Hongkun Park

List of Publications by Year in Descending Order

123 papers	27,824 citations	71 h-index	134 g-index
134 ext. papers	31,361 ext. citations	17.6 avg, IF	6.82 L-index

#	Paper	IF	Citations
123	Probing dark exciton navigation through a local strain landscape in a WSe monolayer.. *Nature Communications*, **2022**, 13, 232	17.4	8
122	Electrically controlled emission from singlet and triplet exciton species in atomically thin light-emitting diodes. *Physical Review B*, **2021**, 103,	3.3	10
121	Bilayer Wigner crystals in a transition metal dichalcogenide heterostructure. *Nature*, **2021**, 595, 48-52	50.4	16
120	Excitons in a reconstructed moir potential in twisted WSe/WSe homobilayers. *Nature Materials*, **2021**, 20, 480-487	27	44
119	Micron-Scale NV-NMR Spectroscopy with Signal Amplification by Reversible Exchange. *PRX Quantum*, **2021**, 2,	6.1	9
118	Neuromorphic electronics based on copying and pasting the brain. *Nature Electronics*, **2021**, 4, 635-644	28.4	31
117	Electrically Tunable Valley Dynamics in Twisted WSe_{2}/WSe_{2} Bilayers. *Physical Review Letters*, **2020**, 124, 217403	7.4	50
116	Probing and manipulating embryogenesis via nanoscale thermometry and temperature control. *Proceedings of the National Academy of Sciences of the United States of America*, **2020**, 117, 14636-14641	11.5	31
115	Hyperpolarization-Enhanced NMR Spectroscopy with Femtomole Sensitivity Using Quantum Defects in Diamond. *Physical Review X*, **2020**, 10,	9.1	10
114	Experimental demonstration of memory-enhanced quantum communication. *Nature*, **2020**, 580, 60-64	50.4	132
113	The Design of a CMOS Nanoelectrode Array with 4096 Current-Clamp/Voltage-Clamp Amplifiers for Intracellular Recording/Stimulation of Mammalian Neurons. *IEEE Journal of Solid-State Circuits*, **2020**, 55, 2567-2582	5.5	9
112	Controlling Excitons in an Atomically Thin Membrane with a Mirror. *Physical Review Letters*, **2020**, 124, 027401	7.4	36
111	Quantum Metrology with Strongly Interacting Spin Systems. *Physical Review X*, **2020**, 10,	9.1	14
110	Asymmetric photoelectric effect: Auger-assisted hot hole photocurrents in transition metal dichalcogenides. *Nanophotonics*, **2020**, 10, 105-113	6.3	1
109	Broken mirror symmetry in excitonic response of reconstructed domains in twisted MoSe/MoSe bilayers. *Nature Nanotechnology*, **2020**, 15, 750-754	28.7	46
108	Extracellular recording of direct synaptic signals with a CMOS-nanoelectrode array. *Lab on A Chip*, **2020**, 20, 3239-3248	7.2	3
107	A nanoelectrode array for obtaining intracellular recordings from thousands of connected neurons. *Nature Biomedical Engineering*, **2020**, 4, 232-241	19	77

