

Kartik Srinivasan

List of Publications by Year in descending order

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Version: 2024-02-01

171
papers

11,130
citations

24978

57
h-index

30848

102
g-index

173
all docs

173
docs citations

173
times ranked

7720
citing authors

#	ARTICLE	IF	CITATIONS
1	An optical-frequency synthesizer using integrated photonics. <i>Nature</i> , 2018, 557, 81-85.	13.7	550
2	Hybrid integrated quantum photonic circuits. <i>Nature Photonics</i> , 2020, 14, 285-298.	15.6	411
3	Spectral line-by-line pulse shaping of on-chip microresonator frequency combs. <i>Nature Photonics</i> , 2011, 5, 770-776.	15.6	402
4	Linear and nonlinear optical spectroscopy of a strongly coupled microdisk-quantum dot system. <i>Nature</i> , 2007, 450, 862-865.	13.7	366
5	Nonlinear response of silicon photonic crystal micresonators excited via an integrated waveguide and fiber taper. <i>Optics Express</i> , 2005, 13, 801.	1.7	360
6	Architecture for the photonic integration of an optical atomic clock. <i>Optica</i> , 2019, 6, 680.	4.8	346
7	Quantum Cascade Surface-Emitting Photonic Crystal Laser. <i>Science</i> , 2003, 302, 1374-1377.	6.0	317
8	A solid-state source of strongly entangled photon pairs with high brightness and indistinguishability. <i>Nature Nanotechnology</i> , 2019, 14, 586-593.	15.6	303
9	Momentum space design of high-Q photonic crystal optical cavities. <i>Optics Express</i> , 2002, 10, 670.	1.7	302
10	Coherent coupling between radiofrequency, optical and acoustic waves in piezo-optomechanical circuits. <i>Nature Photonics</i> , 2016, 10, 346-352.	15.6	268
11	The 2019 surface acoustic waves roadmap. <i>Journal Physics D: Applied Physics</i> , 2019, 52, 353001.	1.3	236
12	Stably accessing octave-spanning microresonator frequency combs in the soliton regime. <i>Optica</i> , 2017, 4, 193.	4.8	235
13	Nanoscale optical positioning of single quantum dots for bright and pure single-photon emission. <i>Nature Communications</i> , 2015, 6, 7833.	5.8	231
14	Quantum transduction of telecommunications-band single photons from a quantum dot by frequency upconversion. <i>Nature Photonics</i> , 2010, 4, 786-791.	15.6	210
15	Heterogeneous integration for on-chip quantum photonic circuits with single quantum dot devices. <i>Nature Communications</i> , 2017, 8, 889.	5.8	185
16	Efficient and low-noise single-photon-level frequency conversion interfaces using silicon nanophotonics. <i>Nature Photonics</i> , 2016, 10, 406-414.	15.6	184
17	Microwave-to-optics conversion using a mechanical oscillator in its quantum ground state. <i>Nature Physics</i> , 2020, 16, 69-74.	6.5	182
18	Development of Quantum Interconnects (QulCs) for Next-Generation Information Technologies. <i>PRX Quantum</i> , 2021, 2, .	3.5	172

