Hong X Tang

List of Publications by Year
in descending order

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144 papers	8,213 citations	41323 49 h-index	49868 87 g-index
149 all docs	149 docs citations	149 times ranked	5027 citing authors

#	Article	IF	Citations
1	Strongly Coupled Magnons and Cavity Microwave Photons. Physical Review Letters, 2014, 113, 156401.	2.9	693
2	Cavity magnomechanics. Science Advances, 2016, 2, e1501286.	4.7	395
3	Magnon dark modes and gradient memory. Nature Communications, 2015, 6, 8914.	5.8	293
4	Optomagnonic Whispering Gallery Microresonators. Physical Review Letters, 2016, 117, 123605.	2.9	278
5	Periodically poled thin-film lithium niobate microring resonators with a second-harmonic generation efficiency of 250,000%/W. Optica, 2019, 6, 1455.	4.8	263
6	Optical frequency comb generation from aluminum nitride microring resonator. Optics Letters, 2013, 38, 2810.	1.7	215
7	Low-Loss, Silicon Integrated, Aluminum Nitride Photonic Circuits and Their Use for Electro-Optic Signal Processing. Nano Letters, 2012, 12, 3562-3568.	4.5	212
8	Aluminum nitride as a new material for chip-scale optomechanics and nonlinear optics. New Journal of Physics, 2012, 14, 095014.	1.2	207
9	Parametric down-conversion photon-pair source on a nanophotonic chip. Light: Science and Applications, 2017, 6, e16249-e16249.	7.7	196
10	Integrated GaN photonic circuits on silicon (100) for second harmonic generation. Optics Express, 2011, 19, 10462.	1.7	176
11	Reactive Cavity Optical Force on Microdisk-Coupled Nanomechanical Beam Waveguides. Physical Review Letters, 2009, 103, 223901.	2.9	164
12	Second-harmonic generation in aluminum nitride microrings with 2500%/W conversion efficiency. Optica, 2016, 3, 1126.	4.8	160
13	2022 Roadmap on integrated quantum photonics. JPhys Photonics, 2022, 4, 012501.	2.2	152
14	Superconducting cavity electro-optics: A platform for coherent photon conversion between superconducting and photonic circuits. Science Advances, 2018, 4, eaar4994.	4.7	148
15	Coupled spin-light dynamics in cavity optomagnonics. Physical Review A, 2016, 94, .	1.0	142
16	Cavity magnonics. Physics Reports, 2022, 979, 1-61.	10.3	140
17	On-Chip Strong Coupling and Efficient Frequency Conversion between Telecom and Visible Optical Modes. Physical Review Letters, 2016, 117, 123902.	2.9	138
18	Waveguide integrated low noise NbTiN nanowire single-photon detectors with milli-Hz dark count rate. Scientific Reports, 2013, 3, 1893.	1.6	116

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19	Green, red, and IR frequency comb line generation from single IR pump in AlN microring resonator. Optica, 2014, 1, 396.	4.8	116
20	Cascaded optical transparency in multimode-cavity optomechanical systems. Nature Communications, 2015, 6, 5850.	5.8	111
21	Toward 1% single-photon anharmonicity with periodically poled lithium niobate microring resonators. Optica, 2020, 7, 1654.	4.8	110
22	Pockels soliton microcomb. Nature Photonics, 2021, 15, 21-27.	15.6	97
23	Integrated optomechanical single-photon frequency shifter. Nature Photonics, 2016, 10, 766-770.	15.6	94
24	Optomagnonics in magnetic solids. Physical Review B, 2016, 94, .	1.1	90
25	Ultrabroadband Supercontinuum Generation and Frequency-Comb Stabilization Using On-Chip Waveguides with Both Cubic and Quadratic Nonlinearities. Physical Review Applied, 2017, 8, .	1.5	90
26	High-fidelity cavity soliton generation in crystalline AlN micro-ring resonators. Optics Letters, 2018, 43, 4366.	1.7	90
27	Broadband on-chip single-photon spectrometer. Nature Communications, 2019, 10, 4104.	5.8	88
28	Waveguide cavity optomagnonics for microwave-to-optics conversion. Optica, 2020, 7, 1291.	4.8	84
29	Ultralow-threshold thin-film lithium niobate optical parametric oscillator. Optica, 2021, 8, 539.	4.8	82
30	Electric-Field Coupling to Spin Waves in a Centrosymmetric Ferrite. Physical Review Letters, 2014, 113, 037202.	2.9	81
31	Microwave-optical quantum frequency conversion. Optica, 2021, 8, 1050.	4.8	81
32	17â€‰000%/W second-harmonic conversion efficiency in single-crystalline aluminum nitride microresonators. Applied Physics Letters, 2018, 113, .	1.5	80
33	Casimir Force and<i>In Situ</i>Surface Potential Measurements on Nanomembranes. Physical Review Letters, 2012, 109, 027202.	2.9	76
34	Cavity piezo-mechanics for superconducting-nanophotonic quantum interface. Nature Communications, 2020, 11, 3237.	5.8	76
35	On-chip Ï‡⁽²⁾ microring optical parametric oscillator. Optica, 2019, 6, 1361.	4.8	75
36	Ultra-high-Q UV microring resonators based on a single-crystalline AlN platform. Optica, 2018, 5, 1279.	4.8	71