106	Liquid Salt Transport Growth of Single Crystals of the Layered Dichalcogenides MoS2 and WS2. *Crystal Growth and Design*, **2019**, 19, 5762-5767	3.5	9
105	Origins of Diamond Surface Noise Probed by Correlating Single-Spin Measurements with Surface Spectroscopy. *Physical Review X*, **2019**, 9,	9.1	45
104	Electrically Tunable Exciton-Plasmon Coupling in a WSe Monolayer Embedded in a Plasmonic Crystal Cavity. *Nano Letters*, **2019**, 19, 3543-3547	11.5	15
103	Stepwise Ligand-induced Self-assembly for Facile Fabrication of Nanodiamond-Gold Nanoparticle Dimers via Noncovalent Biotin-Streptavidin Interactions. *Nano Letters*, **2019**, 19, 2020-2026	11.5	11
102	Atomically thin three-dimensional membranes of van der Waals semiconductors by wafer-scale growth. *Science Advances*, **2019**, 5, eaaw3180	14.3	14
101	Quantum Network Nodes Based on Diamond Qubits with an Efficient Nanophotonic Interface. *Physical Review Letters*, **2019**, 123, 183602	7.4	59
100	Electrical control of interlayer exciton dynamics in atomically thin heterostructures. *Science*, **2019**, 366, 870-875	33.3	135
99	An integrated nanophotonic quantum register based on silicon-vacancy spins in diamond. *Physical Review B*, **2019**, 100,	3.3	47
98	Electron-phonon instability in graphene revealed by global and local noise probes. *Science*, **2019**, 364, 154-157	33.3	29
97	Optimizing Nanoelectrode Arrays for Scalable Intracellular Electrophysiology. *Accounts of Chemical Research*, **2018**, 51, 600-608	24.3	55
96	Large Excitonic Reflectivity of Monolayer MoSe_{2} Encapsulated in Hexagonal Boron Nitride. *Physical Review Letters*, **2018**, 120, 037402	7.4	117
95	Electrical control of charged carriers and excitons in atomically thin materials. *Nature Nanotechnology*, **2018**, 13, 128-132	28.7	113
94	High-resolution magnetic resonance spectroscopy using a solid-state spin sensor. *Nature*, **2018**, 555, 351-354	50.4	167
93	Improving Defect-Based Quantum Emitters in Silicon Carbide via Inorganic Passivation. *Advanced Materials*, **2018**, 30, 1704543	24	12
92	Photon-mediated interactions between quantum emitters in a diamond nanocavity. *Science*, **2018**, 362, 662-665	33.3	112
91	CMOS electronics probe inside a cellular network Invited review paper **2018**,		1
90	Magnetic resonance spectroscopy of an atomically thin material using a single-spin qubit. *Science*, **2017**, 355, 503-507	33.3	74
89	CMOS nanoelectrode array for all-electrical intracellular electrophysiological imaging. *Nature Nanotechnology*, **2017**, 12, 460-466	28.7	152

88	Probing dark excitons in atomically thin semiconductors via near-field coupling to surface plasmon polaritons. *Nature Nanotechnology*, **2017**, 12, 856-860	28.7	191
87	Quantum Nonlinear Optics with a Germanium-Vacancy Color Center in a Nanoscale Diamond Waveguide. *Physical Review Letters*, **2017**, 118, 223603	7.4	155
86	Optical magnetic detection of single-neuron action potentials using quantum defects in diamond. *Proceedings of the National Academy of Sciences of the United States of America*, **2016**, 113, 14133-14138	11.5	245
85	Nanotechnologies for the Bioelectronic Interface **2016**, 127-142		2
84	NMR technique for determining the depth of shallow nitrogen-vacancy centers in diamond. *Physical Review B*, **2016**, 93,	3.3	76
83	Nuclear magnetic resonance detection and spectroscopy of single proteins using quantum logic. *Science*, **2016**, 351, 836-41	33.3	269
82	An integrated diamond nanophotonics platform for quantum-optical networks. *Science*, **2016**, 354, 847-850	33.3	403
81	Quantum electronics. Probing Johnson noise and ballistic transport in normal metals with a single-spin qubit. *Science*, **2015**, 347, 1129-32	33.3	90
80	Single-cell magnetic imaging using a quantum diamond microscope. *Nature Methods*, **2015**, 12, 736-738	21.6	120
79	Efficient readout of a single spin state in diamond via spin-to-charge conversion. *Physical Review Letters*, **2015**, 114, 136402	7.4	114
78	CD5L/AIM Regulates Lipid Biosynthesis and Restrains Th17 Cell Pathogenicity. *Cell*, **2015**, 163, 1413-27	56.2	220
77	Single-Cell Genomics Unveils Critical Regulators of Th17 Cell Pathogenicity. *Cell*, **2015**, 163, 1400-12	56.2	369
76	Visible-frequency hyperbolic metasurface. *Nature*, **2015**, 522, 192-6	50.4	327
75	Nanoscale NMR spectroscopy and imaging of multiple nuclear species. *Nature Nanotechnology*, **2015**, 10, 129-34	28.7	184
74	Somatic mutation as a mechanism of Wnt/Ecatenin pathway activation in CLL. *Blood*, **2014**, 124, 1089-98	2.2	56
73	Magnetic resonance detection of individual proton spins using quantum reporters. *Physical Review Letters*, **2014**, 113, 197601	7.4	123
72	All-optical sensing of a single-molecule electron spin. *Nano Letters*, **2014**, 14, 6443-8	11.5	63
71	Coherent optical transitions in implanted nitrogen vacancy centers. *Nano Letters*, **2014**, 14, 1982-6	11.5	130