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19	Experimental demonstration of a high quality factor photonic crystal microcavity. Applied Physics Letters, 2003, 83, 1915-1917.	1.5	163
20	2022 Roadmap on integrated quantum photonics. JPhys Photonics, 2022, 4, 012501.	2.2	152
21	Cavity Q, mode volume, and lasing threshold in small diameter AlGaAs microdisks with embedded quantum dots. Optics Express, 2006, 14, 1094.	1.7	151
22	Ultra-efficient frequency comb generation in AlGaAs-on-insulator microresonators. Nature Communications, 2020, 11, 1331.	5.8	151
23	Chip-integrated visible telecom entangled photon pair source for quantum communication. Nature Physics, 2019, 15, 373-381.	6.5	148
24	Rayleigh scattering, mode coupling, and optical loss in silicon microdisks. Applied Physics Letters, 2004, 85, 3693-3695.	1.5	134
25	Electromagnetically Induced Transparency and Wideband Wavelength Conversion in Silicon Nitride Microdisk Optomechanical Resonators. Physical Review Letters, 2013, 110, 223603.	2.9	134
26	Telecommunications-band heralded single photons from a silicon nanophotonic chip. Applied Physics Letters, 2012, 100, .	1.5	133
27	Optomechanical Transduction of an Integrated Silicon Cantilever Probe Using a Microdisk Resonator. Nano Letters, 2011, 11, 791-797.	4.5	123
28	Quantum correlations from a room-temperature optomechanical cavity. Science, 2017, 356, 1265-1268.	6.0	116
29	Mode coupling and cavity quantum-dot interactions in a fiber-coupled microdisk cavity. Physical Review A, 2007, 75, .	1.0	114
30	Two-Photon Interference Using Background-Free Quantum Frequency Conversion of Single Photons Emitted by an InAs Quantum Dot. Physical Review Letters, 2012, 109, 147405.	2.9	113
31	Integration of fiber-coupled high-Q SiNx microdisks with atom chips. Applied Physics Letters, 2006, 89, 131108.	1.5	112
32	A circular dielectric grating for vertical extraction of single quantum dot emission. Applied Physics Letters, 2011, 99, .	1.5	104
33	Efficient input and output fiber coupling to a photonic crystal waveguide. Optics Letters, 2004, 29, 697.	1.7	99
34	Optical-fiber-based measurement of an ultrasmall volume high-Q photonic crystal microcavity. Physical Review B, 2004, 70, .	1.1	96
35	Photonic chip for laser stabilization to an atomic vapor with 10^{11} instability. Optica, 2018, 5, 443.	4.8	95
36	Manipulating the color and shape of single photons. Physics Today, 2012, 65, 32-37.	0.3	92

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37	Ultrabroadband Supercontinuum Generation and Frequency-Comb Stabilization Using On-Chip Waveguides with Both Cubic and Quadratic Nonlinearities. <i>Physical Review Applied</i> , 2017, 8, .	1.5	90
38	Efficient fiber-coupled single-photon source based on quantum dots in a photonic-crystal waveguide. <i>Optica</i> , 2017, 4, 178.	4.8	87
39	Cascaded emission of single photons from the biexciton in monolayered WSe ₂ . <i>Nature Communications</i> , 2016, 7, 13409.	5.8	86
40	Stellar spectroscopy in the near-infrared with a laser frequency comb. <i>Optica</i> , 2019, 6, 233.	4.8	86
41	Efficient photoinduced second-harmonic generation in silicon nitride photonics. <i>Nature Photonics</i> , 2021, 15, 131-136.	15.6	85
42	Efficient telecom-to-visible spectral translation through ultralow power nonlinear nanophotonics. <i>Nature Photonics</i> , 2019, 13, 593-601.	15.6	82
43	Self-referenced frequency combs using high-efficiency silicon-nitride waveguides. <i>Optics Letters</i> , 2017, 42, 2314.	1.7	80
44	Optical loss and lasing characteristics of high-quality-factor AlGaAs microdisk resonators with embedded quantum dots. <i>Applied Physics Letters</i> , 2005, 86, 151106.	1.5	77
45	Moving boundary and photoelastic coupling in GaAs optomechanical resonators. <i>Optica</i> , 2014, 1, 414.	4.8	77
46	Single Self-Assembled InAs Quantum Dots in Photonic Nanostructures: The Role of Nanofabrication. <i>Physical Review Applied</i> , 2018, 9, .	1.5	73
47	Wavelength- and material-dependent absorption in GaAs and AlGaAs microcavities. <i>Applied Physics Letters</i> , 2007, 90, 051108.	1.5	72
48	Observation of correlation between route to formation, coherence, noise, and communication performance of Kerr combs. <i>Optics Express</i> , 2012, 20, 29284.	1.7	71
49	A microelectromechanically controlled cavity optomechanical sensing system. <i>New Journal of Physics</i> , 2012, 14, 075015.	1.2	66
50	Photonic waveguide to free-space Gaussian beam extreme mode converter. <i>Light: Science and Applications</i> , 2018, 7, 72.	7.7	66
51	Fourier space design of high-Q cavities in standard and compressed hexagonal lattice photonic crystals. <i>Optics Express</i> , 2003, 11, 579.	1.7	63
52	Deterministic implementation of a bright, on-demand single-photon source with near-unity indistinguishability via quantum dot imaging. <i>Optica</i> , 2017, 4, 802.	4.8	63
53	Optical fiber taper coupling and high-resolution wavelength tuning of microdisk resonators at cryogenic temperatures. <i>Applied Physics Letters</i> , 2007, 90, 031114.	1.5	61
54	Spontaneous pulse formation in edgeless photonic crystal resonators. <i>Nature Photonics</i> , 2021, 15, 461-467.	15.6	61

