Hongkun Park

List of Publications by Year
in descending order

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		6592	16605
133	34,051	79	123
papers	citations	h-index	g-index

134	134	134	37421
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Nanowire Nanosensors for Highly Sensitive and Selective Detection of Biological and Chemical Species. Science, 2001, 293, 1289-1292.	6.0	5,587
2	Nanomechanical oscillations in a single-C60 transistor. Nature, 2000, 407, 57-60.	13.7	1,676
3	Nanometre-scale thermometry in a living cell. Nature, 2013, 500, 54-58.	13.7	1,440
4	Kondo resonance in a single-molecule transistor. Nature, 2002, 417, 725-729.	13.7	1,359
5	Generation of single optical plasmons in metallic nanowires coupled to quantum dots. Nature, 2007, 450, 402-406.	13.7	1,307
6	Single-cell transcriptomics reveals bimodality in expression and splicing in immune cells. Nature, 2013, 498, 236-240.	13.7	1,103
7	Single-walled carbon nanotube electronics. IEEE Nanotechnology Magazine, 2002, 1, 78-85.	1.1	1,023
8	Fabry - Perot interference in a nanotube electron waveguide. Nature, 2001, 411, 665-669.	13.7	875
9	Single-cell RNA-seq reveals dynamic paracrine control of cellular variation. Nature, 2014, 510, 363-369.	13.7	872
10	Fabrication of metallic electrodes with nanometer separation by electromigration. Applied Physics Letters, 1999, 75, 301-303.	1.5	817
11	Diameter-Controlled Synthesis of Carbon Nanotubes. Journal of Physical Chemistry B, 2002, 106, 2429-2433.	1.2	747
12	Dynamic regulatory network controlling TH17 cell differentiation. Nature, 2013, 496, 461-468.	13.7	608
13	An integrated diamond nanophotonics platform for quantum-optical networks. Science, 2016, 354, 847-850.	6.0	570
14	Vertical nanowire electrode arrays as a scalable platform for intracellular interfacing to neuronal circuits. Nature Nanotechnology, 2012, 7, 180-184.	15.6	532
15	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, 1870-1875.	3.3	518
16	Single-Cell Genomics Unveils Critical Regulators of Th17 Cell Pathogenicity. Cell, 2015, 163, 1400-1412.	13.5	504
17	Visible-frequency hyperbolic metasurface. Nature, 2015, 522, 192-196.	13.7	453
18	Synthesis of Single-Crystalline Perovskite Nanorods Composed of Barium Titanate and Strontium Titanate. Journal of the American Chemical Society, 2002, 124, 1186-1187.	6.6	435

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19	Transcriptional and Epigenetic Dynamics during Specification of Human Embryonic Stem Cells. Cell, 2013, 153, 1149-1163.	13.5	419
20	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.	3.3	397
21	Resonant Electron Scattering by Defects in Single-Walled Carbon Nanotubes. Science, 2001, 291, 283-285.	6.0	391
22	Nuclear magnetic resonance detection and spectroscopy of single proteins using quantum logic. Science, 2016, 351, 836-841.	6.0	387
23	Gate-Activated Photoresponse in a Graphene pâ€“n Junction. Nano Letters, 2011, 11, 4134-4137.	4.5	379
24	Ferroelectric Phase Transition in Individual Single-Crystalline BaTiO3 Nanowires. Nano Letters, 2006, 6, 735-739.	4.5	371
25	Signatures of Molecular Magnetism in Single-Molecule Transport Spectroscopy. Nano Letters, 2006, 6, 2014-2020.	4.5	329
26	Experimental demonstration of memory-enhanced quantum communication. Nature, 2020, 580, 60-64.	13.7	325
27	Nanotools for Neuroscience and Brain Activity Mapping. ACS Nano, 2013, 7, 1850-1866.	7.3	323
28	CD5L/AIM Regulates Lipid Biosynthesis and Restrains Th17 Cell Pathogenicity. Cell, 2015, 163, 1413-1427.	13.5	313
29	Deterministic Coupling of a Single Nitrogen Vacancy Center to a Photonic Crystal Cavity. Nano Letters, 2010, 10, 3922-3926.	4.5	309
30	Ferroelectric Properties of Individual Barium Titanate Nanowires Investigated by Scanned Probe Microscopy. Nano Letters, 2002, 2, 447-450.	4.5	298
31	Near-field electrical detection of optical plasmons and single-plasmon sources. Nature Physics, 2009, 5, 475-479.	6.5	290
32	Single-Crystalline Vanadium Dioxide Nanowires with Rectangular Cross Sections. Journal of the American Chemical Society, 2005, 127, 498-499.	6.6	289
33	Strain-Induced Self Organization of Metalâ^'Insulator Domains in Single-Crystalline VO2Nanobeams. Nano Letters, 2006, 6, 2313-2317.	4.5	285
34	Probing dark excitons in atomically thin semiconductors via near-field coupling to surface plasmon polaritons. Nature Nanotechnology, 2017, 12, 856-860.	15.6	270
35	High-resolution magnetic resonance spectroscopy using a solid-state spin sensor. Nature, 2018, 555, 351-354.	13.7	270
36	Electrical control of interlayer exciton dynamics in atomically thin heterostructures. Science, 2019, 366, 870-875.	6.0	255