70	Single-cell RNA-seq reveals dynamic paracrine control of cellular variation. *Nature*, **2014**, 510, 363-9	50.4	661
69	Nanometre-scale thermometry in a living cell. *Nature*, **2013**, 500, 54-8	50.4	1075
68	Coupling of NV centers to photonic crystal nanobeams in diamond. *Nano Letters*, **2013**, 13, 5791-6	11.5	143
67	Probing enzymatic activity inside living cells using a nanowire-cell "sandwich" assay. *Nano Letters*, **2013**, 13, 153-8	11.5	83
66	Stretchable photonic crystal cavity with wide frequency tunability. *Nano Letters*, **2013**, 13, 248-52	11.5	43
65	Nanotools for neuroscience and brain activity mapping. *ACS Nano*, **2013**, 7, 1850-66	16.7	248
64	Dynamic regulatory network controlling TH17 cell differentiation. *Nature*, **2013**, 496, 461-8	50.4	492
63	Single-cell transcriptomics reveals bimodality in expression and splicing in immune cells. *Nature*, **2013**, 498, 236-40	50.4	867
62	Transcriptional and epigenetic dynamics during specification of human embryonic stem cells. *Cell*, **2013**, 153, 1149-63	56.2	332
61	Nanowire electrodes for high-density stimulation and measurement of neural circuits. *Frontiers in Neural Circuits*, **2013**, 7, 38	3.5	43
60	Free-standing mechanical and photonic nanostructures in single-crystal diamond. *Nano Letters*, **2012**, 12, 6084-9	11.5	167
59	Quantum Plasmonic Circuits. *IEEE Journal of Selected Topics in Quantum Electronics*, **2012**, 18, 1781-1791	3.8	74
58	Nanowire-mediated delivery enables functional interrogation of primary immune cells: application to the analysis of chronic lymphocytic leukemia. *Nano Letters*, **2012**, 12, 6498-504	11.5	129
57	Vertical nanowire electrode arrays as a scalable platform for intracellular interfacing to neuronal circuits. *Nature Nanotechnology*, **2012**, 7, 180-4	28.7	446
56	Tailoring light-matter interaction with a nanoscale plasmon resonator. *Physical Review Letters*, **2012**, 108, 226803	7.4	110
55	Correlative light and electron microscopy using cathodoluminescence from nanoparticles with distinguishable colours. *Scientific Reports*, **2012**, 2, 865	4.9	61
54	Somatic Mutation As a Mechanism of Wnt/β-Catenin Pathway Activation in CLL. *Blood*, **2012**, 120, 559-559	2.2	
53	Water photolysis with a cross-linked titanium dioxide nanowire anode. *Chemical Science*, **2011**, 2, 80-87	9.4	105

