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	Probing dark exciton navigation through a local strain landscape in a WSe2 monolayer. Nature Communications, 2022, 13, 232.	5.8	32
2	Development of hard masks for reactive ion beam angled etching of diamond. Optics Express, 2022, 30, 14189.	1.7	11
3	Integrated silicon carbide electro-optic modulator. Nature Communications, 2022, 13, 1851.	5.8	46
4	Mechanical Control of a Single Nuclear Spin. Physical Review X, 2022, 12, .	2.8	15
5	Thin-film lithium-niobate electro-optic platform for spectrally tailored dual-comb spectroscopy. Communications Physics, 2022, 5, .	2.0	37
6	Diamond mirrors for high-power continuous-wave lasers. Nature Communications, 2022, 13, 2610.	5.8	9
7	Optical Entanglement of Distinguishable Quantum Emitters. Physical Review Letters, 2022, 128, .	2.9	9
8	Diamond quantum nanophotonics and optomechanics. Semiconductors and Semimetals, 2021, 104, 219-251.	0.4	2
9	Diamond Phononic Crystals with Silicon-Vacancy Centers at Cryogenic Temperatures. , 2021, , .		0
10	Controlling coherence time of silicon vacancy centers in diamond using phononic crystals. , 2021, , .		0
11	Development of Quantum Interconnects (QuICs) for Next-Generation Information Technologies. PRX Quantum, 2021, 2, .	3.5	172
12	Integrated lithium niobate electro-optic modulators: when performance meets scalability. Optica, 2021, 8, 652.	4.8	184
13	Integrated photonics on thin-film lithium niobate. Advances in Optics and Photonics, 2021, 13, 242.	12.1	503
14	Confinement of long-lived interlayer excitons in WS2/WSe2 heterostructures. Communications Physics, 2021, 4, .	2.0	26
15	Coupling of a single tin-vacancy center to a photonic crystal cavity in diamond. Applied Physics Letters, 2021, 118, .	1.5	35
16	Optically Heralded Entanglement of Superconducting Systems in Quantum Networks. Physical Review Letters, 2021, 127, 040503.	2.9	36
17	Engineering spin-phonon coupling rates for the silicon vacancy center in diamond phononic crystal cavities. , 2021, , .		0
18	Thin-film lithium niobate integrated circuits for terahertz generation and detection. , 2021, , .		0

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19	On-chip electro-optic frequency shifters and beam splitters. Nature, 2021, 599, 587-593.	13.7	78
20	Coherent acoustic control of a single silicon vacancy spin in diamond. Nature Communications, 2020, 11, 193.	5.8	92
21	High-<i>Q</i> Lithium Niobate Microcavities and Their Applications. , 2020, , 1-35.		2
22	Magnetic Field Fingerprinting of Integrated-Circuit Activity with a Quantum Diamond Microscope. Physical Review Applied, 2020, 14, .	1.5	37
23	Chalcogen-hyperdoped germanium for short-wavelength infrared photodetection. AIP Advances, 2020, 10, .	0.6	7
24	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></r Bilayers. Physical Review Letters, 2020, 124, 217403.	2.9	89
25	Experimental demonstration of memory-enhanced quantum communication. Nature, 2020, 580, 60-64.	13.7	325
26	Design of Efficient Resonator-Enhanced Electro-Optic Frequency Comb Generators. Journal of Lightwave Technology, 2020, 38, 1400-1413.	2.7	25
27	Raman lasing and soliton mode-locking in lithium niobate microresonators. Light: Science and Applications, 2020, 9, 9.	7.7	79
28	Acoustically Mediated Microwave-to-Optical Conversion on Thin-Film Lithium Niobate. , 2020, , .		0
29	Non-reciprocal transmission of microwave acoustic waves in nonlinear parityâ€“time symmetric resonators. Nature Electronics, 2020, 3, 267-272.	13.1	73
30	Superconducting nanowire single-photon detector on thin- film lithium niobate photonic waveguide. , 2020, , .		5
31	A metasurface-based diamond frequency converter using plasmonic nanogap resonators. Nanophotonics, 2020, 10, 589-595.	2.9	8
32	Backside Integrated Circuit Magnetic Field Imaging with a Quantum Diamond Microscope. , 2020, , .		3
33	Quantum Interference of Electromechanically Stabilized Emitters in Nanophotonic Devices. Physical Review X, 2019, 9, .	2.8	55
34	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
35	Quantum Network Nodes Based on Diamond Qubits with an Efficient Nanophotonic Interface. Physical Review Letters, 2019, 123, 183602.	2.9	133
36	An integrated nanophotonic quantum register based on silicon-vacancy spins in diamond. Physical Review B, 2019, 100, .	1.1	111

