Y-I Sohn

List of Publications by Year
in descending order

154 papers	15,286 citations	15466 65 h-index	17546 121 g-index
155 all docs	155 docs citations	155 times ranked	11235 citing authors

#	Article	IF	Citations
1	Integrated lithium niobate electro-optic modulators operating at CMOS-compatible voltages. Nature, 2018, 562, 101-104.	13.7	1,402
2	Monolithic ultra-high-Q lithium niobate microring resonator. Optica, 2017, 4, 1536.	4.8	571
3	An integrated diamond nanophotonics platform for quantum-optical networks. Science, 2016, 354, 847-850.	6.0	570
4	Broadband electro-optic frequency comb generation in a lithium niobate microring resonator. Nature, 2019, 568, 373-377.	13.7	527
5	A robust scanning diamond sensor for nanoscale imaging with single nitrogen-vacancy centres. Nature Nanotechnology, 2012, 7, 320-324.	15.6	525
6	Integrated photonics on thin-film lithium niobate. Advances in Optics and Photonics, 2021, 13, 242.	12.1	503
7	Nanophotonic lithium niobate electro-optic modulators. Optics Express, 2018, 26, 1547.	1.7	439
8	High quality factor photonic crystal nanobeam cavities. Applied Physics Letters, 2009, 94, .	1.5	416
9	Large-scale quantum-emitter arrays in atomically thin semiconductors. Nature Communications, 2017, 8, 15093.	5.8	406
10	Evanescent-wave bonding between optical waveguides. Optics Letters, 2005, 30, 3042.	1.7	374
11	On-chip zero-index metamaterials. Nature Photonics, 2015, 9, 738-742.	15.6	327
12	Experimental demonstration of memory-enhanced quantum communication. Nature, 2020, 580, 60-64.	13.7	325
13	Controlling propagation and coupling of waveguide modes using phase-gradient metasurfaces. Nature Nanotechnology, 2017, 12, 675-683.	15.6	323
14	Photonic crystal nanobeam cavity strongly coupled to the feeding waveguide. Applied Physics Letters, 2010, 96, .	1.5	304
15	Diamond nonlinear photonics. Nature Photonics, 2014, 8, 369-374.	15.6	291
16	Monolithic lithium niobate photonic circuits for Kerr frequency comb generation and modulation. Nature Communications, 2019, 10, 978.	5.8	243
17	Chaos-assisted broadband momentum transformation in optical microresonators. Science, 2017, 358, 344-347.	6.0	239
18	Integrated high quality factor lithium niobate microdisk resonators. Optics Express, 2014, 22, 30924.	1.7	222

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19	Quantum Nonlinear Optics with a Germanium-Vacancy Color Center in a Nanoscale Diamond Waveguide. Physical Review Letters, 2017, 118, 223603.	2.9	218
20	Free-Standing Mechanical and Photonic Nanostructures in Single-Crystal Diamond. Nano Letters, 2012, 12, 6084-6089.	4.5	210
21	High quality-factor optical nanocavities in bulk single-crystal diamond. Nature Communications, 2014, 5, 5718.	5.8	196
22	Photon-mediated interactions between quantum emitters in a diamond nanocavity. Science, 2018, 362, 662-665.	6.0	189
23	Integrated lithium niobate electro-optic modulators: when performance meets scalability. Optica, 2021, 8, 652.	4.8	184
24	Integrated Diamond Networks for Quantum Nanophotonics. Nano Letters, 2012, 12, 1578-1582.	4.5	183
25	Enhanced Spontaneous Emission at Third-Order Dirac Exceptional Points in Inverse-Designed Photonic Crystals. Physical Review Letters, 2016, 117, 107402.	2.9	181
26	Development of Quantum Interconnects (QuICs) for Next-Generation Information Technologies. PRX Quantum, 2021, 2, .	3.5	172
27	Enhanced single-photon emission from a diamondâ€“silver aperture. Nature Photonics, 2011, 5, 738-743.	15.6	171
28	Strain engineering of the silicon-vacancy center in diamond. Physical Review B, 2018, 97, .	1.1	171
29	Coupling of NV Centers to Photonic Crystal Nanobeams in Diamond. Nano Letters, 2013, 13, 5791-5796.	4.5	170
30	Coherent Optical Transitions in Implanted Nitrogen Vacancy Centers. Nano Letters, 2014, 14, 1982-1986.	4.5	169
31	Fabrication of diamond nanowires for quantum information processing applications. Diamond and Related Materials, 2010, 19, 621-629.	1.8	160
32	Electronically programmable photonic molecule. Nature Photonics, 2019, 13, 36-40.	15.6	155
33	Metasurface-assisted phase-matching-free second harmonic generation in lithium niobate waveguides. Nature Communications, 2017, 8, 2098.	5.8	137
34	Quantum Network Nodes Based on Diamond Qubits with an Efficient Nanophotonic Interface. Physical Review Letters, 2019, 123, 183602.	2.9	133
35	Topology-Optimized Multilayered Metaoptics. Physical Review Applied, 2018, 9, .	1.5	129
36	Diamond optomechanical crystals. Optica, 2016, 3, 1404.	4.8	125