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37	Shell Filling and Exchange Coupling in Metallic Single-Walled Carbon Nanotubes. Physical Review Letters, 2002, 88, 126801.	2.9	246
38	Magnetic field imaging with nitrogen-vacancy ensembles. New Journal of Physics, 2011, 13, 045021.	1.2	228
39	Quantum Nonlinear Optics with a Germanium-Vacancy Color Center in a Nanoscale Diamond Waveguide. Physical Review Letters, 2017, 118, 223603.	2.9	218
40	Nanoscale NMR spectroscopy and imaging of multiple nuclear species. Nature Nanotechnology, 2015, 10, 129-134.	15.6	215
41	CMOS nanoelectrode array for all-electrical intracellular electrophysiological imaging. Nature Nanotechnology, 2017, 12, 460-466.	15.6	212
42	Free-Standing Mechanical and Photonic Nanostructures in Single-Crystal Diamond. Nano Letters, 2012, 12, 6084-6089.	4.5	210
43	Photon-mediated interactions between quantum emitters in a diamond nanocavity. Science, 2018, 362, 662-665.	6.0	189
44	Systematic Discovery of TLR Signaling Components Delineates Viral-Sensing Circuits. Cell, 2011, 147, 853-867.	13.5	177
45	Catalyst-Assisted Solutionâ^'Liquidâ^'Solid Synthesis of CdS/CdSe Nanorod Heterostructures. Journal of the American Chemical Society, 2007, 129, 133-138.	6.6	175
46	A nanoelectrode array for obtaining intracellular recordings from thousands of connected neurons. Nature Biomedical Engineering, 2020, 4, 232-241.	11.6	171
47	Coupling of NV Centers to Photonic Crystal Nanobeams in Diamond. Nano Letters, 2013, 13, 5791-5796.	4.5	170
48	Coherent Optical Transitions in Implanted Nitrogen Vacancy Centers. Nano Letters, 2014, 14, 1982-1986.	4.5	169
49	Magnetic Resonance Detection of Individual Proton Spins Using Quantum Reporters. Physical Review Letters, 2014, 113, 197601.	2.9	167
50	Large Excitonic Reflectivity of Monolayer<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:msub><mml:mrow><mml:mi>MoSe</mml:mi></mml:mrow><mml:mrow><mml:mn>2</mml:mn></ in Hexagonal Boron Nitride. Physical Review Letters, 2018, 120, 037402.	2.9	165
51	Single-Crystalline Barium Titanate Nanowires. Advanced Materials, 2003, 15, 423-426.	11.1	164
52	Efficient Readout of a Single Spin State in Diamond via Spin-to-Charge Conversion. Physical Review Letters, 2015, 114, 136402.	2.9	162
53	Single-cell magnetic imaging using a quantum diamond microscope. Nature Methods, 2015, 12, 736-738.	9.0	161
54	Nanowire-Mediated Delivery Enables Functional Interrogation of Primary Immune Cells: Application to the Analysis of Chronic Lymphocytic Leukemia. Nano Letters, 2012, 12, 6498-6504.	4.5	154