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55	Self-organized nonlinear gratings for ultrafast nanophotonics. Nature Photonics, 2019, 13, 494-499.	15.6	60
56	Probing the dispersive and spatial properties of photonic crystal waveguides via highly efficient coupling from fiber tapers. Applied Physics Letters, 2004, 85, 4-6.	1.5	59
57	Wide cantilever stiffness range cavity optomechanical sensors for atomic force microscopy. Optics Express, 2012, 20, 18268.	1.7	59
58	Interlocking Kerr-microresonator frequency combs for microwave to optical synthesis. Optics Letters, 2018, 43, 2933.	1.7	59
59	Quantum electromechanics on silicon nitride nanomembranes. Nature Communications, 2016, 7, 12396.	5.8	58
60	Quantum frequency conversion of a quantum dot single-photon source on a nanophotonic chip. Optica, 2019, 6, 563.	4.8	55
61	Indistinguishable Photons from Deterministically Integrated Single Quantum Dots in Heterogeneous GaAs/Si ₃ N ₄ Quantum Photonic Circuits. Nano Letters, 2019, 19, 7164-7172.	4.5	53
62	Feasibility of detecting single atoms using photonic bandgap cavities. Nanotechnology, 2004, 15, S556-S561.	1.3	51
63	Fabrication-tolerant high quality factor photonic crystal microcavities. Optics Express, 2004, 12, 1458.	1.7	51
64	Microwave-to-Optical Transduction Using a Mechanical Supermode for Coupling Piezoelectric and Optomechanical Resonators. Physical Review Applied, 2020, 13, .	1.5	51
65	Low-noise chip-based frequency conversion by four-wave-mixing Bragg scattering in SiN _x waveguides. Optics Letters, 2012, 37, 2997.	1.7	50
66	Simultaneous Wavelength Translation and Amplitude Modulation of Single Photons from a Quantum Dot. Physical Review Letters, 2011, 107, 083602.	2.9	49
67	Terahertz-Rate Kerr-Microresonator Optical Clockwork. Physical Review X, 2019, 9, .	2.8	49
68	Broadband resonator-waveguide coupling for efficient extraction of octave-spanning microcombs. Optics Letters, 2019, 44, 4737.	1.7	49
69	Cryogenic photoluminescence imaging system for nanoscale positioning of single quantum emitters. Review of Scientific Instruments, 2017, 88, 023116.	0.6	48
70	Efficient quantum dot single photon extraction into an optical fiber using a nanophotonic directional coupler. Applied Physics Letters, 2011, 99, .	1.5	47
71	Slot-mode-coupled optomechanical crystals. Optics Express, 2012, 20, 24394.	1.7	45
72	Improving the performance of bright quantum dot single photon sources using temporal filtering via amplitude modulation. Scientific Reports, 2013, 3, 1397.	1.6	45