52	Magnetic field imaging with nitrogen-vacancy ensembles. *New Journal of Physics*, **2011**, 13, 045021	2.9	177
51	Systematic discovery of TLR signaling components delineates viral-sensing circuits. *Cell*, **2011**, 147, 853-67	56.2	148
50	Gate-activated photoresponse in a graphene p-n junction. *Nano Letters*, **2011**, 11, 4134-7	11.5	330
49	Sensitivity to Wnt Pathway Inhibition in CLL Is Associated with Specific Gene Expression Signatures. *Blood*, **2011**, 118, 801-801	2.2	1
48	Diameter dependence of the transport properties of antimony telluride nanowires. *Nano Letters*, **2010**, 10, 3037-40	11.5	108
47	Vertical silicon nanowires as a universal platform for delivering biomolecules into living cells. *Proceedings of the National Academy of Sciences of the United States of America*, **2010**, 107, 1870-5	11.5	453
46	Deterministic coupling of a single nitrogen vacancy center to a photonic crystal cavity. *Nano Letters*, **2010**, 10, 3922-6	11.5	267
45	Near-field electrical detection of optical plasmons and single-plasmon sources. *Nature Physics*, **2009**, 5, 475-479	16.2	256
44	Trapping and manipulation of isolated atoms using nanoscale plasmonic structures. *Physical Review Letters*, **2009**, 103, 123004	7.4	80
43	Vibrational excitation in single-molecule transistors: deviation from the simple franck-condon prediction. *Nano Letters*, **2008**, 8, 2963-7	11.5	41
42	Vapor-liquid-solid and vapor-solid growth of phase-change Sb2Te3 nanowires and Sb2Te3/GeTe nanowire heterostructures. *Journal of the American Chemical Society*, **2008**, 130, 6252-8	16.4	122
41	Minimum voltage for threshold switching in nanoscale phase-change memory. *Nano Letters*, **2008**, 8, 3429-33	11.5	69
40	Electrically driven light emission from individual CdSe nanowires. *Nano Letters*, **2008**, 8, 4552-6	11.5	58
39	Current-driven phase oscillation and domain-wall propagation in WxV1-xO2 nanobeams. *Nano Letters*, **2007**, 7, 363-6	11.5	118
38	Generation of single optical plasmons in metallic nanowires coupled to quantum dots. *Nature*, **2007**, 450, 402-6	50.4	1139
37	Magnetic switching of phase-slip dissipation in NbSe2 nanoribbons. *Physical Review B*, **2007**, 75,	3.3	17
36	Catalyst-assisted solution-liquid-solid synthesis of CdS/CdSe nanorod heterostructures. *Journal of the American Chemical Society*, **2007**, 129, 133-8	16.4	162
35	Vapor-Phase Synthesis and Characterization of ?-FeSi Nanowires. *Advanced Materials*, **2006**, 18, 1437-1440	11.4	83

34	Signatures of molecular magnetism in single-molecule transport spectroscopy. *Nano Letters*, **2006**, 6, 2014-20	11.5	318
33	Ferroelectric phase transition in individual single-crystalline BaTiO3 nanowires. *Nano Letters*, **2006**, 6, 735-9	11.5	342
32	Strain-induced self organization of metal-insulator domains in single-crystalline VO2 nanobeams. *Nano Letters*, **2006**, 6, 2313-7	11.5	261
31	Germanium telluride nanowires and nanohelices with memory-switching behavior. *Journal of the American Chemical Society*, **2006**, 128, 8148-9	16.4	117
30	Single-crystalline vanadium dioxide nanowires with rectangular cross sections. *Journal of the American Chemical Society*, **2005**, 127, 498-9	16.4	268
29	Electroluminescence from a single-nanocrystal transistor. *Nano Letters*, **2005**, 5, 2257-61	11.5	54
28	Transport spectroscopy of chemical nanostructures: the case of metallic single-walled carbon nanotubes. *Annual Review of Physical Chemistry*, **2005**, 56, 475-90	15.7	11
27	Synthesis of Single-Crystalline La1-xBaxMnO3 Nanocubes with Adjustable Doping Levels. *Nano Letters*, **2004**, 4, 1547-1550	11.5	94
26	Transport Investigations of Chemical Nanostructures **2004**, 95-99		
25	Fabrication of Asymmetric Electrode Pairs with Nanometer Separation Made of Two Distinct Metals. *Nano Letters*, **2003**, 3, 1383-1385	11.5	53
24	Ferroelectric Nanowires **2003**, 83-92		1
23	Plastic deformations in mechanically strained single-walled carbon nanotubes. *Physical Review B*, **2003**, 67,	3.3	94
22	Kondo resonance in a single-molecule transistor. *Nature*, **2002**, 417, 725-9	50.4	1242
21	Shell filling and exchange coupling in metallic single-walled carbon nanotubes. *Physical Review Letters*, **2002**, 88, 126801	7.4	236
20	Ferroelectric Properties of Individual Barium Titanate Nanowires Investigated by Scanned Probe Microscopy. *Nano Letters*, **2002**, 2, 447-450	11.5	274
19	Diameter-Controlled Synthesis of Carbon Nanotubes. *Journal of Physical Chemistry B*, **2002**, 106, 2429-2433	3.4	653
18	Single-walled carbon nanotube electronics. *IEEE Nanotechnology Magazine*, **2002**, 1, 78-85	2.6	828
17	Synthesis of single-crystalline perovskite nanorods composed of barium titanate and strontium titanate. *Journal of the American Chemical Society*, **2002**, 124, 1186-7	16.4	398