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55	Electrical control of charged carriers and excitons in atomically thin materials. Nature Nanotechnology, 2018, 13, 128-132.	15.6	142
56	Current-Driven Phase Oscillation and Domain-Wall Propagation in WxV1-xO2Nanobeams. Nano Letters, 2007, 7, 363-366.	4.5	133
57	Quantum Network Nodes Based on Diamond Qubits with an Efficient Nanophotonic Interface. Physical Review Letters, 2019, 123, 183602.	2.9	133
58	Probing Johnson noise and ballistic transport in normal metals with a single-spin qubit. Science, 2015, 347, 1129-1132.	6.0	130
59	Germanium Telluride Nanowires and Nanohelices with Memory-Switching Behavior. Journal of the American Chemical Society, 2006, 128, 8148-8149.	6.6	127
60	Vaporâ€“Liquidâ€“Solid and Vaporâ€“Solid Growth of Phase-Change Sb₂Te₃ Nanowires and Sb₂Te₃/GeTe Nanowire Heterostructures. Journal of the American Chemical Society, 2008, 130, 6252-6258.	6.6	127
61	Tailoring Light-Matter Interaction with a Nanoscale Plasmon Resonator. Physical Review Letters, 2012, 108, 226803.	2.9	127
62	Surface-enhanced Raman scattering of p-aminobenzoic acid at silver electrode. The Journal of Physical Chemistry, 1990, 94, 7576-7580.	2.9	124
63	Water photolysis with a cross-linked titanium dioxidenanowire anode. Chemical Science, 2011, 2, 80-87.	3.7	116
64	Diameter Dependence of the Transport Properties of Antimony Telluride Nanowires. Nano Letters, 2010, 10, 3037-3040.	4.5	111
65	An integrated nanophotonic quantum register based on silicon-vacancy spins in diamond. Physical Review B, 2019, 100, .	1.1	111
66	Magnetic resonance spectroscopy of an atomically thin material using a single-spin qubit. Science, 2017, 355, 503-507.	6.0	110
67	Excitons in a reconstructed moirÃ© potential in twisted WSe2/WSe2 homobilayers. Nature Materials, 2021, 20, 480-487.	13.3	109
68	NMR technique for determining the depth of shallow nitrogen-vacancy centers in diamond. Physical Review B, 2016, 93, .	1.1	107
69	Origins of Diamond Surface Noise Probed by Correlating Single-Spin Measurements with Surface Spectroscopy. Physical Review X, 2019, 9, .	2.8	107
70	Broken mirror symmetry in excitonic response of reconstructed domains in twisted MoSe2/MoSe2 bilayers. Nature Nanotechnology, 2020, 15, 750-754.	15.6	106
71	Synthesis of Single-Crystalline La1-xBaxMnO3 Nanocubes with Adjustable Doping Levels. Nano Letters, 2004, 4, 1547-1550.	4.5	100
72	Plastic deformations in mechanically strained single-walled carbon nanotubes. Physical Review B, 2003, 67, .	1.1	99