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73	Dissipative Kerr Solitons in a III-V Microresonator. <i>Laser and Photonics Reviews</i> , 2020, 14, 2000022.	4.4	45
74	Milliwatt-threshold visible telecom optical parametric oscillation using silicon nanophotonics. <i>Optica</i> , 2019, 6, 1535.	4.8	44
75	Multiple time scale blinking in InAs quantum dot single-photon sources. <i>Physical Review B</i> , 2014, 89, .	1.1	43
76	Acousto-Optic Modulation and Optoacoustic Gating in Piezo-Optomechanical Circuits. <i>Physical Review Applied</i> , 2017, 7, .	1.5	43
77	Tuning Kerr-Soliton Frequency Combs to Atomic Resonances. <i>Physical Review Applied</i> , 2019, 11, .	1.5	42
78	Bright Single-Photon Emission From a Quantum Dot in a Circular Bragg Grating Microcavity. <i>IEEE Journal of Selected Topics in Quantum Electronics</i> , 2012, 18, 1711-1721.	1.9	41
79	Multifunctional integrated photonics in the mid-infrared with suspended AlGaAs on silicon. <i>Optica</i> , 2019, 6, 1246.	4.8	41
80	Photonic-Chip Supercontinuum with Tailored Spectra for Counting Optical Frequencies. <i>Physical Review Applied</i> , 2017, 8, .	1.5	40
81	Spectrally multiplexed and tunable-wavelength photon pairs at 155 nm from a silicon coupled-resonator optical waveguide. <i>Optics Letters</i> , 2013, 38, 2969.	1.7	39
82	High-Q slow light and its localization in a photonic crystal microring. <i>Nature Photonics</i> , 2022, 16, 66-71.	15.6	39
83	Kerr-Microresonator Soliton Frequency Combs at Cryogenic Temperatures. <i>Physical Review Applied</i> , 2019, 12, .	1.5	37
84	Ultra-broadband Kerr microcomb through soliton spectral translation. <i>Nature Communications</i> , 2021, 12, 7275.	5.8	37
85	Si ₃ N ₄ optomechanical crystals in the resolved-sideband regime. <i>Applied Physics Letters</i> , 2014, 104, .	1.5	35
86	Quasi-Phase-Matched Supercontinuum Generation in Photonic Waveguides. <i>Physical Review Letters</i> , 2018, 120, 053903.	2.9	34
87	Phased-locked two-color single soliton microcombs in dispersion-engineered Si ₃ N ₄ resonators. <i>Optics Letters</i> , 2018, 43, 2772.	1.7	34
88	Efficient spectroscopy of single embedded emitters using optical fiber taper waveguides. <i>Optics Express</i> , 2009, 17, 10542.	1.7	31
89	A chip-scale, telecommunications-band frequency conversion interface for quantum emitters. <i>Optics Express</i> , 2013, 21, 21628.	1.7	31
90	On-chip optical parametric oscillation into the visible: generating red, orange, yellow, and green from a near-infrared pump. <i>Optica</i> , 2020, 7, 1417.	4.8	31