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37	Phonon Networks with Silicon-Vacancy Centers in Diamond Waveguides. Physical Review Letters, 2018, 120, 213603.	2.9	125
38	Controlling the coherence of a diamond spin qubit through its strain environment. Nature Communications, 2018, 9, 2012.	5.8	120
39	Programmable photonic crystal nanobeam cavities. Optics Express, 2010, 18, 8705.	1.7	118
40	High-power quantum cascade lasers grown by low-pressure metal organic vapor-phase epitaxy operating in continuous wave above 400K. Applied Physics Letters, 2006, 88, 201115.	1.5	116
41	On-chip diamond Raman laser. Optica, 2015, 2, 924.	4.8	116
42	Fiber-Coupled Diamond Quantum Nanophotonic Interface. Physical Review Applied, 2017, 8, .	1.5	115
43	Strongly Cavity-Enhanced Spontaneous Emission from Silicon-Vacancy Centers in Diamond. Nano Letters, 2018, 18, 1360-1365.	4.5	112
44	Integrated high-quality factor silicon-on-sapphire ring resonators for the mid-infrared. Applied Physics Letters, 2013, 102, .	1.5	111
45	An integrated nanophotonic quantum register based on silicon-vacancy spins in diamond. Physical Review B, 2019, 100, .	1.1	111
46	All optical reconfiguration of optomechanical filters. Nature Communications, 2012, 3, 846.	5.8	108
47	Optical Trapping and Two-Photon Excitation of Colloidal Quantum Dots Using Bowtie Apertures. ACS Photonics, 2016, 3, 423-427.	3.2	107
48	Photonic crystal nanobeam lasers. Applied Physics Letters, 2010, 97, .	1.5	105
49	Structural colour in colourimetric sensors and indicators. Journal of Materials Chemistry C, 2013, 1, 6075.	2.7	102
50	Coupled photonic crystal nanobeam cavities. Applied Physics Letters, 2009, 95, .	1.5	92
51	High sensitivity and high <i>Q</i>-factor nanoslotted parallel quadrabeam photonic crystal cavity for real-time and label-free sensing. Applied Physics Letters, 2014, 105, .	1.5	92
52	Coherent acoustic control of a single silicon vacancy spin in diamond. Nature Communications, 2020, 11, 193.	5.8	92
53	Electrically Tunable Valley Dynamics in Twisted <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:msub><mml:mrow><mml:mi>WSe</mml:mi></mml:mrow><mml:mrow><mml:mn>2</mml:mn> Bilayers. Physical Review Letters, 2020, 124, 217403.	2.9	89
54	Integrated TiO_2 resonators for visible photonics. Optics Letters, 2012, 37, 539.	1.7	81