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73	Bilayer Wigner crystals in a transition metal dichalcogenide heterostructure. Nature, 2021, 595, 48-52.	13.7	98
74	Trapping and Manipulation of Isolated Atoms Using Nanoscale Plasmonic Structures. Physical Review Letters, 2009, 103, 123004.	2.9	96
75	Neuromorphic electronics based on copying and pasting the brain. Nature Electronics, 2021, 4, 635-644.	13.1	94
76	Probing Enzymatic Activity inside Living Cells Using a Nanowireâ€“Cell â€œSandwichâ€•Assay. Nano Letters, 2013, 13, 153-158.	4.5	92
77	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
78	Vapor-Phase Synthesis and Characterization of Îµ-FeSi Nanowires. Advanced Materials, 2006, 18, 1437-1440.	11.1	87
79	All-Optical Sensing of a Single-Molecule Electron Spin. Nano Letters, 2014, 14, 6443-6448.	4.5	83
80	Quantum Plasmonic Circuits. IEEE Journal of Selected Topics in Quantum Electronics, 2012, 18, 1781-1791.	1.9	78
81	Optimizing Nanoelectrode Arrays for Scalable Intracellular Electrophysiology. Accounts of Chemical Research, 2018, 51, 600-608.	7.6	78
82	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.	3.3	77
83	Minimum Voltage for Threshold Switching in Nanoscale Phase-Change Memory. Nano Letters, 2008, 8, 3429-3433.	4.5	76
84	Correlative light and electron microscopy using cathodoluminescence from nanoparticles with distinguishable colours. Scientific Reports, 2012, 2, 865.	1.6	75
85	Electronic properties of mechanically induced kinks in single-walled carbon nanotubes. Applied Physics Letters, 2001, 78, 3693-3695.	1.5	68
86	Molecularâ€•orbital decomposition of the ionization continuum for a diatomic molecule by angleâ€•and energyâ€•resolved photoelectron spectroscopy. I. Formalism. Journal of Chemical Physics, 1996, 104, 4554-4567.	1.2	67
87	Measurement of circular dichroism in rotationally resolved photoelectron angular distributions following the photoionization of NO Aâ€‰2Î£+. Journal of Chemical Physics, 1992, 97, 4948-4957.	1.2	66
88	Somatic mutation as a mechanism of Wnt/Î²-catenin pathway activation in CLL. Blood, 2014, 124, 1089-1098.	0.6	65
89	Electrically Driven Light Emission from Individual CdSe Nanowires. Nano Letters, 2008, 8, 4552-4556.	4.5	61
90	Fabrication of Asymmetric Electrode Pairs with Nanometer Separation Made of Two Distinct Metals. Nano Letters, 2003, 3, 1383-1385.	4.5	56

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91	Electroluminescence from a Single-Nanocrystal Transistor. Nano Letters, 2005, 5, 2257-2261.	4.5	56
92	Controlling Excitons in an Atomically Thin Membrane with a Mirror. Physical Review Letters, 2020, 124, 027401.	2.9	55
93	Quantum Metrology with Strongly Interacting Spin Systems. Physical Review X, 2020, 10, .	2.8	52
94	Nanowire electrodes for high-density stimulation and measurement of neural circuits. Frontiers in Neural Circuits, 2013, 7, 38.	1.4	51
95	Stretchable Photonic Crystal Cavity with Wide Frequency Tunability. Nano Letters, 2013, 13, 248-252.	4.5	50
96	Electron-phonon instability in graphene revealed by global and local noise probes. Science, 2019, 364, 154-157.	6.0	47
97	Vibrational Excitation in Single-Molecule Transistors: Deviation from the Simple Franckâ^'Condon Prediction. Nano Letters, 2008, 8, 2963-2967.	4.5	44
98	Hyperpolarization-Enhanced NMR Spectroscopy with Femtomole Sensitivity Using Quantum Defects in Diamond. Physical Review X, 2020, 10, .	2.8	34
99	Electrically Tunable Excitonâ€"Plasmon Coupling in a WSe₂ Monolayer Embedded in a Plasmonic Crystal Cavity. Nano Letters, 2019, 19, 3543-3547.	4.5	32
100	Probing dark exciton navigation through a local strain landscape in a WSe2 monolayer. Nature Communications, 2022, 13, 232.	5.8	32
101	Molecularâ€orbital decomposition of the ionization continuum for a diatomic molecule by angleâ€and energyâ€resolved photoelectron spectroscopy. II. Ionization continuum of NO. Journal of Chemical Physics, 1996, 104, 4568-4580.	1.2	31
102	Photoionization dynamics of the NO Aâ€‰2Î£+ state deduced from energyâ€and angleâ€resolved photoelectron spectroscopy. Journal of Chemical Physics, 1993, 99, 6537-6544.	1.2	28
103	Micron-Scale NV-NMR Spectroscopy with Signal Amplification by Reversible Exchange. PRX Quantum, 2021, 2, .	3.5	27
104	Electrically controlled emission from singlet and triplet exciton species in atomically thin light-emitting diodes. Physical Review B, 2021, 103, .	1.1	26
105	Rotationally resolved photoelectron spectra from vibrational autoionization of NO Rydberg levels. Journal of Chemical Physics, 1997, 106, 2239-2247.	1.2	24
106	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.	3.5	23
107	Atomically thin three-dimensional membranes of van der Waals semiconductors by wafer-scale growth. Science Advances, 2019, 5, eaaw3180.	4.7	22
108	Extensive Electron-Nuclear Angular Momentum Exchange in Vibrational Autoionization ofnpandnfRydberg States of NO. Physical Review Letters, 1996, 76, 1591-1594.	2.9	21