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37	Quantum Engineering With Hybrid Magnonic Systems and Materials <i>(Invited Paper)</i>. IEEE Transactions on Quantum Engineering, 2021, 2, 1-36.	2.9	69
38	Octave-spanning supercontinuum generation in nanoscale lithium niobate waveguides. Optics Letters, 2019, 44, 1492.	1.7	68
39	Phononic integrated circuitry and spinâ€“orbit interaction of phonons. Nature Communications, 2019, 10, 2743.	5.8	67
40	High-<i>Q</i> silicon optomechanical microdisk resonators at gigahertz frequencies. Applied Physics Letters, 2012, 100, .	1.5	65
41	Soliton microcomb generation at 2â€‰â€‰Î¼m in z-cut lithium niobate microring resonators. Optics Letters, 2019, 44, 3182.	1.7	63
42	Superstrong coupling of thin film magnetostatic waves with microwave cavity. Journal of Applied Physics, 2016, 119, .	1.1	62
43	Near-octave lithium niobate soliton microcomb. Optica, 2020, 7, 1275.	4.8	58
44	Proposal for Heralded Generation and Detection of Entangled Microwaveâ€“Optical-Photon Pairs. Physical Review Letters, 2020, 124, 010511.	2.9	57
45	Efficient third-harmonic generation in composite aluminum nitride/silicon nitride microrings. Optica, 2018, 5, 103.	4.8	55
46	Aluminum nitride piezo-acousto-photonic crystal nanocavity with high quality factors. Applied Physics Letters, 2013, 102, .	1.5	54
47	Efficient Generation of a Near-visible Frequency Comb via Cherenkov-like Radiation from a Kerr Microcomb. Physical Review Applied, 2018, 10, .	1.5	54
48	Multimode Strong Coupling in Superconducting Cavity Piezoelectromechanics. Physical Review Letters, 2016, 117, 123603.	2.9	53
49	Aluminum nitride nanophotonics for beyond-octave soliton microcomb generation and self-referencing. Nature Communications, 2021, 12, 5428.	5.8	53
50	Aluminum nitride as nonlinear optical material for on-chip frequency comb generation and frequency conversion. Nanophotonics, 2016, 5, 263-271.	2.9	51
51	Bidirectional interconversion of microwave and light with thin-film lithium niobate. Nature Communications, 2021, 12, 4453.	5.8	51
52	Frequency and phase noise of ultrahigh<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mi>Q</mml:mi></mml:math>silicon nitride nanomechanical resonators. Physical Review B, 2012, 85, .	1.1	50
53	Electrical tuning and switching of an optical frequency comb generated in aluminum nitride microring resonators. Optics Letters, 2014, 39, 84.	1.7	48
54	Lowâ€loss aluminium nitride thin film for midâ€infrared microphotonics. Laser and Photonics Reviews, 2014, 8, L23.	4.4	48

