Sanghyeon Park

List of Publications by Citations

66 papers	2,809 citations	25 h-index	52 g-index
72 ext. papers	3,305 ext. citations	10.7 avg, IF	5.27 L-index

#	Paper	IF	Citations
66	Enhancing the conductivity of transparent graphene films via doping. *Nanotechnology*, **2010**, 21, 285205	3.4	301
65	Graphene as transparent conducting electrodes in organic photovoltaics: studies in graphene morphology, hole transporting layers, and counter electrodes. *Nano Letters*, **2012**, 12, 133-40	11.5	269
64	Doped graphene electrodes for organic solar cells. *Nanotechnology*, **2010**, 21, 505204	3.4	216
63	Flexible graphene electrode-based organic photovoltaics with record-high efficiency. *Nano Letters*, **2014**, 14, 5148-54	11.5	179
62	Graphene cathode-based ZnO nanowire hybrid solar cells. *Nano Letters*, **2013**, 13, 233-9	11.5	179
61	Ion doping of graphene for high-efficiency heterojunction solar cells. *Nanoscale*, **2013**, 5, 1945-8	7.7	119
60	Highly Flexible and Efficient All-Polymer Solar Cells with High-Viscosity Processing Polymer Additive toward Potential of Stretchable Devices. *Angewandte Chemie - International Edition*, **2018**, 57, 13277-13282	16.4	117
59	Direct Observation of Wet Biological Samples by Graphene Liquid Cell Transmission Electron Microscopy. *Nano Letters*, **2015**, 15, 4737-44	11.5	105
58	The use of an n-type macromolecular additive as a simple yet effective tool for improving and stabilizing the performance of organic solar cells. *Energy and Environmental Science*, **2016**, 9, 3464-3471	35.4	92
57	In-situ local phase-transitioned MoSe in LaSrCoO heterostructure and stable overall water electrolysis over 1000 hours. *Nature Communications*, **2019**, 10, 1723	17.4	91
56	Anomalous Behaviors of Graphene Transparent Conductors in Graphene–Silicon Heterojunction Solar Cells. *Advanced Energy Materials*, **2013**, 3, 1029-1034	21.8	90
55	Flexible Organic Solar Cells Over 15% Efficiency with Polyimide-Integrated Graphene Electrodes. *Joule*, **2020**, 4, 1021-1034	27.8	73
54	Interface engineering of graphene for universal applications as both anode and cathode in organic photovoltaics. *Scientific Reports*, **2013**, 3, 1581	4.9	73
53	Organic solar cells with graphene electrodes and vapor printed poly(3,4-ethylenedioxythiophene) as the hole transporting layers. *ACS Nano*, **2012**, 6, 6370-7	16.7	69
52	Development of Annealing-Free, Solution-Processable Inverted Organic Solar Cells with N-Doped Graphene Electrodes using Zinc Oxide Nanoparticles. *Nano Letters*, **2018**, 18, 1337-1343	11.5	65
51	Application of solvent modified PEDOT:PSS to graphene electrodes in organic solar cells. *Nanoscale* , **2013**, 5, 8934-9	7.7	56
50	Graphene-Based Gas Sensors with High Sensitivity and Minimal Sensor-to-Sensor Variation. *ACS Applied Nano Materials*, **2020**, 3, 2257-2265	5.6	48