16	Nanowire nanosensors for highly sensitive and selective detection of biological and chemical species. *Science*, **2001**, 293, 1289-92	33.3	5041
15	Fabry - Perot interference in a nanotube electron waveguide. *Nature*, **2001**, 411, 665-9	50.4	766
14	Electronic properties of mechanically induced kinks in single-walled carbon nanotubes. *Applied Physics Letters*, **2001**, 78, 3693-3695	3.4	60
13	Resonant electron scattering by defects in single-walled carbon nanotubes. *Science*, **2001**, 291, 283-5	33.3	367
12	Nanomechanical oscillations in a single-C60 transistor. *Nature*, **2000**, 407, 57-60	50.4	1530
11	Partial-wave decomposition of the ionization continuum accessed by vibrational autoionization of the NO 14s (nu = 1, N = 20, N(+)(R) = 20) level. *Physical Review Letters*, **2000**, 84, 3819-22	7.4	11
10	Fabrication of metallic electrodes with nanometer separation by electromigration. *Applied Physics Letters*, **1999**, 75, 301-303	3.4	740
9	Rotationally resolved photoelectron spectra from vibrational autoionization of NO Rydberg levels. *Journal of Chemical Physics*, **1997**, 106, 2239-2247	3.9	21
8	Molecular-orbital decomposition of the ionization continuum for a diatomic molecule by angle- and energy-resolved photoelectron spectroscopy. II. Ionization continuum of NO. *Journal of Chemical Physics*, **1996**, 104, 4568-4580	3.9	29
7	Extensive electron-nuclear angular momentum exchange in vibrational autoionization of np and nf Rydberg states of NO. *Physical Review Letters*, **1996**, 76, 1591-1594	7.4	18
6	Molecular-orbital decomposition of the ionization continuum for a diatomic molecule by angle- and energy-resolved photoelectron spectroscopy. I. Formalism. *Journal of Chemical Physics*, **1996**, 104, 4554-4567	3.9	62
5	Evidence for a Cooper minimum in the photoionization dynamics of the NO D 2Π state. *Chemical Physics Letters*, **1994**, 225, 327-334	2.5	12
4	Photoionization dynamics of the NO A 2Π state deduced from energy- and angle-resolved photoelectron spectroscopy. *Journal of Chemical Physics*, **1993**, 99, 6537-6544	3.9	27
3	Measurement of circular dichroism in rotationally resolved photoelectron angular distributions following the photoionization of NO A 2Π. *Journal of Chemical Physics*, **1992**, 97, 4948-4957	3.9	61
2	Effects on silver-surface-enhanced Raman spectroscopy by competitive adsorption of hydroxide and halide ions. *Chemical Physics*, **1992**, 161, 265-272	2.3	16
1	Surface-enhanced Raman scattering of p-aminobenzoic acid at silver electrode. *The Journal of Physical Chemistry*, **1990**, 94, 7576-7580		112