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55	Incorporation of erbium ions into thin-film lithium niobate integrated photonics. Applied Physics Letters, 2020, 116, .	1.5	47
56	Lithium-niobate-on-insulator waveguide-integrated superconducting nanowire single-photon detectors. Applied Physics Letters, 2020, 116, .	1.5	47
57	Broadband nanophotonic waveguides and resonators based on epitaxial GaN thin films. Applied Physics Letters, 2015, 107, .	1.5	44
58	GHz optomechanical resonators with high mechanical Q factor in air. Optics Express, 2011, 19, 22316.	1.7	41
59	Magnon-photon strong coupling for tunable microwave circulators. Physical Review A, 2020, 101, .	1.0	41
60	Cavity piezooptomechanics: Piezoelectrically excited, optically transduced optomechanical resonators. Applied Physics Letters, 2013, 102, 021110.	1.5	40
61	Cavity piezomechanical strong coupling and frequency conversion on an aluminum nitride chip. Physical Review A, 2016, 94, .	1.0	40
62	Mitigating photorefractive effect in thin-film lithium niobate microring resonators. Optics Express, 2021, 29, 5497.	1.7	37
63	Ultraviolet to mid-infrared supercontinuum generation in single-crystalline aluminum nitride waveguides. Optics Letters, 2020, 45, 4499.	1.7	35
64	Patterned growth of crystalline Y3Fe5O12 nanostructures with engineered magnetic shape anisotropy. Applied Physics Letters, 2017, 110, .	1.5	34
65	Beyond 100â€‰THz-spanning ultraviolet frequency combs in a non-centrosymmetric crystalline waveguide. Nature Communications, 2019, 10, 2971.	5.8	34
66	Nano-Optomechanical Resonators in Microfluidics. Nano Letters, 2015, 15, 6116-6120.	4.5	33
67	Frequency-tunable high-<i>Q</i> superconducting resonators via wireless control of nonlinear kinetic inductance. Applied Physics Letters, 2019, 114, .	1.5	33
68	Strong Pockels materials. Nature Materials, 2019, 18, 9-11.	13.3	33
69	Microwave-assisted coherent and nonlinear control in cavity piezo-optomechanical systems. Physical Review A, 2014, 90, .	1.0	32
70	Sensitivity to external signals and synchronization properties of a non-isochronous auto-oscillator with delayed feedback. Scientific Reports, 2014, 4, 3873.	1.6	32
71	Radiative Cooling of a Superconducting Resonator. Physical Review Letters, 2020, 124, 033602.	2.9	32
72	Optomechanical coupling in photonic crystal supported nanomechanical waveguides. Optics Express, 2009, 17, 12424.	1.7	28

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73	A superhigh-frequency optoelectromechanical system based on a slotted photonic crystal cavity. Applied Physics Letters, 2012, 101, .	1.5	28
74	Noiseless photonic non-reciprocity via optically-induced magnetization. Nature Communications, 2021, 12, 2389.	5.8	28
75	Efficient Frequency Conversion in a Degenerate <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:msup><mml:mi>Ï‡</mml:mi><mml:mrow><mml:mo stretchy="false">(</mml:mo><mml:mn>2</mml:mn><mml:mo) Tj ETQq1 1 0.784314 rgBT /Overlock 10 Tf 50 652 Td (stretchy="false"> Letters, 2021, 126, 133601.	2.9	27
76	Nonlinear optical effects of ultrahigh-Q silicon photonic nanocavities immersed in superfluid helium. Scientific Reports, 2013, 3, 1436.	1.6	26
77	Photonic Dissipation Control for Kerr Soliton Generation in Strongly Raman-Active Media. Physical Review Letters, 2020, 125, 183901.	2.9	26
78	Cavity electro-optic circuit for microwave-to-optical conversion in the quantum ground state. Physical Review A, 2021, 103, .	1.0	26
79	Design of a Silicon Integrated Electro-Optic Modulator Using Ferroelectric BaTiO₃ Films. IEEE Photonics Technology Letters, 2014, 26, 1344-1347.	1.3	25
80	Low loss spin wave resonances in organic-based ferrimagnet vanadium tetracyanoethylene thin films. Applied Physics Letters, 2016, 109, .	1.5	25
81	Epitaxial niobium nitride superconducting nanowire single-photon detectors. Applied Physics Letters, 2020, 117, .	1.5	25
82	Widely separated optical Kerr parametric oscillation in AlN microrings. Optics Letters, 2020, 45, 1124.	1.7	25
83	Superconducting nanowire single-photon detectors fabricated from atomic-layer-deposited NbN. Applied Physics Letters, 2019, 115, .	1.5	24
84	Analysis of short range forces in opto-mechanical devices with a nanogap. Optics Express, 2010, 18, 12615.	1.7	21
85	A 10-GHz film-thickness-mode cavity optomechanical resonator. Applied Physics Letters, 2015, 106, .	1.5	21
86	Phase sensitive imaging of 10 GHz vibrations in an AlN microdisk resonator. Review of Scientific Instruments, 2017, 88, 123709.	0.6	21
87	Spectrotemporal shaping of itinerant photons via distributed nanomechanics. Nature Photonics, 2019, 13, 323-327.	15.6	21
88	Entanglement of microwave-optical modes in a strongly coupled electro-optomechanical system. Physical Review A, 2020, 101, .	1.0	21
89	Stokes and anti-Stokes Raman scatterings from frequency comb lines in poly-crystalline aluminum nitride microring resonators. Optics Express, 2019, 27, 22246.	1.7	20
90	Photon-Photon Quantum Phase Gate in a Photonic Molecule with <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline" overflow="scroll"><mml:msup><mml:mi>Ï‡</mml:mi><mml:mrow><mml:mo stretchy="false">(</mml:mo><mml:mn>2</mml:mn><mml:mo) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 52 Td (stretchy="false">)</mml:m Applied, 2020, 13, .	1.5	20

