

Hongkun Park

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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	Nanowire nanosensors for highly sensitive and selective detection of biological and chemical species. <i>Science</i> , 2001 , 293, 1289-92	33.3	5041
122	Nanomechanical oscillations in a single-C60 transistor. <i>Nature</i> , 2000 , 407, 57-60	50.4	1530
121	Kondo resonance in a single-molecule transistor. <i>Nature</i> , 2002 , 417, 725-9	50.4	1242
120	Generation of single optical plasmons in metallic nanowires coupled to quantum dots. <i>Nature</i> , 2007 , 450, 402-6	50.4	1139
119	Nanometre-scale thermometry in a living cell. <i>Nature</i> , 2013 , 500, 54-8	50.4	1075
118	Single-cell transcriptomics reveals bimodality in expression and splicing in immune cells. <i>Nature</i> , 2013 , 498, 236-40	50.4	867
117	Single-walled carbon nanotube electronics. <i>IEEE Nanotechnology Magazine</i> , 2002 , 1, 78-85	2.6	828
116	Fabry - Perot interference in a nanotube electron waveguide. <i>Nature</i> , 2001 , 411, 665-9	50.4	766
115	Fabrication of metallic electrodes with nanometer separation by electromigration. <i>Applied Physics Letters</i> , 1999 , 75, 301-303	3.4	740
114	Single-cell RNA-seq reveals dynamic paracrine control of cellular variation. <i>Nature</i> , 2014 , 510, 363-9	50.4	661
113	Diameter-Controlled Synthesis of Carbon Nanotubes. <i>Journal of Physical Chemistry B</i> , 2002 , 106, 2429-2433	3.4	653
112	Dynamic regulatory network controlling TH17 cell differentiation. <i>Nature</i> , 2013 , 496, 461-8	50.4	492
111	Vertical silicon nanowires as a universal platform for delivering biomolecules into living cells. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2010 , 107, 1870-5	11.5	453
110	Vertical nanowire electrode arrays as a scalable platform for intracellular interfacing to neuronal circuits. <i>Nature Nanotechnology</i> , 2012 , 7, 180-4	28.7	446
109	An integrated diamond nanophotonics platform for quantum-optical networks. <i>Science</i> , 2016 , 354, 847-850	35.3	403
108	Synthesis of single-crystalline perovskite nanorods composed of barium titanate and strontium titanate. <i>Journal of the American Chemical Society</i> , 2002 , 124, 1186-7	16.4	398
107	Single-Cell Genomics Unveils Critical Regulators of Th17 Cell Pathogenicity. <i>Cell</i> , 2015 , 163, 1400-12	56.2	369

106	Resonant electron scattering by defects in single-walled carbon nanotubes. <i>Science</i> , 2001 , 291, 283-5	33.3	367
105	Ferroelectric phase transition in individual single-crystalline BaTiO ₃ nanowires. <i>Nano Letters</i> , 2006 , 6, 735-9	11.5	342
104	Transcriptional and epigenetic dynamics during specification of human embryonic stem cells. <i>Cell</i> , 2013 , 153, 1149-63	56.2	332
103	Gate-activated photoresponse in a graphene p-n junction. <i>Nano Letters</i> , 2011 , 11, 4134-7	11.5	330
102	Visible-frequency hyperbolic metasurface. <i>Nature</i> , 2015 , 522, 192-6	50.4	327
101	Signatures of molecular magnetism in single-molecule transport spectroscopy. <i>Nano Letters</i> , 2006 , 6, 2014-20	11.5	318
100	Ferroelectric Properties of Individual Barium Titanate Nanowires Investigated by Scanned Probe Microscopy. <i>Nano Letters</i> , 2002 , 2, 447-450	11.5	274
99	Nuclear magnetic resonance detection and spectroscopy of single proteins using quantum logic. <i>Science</i> , 2016 , 351, 836-41	33.3	269
98	Single-crystalline vanadium dioxide nanowires with rectangular cross sections. <i>Journal of the American Chemical Society</i> , 2005 , 127, 498-9	16.4	268