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55	Raman lasing and soliton mode-locking in lithium niobate microresonators. Light: Science and Applications, 2020, 9, 9.	7.7	79
56	High-temperature continuous wave operation of strain-balanced quantum cascade lasers grown by metal organic vapor-phase epitaxy. Applied Physics Letters, 2006, 89, 081101.	1.5	78
57	On-chip electro-optic frequency shifters and beam splitters. Nature, 2021, 599, 587-593.	13.7	78
58	An Integrated Low-Voltage Broadband Lithium Niobate Phase Modulator. IEEE Photonics Technology Letters, 2019, 31, 889-892.	1.3	76
59	Measurement of bound states in the continuum by a detector embedded in a photonic crystal. Light: Science and Applications, 2016, 5, e16147-e16147.	7.7	73
60	Non-reciprocal transmission of microwave acoustic waves in nonlinear parityâ€“time symmetric resonators. Nature Electronics, 2020, 3, 267-272.	13.1	73
61	Enhanced Strain Coupling of Nitrogen-Vacancy Spins to Nanoscale Diamond Cantilevers. Physical Review Applied, 2016, 5, .	1.5	70
62	Phononic Band Structure Engineering for High- <i>Q</i> Gigahertz Surface Acoustic Wave Resonators on Lithium Niobate. Physical Review Applied, 2019, 12, .	1.5	70
63	Design and focused ion beam fabrication of single crystal diamond nanobeam cavities. Journal of Vacuum Science and Technology B:Nanotechnology and Microelectronics, 2011, 29, 010601.	0.6	67
64	Spontaneous emission and collection efficiency enhancement of single emitters in diamond via plasmonic cavities and gratings. Applied Physics Letters, 2013, 103, 161101.	1.5	67
65	Integration of quantum dots with lithium niobate photonics. Applied Physics Letters, 2018, 113, .	1.5	66
66	Nanomechanical resonant structures in single-crystal diamond. Applied Physics Letters, 2013, 103, .	1.5	63
67	Efficient quantum microwave-to-optical conversion using electro-optic nanophotonic coupled resonators. Physical Review A, 2017, 96, .	1.0	55
68	Quantum Interference of Electromechanically Stabilized Emitters in Nanophotonic Devices. Physical Review X, 2019, 9, .	2.8	55
69	Quantum photonic networks in diamond. MRS Bulletin, 2013, 38, 144-148.	1.7	54
70	Plasmonic resonators for enhanced diamond NV- center single photon sources. Optics Express, 2011, 19, 5268.	1.7	50
71	Integrated silicon carbide electro-optic modulator. Nature Communications, 2022, 13, 1851.	5.8	46
72	Classical and fluctuationâ€induced electromagnetic interactions in micronâ€scale systems: designer bonding, antibonding, and Casimir forces. Annalen Der Physik, 2015, 527, 45-80.	0.9	45

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73	All-Polymer Integrated Optical Resonators by Roll-to-Roll Nanoimprint Lithography. ACS Photonics, 2018, 5, 1839-1845.	3.2	44
74	Design and low-temperature characterization of a tunable microcavity for diamond-based quantum networks. Applied Physics Letters, 2017, 110, .	1.5	41
75	Cavity-Enhanced Raman Emission from a Single Color Center in a Solid. Physical Review Letters, 2018, 121, 083601.	2.9	41
76	Freestanding nanostructures via reactive ion beam angled etching. APL Photonics, 2017, 2, 051301.	3.0	40
77	High-Q transverse-electric/transverse-magnetic photonic crystal nanobeam cavities. Applied Physics Letters, 2011, 98, .	1.5	38
78	Control of buckling in large micromembranes using engineered support structures. Journal of Micromechanics and Microengineering, 2012, 22, 065028.	1.5	38
79	Magnetic Field Fingerprinting of Integrated-Circuit Activity with a Quantum Diamond Microscope. Physical Review Applied, 2020, 14, .	1.5	37
80	Thin-film lithium-niobate electro-optic platform for spectrally tailored dual-comb spectroscopy. Communications Physics, 2022, 5, .	2.0	37
81	Optically Heralded Entanglement of Superconducting Systems in Quantum Networks. Physical Review Letters, 2021, 127, 040503.	2.9	36
82	Coupling of a single tin-vacancy center to a photonic crystal cavity in diamond. Applied Physics Letters, 2021, 118, .	1.5	35
83	Wideâ€Field Optical Microscopy of Microwave Fields Using Nitrogenâ€Vacancy Centers in Diamonds. Advanced Optical Materials, 2016, 4, 1075-1080.	3.6	34
84	Microfluidic integration of porous photonic crystal nanolasers for chemical sensing. IEEE Journal on Selected Areas in Communications, 2005, 23, 1348-1354.	9.7	32
85	Optomechanical and photothermal interactions in suspended photonic crystal membranes. Optics Express, 2013, 21, 7258.	1.7	32
86	Probing dark exciton navigation through a local strain landscape in a WSe2 monolayer. Nature Communications, 2022, 13, 232.	5.8	32
87	Design and fabrication of photonic crystal quantum cascade lasers for optofluidics. Optics Express, 2007, 15, 4499.	1.7	31
88	Superconducting nanowire single photon detector on diamond. Applied Physics Letters, 2014, 104, .	1.5	31
89	Diamond nanophotonics and applications in quantum science and technology. Physica Status Solidi (A) Applications and Materials Science, 2012, 209, 1619-1630.	0.8	30
90	Spectral Alignment of Single-Photon Emitters in Diamond using Strain Gradient. Physical Review Applied, 2018, 10, .	1.5	30

