Jiwoong Park

List of Publications by Citations

63 papers	5,944 citations	28 h-index	69 g-index
69 ext. papers	7,131 ext. citations	13.9 avg, IF	5.91 L-index

#	Paper	IF	Citations
63	High-mobility three-atom-thick semiconducting films with wafer-scale homogeneity. *Nature*, **2015**, 520, 656-60	50.4	1224
62	Valleytronics. The valley Hall effect in MoS□transistors. *Science*, **2014**, 344, 1489-92	33.3	1153
61	Breaking of valley degeneracy by magnetic field in monolayer MoSe2. *Physical Review Letters*, **2015**, 114, 037401	7.4	401
60	Layer-by-layer assembly of two-dimensional materials into wafer-scale heterostructures. *Nature*, **2017**, 550, 229-233	50.4	305
59	Imaging of photocurrent generation and collection in single-layer graphene. *Nano Letters*, **2009**, 9, 1742-6	11.5	293
58	Electron ptychography of 2D materials to deep sub-□gstr□m resolution. *Nature*, **2018**, 559, 343-349	50.4	269
57	Angle-resolved Raman imaging of interlayer rotations and interactions in twisted bilayer graphene. *Nano Letters*, **2012**, 12, 3162-7	11.5	260
56	Ultrafast relaxation dynamics of hot optical phonons in graphene. *Applied Physics Letters*, **2010**, 96, 081917	3.4	202
55	Coherent, atomically thin transition-metal dichalcogenide superlattices with engineered strain. *Science*, **2018**, 359, 1131-1136	33.3	170
54	Atomically Thin Ohmic Edge Contacts Between Two-Dimensional Materials. *ACS Nano*, **2016**, 10, 6392-9	16.7	144
53	Chiral atomically thin films. *Nature Nanotechnology*, **2016**, 11, 520-524	28.7	117
52	Polycrystalline graphene with single crystalline electronic structure. *Nano Letters*, **2014**, 14, 5706-11	11.5	112
51	Wafer-scale synthesis of monolayer two-dimensional porphyrin polymers for hybrid superlattices. *Science*, **2019**, 366, 1379-1384	33.3	111
50	Klein tunnelling and electron trapping in nanometre-scale graphene quantum dots. *Nature Physics*, **2016**, 12, 1069-1075	16.2	103
49	Van Hove singularities and excitonic effects in the optical conductivity of twisted bilayer graphene. *Nano Letters*, **2014**, 14, 3353-7	11.5	99
48	Tunable excitons in bilayer graphene. *Science*, **2017**, 358, 907-910	33.3	89
47	Low-loss composite photonic platform based on 2D semiconductor monolayers. *Nature Photonics*, **2020**, 14, 256-262	33.9	71

46	Schottky barrier inhomogeneities at the interface of few layer epitaxial graphene and silicon carbide. *Applied Physics Letters*, **2012**, 100, 183112	3.4	70
45	Tuning Electrical Conductance of MoS Monolayers through Substitutional Doping. *Nano Letters*, **2020**, 20, 4095-4101	11.5	59
44	Imaging chiral symmetry breaking from Kekulé bond order in graphene. *Nature Physics*, **2016**, 12, 950-958	16.2	56
43	Strain Mapping of Two-Dimensional Heterostructures with Subpicometer Precision. *Nano Letters*, **2018**, 18, 3746-3751	11.5	50
42	Transient absorption and photocurrent microscopy show that hot electron supercollisions describe the rate-limiting relaxation step in graphene. *Nano Letters*, **2013**, 13, 5497-502	11.5	45
41	Stacking angle-tunable photoluminescence from interlayer exciton states in twisted bilayer graphene. *Nature Communications*, **2019**, 10, 1445	17.4	42
40	Tunable Optical Excitations in Twisted Bilayer Graphene Form Strongly Bound Excitons. *Nano Letters*, **2015**, 15, 5932-7	11.5	42
39	Atomistic Interrogation of B-N Co-dopant Structures and Their Electronic Effects in Graphene. *ACS Nano*, **2016**, 10, 6574-84	16.7	42
38	High-throughput graphene imaging on arbitrary substrates with widefield Raman spectroscopy. *ACS Nano*, **2012**, 6, 373-80	16.7	42
37	Hyperspectral imaging of structure and composition in atomically thin heterostructures. *Nano Letters*, **2013**, 13, 3942-6	11.5	37
36	Reversible MoS Origami with Spatially Resolved and Reconfigurable Photosensitivity. *Nano Letters*, **2019**, 19, 7941-7949	11.5	33
35	Absence of a Band Gap at the Interface of a Metal and Highly Doped Monolayer MoS. *Nano Letters*, **2017**, 17, 5962-5968	11.5	27
34	High-Throughput Growth of Wafer-Scale Monolayer Transition Metal Dichalcogenide via Vertical Ostwald Ripening. *Advanced Materials*, **2020**, 32, e2003542	24	26
33	Atomic-Scale Spectroscopy of Gated Monolayer MoS2. *Nano Letters*, **2016**, 16, 3148-54	11.5	23
32	Capillary Origami with Atomically Thin Membranes. *Nano Letters*, **2019**, 19, 6221-6226	11.5	21
31	Extremely anisotropic van der Waals thermal conductors. *Nature*, **2021**, 597, 660-665	50.4	20
30	Atomic-Scale Visualization of Electrochemical Lithiation Processes in Monolayer MoS2 by Cryogenic Electron Microscopy. *Advanced Energy Materials*, **2019**, 9, 1902773	21.8	18
29	Stacking, strain, and twist in 2D materials quantified by 3D electron diffraction. *Physical Review Materials*, **2019**, 3,	3.2	14