97	Deterministic coupling of a single nitrogen vacancy center to a photonic crystal cavity. <i>Nano Letters</i> , 2010 , 10, 3922-6	11.5	267
96	Strain-induced self organization of metal-insulator domains in single-crystalline VO ₂ nanobeams. <i>Nano Letters</i> , 2006 , 6, 2313-7	11.5	261
95	Near-field electrical detection of optical plasmons and single-plasmon sources. <i>Nature Physics</i> , 2009 , 5, 475-479	16.2	256
94	Nanotools for neuroscience and brain activity mapping. <i>ACS Nano</i> , 2013 , 7, 1850-66	16.7	248
93	Optical magnetic detection of single-neuron action potentials using quantum defects in diamond. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2016 , 113, 14133-14138	11.5	245
92	Shell filling and exchange coupling in metallic single-walled carbon nanotubes. <i>Physical Review Letters</i> , 2002 , 88, 126801	7.4	236
91	CD5L/AIM Regulates Lipid Biosynthesis and Restrains Th17 Cell Pathogenicity. <i>Cell</i> , 2015 , 163, 1413-27	56.2	220
90	Probing dark excitons in atomically thin semiconductors via near-field coupling to surface plasmon polaritons. <i>Nature Nanotechnology</i> , 2017 , 12, 856-860	28.7	191
89	Nanoscale NMR spectroscopy and imaging of multiple nuclear species. <i>Nature Nanotechnology</i> , 2015 , 10, 129-34	28.7	184

88	Magnetic field imaging with nitrogen-vacancy ensembles. <i>New Journal of Physics</i> , 2011 , 13, 045021	2.9	177
87	High-resolution magnetic resonance spectroscopy using a solid-state spin sensor. <i>Nature</i> , 2018 , 555, 351-354	50.4	167
86	Free-standing mechanical and photonic nanostructures in single-crystal diamond. <i>Nano Letters</i> , 2012 , 12, 6084-9	11.5	167
85	Catalyst-assisted solution-liquid-solid synthesis of CdS/CdSe nanorod heterostructures. <i>Journal of the American Chemical Society</i> , 2007 , 129, 133-8	16.4	162
84	Quantum Nonlinear Optics with a Germanium-Vacancy Color Center in a Nanoscale Diamond Waveguide. <i>Physical Review Letters</i> , 2017 , 118, 223603	7.4	155
83	CMOS nanoelectrode array for all-electrical intracellular electrophysiological imaging. <i>Nature Nanotechnology</i> , 2017 , 12, 460-466	28.7	152
82	Systematic discovery of TLR signaling components delineates viral-sensing circuits. <i>Cell</i> , 2011 , 147, 853-67	56.2	148
81	Coupling of NV centers to photonic crystal nanobeams in diamond. <i>Nano Letters</i> , 2013 , 13, 5791-6	11.5	143
80	Electrical control of interlayer exciton dynamics in atomically thin heterostructures. <i>Science</i> , 2019 , 366, 870-875	33.3	135
79	Experimental demonstration of memory-enhanced quantum communication. <i>Nature</i> , 2020 , 580, 60-64	50.4	132
78	Coherent optical transitions in implanted nitrogen vacancy centers. <i>Nano Letters</i> , 2014 , 14, 1982-6	11.5	130
77	Nanowire-mediated delivery enables functional interrogation of primary immune cells: application to the analysis of chronic lymphocytic leukemia. <i>Nano Letters</i> , 2012 , 12, 6498-504	11.5	129
76	Magnetic resonance detection of individual proton spins using quantum reporters. <i>Physical Review Letters</i> , 2014 , 113, 197601	7.4	123
75	Vapor-liquid-solid and vapor-solid growth of phase-change Sb ₂ Te ₃ nanowires and Sb ₂ Te ₃ /GeTe nanowire heterostructures. <i>Journal of the American Chemical Society</i> , 2008 , 130, 6252-8	16.4	122
74	Single-cell magnetic imaging using a quantum diamond microscope. <i>Nature Methods</i> , 2015 , 12, 736-738	21.6	120