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37	Chip-Based Lithium-Niobate Frequency Combs. IEEE Photonics Technology Letters, 2019, 31, 1894-1897.	1.3	18
38	New Opportunities with Old Optical Materials. , 2019, , .		0
39	An Integrated Low-Voltage Broadband Lithium Niobate Phase Modulator. IEEE Photonics Technology Letters, 2019, 31, 889-892.	1.3	76
40	Broadband electro-optic frequency comb generation in a lithium niobate microring resonator. Nature, 2019, 568, 373-377.	13.7	527
41	Monolithic lithium niobate photonic circuits for Kerr frequency comb generation and modulation. Nature Communications, 2019, 10, 978.	5.8	243
42	Electronically programmable photonic molecule. Nature Photonics, 2019, 13, 36-40.	15.6	155
43	Coherent Quantum Control of Silicon Vacancy Spins in Diamond with Surface Acoustics. , 2019, , .		1
44	Integration of Quantum Emitters with Lithium Niobate Photonics. , 2019, , .		1
45	Quantum interference of electromechanically stabilized emitters in nanophotonic devices. , 2019, , .		0
46	Integrated Lithium Niobate Photonic and Applications. , 2019, , .		0
47	Strain control of silicon-vacancy centers in diamond nanophotonic devices. , 2019, , .		0
48	Electron-phonon coupling between silicon vacancy centers and optomechanical crystals in diamond. , 2019, , .		0
49	Supercontinuum generation in angle-etched diamond waveguides. Optics Letters, 2019, 44, 4056.	1.7	18
50	Topology-optimized dual-polarization Dirac cones. Physical Review B, 2018, 97, .	1.1	23
51	Topology-Optimized Multilayered Metaoptics. Physical Review Applied, 2018, 9, .	1.5	129
52	All-Polymer Integrated Optical Resonators by Roll-to-Roll Nanoimprint Lithography. ACS Photonics, 2018, 5, 1839-1845.	3.2	44
53	Strongly Cavity-Enhanced Spontaneous Emission from Silicon-Vacancy Centers in Diamond. Nano Letters, 2018, 18, 1360-1365.	4.5	112
54	Integration of quantum dots with lithium niobate photonics. Applied Physics Letters, 2018, 113, .	1.5	66

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55	Integrated lithium niobate electro-optic modulators operating at CMOS-compatible voltages. Nature, 2018, 562, 101-104.	13.7	1,402
56	Photon-mediated interactions between quantum emitters in a diamond nanocavity. Science, 2018, 362, 662-665.	6.0	189
57	Spectral Alignment of Single-Photon Emitters in Diamond using Strain Gradient. Physical Review Applied, 2018, 10, .	1.5	30
58	Strain engineering of the silicon-vacancy center in diamond. Physical Review B, 2018, 97, .	1.1	171
59	Controlling the coherence of a diamond spin qubit through its strain environment. Nature Communications, 2018, 9, 2012.	5.8	120
60	Phonon Networks with Silicon-Vacancy Centers in Diamond Waveguides. Physical Review Letters, 2018, 120, 213603.	2.9	125
61	Nanophotonic lithium niobate electro-optic modulators. Optics Express, 2018, 26, 1547.	1.7	439
62	Integrated diamond Raman laser pumped in the near-visible. Optics Letters, 2018, 43, 318.	1.7	29
63	Cavity-Enhanced Raman Emission from a Single Color Center in a Solid. Physical Review Letters, 2018, 121, 083601.	2.9	41
64	Spectral Tuning of Multiple Germanium Vacancy Centers in Diamond with Mechanical Strain. , 2018, , .		0
65	Electromechanically Tunable Diamond Color Centers Coupled to Nanophotonic Waveguides. , 2018, , .		0
66	Controlling propagation and coupling of waveguide modes using phase-gradient metasurfaces. Nature Nanotechnology, 2017, 12, 675-683.	15.6	323
67	Freestanding nanostructures via reactive ion beam angled etching. APL Photonics, 2017, 2, 051301.	3.0	40
68	Large-scale quantum-emitter arrays in atomically thin semiconductors. Nature Communications, 2017, 8, 15093.	5.8	406
69	Efficient quantum microwave-to-optical conversion using electro-optic nanophotonic coupled resonators. Physical Review A, 2017, 96, .	1.0	55
70	Chaos-assisted broadband momentum transformation in optical microresonators. Science, 2017, 358, 344-347.	6.0	239
71	Fiber-Coupled Diamond Quantum Nanophotonic Interface. Physical Review Applied, 2017, 8, .	1.5	115
72	Quantum Nonlinear Optics with a Germanium-Vacancy Color Center in a Nanoscale Diamond Waveguide. Physical Review Letters, 2017, 118, 223603.	2.9	218