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91	Planar-Integrated Magneto-Optical Trap. Physical Review Applied, 2022, 17, .	1.5	20
92	Active microcantilevers based on piezoresistive ferromagnetic thin films. Applied Physics Letters, 2011, 98, .	1.5	19
93	High quality factor surface Fabry-Perot cavity of acoustic waves. Applied Physics Letters, 2018, 112, .	1.5	19
94	All-Optical Control of Linear and Nonlinear Energy Transfer via the Zeno Effect. Physical Review Letters, 2018, 120, 203902.	2.9	19
95	A closed-cycle 1 K refrigeration cryostat. Cryogenics, 2014, 64, 5-9.	0.9	18
96	Phase noise of self-sustained optomechanical oscillators. Physical Review A, 2014, 90, .	1.0	18
97	Low-damping ferromagnetic resonance in electron-beam patterned, high-<i>Q</i> vanadium tetracyanoethylene magnon cavities. APL Materials, 2019, 7, .	2.2	17
98	Triply resonant cavity electro-optomechanics at X-band. New Journal of Physics, 2014, 16, 063060.	1.2	16
99	Nonâ€Reciprocity in Highâ€Q Ferromagnetic Microspheres via Photonic Spinâ€“Orbit Coupling. Laser and Photonics Reviews, 2020, 14, 1900252.	4.4	16
100	Matrix of Integrated Superconducting Single-Photon Detectors With High Timing Resolution. IEEE Transactions on Applied Superconductivity, 2013, 23, 2201007-2201007.	1.1	15
101	Self-aligned multi-channel superconducting nanowire single-photon detectors. Optics Express, 2016, 24, 27070.	1.7	15
102	On-chip interaction-free measurements via the quantum Zeno effect. Physical Review A, 2014, 90, .	1.0	14
103	Control of second-harmonic generation in doubly resonant aluminum nitride microrings to address a rubidium two-photon clock transition. Optics Letters, 2018, 43, 2696.	1.7	14
104	High frequency lithium niobate film-thickness-mode optomechanical resonator. Applied Physics Letters, 2020, 117, .	1.5	14
105	Quantum Microwave Radiometry with a Superconducting Qubit. Physical Review Letters, 2021, 126, 180501.	2.9	13
106	High-acoustic-index-contrast phononic circuits: Numerical modeling. Journal of Applied Physics, 2020, 128, .	1.1	12
107	Electrochemically sliced low loss AlGaN optical microresonators. Applied Physics Letters, 2017, 110, .	1.5	11
108	Efficient and tunable blue light generation using lithium niobate nonlinear photonics. Applied Physics Letters, 2021, 119, .	1.5	11