28	Atomically Thin Graphene Windows That Enable High Contrast Electron Microscopy without a Specimen Vacuum Chamber. *Nano Letters*, **2016**, 16, 7427-7432	11.5	13
27	MoS pixel arrays for real-time photoluminescence imaging of redox molecules. *Science Advances*, **2019**, 5, eaat9476	14.3	13
26	Twist, slip, and circular dichroism in bilayer graphene. *Physical Review B*, **2019**, 100,	3.3	12
25	Strongly bound excitons in gapless two-dimensional structures. *Physical Review B*, **2014**, 90,	3.3	12
24	Two-Dimensional Material Tunnel Barrier for Josephson Junctions and Superconducting Qubits. *Nano Letters*, **2019**, 19, 8287-8293	11.5	11
23	Laser-based imaging of individual carbon nanostructures. *NPG Asia Materials*, **2011**, 3, 91-99	10.3	11
22	The MoSeS dynamic omnigami paradigm for smart shape and composition programmable 2D materials. *Nature Communications*, **2019**, 10, 5210	17.4	10
21	Depolarization effect in optical absorption measurements of one- and two-dimensional nanostructures. *Applied Physics Letters*, **2012**, 101, 123102	3.4	10
20	Imaging Polarity in Two Dimensional Materials by Breaking Friedel's Law. *Ultramicroscopy*, **2020**, 215, 113019	3.1	8
19	Photoelectrical imaging and characterization of point contacts in pentacene thin-film transistors. *Applied Physics Letters*, **2010**, 97, 023308	3.4	8
18	Graphene has ultra high piezoresistive gauge factor **2012**,		7
17	Robotic four-dimensional pixel assembly of van der Waals solids.. *Nature Nanotechnology*, **2022**,	28.7	7
16	Spatiotemporal Mapping of a Photocurrent Vortex in Monolayer MoS2 Using Diamond Quantum Sensors. *Physical Review X*, **2020**, 10,	9.1	7
15	Electron Microscopy in Air: Transparent Atomic Membranes and Imaging Modes. *Microscopy and Microanalysis*, **2015**, 21, 1111-1112	0.5	5
14	Strain Accommodation and Coherency in Laterally-Stitched WSe 2 /WS 2 Junctions. *Microscopy and Microanalysis*, **2016**, 22, 870-871	0.5	5
13	Local Electronic Properties of Coherent Single-Layer WS/WSe Lateral Heterostructures. *Nano Letters*, **2021**, 21, 2363-2369	11.5	4
12	Electron Diffraction from a Single Atom and Optimal Signal Detection. *Microscopy and Microanalysis* , **2016**, 22, 846-847	0.5	3
11	Resist-Free Lithography for Monolayer Transition Metal Dichalcogenides.. *Nano Letters*, **2022**,	11.5	3

List of Publications

10	SynCells: A 60 µm × 60 µm Electronic Platform with Remote Actuation for Sensing Applications in Constrained Environments. *ACS Nano*, **2021**, 15, 8803-8812	16.7	2
9	Breaking Friedel's Law in Polar Two Dimensional Materials. *Microscopy and Microanalysis*, **2017**, 23, 1738-1739	0.5	1
8	Diffraction Mapping with a Pixelated Detector to Quantify Crystal Orientation in 3D Structures Made from 2D Materials. *Microscopy and Microanalysis*, **2019**, 25, 1956-1957	0.5	
7	Atomic Imaging Across Strain Boundaries in Bilayer Graphene with ADF-STEM and DF-TEM. *Microscopy and Microanalysis*, **2014**, 20, 1058-1059	0.5	
6	Picometer-Precision Strain Mapping of Two-Dimensional Heterostructures using an Electron Microscope Pixel Array Detector (EMPAD). *Microscopy and Microanalysis*, **2017**, 23, 1712-1713	0.5	
5	Uncovering Atomic and Nano-scale Deformations in Two-dimensional Lateral Heterojunctions. *Microscopy and Microanalysis*, **2020**, 26, 1630-1631	0.5	
4	Mapping the 3D Structure of Corrugated Cardboard MoS2. *Microscopy and Microanalysis*, **2018**, 24, 1584-1585	0.5	
3	Real-space Demonstration of 0.4 Angstrom Resolution at 80 keV via Electron Ptychography with a High Dynamic Range Pixel Array Detector. *Microscopy and Microanalysis*, **2018**, 24, 194-195	0.5	
2	Mapping Strain and Relaxation in 2D Heterojunctions with Sub-picometer Precision. *Microscopy and Microanalysis*, **2018**, 24, 1588-1589	0.5	
1	Atomically Thin, Optically Isotropic Films with 3D Nanotopography. *Nano Letters*, **2021**, 21, 7291-7297	11.5	