49	Suppressed Interdiffusion and Degradation in Flexible and Transparent Metal Electrode-Based Perovskite Solar Cells with a Graphene Interlayer. *Nano Letters*, **2020**, 20, 3718-3727	11.5	40
48	Control of emergent properties at a correlated oxide interface with graphene. *Nano Letters*, **2015**, 15, 1627-34	11.5	38
47	Locking-In Optimal Nanoscale Structure Induced by Naphthalenediimide-Based Polymeric Additive Enables Efficient and Stable Inverted Polymer Solar Cells. *ACS Nano*, **2017**, 11, 7409-7415	16.7	34
46	Amphiphilic Graft Copolymers as a Versatile Binder for Various Electrodes of High-Performance Lithium-Ion Batteries. *Small*, **2016**, 12, 3119-27	11	33
45	Stepwise heating in Stille polycondensation toward no batch-to-batch variations in polymer solar cell performance. *Nature Communications*, **2018**, 9, 1867	17.4	33
44	Ultrasensitive Plasmon-Free Surface-Enhanced Raman Spectroscopy with Femtomolar Detection Limit from 2D van der Waals Heterostructure. *Nano Letters*, **2020**, 20, 1620-1630	11.5	31
43	An Alternative Hole Transport Layer for Both ITO- and Graphene-Based Organic Solar Cells. *Advanced Energy Materials*, **2014**, 4, 1301280	21.8	25
42	High-Crystalline Monolayer Transition Metal Dichalcogenides Films for Wafer-Scale Electronics. *ACS Nano*, **2021**, 15, 3038-3046	16.7	25
41	Highly efficient and robust noble-metal free bifunctional water electrolysis catalyst achieved via complementary charge transfer. *Nature Communications*, **2021**, 12, 4606	17.4	25
40	In-situ coalesced vacancies on MoSe2 mimicking noble metal: Unprecedented Tafel reaction in hydrogen evolution. *Nano Energy*, **2019**, 63, 103846	17.1	24
39	Phase Engineering of Transition Metal Dichalcogenides with Unprecedentedly High Phase Purity, Stability, and Scalability via Molten-Metal-Assisted Intercalation. *Advanced Materials*, **2020**, 32, e2001889	24	24
38	High-efficiency exfoliation of large-area mono-layer graphene oxide with controlled dimension. *Scientific Reports*, **2017**, 7, 16414	4.9	22
37	High-Performance Inverted Perovskite Solar Cells with Operational Stability via n-Type Small Molecule Additive-Assisted Defect Passivation. *Advanced Energy Materials*, **2020**, 10, 2001920	21.8	22
36	Nafion-Mediated Liquid-Phase Exfoliation of Transition Metal Dichalcogenides and Direct Application in Hydrogen Evolution Reaction. *Chemistry of Materials*, **2018**, 30, 4658-4666	9.6	21
35	Study of Cooling Rate on the Growth of Graphene via Chemical Vapor Deposition. *Chemistry of Materials*, **2017**, 29, 4202-4208	9.6	19
34	Flexible Indium-Tin Oxide Crystal on Plastic Substrates Supported by Graphene Monolayer. *Scientific Reports*, **2017**, 7, 3131	4.9	18
33	Improved interface control for high-performance graphene-based organic solar cells. *2D Materials*, **2017**, 4, 045004	5.9	17
32	A highly robust and stable graphene-encapsulated Cu-grid hybrid transparent electrode demonstrating superior performance in organic solar cells. *Journal of Materials Chemistry A*, **2018**, 6, 24805-24813	13	16

31	Demonstration of a Subthreshold FPGA Using Monolithically Integrated Graphene Interconnects. *IEEE Transactions on Electron Devices*, **2013**, 60, 383-390	2.9	14
30	Toward Green Synthesis of Graphene Oxide Using Recycled Sulfuric Acid via Couette-Taylor Flow. *ACS Omega*, **2017**, 2, 186-192	3.9	13
29	Enhanced Charge Transport via Metallic 1T Phase Transition Metal Dichalcogenides-Mediated Hole Transport Layer Engineering for Perovskite Solar Cells. *ChemNanoMat*, **2019**, 5, 1050-1058	3.5	12
28	The effect of the graphene integration process on the performance of graphene-based Schottky junction solar cells. *Journal of Materials Chemistry A*, **2017**, 5, 18716-18724	13	12
27	Site-Selective and van der Waals Epitaxial Growth of Rhenium Disulfide on Graphene. *Small*, **2019**, 15, e1804133	11	12
26	Strategy for large-scale monolithic Perovskite/Silicon tandem solar cell: A review of recent progress. *EcoMat*, **2021**, 3, e12084	9.4	12
25	Enhancing the Performance of Surface Plasmon Resonance Biosensor via Modulation of Electron Density at the Graphene□old Interface. *Advanced Materials Interfaces*, **2018**, 5, 1800433	4.6	10
24	Bio-Inspired Catecholamine-Derived Surface Modifier for Graphene-Based Organic Solar Cells. *ACS Applied Energy Materials*, **2018**, 1, 6463-6468	6.1	9
23	Nitrogen-doped tin oxide electron transport layer for stable perovskite solar cells with efficiency over 23%		9
22	Multifaceted Role of a Dibutylhydroxytoluene Processing Additive in Enhancing the Efficiency and Stability of Planar Perovskite Solar Cells. *ACS Applied Materials & Interfaces*, **2019**, 11, 38828-38837	9.5	7
21	A Low-Energy Electron Beam Does Not Damage Single-Walled Carbon Nanotubes and Graphene. *Journal of Physical Chemistry Letters*, **2016**, 7, 4739-4743	6.4	7
20	Reduction of water-molecule-induced current-voltage hysteresis in graphene field effect transistor with semi-dry transfer using flexible supporter. *Journal of Applied Physics*, **2019**, 125, 184302	2.5	6
19	Defect-Induced Atomic Doping in Transition Metal Dichalcogenides via Liquid-Phase Synthesis toward Efficient Electrochemical Activity. *ACS Nano*, **2020**,	16.7	6
18	Zwitterionic Conjugated Surfactant Functionalization of Graphene with pH-Independent Dispersibility: An Efficient Electron Mediator for the Oxygen Evolution Reaction in Acidic Media. *Small*, **2020**, 16, e1906635	11	6
17	Highly Flexible and Efficient All-Polymer Solar Cells with High-Viscosity Processing Polymer Additive toward Potential of Stretchable Devices. *Angewandte Chemie*, **2018**, 130, 13461-13466	3.6	6
16	Solution-Processed Molybdenum Oxide with Hydroxyl Radical-Induced Oxygen Vacancy as an Efficient and Stable Interfacial Layer for Organic Solar Cells. *Solar Rrl*, **2020**, 4, 1900420	7.1	5
15	Toward All-Vacuum-Processable Perovskite Solar Cells with High Efficiency, Stability, and Scalability Enabled by Fluorinated Spiro-OMeTAD through Thermal Evaporation. *Solar Rrl*, **2021**, 5, 2100415	7.1	5
14	A thermodynamic approach toward selective and reversible sub-ppm H2S sensing using ultra-small CuO nanorods impregnated with Nb2O5 nanoparticles. *Journal of Materials Chemistry A*, **2021**, 9, 17425-17433	13	5

