

# Hyochul Kim

## List of Publications by Year in descending order

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41  
papers

1,602  
citations

430874

18  
h-index

377865

34  
g-index

41  
all docs

41  
docs citations

41  
times ranked

2254  
citing authors

#	ARTICLE	IF	CITATIONS
1	Large Work Function Modulation of Monolayer MoS <sub>2</sub> by Ambient Gases. ACS Nano, 2016, 10, 6100-6107.	14.6	188
2	Low-Photon-Number Optical Switching with a Single Quantum Dot Coupled to a Photonic Crystal Cavity. Physical Review Letters, 2012, 108, 227402.	7.8	157
3	Dynamic modulation of photonic crystal nanocavities using gigahertz acoustic phonons. Nature Photonics, 2011, 5, 605-609.	31.4	140
4	A quantum logic gate between a solid-state quantum bit and a photon. Nature Photonics, 2013, 7, 373-377.	31.4	138
5	A single-photon switch and transistor enabled by a solid-state quantum memory. Science, 2018, 361, 57-60.	12.6	137
6	A quantum phase switch between a single solid-state spin and a photon. Nature Nanotechnology, 2016, 11, 539-544.	31.5	129
7	Strong coupling through optical positioning of a quantum dot in a photonic crystal cavity. Applied Physics Letters, 2009, 94, .	3.3	112
8	Fast Electrical Control of a Quantum Dot Strongly Coupled to a Photonic-Crystal Cavity. Physical Review Letters, 2010, 104, 047402.	7.8	84
9	Strong coupling between two quantum dots and a photonic crystal cavity using magnetic field tuning. Optics Express, 2011, 19, 2589.	3.4	58
10	Enhanced Sequential Carrier Capture into Individual Quantum Dots and Quantum Posts Controlled by Surface Acoustic Waves. Nano Letters, 2010, 10, 3399-3407.	9.1	48
11	Linewidth broadening of a quantum dot coupled to an off-resonant cavity. Physical Review B, 2010, 82, .	3.2	45
12	Resonant Interactions between a Mollow Triplet Sideband and a Strongly Coupled Cavity. Physical Review Letters, 2014, 113, 027403.	7.8	41
13	Strain tuning of a quantum dot strongly coupled to a photonic crystal cavity. Applied Physics Letters, 2013, 103, .	3.3	40
14	Magnetic field tuning of a quantum dot strongly coupled to a photonic crystal cavity. Applied Physics Letters, 2011, 98, .	3.3	37
15	Fast quantum dot single photon source triggered at telecommunications wavelength. Applied Physics Letters, 2011, 98, .	3.3	35
16	Tuning micropillar cavity birefringence by laser induced surface defects. Applied Physics Letters, 2009, 95, .	3.3	25
17	Strain tuning of quantum dot optical transitions via laser-induced surface defects. Physical Review B, 2011, 84, .	3.2	20
18	A reversibly tunable photonic crystal nanocavity laser using photochromic thin film. Optics Express, 2011, 19, 5551.	3.4	19

#	ARTICLE	IF	CITATIONS
19	Independent tuning of quantum dots in a photonic crystal cavity. Applied Physics Letters, 2009, 95, .	3.3	17
20	Permanent tuning of quantum dot transitions to degenerate microcavity resonances. Applied Physics Letters, 2011, 98, 121111.	3.3	17
21	Fiber-connectorized micropillar cavities. Applied Physics Letters, 2010, 97, .	3.3	15
22	Surface acoustic wave mediated carrier injection into individual quantum post nano emitters. Nanotechnology, 2012, 23, 285201.	2.6	13
23	Cavity-Enhanced Optical Readout of a Single Solid-State Spin. Physical Review Applied, 2018, 9, .	3.8	13
24	Metasurface electrode light emitting diodes with planar light control. Scientific Reports, 2017, 7, 14753.	3.3	10
25	Optical modes in oxide-apertured micropillar cavities. Optics Letters, 2012, 37, 4678.	3.3	9
26	Ultrafast optical response of a high-reflectivity GaAs <sup>+</sup> AlAs Bragg mirror. Applied Physics Letters, 2005, 86, 031109.	3.3	8
27	Electrically pumped quantum post vertical cavity surface emitting lasers. Applied Physics Letters, 2009, 94, .	3.3	8
28	Direction control of colloidal quantum dot emission using dielectric metasurfaces. Nanophotonics, 2020, 9, 1023-1030.	6.0	8
29	Effect of a nanoparticle on the optical properties of a photonic crystal cavity: theory and experiment. Journal of the Optical Society of America B: Optical Physics, 2012, 29, 698.	2.1	7
30	Differential reflection spectroscopy of a single quantum dot strongly coupled to a photonic crystal cavity. Applied Physics Letters, 2010, 97, 053111.	3.3	6
31	Far-field emission profiles from L3 photonic crystal cavity modes. Photonics and Nanostructures - Fundamentals and Applications, 2013, 11, 37-47.	2.0	6
32	Terahertz Ionization of Highly Charged Quantum Posts in a Perforated Electron Gas. Nano Letters, 2012, 12, 1115-1120.	9.1	4
33	Enhanced Electro-Optic Phase Modulation in InGaAs Quantum Posts at 1500 nm. IEEE Journal of Quantum Electronics, 2010, 46, 1127-1131.	1.9	3
34	A Solid-State Spin-Photon Transistor. , 2015, , .		3
35	Surface acoustic wave controlled carrier injection into self-assembled quantum dots and quantum posts. Physica Status Solidi C: Current Topics in Solid State Physics, 2012, 9, 407-410.	0.8	1
36	Control of the cavity reflectivity using a single quantum dot spin. Proceedings of SPIE, 2015, , .	0.8	1

#	ARTICLE	IF	CITATIONS
37	Selective coupling of quantum dot exciton spin states to a photonic crystal cavity using magnetic field tuning. , 2011, , .		0
38	Acousto-mechanical tuning of photonic crystal nanocavity modes. , 2013, , .		0
39	Time domain investigation of radio frequency acousto-mechanical tuning of photonic crystal nanocavity modes. , 2013, , .		0
40	Solid-state cavity-QED in polarization-degenerate micropillar cavities. , 2011, , .		0
41	Nanophotonic Spin-photon Quantum Transistor. , 2017, , .		0