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109	Conversion Efficiency in Kerr-Microresonator Optical Parametric Oscillators: From Three Modes to Many Modes. <i>Physical Review Applied</i> , 2022, 17, .	1.5	18
110	Dual-comb spectroscopy with tailored spectral broadening in Si ₃ N ₄ nanophotonics. <i>Optics Express</i> , 2019, 27, 11869.	1.7	17
111	Subnanosecond electro-optic modulation of triggered single photons from a quantum dot. <i>Applied Physics Letters</i> , 2011, 98, 211103.	1.5	16
112	Imaging nanophotonic modes of microresonators using a focused ion beam. <i>Nature Photonics</i> , 2016, 10, 35-39.	15.6	16
113	Wavelength transduction from a 3D microwave cavity to telecom using piezoelectric optomechanical crystals. <i>Applied Physics Letters</i> , 2020, 116, 174005.	1.5	16
114	Combined atomic force microscopy and photoluminescence imaging to select single InAs/GaAs quantum dots for quantum photonic devices. <i>Scientific Reports</i> , 2017, 7, 6205.	1.6	15
115	Lasing mode pattern of a quantum cascade photonic crystal surface-emitting microcavity laser. <i>Applied Physics Letters</i> , 2004, 84, 4164-4166.	1.5	13
116	Spectral broadening and shaping of nanosecond pulses: toward shaping of single photons from quantum emitters. <i>Optics Letters</i> , 2014, 39, 5677.	1.7	13
117	Nonlinear Oscillations and Bifurcations in Silicon Photonic Microresonators. <i>Physical Review Letters</i> , 2014, 112, 123901.	2.9	13
118	Tailoring broadband Kerr soliton microcombs via post-fabrication tuning of the geometric dispersion. <i>Applied Physics Letters</i> , 2021, 119, .	1.5	12
119	Exceptional points in lossy media lead to deep polynomial wave penetration with spatially uniform power loss. <i>Nature Nanotechnology</i> , 2022, 17, 583-589.	15.6	12
120	On-chip polarization rotator for type I second harmonic generation. <i>APL Photonics</i> , 2019, 4, 126105.	3.0	10
121	Tunable Quantum Beat of Single Photons Enabled by Nonlinear Nanophotonics. <i>Physical Review Applied</i> , 2019, 12, .	1.5	8
122	Broadband, efficient extraction of quantum light by a photonic device comprised of a metallic nano-ring and a gold back reflector. <i>Applied Physics Letters</i> , 2022, 120, 081103.	1.5	7
123	Hybrid Mode Family Kerr Optical Parametric Oscillation for Robust Coherent Light Generation on Chip. <i>Laser and Photonics Reviews</i> , 2022, 16, .	4.4	6
124	Kerr optical parametric oscillation in a photonic crystal microring for accessing the infrared. <i>Optics Letters</i> , 2022, 47, 3331.	1.7	6
125	Improved coupled-mode theory for high-index-contrast photonic platforms. <i>Physical Review A</i> , 2020, 102, .	1.0	5
126	Thermal release tape-assisted semiconductor membrane transfer process for hybrid photonic devices embedding quantum emitters. <i>Materials for Quantum Technology</i> , 0, , .	1.2	5

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127	Dissipative Kerr Solitons: Dissipative Kerr Solitons in a III-V Microresonator (Laser Photonics Rev.) Tj ETQq1 1 0.784314 rgBT ₄ /Overlook	4.4	4
128	Proposal for noise-free visible-telecom quantum frequency conversion through third-order sum and difference frequency generation. Optics Letters, 2021, 46, 222.	1.7	4
129	Automated on-axis direct laser writing of coupling elements for photonic chips. Optics Express, 2020, 28, 39340.	1.7	4
130	Impact of the precursor gas ratio on dispersion engineering of broadband silicon nitride microresonator frequency combs. Optics Letters, 2021, 46, 5970.	1.7	3
131	Considering Photoinduced Second-Harmonic Generation as a dc Kerr Optical Parametric Oscillation or Amplification Process. Physical Review Applied, 2021, 16, .	1.5	2
132	Self-organized nonlinear gratings for ultrafast nanophotonics. , 2018, , .		2
133	An out-of-plane experience. Nature Photonics, 2009, 3, 15-16.	15.6	1
134	Cavity optomechanical sensors. , 2011, , .		1
135	Integrated cavity optomechanical sensors for atomic force microscopy. , 2012, , .		1
136	Small Cavities Make Noisy Homes for Light. Physics Magazine, 2020, 13, .	0.1	1
137	Piezo-optomechanical Actuation of Nanobeam Resonators for Microwave-to-Optical Transduction. , 2021, , .		1
138	A dual beam photonic wavelength reference. Measurement: Sensors, 2021, 18, 100288.	1.3	1
139	Semiconductor laser integration for octave-span Kerr-soliton frequency combs. , 2020, , .		1
140	High mechanical fMQM product tuning fork cavity optomechanical transducers. , 2015, , .		1
141	Indistinguishable photons from deterministically integrated single quantum dots in heterogeneous GaAs/Si ₃ N ₄ quantum photonic circuits. , 2019, , .		1
142	Efficient second harmonic generation in a Si ₃ N ₄ microring. , 2020, , .		1
143	Optical synthesis by spectral translation. , 2020, , .		1
144	Kerr Microresonator Soliton Frequency Combs at Cryogenic Temperatures. Physical Review Applied, 2019, 12, .	1.5	1