73	Current-driven phase oscillation and domain-wall propagation in WxV1-xO2 nanobeams. <i>Nano Letters</i> , 2007 , 7, 363-6	11.5	118
72	Large Excitonic Reflectivity of Monolayer MoSe ₂ Encapsulated in Hexagonal Boron Nitride. <i>Physical Review Letters</i> , 2018 , 120, 037402	7.4	117
71	Germanium telluride nanowires and nanohelices with memory-switching behavior. <i>Journal of the American Chemical Society</i> , 2006 , 128, 8148-9	16.4	117

70	Efficient readout of a single spin state in diamond via spin-to-charge conversion. <i>Physical Review Letters</i> , 2015 , 114, 136402	7.4	114
69	Electrical control of charged carriers and excitons in atomically thin materials. <i>Nature Nanotechnology</i> , 2018 , 13, 128-132	28.7	113
68	Surface-enhanced Raman scattering of p-aminobenzoic acid at silver electrode. <i>The Journal of Physical Chemistry</i> , 1990 , 94, 7576-7580		112
67	Photon-mediated interactions between quantum emitters in a diamond nanocavity. <i>Science</i> , 2018 , 362, 662-665	33.3	112
66	Tailoring light-matter interaction with a nanoscale plasmon resonator. <i>Physical Review Letters</i> , 2012 , 108, 226803	7.4	110
65	Diameter dependence of the transport properties of antimony telluride nanowires. <i>Nano Letters</i> , 2010 , 10, 3037-40	11.5	108
64	Water photolysis with a cross-linked titanium dioxide nanowire anode. <i>Chemical Science</i> , 2011 , 2, 80-87	9.4	105
63	Synthesis of Single-Crystalline La _{1-x} BaxMnO ₃ Nanocubes with Adjustable Doping Levels. <i>Nano Letters</i> , 2004 , 4, 1547-1550	11.5	94
62	Plastic deformations in mechanically strained single-walled carbon nanotubes. <i>Physical Review B</i> , 2003 , 67,	3.3	94
61	Quantum electronics. Probing Johnson noise and ballistic transport in normal metals with a single-spin qubit. <i>Science</i> , 2015 , 347, 1129-32	33.3	90
60	Probing enzymatic activity inside living cells using a nanowire-cell "sandwich" assay. <i>Nano Letters</i> , 2013 , 13, 153-8	11.5	83
59	Vapor-Phase Synthesis and Characterization of γ -FeSi Nanowires. <i>Advanced Materials</i> , 2006 , 18, 1437-1440		83
58	Trapping and manipulation of isolated atoms using nanoscale plasmonic structures. <i>Physical Review Letters</i> , 2009 , 103, 123004	7.4	80
57	A nanoelectrode array for obtaining intracellular recordings from thousands of connected neurons. <i>Nature Biomedical Engineering</i> , 2020 , 4, 232-241	19	77
56	NMR technique for determining the depth of shallow nitrogen-vacancy centers in diamond. <i>Physical Review B</i> , 2016 , 93,	3.3	76
55	Magnetic resonance spectroscopy of an atomically thin material using a single-spin qubit. <i>Science</i> , 2017 , 355, 503-507	33.3	74
54	Quantum Plasmonic Circuits. <i>IEEE Journal of Selected Topics in Quantum Electronics</i> , 2012 , 18, 1781-1791	3.8	74
53	Minimum voltage for threshold switching in nanoscale phase-change memory. <i>Nano Letters</i> , 2008 , 8, 3429-33	11.5	69

52	All-optical sensing of a single-molecule electron spin. <i>Nano Letters</i> , 2014 , 14, 6443-8	11.5	63
51	Molecular-orbital decomposition of the ionization continuum for a diatomic molecule by angle- and energy-resolved photoelectron spectroscopy. I. Formalism. <i>Journal of Chemical Physics</i> , 1996 , 104, 4554-4567	3.9	62
50	Correlative light and electron microscopy using cathodoluminescence from nanoparticles with distinguishable colours. <i>Scientific Reports</i> , 2012 , 2, 865	4.9	61
49	Measurement of circular dichroism in rotationally resolved photoelectron angular distributions following the photoionization of NO A 2π . <i>Journal of Chemical Physics</i> , 1992 , 97, 4948-4957	3.9	61