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109	Spin-wave confinement and coupling in organic-based magnetic nanostructures. APL Materials, 2019, 7, .	2.2	10
110	All-optical thermal control for second-harmonic generation in an integrated microcavity. Optics Express, 2020, 28, 11144.	1.7	9
111	Phase-dependent interference between frequency doubled comb lines in a Ï‡^(2) phase-matched aluminum nitride microring. Optics Letters, 2016, 41, 3747.	1.7	8
112	Concept of quantum timing jitter and non-Markovian limits in single-photon detection. Physical Review A, 2018, 97, .	1.0	8
113	Infrared laser locking to a rubidium saturated absorption spectrum via a photonic chip frequency doubler. Optics Letters, 2019, 44, 1150.	1.7	8
114	Quadratic strong coupling in AlN Kerr cavity solitons. Optics Letters, 2022, 47, 746.	1.7	8
115	Adiabatic embedment of nanomechanical resonators in photonic microring cavities. Applied Physics Letters, 2010, 96, 263101.	1.5	7
116	Phonon Coupling between a Nanomechanical Resonator and a Quantum Fluid. Nano Letters, 2019, 19, 3716-3722.	4.5	7
117	Stable tuning of photorefractive microcavities using an auxiliary laser. Optics Letters, 2021, 46, 328.	1.7	7
118	Polarization mode hybridization and conversion in phononic wire waveguides. Applied Physics Letters, 2019, 115, .	1.5	6
119	Photorefraction-induced Bragg scattering in cryogenic lithium niobate ring resonators. Optics Letters, 2021, 46, 432.	1.7	6
120	Photonic integration of Er³⁺:Y₂SiO₅ with thin-film lithium niobate by flip chip bonding. Optics Express, 2021, 29, 15497.	1.7	6
121	Compact, widely tunable, half-lambda YIG oscillator. , 2012, , .		5
122	Integrated Photonic Circuits in Gallium Nitride and Aluminum Nitride. International Journal of High Speed Electronics and Systems, 2014, 23, 1450001.	0.3	5
123	Cavity-enhanced optical controlling based on three-wave mixing in cavity-atom ensemble system. Optics Express, 2019, 27, 6660.	1.7	5
124	Broadband frequency conversion and â€œarea lawâ€•in tapered waveguides. OSA Continuum, 2018, 1, 1349.	1.8	5
125	Flat-top optical filter via the adiabatic evolution of light in an asymmetric coupler. Physical Review A, 2019, 100, .	1.0	4
126	Probabilistic vortex crossing criterion for superconducting nanowire single-photon detectors. Journal of Applied Physics, 2020, 127, .	1.1	4

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127	Design of a micrometer-long superconducting nanowire perfect absorber for efficient high-speed single-photon detection. Photonics Research, 2020, 8, 1260.	3.4	3
128	Casimir probe based upon metallized high Q SiN nanomembrane resonator. Review of Scientific Instruments, 2013, 84, 015115.	0.6	1
129	AlN nonlinear optics and integrated photonics. Semiconductors and Semimetals, 2021, 107, 223-281.	0.4	1
130	On-chip lithium niobate optical parametric oscillator with micro-watts threshold. , 2021, , .		1
131	Photonic Integration of nano-electro-mechanical systems. , 2010, , .		0
132	Optical forces between a high-Q micro-disk resonator and an integrated waveguide. , 2010, , .		0
133	Adiabatic embedment of nanomechanical resonators in photonic microring cavities. , 2010, , .		0
134	GHz aluminum nitride optomechanical wheel resonators. , 2012, , .		0
135	Observation of k<inf>B</inf>T/f frequency noise in ultrahigh Q silicon nitride nanomechanical resonators. , 2012, , .		0
136	Low-noise NbTiN superconducting nanowire single-photon detectors integrated with Si3N4 waveguides. , 2013, , .		0
137	Cavity optomechanics and cavity optoelectromechanics. , 2013, , .		0
138	Integrated Optomechanical Circuits and Nonlinear Dynamics. , 2014, , 169-194.		0
139	Triply resonant cavity electro-optomechanics at X-band. , 2014, , .		0
140	Low-Loss Aluminium Nitride Thin Film for Mid-Infrared Waveguiding. , 2014, , .		0
141	Bidirectional electro-optic conversion reaching 1% efficiency with thin film lithium niobate. , 2021, , .		0
142	Efficient visible frequency microcomb generation with 22% conversion efficiency. , 2017, , .		0
143	Optimization of Second Order Nonlinear Frequency Conversion in Lithium Niobate Microrings. , 2019, , .		0
144	Microwave to optical quantum conversion. , 2022, , .		0