two-Pump Configuration, DCF, and a Dispersion Compensator. *IEEE Photonics Technology Letters*, **2007**, 19, 861-863	2.2	39
12	Wavelength dependence of the ultrafast third-order nonlinearity of Silicon **2007**,		3
11	Experiments Showing Orbital Angular Momentum Exchange with Optical Vortices **2007**,		2
10	Continuous Tunable Delays at 10-Gb/s Data Rates Using Self-Phase Modulation and Dispersion. *Journal of Lightwave Technology*, **2007**, 25, 3710-3715	4	10

9	Broad-band optical parametric gain on a silicon photonic chip. *Nature*, **2006**, 441, 960-3	50.4	606
8	Self-focusing Distance of Very High Power Laser Pulses. *Optics Express*, **2005**, 13, 5897-903	3.3	58
7	Role of dispersion in multiple-collapse dynamics. *Optics Letters*, **2004**, 29, 995-7	3	57
6	Optics. Collapsing light really shines. *Science*, **2003**, 301, 54-5	33.3	38
5	Nanoscale modification of optical properties in Ge-doped SiO2 glass by electron-beam irradiation. *Applied Physics Letters*, **2002**, 80, 2005-2007	3.4	35
4	Memorized polarization-dependent light scattering in rare-earth-ion-doped glass. *Applied Physics Letters*, **2000**, 77, 1940-1942	3.4	41
3	Critical power for self-focusing in bulk media and in hollow waveguides. *Optics Letters*, **2000**, 25, 335-7	3	252
2	Catastrophic collapse of ultrashort pulses. *Physical Review Letters*, **2000**, 84, 3582-5	7.4	394
1	High-reflectivity, wide-bandwidth optical phase conjugation via four-wave mixing in potassium vapor. *Applied Physics Letters*, **1996**, 69, 1199-1201	3.4	21