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109	Magnetic switching of phase-slip dissipation inNbSe2nanoribbons. Physical Review B, 2007, 75, .	1.1	20
110	Multi-parametric functional imaging of cell cultures and tissues with a CMOS microelectrode array. Lab on A Chip, 2022, 22, 1286-1296.	3.1	20
111	Effects on silver-surface-enhanced Raman spectroscopy by competitive adsorption of hydroxide and halide ions. Chemical Physics, 1992, 161, 265-272.	0.9	18
112	Extracellular recording of direct synaptic signals with a CMOS-nanoelectrode array. Lab on A Chip, 2020, 20, 3239-3248.	3.1	17
113	Liquid Salt Transport Growth of Single Crystals of the Layered Dichalcogenides MoS₂ and WS₂. Crystal Growth and Design, 2019, 19, 5762-5767.	1.4	16
114	Stepwise Ligand-induced Self-assembly for Facile Fabrication of Nanodiamondâ€“Gold Nanoparticle Dimers via Noncovalent Biotinâ€“Streptavidin Interactions. Nano Letters, 2019, 19, 2020-2026.	4.5	16
115	Evidence for a Cooper minimum in the photoionization dynamics of the NO D 2Î£+ state. Chemical Physics Letters, 1994, 225, 327-334.	1.2	14
116	Improving Defectâ€Based Quantum Emitters in Silicon Carbide via Inorganic Passivation. Advanced Materials, 2018, 30, 1704543.	11.1	13
117	Partial-Wave Decomposition of the Ionization Continuum Accessed by Vibrational Autoionization of the NO14s(Î½=1,N=20,NR+=20) Level. Physical Review Letters, 2000, 84, 3819-3822.	2.9	11
118	TRANSPORT SPECTROSCOPY OF CHEMICAL NANOSTRUCTURES: The Case of Metallic Single-Walled Carbon Nanotubes. Annual Review of Physical Chemistry, 2005, 56, 475-490.	4.8	11
119	Charges feel the heat. Nature Materials, 2007, 6, 330-331.	13.3	10
120	Optical Entanglement of Distinguishable Quantum Emitters. Physical Review Letters, 2022, 128, .	2.9	9
121	Beam steering at the nanosecond time scale with an atomically thin reflector. Nature Communications, 2022, 13, .	5.8	6
122	CMOS interface with biological molecules and cells. , 2019, , .		3
123	Asymmetric photoelectric effect: Auger-assisted hot hole photocurrents in transition metal dichalcogenides. Nanophotonics, 2020, 10, 105-113.	2.9	2
124	Ferroelectric Nanowires. , 2003, , 83-92.		1
125	CMOS electronics probe inside a cellular network â€" Invited review paper. , 2018, , .		1
126	CMOS interface with biological molecules and cells : Invited review paper. , 2019, , .		1

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127	Sensitivity to Wnt Pathway Inhibition in CLL Is Associated with Specific Gene Expression Signatures. Blood, 2011, 118, 801-801.	0.6	1
128	Quantum optics with nanoscale surface plasmons. , 2009, , .		0
129	A hybrid quantum photonic interface for solid state qubits. Proceedings of SPIE, 2011, , .	0.8	0
130	CMOS-nano-bio interface array for cardiac and neuro technology. , 2017, , .		0
131	Transport Investigations of Chemical Nanostructures. , 2004, , 95-99.		0
132	Somatic Mutation As a Mechanism of Wnt/Î²-Catenin Pathway Activation in CLL. Blood, 2012, 120, 559-559.	0.6	0
133	A nanophotonic interface to long-lived quantum memories in diamond. , 2019, , .		0