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91	Silicon photonic devices for mid-infrared applications. Nanophotonics, 2014, 3, 329-341.	2.9	29
92	Integrated diamond Raman laser pumped in the near-visible. Optics Letters, 2018, 43, 318.	1.7	29
93	Faraday cage angled-etching of nanostructures in bulk dielectrics. Journal of Vacuum Science and Technology B:Nanotechnology and Microelectronics, 2016, 34, .	0.6	28
94	Nanofluidics of Single-Crystal Diamond Nanomechanical Resonators. Nano Letters, 2015, 15, 8070-8076.	4.5	27
95	Confinement of long-lived interlayer excitons in WS2/WSe2 heterostructures. Communications Physics, 2021, 4, .	2.0	26
96	Design of Efficient Resonator-Enhanced Electro-Optic Frequency Comb Generators. Journal of Lightwave Technology, 2020, 38, 1400-1413.	2.7	25
97	Bonding, antibonding and tunable optical forces in asymmetric membranes. Optics Express, 2011, 19, 2225.	1.7	24
98	Topology-optimized dual-polarization Dirac cones. Physical Review B, 2018, 97, .	1.1	23
99	Designing evanescent optical interactions to control the expression of Casimir forces in optomechanical structures. Applied Physics Letters, 2011, 98, .	1.5	22
100	Nanoscale Label-free Bioprobes to Detect Intracellular Proteins in Single Living Cells. Scientific Reports, 2014, 4, 6179.	1.6	20
101	Dynamic actuation of single-crystal diamond nanobeams. Applied Physics Letters, 2015, 107, .	1.5	19
102	Chip-Based Lithium-Niobate Frequency Combs. IEEE Photonics Technology Letters, 2019, 31, 1894-1897.	1.3	18
103	Supercontinuum generation in angle-etched diamond waveguides. Optics Letters, 2019, 44, 4056.	1.7	18
104	Diamond Radio Receiver: Nitrogen-Vacancy Centers as Fluorescent Transducers of Microwave Signals. Physical Review Applied, 2016, 6, .	1.5	17
105	10â€‰nm gap bowtie plasmonic apertures fabricated by modified lift-off process. Applied Physics Letters, 2016, 109, .	1.5	17
106	Robust nano-fabrication of an integrated platform for spin control in a tunable microcavity. APL Photonics, 2017, 2, .	3.0	17
107	Mechanical Control of a Single Nuclear Spin. Physical Review X, 2022, 12, .	2.8	15
108	Optical bistability with a repulsive optical force in coupled silicon photonic crystal membranes. Applied Physics Letters, 2013, 103, .	1.5	14

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109	High-efficiency degenerate four-wave mixing in triply resonant nanobeam cavities. Physical Review A, 2014, 89, .	1.0	14
110	Development of hard masks for reactive ion beam angled etching of diamond. Optics Express, 2022, 30, 14189.	1.7	11
111	Non-linear mixing in coupled photonic crystal nanobeam cavities due to cross-coupling opto-mechanical mechanisms. Applied Physics Letters, 2014, 105, 181121.	1.5	10
112	Tuning and Freezing Disorder in Photonic Crystals using Percolation Lithography. Scientific Reports, 2016, 6, 19542.	1.6	10
113	Mechanical and optical nanodevices in single-crystal quartz. Applied Physics Letters, 2017, 111, 263103.	1.5	10
114	Waveguide-loaded silica fibers for coupling to high-index micro-resonators. Applied Physics Letters, 2016, 108, .	1.5	9
115	Diamond mirrors for high-power continuous-wave lasers. Nature Communications, 2022, 13, 2610.	5.8	9
116	Optical Entanglement of Distinguishable Quantum Emitters. Physical Review Letters, 2022, 128, .	2.9	9
117	A metasurface-based diamond frequency converter using plasmonic nanogap resonators. Nanophotonics, 2020, 10, 589-595.	2.9	8
118	Chalcogen-hyperdoped germanium for short-wavelength infrared photodetection. AIP Advances, 2020, 10, .	0.6	7
119	Superconducting nanowire single-photon detector on thin- film lithium niobate photonic waveguide. , 2020, , .		5
120	Integrated high-quality factor silicon-on-sapphire ring resonators for the mid-infrared. , 2013, , .		4
121	Backside Integrated Circuit Magnetic Field Imaging with a Quantum Diamond Microscope. , 2020, , .		3
122	High-<i>Q</i> Lithium Niobate Microcavities and Their Applications. , 2020, , 1-35.		2
123	Diamond quantum nanophotonics and optomechanics. Semiconductors and Semimetals, 2021, 104, 219-251.	0.4	2
124	Novel fabrication of diamond nanophotonics coupled to single-photon detectors. SPIE Newsroom, 0, , .	0.1	2
125	Novel photonic crystal quantum cascade laser platform. , 2006, , .		1
126	Semiconductor nanowires embedded in optical microcavities. , 2006, , .		1