48	Electronic properties of mechanically induced kinks in single-walled carbon nanotubes. <i>Applied Physics Letters</i> , 2001 , 78, 3693-3695	3.4	60
47	Quantum Network Nodes Based on Diamond Qubits with an Efficient Nanophotonic Interface. <i>Physical Review Letters</i> , 2019 , 123, 183602	7.4	59
46	Electrically driven light emission from individual CdSe nanowires. <i>Nano Letters</i> , 2008 , 8, 4552-6	11.5	58
45	Somatic mutation as a mechanism of Wnt/ β -catenin pathway activation in CLL. <i>Blood</i> , 2014 , 124, 1089-98	2.2	56
44	Optimizing Nanoelectrode Arrays for Scalable Intracellular Electrophysiology. <i>Accounts of Chemical Research</i> , 2018 , 51, 600-608	24.3	55
43	Electroluminescence from a single-nanocrystal transistor. <i>Nano Letters</i> , 2005 , 5, 2257-61	11.5	54
42	Fabrication of Asymmetric Electrode Pairs with Nanometer Separation Made of Two Distinct Metals. <i>Nano Letters</i> , 2003 , 3, 1383-1385	11.5	53
41	Electrically Tunable Valley Dynamics in Twisted WSe ₂ /WSe ₂ Bilayers. <i>Physical Review Letters</i> , 2020 , 124, 217403	7.4	50
40	An integrated nanophotonic quantum register based on silicon-vacancy spins in diamond. <i>Physical Review B</i> , 2019 , 100,	3.3	47
39	Broken mirror symmetry in excitonic response of reconstructed domains in twisted MoSe ₂ /MoSe ₂ bilayers. <i>Nature Nanotechnology</i> , 2020 , 15, 750-754	28.7	46
38	Origins of Diamond Surface Noise Probed by Correlating Single-Spin Measurements with Surface Spectroscopy. <i>Physical Review X</i> , 2019 , 9,	9.1	45
37	Excitons in a reconstructed moiré potential in twisted WSe ₂ /WSe ₂ homobilayers. <i>Nature Materials</i> , 2021 , 20, 480-487	27	44
36	Stretchable photonic crystal cavity with wide frequency tunability. <i>Nano Letters</i> , 2013 , 13, 248-52	11.5	43
35	Nanowire electrodes for high-density stimulation and measurement of neural circuits. <i>Frontiers in Neural Circuits</i> , 2013 , 7, 38	3.5	43

34	Vibrational excitation in single-molecule transistors: deviation from the simple franck-condon prediction. <i>Nano Letters</i> , 2008 , 8, 2963-7	11.5	41
33	Controlling Excitons in an Atomically Thin Membrane with a Mirror. <i>Physical Review Letters</i> , 2020 , 124, 027401	7.4	36
32	Probing and manipulating embryogenesis via nanoscale thermometry and temperature control. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2020 , 117, 14636-14641	11.5	31
31	Neuromorphic electronics based on copying and pasting the brain. <i>Nature Electronics</i> , 2021 , 4, 635-644	28.4	31
30	Molecular-orbital decomposition of the ionization continuum for a diatomic molecule by angle- and energy-resolved photoelectron spectroscopy. II. Ionization continuum of NO. <i>Journal of Chemical Physics</i> , 1996 , 104, 4568-4580	3.9	29
29	Electron-phonon instability in graphene revealed by global and local noise probes. <i>Science</i> , 2019 , 364, 154-157	33.3	29
28	Photoionization dynamics of the NO A 2π state deduced from energy- and angle-resolved photoelectron spectroscopy. <i>Journal of Chemical Physics</i> , 1993 , 99, 6537-6544	3.9	27
27	Rotationally resolved photoelectron spectra from vibrational autoionization of NO Rydberg levels. <i>Journal of Chemical Physics</i> , 1997 , 106, 2239-2247	3.9	21
26	Extensive electron-nuclear angular momentum exchange in vibrational autoionization of np and nf Rydberg states of NO. <i>Physical Review Letters</i> , 1996 , 76, 1591-1594	7.4	18