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145	Tunable quantum beat of single photons enabled by nonlinear nanophotonics. Physical Review Applied, 2019, 12, .	1.5	1
146	Optical-fiber-based probing of semiconductor microcavity-quantum-dot systems at cryogenic temperatures. , 2007, , .		0
147	Single quantum dots in fiber-coupled nanophotonic cavities and waveguides. , 2009, , .		0
148	MEMS and NEMS with integrated cavity optomechanical readout. , 2013, , .		0
149	Quantum dot single photon sources: Blinking and deterministic device fabrication. , 2014, , .		0
150	Direct imaging of nanophotonic cavity modes using Li ion microscope. , 2014, , .		0
151	Silicon nitride cavity optomechanical transducers. , 2014, , .		0
152	Towards Quantum Frequency Conversion. , 2015, , .		0
153	Nonlinear Optics for Photonic Quantum Networks. Springer Series in Optical Sciences, 2015, , 355-421.	0.5	0
154	Generation of Octave-Spanning Microresonator Solitons with a Self Injection-Locked DFB Laser. , 2019, , .		0
155	Ultra-low-loss photonic circuits with integrated quantum dot single-photon sources. , 2021, , .		0
156	Impact of Stoichiometric Silicon Nitride Growth Conditions on Dispersion and Broadband Kerr Microcombs in the Near-Visible. , 2021, , .		0
157	Hybridization of circular and rectangular transverse profiles of nanophotonic modes for nonlinear optics. Optics Letters, 2021, 46, 2682.	1.7	0
158	$\hat{1}/4W$ Pumping for MHz Photon Pair Generation Rates Enabled by $\hat{1}\ddagger(2)$ Organic Chromophores. , 2021, , .		0
159	Wide Stiffness Range Cavity Optomechanical Sensors for Atomic Force Microscopy. , 2012, , .		0
160	Nanophotonic Devices and Quantum Frequency Conversion. , 2013, , .		0
161	Erasing spectral distinguishability in quantum dot based single photon sources using quantum frequency conversion. , 2013, , .		0
162	Electromagnetically Induced Transparency in Si3N4 nanobeam optomechanical crystals. , 2014, , .		0

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163	Sub-mW optical parametric oscillation across visible and telecommunications bands using silicon nanophotonics. , 2019, , .		0
164	Heterogeneous integrated quantum photonic devices with single, deterministically positioned InAs quantum dots. , 2019, , .		0
165	Integrated Photonic Interposers for Processing Octave-Spanning Microresonator Frequency Combs. , 2020, , .		0
166	Post-Processing Dispersion Engineering of Frequency Combs In Microresonator Addressing Atomic Clock. , 2020, , .		0
167	Broadband resonator-waveguide coupling for efficient extraction of octave-spanning microcombs: publisher's note. Optics Letters, 2020, 45, 4939.	1.7	0
168	Efficient widely-separated optical parametric oscillation. , 2020, , .		0
169	Stable Dissipative Kerr Solitons in a AlGaAs Microresonator Through Cryogenic Operation. , 2020, , .		0
170	Coupled Piezo-Optomechanical Devices for Bi-Directional Microwave-to-Optical Quantum Transduction. , 2020, , .		0
171	Heterogeneous integrated silicon photonic circuits with deterministically fabricated single quantum dot single-photon sources. , 2020, , .		0