#	ARTICLE	IF	CITATIONS
127	Observation of coupled-cavity structures in metamaterials. Applied Physics Letters, 2008, 93, 121910.	1.5	1
128	Room-temperature photoresponse of Schottky photodiodes based on GaNxAs1â˜x synthesized by ion implantation and pulsed-laser melting. Applied Physics Letters, 2010, 97, 151103.	1.5	1
129	High quality factor-suspended 1D photonic crystal (Phc) extended cavity for bio-sensing. , 2017, , .		1
130	Coherent Quantum Control of Silicon Vacancy Spins in Diamond with Surface Acoustics. , 2019, , .		1
131	Integration of Quantum Emitters with Lithium Niobate Photonics. , 2019, , .		1
132	Optofluidic tuning of quantum cascade lasers. , 0, , .		0
133	High power quantum cascade lasers by MOVPE. , 2006, , .		0
134	Design, Fabrication and Characterization of Si3N4 Photonic Crystal Nanocavities for Diamond-based Quantum Information Processing Applications. Materials Research Society Symposia Proceedings, 2008, 1145, 1.	0.1	0
135	Mid-infrared photonic crystals in silicon. , 2011, , .		0
136	Back Cover: Diamond nanophotonics and applications in quantum science and technology (Phys.) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50	0.8	0
137	Diamond nanophotonics and quantum optics. , 2013, , .		0
138	Ultra-Compact Mid-IR Modulators Based on Electrically Tunable Optical Antennas. , 2014, , .		0
139	Diamond â€" A quantum engineer's best friend. , 2016, , .		0
140	New Opportunities with Old Optical Materials. , 2019, , .		0
141	Acoustically Mediated Microwave-to-Optical Conversion on Thin-Film Lithium Niobate. , 2020, , .		0
142	Diamond Phononic Crystals with Silicon-Vacancy Centers at Cryogenic Temperatures. , 2021, , .		0
143	Controlling coherence time of silicon vacancy centers in diamond using phononic crystals. , 2021, , .		0
144	Engineering spin-phonon coupling rates for the silicon vacancy center in diamond phononic crystal cavities. , 2021, , .		0

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145	Thin-film lithium niobate integrated circuits for terahertz generation and detection. , 2021, , .		0
146	Strong Mechanical Nonlinearity of Optomechanically Driven Suspended Photonic Crystal Membrane. , 2015, , .		0
147	Strain coupling of diamond nitrogen vacancy centers to nanomechanical resonators. , 2015, , .		0
148	Protecting The Spin Coherence of Silicon Vacancy Color Centers from Thermal Noise Using Diamond MEMS. , 2017, , .		0
149	Spectral Tuning of Multiple Germanium Vacancy Centers in Diamond with Mechanical Strain. , 2018, , .		0
150	Electromechanically Tunable Diamond Color Centers Coupled to Nanophotonic Waveguides. , 2018, , .		0
151	Quantum interference of electromechanically stabilized emitters in nanophotonic devices. , 2019, , .		0
152	Integrated Lithium Niobate Photonic and Applications. , 2019, , .		0
153	Strain control of silicon-vacancy centers in diamond nanophotonic devices. , 2019, , .		0
154	Electron-phonon coupling between silicon vacancy centers and optomechanical crystals in diamond. , 2019, , .		0