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73	Metasurface-assisted phase-matching-free second harmonic generation in lithium niobate waveguides. Nature Communications, 2017, 8, 2098.	5.8	137
74	Robust nano-fabrication of an integrated platform for spin control in a tunable microcavity. APL Photonics, 2017, 2, .	3.0	17
75	Mechanical and optical nanodevices in single-crystal quartz. Applied Physics Letters, 2017, 111, 263103.	1.5	10
76	High quality factor-suspended 1D photonic crystal (Phc) extended cavity for bio-sensing. , 2017, , .		1
77	Monolithic ultra-high-Q lithium niobate microring resonator. Optica, 2017, 4, 1536.	4.8	571
78	Design and low-temperature characterization of a tunable microcavity for diamond-based quantum networks. Applied Physics Letters, 2017, 110, .	1.5	41
79	Protecting The Spin Coherence of Silicon Vacancy Color Centers from Thermal Noise Using Diamond MEMS. , 2017, , .		0
80	Wideâ€Field Optical Microscopy of Microwave Fields Using Nitrogenâ€Vacancy Centers in Diamonds. Advanced Optical Materials, 2016, 4, 1075-1080.	3.6	34
81	Diamond optomechanical crystals. Optica, 2016, 3, 1404.	4.8	125
82	Waveguide-loaded silica fibers for coupling to high-index micro-resonators. Applied Physics Letters, 2016, 108, .	1.5	9
83	Faraday cage angled-etching of nanostructures in bulk dielectrics. Journal of Vacuum Science and Technology B:Nanotechnology and Microelectronics, 2016, 34, .	0.6	28
84	Diamond Radio Receiver: Nitrogen-Vacancy Centers as Fluorescent Transducers of Microwave Signals. Physical Review Applied, 2016, 6, .	1.5	17
85	Diamond â€" A quantum engineer's best friend. , 2016, , .		0
86	An integrated diamond nanophotonics platform for quantum-optical networks. Science, 2016, 354, 847-850.	6.0	570
87	Enhanced Spontaneous Emission at Third-Order Dirac Exceptional Points in Inverse-Designed Photonic Crystals. Physical Review Letters, 2016, 117, 107402.	2.9	181
88	Enhanced Strain Coupling of Nitrogen-Vacancy Spins to Nanoscale Diamond Cantilevers. Physical Review Applied, 2016, 5, .	1.5	70
89	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
90	Tuning and Freezing Disorder in Photonic Crystals using Percolation Lithography. Scientific Reports, 2016, 6, 19542.	1.6	10

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91	10â€‰nm gap bowtie plasmonic apertures fabricated by modified lift-off process. Applied Physics Letters, 2016, 109, .	1.5	17
92	Optical Trapping and Two-Photon Excitation of Colloidal Quantum Dots Using Bowtie Apertures. ACS Photonics, 2016, 3, 423-427.	3.2	107
93	Dynamic actuation of single-crystal diamond nanobeams. Applied Physics Letters, 2015, 107, .	1.5	19
94	Nanofluidics of Single-Crystal Diamond Nanomechanical Resonators. Nano Letters, 2015, 15, 8070-8076.	4.5	27
95	On-chip diamond Raman laser. Optica, 2015, 2, 924.	4.8	116
96	On-chip zero-index metamaterials. Nature Photonics, 2015, 9, 738-742.	15.6	327
97	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
98	Strong Mechanical Nonlinearity of Optomechanically Driven Suspended Photonic Crystal Membrane. , 2015, , .		0
99	Strain coupling of diamond nitrogen vacancy centers to nanomechanical resonators. , 2015, , .		0
100	Silicon photonic devices for mid-infrared applications. Nanophotonics, 2014, 3, 329-341.	2.9	29
101	Integrated high quality factor lithium niobate microdisk resonators. Optics Express, 2014, 22, 30924.	1.7	222
102	High quality-factor optical nanocavities in bulk single-crystal diamond. Nature Communications, 2014, 5, 5718.	5.8	196
103	Superconducting nanowire single photon detector on diamond. Applied Physics Letters, 2014, 104, .	1.5	31
104	High-efficiency degenerate four-wave mixing in triply resonant nanobeam cavities. Physical Review A, 2014, 89, .	1.0	14
105	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
106	Diamond nonlinear photonics. Nature Photonics, 2014, 8, 369-374.	15.6	291
107	Ultra-Compact Mid-IR Modulators Based on Electrically Tunable Optical Antennas. , 2014, , .		0
108	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