25	Magnetic switching of phase-slip dissipation in NbSe ₂ nanoribbons. <i>Physical Review B</i> , 2007 , 75,	3.3	17
24	Effects on silver-surface-enhanced Raman spectroscopy by competitive adsorption of hydroxide and halide ions. <i>Chemical Physics</i> , 1992 , 161, 265-272	2.3	16
23	Bilayer Wigner crystals in a transition metal dichalcogenide heterostructure. <i>Nature</i> , 2021 , 595, 48-52	50.4	16
22	Electrically Tunable Exciton-Plasmon Coupling in a WSe Monolayer Embedded in a Plasmonic Crystal Cavity. <i>Nano Letters</i> , 2019 , 19, 3543-3547	11.5	15
21	Atomically thin three-dimensional membranes of van der Waals semiconductors by wafer-scale growth. <i>Science Advances</i> , 2019 , 5, eaaw3180	14.3	14
20	Quantum Metrology with Strongly Interacting Spin Systems. <i>Physical Review X</i> , 2020 , 10,	9.1	14
19	Evidence for a Cooper minimum in the photoionization dynamics of the NO D 2π state. <i>Chemical Physics Letters</i> , 1994 , 225, 327-334	2.5	12
18	Improving Defect-Based Quantum Emitters in Silicon Carbide via Inorganic Passivation. <i>Advanced Materials</i> , 2018 , 30, 1704543	24	12
17	Stepwise Ligand-induced Self-assembly for Facile Fabrication of Nanodiamond-Gold Nanoparticle Dimers via Noncovalent Biotin-Streptavidin Interactions. <i>Nano Letters</i> , 2019 , 19, 2020-2026	11.5	11

16	Transport spectroscopy of chemical nanostructures: the case of metallic single-walled carbon nanotubes. <i>Annual Review of Physical Chemistry</i> , 2005 , 56, 475-90	15.7	11
15	Partial-wave decomposition of the ionization continuum accessed by vibrational autoionization of the NO 14s (nu = 1, N = 20, N(+)(R) = 20) level. <i>Physical Review Letters</i> , 2000 , 84, 3819-22	7.4	11
14	Hyperpolarization-Enhanced NMR Spectroscopy with Femtomole Sensitivity Using Quantum Defects in Diamond. <i>Physical Review X</i> , 2020 , 10,	9.1	10
13	Electrically controlled emission from singlet and triplet exciton species in atomically thin light-emitting diodes. <i>Physical Review B</i> , 2021 , 103,	3.3	10
12	Liquid Salt Transport Growth of Single Crystals of the Layered Dichalcogenides MoS2 and WS2. <i>Crystal Growth and Design</i> , 2019 , 19, 5762-5767	3.5	9
11	The Design of a CMOS Nanoelectrode Array with 4096 Current-Clamp/Voltage-Clamp Amplifiers for Intracellular Recording/Stimulation of Mammalian Neurons. <i>IEEE Journal of Solid-State Circuits</i> , 2020 , 55, 2567-2582	5.5	9
10	Micron-Scale NV-NMR Spectroscopy with Signal Amplification by Reversible Exchange. <i>PRX Quantum</i> , 2021 , 2,	6.1	9
9	Probing dark exciton navigation through a local strain landscape in a WSe monolayer.. <i>Nature Communications</i> , 2022 , 13, 232	17.4	8
8	Extracellular recording of direct synaptic signals with a CMOS-nanoelectrode array. <i>Lab on A Chip</i> , 2020 , 20, 3239-3248	7.2	3
7	Nanotechnologies for the Bioelectronic Interface 2016 , 127-142		2
6	Ferroelectric Nanowires 2003 , 83-92		1
5	Sensitivity to Wnt Pathway Inhibition in CLL Is Associated with Specific Gene Expression Signatures. <i>Blood</i> , 2011 , 118, 801-801	2.2	1
4	Asymmetric photoelectric effect: Auger-assisted hot hole photocurrents in transition metal dichalcogenides. <i>Nanophotonics</i> , 2020 , 10, 105-113	6.3	1
3	CMOS electronics probe inside a cellular network [Invited review paper 2018 ,		1
2	Transport Investigations of Chemical Nanostructures 2004 , 95-99		
1	Somatic Mutation As a Mechanism of Wnt/ β Catenin Pathway Activation in CLL. <i>Blood</i> , 2012 , 120, 559-559.2		