13	N-doped graphene quantum dots as charge-transfer-bridge at LaSrCoO/MoSe2 heterointerfaces for enhanced water splitting. *Nano Energy*, **2022**, 96, 107117	17.1	5
12	Breathable Artificial Interphase for Dendrite-Free and Chemo-Resistive Lithium Metal Anode. *Small* , **2021**, e2105724	11	5
11	Size Fractionation of Graphene Oxide via Solvent-Mediated Consecutive Charge Manipulation and Investigation of the Size Effect as Hole Transporting Layer in Perovskite Solar Cells. *ChemNanoMat*, **2019**, 5, 776-783	3.5	4
10	Graphene-Assisted Zwitterionic Conjugated Polycyclic Molecular Interfacial Layer Enables Highly Efficient and Stable Inverted Perovskite Solar Cells. *Chemistry of Materials*, **2021**, 33, 5563-5571	9.6	4
9	Improved charge transport via WSe2-mediated hole transporting layer toward efficient organic solar cells. *Semiconductor Science and Technology*, **2018**, 33, 125020	1.8	4
8	Unveiling the Direct Correlation between the CVD-Grown Graphene and the Growth Template. *Journal of Nanomaterials*, **2018**, 2018, 1-6	3.2	3
7	Rational design and observation of the tight interface between graphene and ligand protected nanocrystals. *Physical Chemistry Chemical Physics*, **2018**, 21, 329-335	3.6	2
6	Graphene Antiadhesion Layer for the Effective Peel-and-Pick Transfer of Metallic Electrodes toward Flexible Electronics. *ACS Applied Materials & Interfaces*, **2021**, 13, 22000-22008	9.5	2
5	Probing sub-diffraction optical confinement via the polarized Raman spectroscopy of a single-walled carbon nanotube. *Nanoscale*, **2018**, 10, 1030-1037	7.7	2
4	Output signals control of triboelectric nanogenerator with metal-dielectric-metal configuration through high resistance grounded systems. *Nano Energy*, **2022**, 95, 107023	17.1	1
3	Amorphous Alumina Film Robust under Cyclic Deformation: a Highly Impermeable and a Highly Flexible Encapsulation Material. *ACS Applied Materials & Interfaces*, **2021**, 13, 46894-46901	9.5	1
2	Liquid Precursor-Mediated Epitaxial Growth of Highly Oriented 2D van der Waals Semiconductors toward High-Performance Electronics. *ACS Applied Electronic Materials*, **2021**, 3, 5528-5536	4	0
1	Wafer-Scale Two-Dimensional Molybdenum Diselenide Phototransistor Array via Liquid-Precursor-Assisted Chemical Vapor Deposition. *Advanced Optical Materials*, **2022**, 10, 2101492	8.1	0