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109	Coherent Optical Transitions in Implanted Nitrogen Vacancy Centers. Nano Letters, 2014, 14, 1982-1986.	4.5	169
110	Nanoscale Label-free Bioprobes to Detect Intracellular Proteins in Single Living Cells. Scientific Reports, 2014, 4, 6179.	1.6	20
111	Optical bistability with a repulsive optical force in coupled silicon photonic crystal membranes. Applied Physics Letters, 2013, 103, .	1.5	14
112	Structural colour in colourimetric sensors and indicators. Journal of Materials Chemistry C, 2013, 1, 6075.	2.7	102
113	Coupling of NV Centers to Photonic Crystal Nanobeams in Diamond. Nano Letters, 2013, 13, 5791-5796.	4.5	170
114	Nanomechanical resonant structures in single-crystal diamond. Applied Physics Letters, 2013, 103, .	1.5	63
115	Diamond nanophotonics and quantum optics. , 2013, , .		0
116	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
117	Optomechanical and photothermal interactions in suspended photonic crystal membranes. Optics Express, 2013, 21, 7258.	1.7	32
118	Quantum photonic networks in diamond. MRS Bulletin, 2013, 38, 144-148.	1.7	54
119	Integrated high-quality factor silicon-on-sapphire ring resonators for the mid-infrared. Applied Physics Letters, 2013, 102, .	1.5	111
120	Integrated high-quality factor silicon-on-sapphire ring resonators for the mid-infrared. , 2013, , .		4
121	All optical reconfiguration of optomechanical filters. Nature Communications, 2012, 3, 846.	5.8	108
122	Integrated TiO_2 resonators for visible photonics. Optics Letters, 2012, 37, 539.	1.7	81
123	Free-Standing Mechanical and Photonic Nanostructures in Single-Crystal Diamond. Nano Letters, 2012, 12, 6084-6089.	4.5	210
124	Integrated Diamond Networks for Quantum Nanophotonics. Nano Letters, 2012, 12, 1578-1582.	4.5	183
125	Diamond nanophotonics and applications in quantum science and technology. Physica Status Solidi (A) Applications and Materials Science, 2012, 209, 1619-1630.	0.8	30
126	Back Cover: Diamond nanophotonics and applications in quantum science and technology (Phys.) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50	0.8	0

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127	Control of buckling in large micromembranes using engineered support structures. Journal of Micromechanics and Microengineering, 2012, 22, 065028.	1.5	38
128	A robust scanning diamond sensor for nanoscale imaging with single nitrogen-vacancy centres. Nature Nanotechnology, 2012, 7, 320-324.	15.6	525
129	Mid-infrared photonic crystals in silicon. , 2011, , .		0
130	Bonding, antibonding and tunable optical forces in asymmetric membranes. Optics Express, 2011, 19, 2225.	1.7	24
131	Plasmonic resonators for enhanced diamond NV- center single photon sources. Optics Express, 2011, 19, 5268.	1.7	50
132	Designing evanescent optical interactions to control the expression of Casimir forces in optomechanical structures. Applied Physics Letters, 2011, 98, .	1.5	22
133	Enhanced single-photon emission from a diamondâ€"silver aperture. Nature Photonics, 2011, 5, 738-743.	15.6	171
134	High-Q transverse-electric/transverse-magnetic photonic crystal nanobeam cavities. Applied Physics Letters, 2011, 98, .	1.5	38
135	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
136	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
137	Photonic crystal nanobeam lasers. Applied Physics Letters, 2010, 97, .	1.5	105
138	Photonic crystal nanobeam cavity strongly coupled to the feeding waveguide. Applied Physics Letters, 2010, 96, .	1.5	304
139	Programmable photonic crystal nanobeam cavities. Optics Express, 2010, 18, 8705.	1.7	118
140	Fabrication of diamond nanowires for quantum information processing applications. Diamond and Related Materials, 2010, 19, 621-629.	1.8	160
141	High quality factor photonic crystal nanobeam cavities. Applied Physics Letters, 2009, 94, .	1.5	416
142	Coupled photonic crystal nanobeam cavities. Applied Physics Letters, 2009, 95, .	1.5	92
143	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
144	Observation of coupled-cavity structures in metamaterials. Applied Physics Letters, 2008, 93, 121910.	1.5	1

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145	Design and fabrication of photonic crystal quantum cascade lasers for optofluidics. Optics Express, 2007, 15, 4499.	1.7	31
146	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
147	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
148	Novel photonic crystal quantum cascade laser platform. , 2006, , .		1
149	Semiconductor nanowires embedded in optical microcavities. , 2006, , .		1
150	High power quantum cascade lasers by MOVPE. , 2006, , .		0
151	Evanescent-wave bonding between optical waveguides. Optics Letters, 2005, 30, 3042.	1.7	374
152	Microfluidic integration of porous photonic crystal nanolasers for chemical sensing. IEEE Journal on Selected Areas in Communications, 2005, 23, 1348-1354.	9.7	32
153	Optofluidic tuning of quantum cascade lasers. , 0, , .		0
154	Novel fabrication of diamond nanophotonics coupled to single-photon detectors. SPIE Newsroom, 0, , .	0.1	2