Hyeon-Jin, Shin

List of Publications by Year
in descending order

77 papers	9,804 citations	101543 36 h-index	74163 75 g-index
80 all docs	80 docs citations	80 times ranked	14497 citing authors

#	Article	IF	Citations
1	Efficient Reduction of Graphite Oxide by Sodium Borohydride and Its Effect on Electrical Conductance. Advanced Functional Materials, 2009, 19, 1987-1992.	14.9	2,059
2	Synthesis of Largeâ€Area Graphene Layers on Polyâ€Nickel Substrate by Chemical Vapor Deposition: Wrinkle Formation. Advanced Materials, 2009, 21, 2328-2333.	21.0	814
3	Fermi Level Pinning at Electrical Metal Contacts of Monolayer Molybdenum Dichalcogenides. ACS Nano, 2017, 11, 1588-1596.	14.6	618
4	Promises and prospects of two-dimensional transistors. Nature, 2021, 591, 43-53.	27.8	548
5	Large-Scale Synthesis of High-Quality Hexagonal Boron Nitride Nanosheets for Large-Area Graphene Electronics. Nano Letters, 2012, 12, 714-718.	9.1	502
6	Transparent Flexible Graphene Triboelectric Nanogenerators. Advanced Materials, 2014, 26, 3918-3925.	21.0	391
7	Influence of Copper Morphology in Forming Nucleation Seeds for Graphene Growth. Nano Letters, 2011, 11, 4144-4148.	9.1	373
8	Layer-by-Layer Doping of Few-Layer Graphene Film. ACS Nano, 2010, 4, 4595-4600.	14.6	293
9	Highâ€Performance Triboelectric Nanogenerators Based on Electrospun Polyvinylidene Fluorideâ€“Silver Nanowire Composite Nanofibers. Advanced Functional Materials, 2018, 28, 1703778.	14.9	291
10	Fully Rollable Transparent Nanogenerators Based on Graphene Electrodes. Advanced Materials, 2010, 22, 2187-2192.	21.0	290
11	Vertical MoS₂ Double-Layer Memristor with Electrochemical Metallization as an Atomic-Scale Synapse with Switching Thresholds Approaching 100 mV. Nano Letters, 2019, 19, 2411-2417.	9.1	288
12	Control of Electronic Structure of Graphene by Various Dopants and Their Effects on a Nanogenerator. Journal of the American Chemical Society, 2010, 132, 15603-15609.	13.7	247
13	Fermi Level Engineering of Single-Walled Carbon Nanotubes by AuCl₃ Doping. Journal of the American Chemical Society, 2008, 130, 12757-12761.	13.7	238
14	Reduction-Controlled Viologen in Bisolvent as an Environmentally Stable n-Type Dopant for Carbon Nanotubes. Journal of the American Chemical Society, 2009, 131, 327-331.	13.7	196
15	Triboelectric Series of 2D Layered Materials. Advanced Materials, 2018, 30, e1801210.	21.0	179
16	Tailoring Electronic Structures of Carbon Nanotubes by Solvent with Electron-Donating and -Withdrawing Groups. Journal of the American Chemical Society, 2008, 130, 2062-2066.	13.7	178
17	Ultralow-dielectric-constant amorphous boron nitride. Nature, 2020, 582, 511-514.	27.8	173
18	Synthesis of Multilayer Graphene Balls by Carbon Segregation from Nickel Nanoparticles. ACS Nano, 2012, 6, 6803-6811.	14.6	160

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19	Refractive index engineering of transparent ZrO2â€“polydimethylsiloxane nanocomposites. Journal of Materials Chemistry, 2008, 18, 1751.	6.7	123
20	Functionalization and Dispersion of Hexagonal Boron Nitride (hâ€BN) Nanosheets Treated with Inorganic Reagents. Chemistry - an Asian Journal, 2012, 7, 554-560.	3.3	116
21	Two-dimensional materials prospects for non-volatile spintronic memories. Nature, 2022, 606, 663-673.	27.8	116
22	An Atomically Thin Optoelectronic Machine Vision Processor. Advanced Materials, 2020, 32, e2002431.	21.0	111
23	Controlling work function of reduced graphite oxide with Au-ion concentration. Chemical Physics Letters, 2009, 475, 91-95.	2.6	104
24	Control of Triboelectrification by Engineering Surface Dipole and Surface Electronic State. ACS Applied Materials & Interfaces, 2016, 8, 18519-18525.	8.0	100
25	Transferâ€Free Growth of Fewâ€Layer Graphene by Selfâ€Assembled Monolayers. Advanced Materials, 2011, 23, 4392-4397.	21.0	79
26	Highâ€Throughput Growth of Waferâ€Scale Monolayer Transition Metal Dichalcogenide via Vertical Ostwald Ripening. Advanced Materials, 2020, 32, e2003542.	21.0	69
27	Doping strategy of carbon nanotubes with redox chemistry. New Journal of Chemistry, 2010, 34, 2183.	2.8	63
28	Selective growth of ZnO nanorods on SiO2/Si substrates using a graphene buffer layer. Nano Research, 2011, 4, 440-447.	10.4	63
29	Restorable Type Conversion of Carbon Nanotube Transistor Using Pyrolytically Controlled Antioxidizing Photosynthesis Coenzyme. Advanced Functional Materials, 2009, 19, 2553-2559.	14.9	59
30	Transparent Organic P-Dopant in Carbon Nanotubes: Bis(trifluoromethanesulfonyl)imide. ACS Nano, 2010, 4, 6998-7004.	14.6	56
31	Nanoscale Networked Single-Walled Carbon-Nanotube Electrodes for Transparent Flexible Nanogenerators. Journal of Physical Chemistry C, 2010, 114, 1379-1384.	3.1	56
32	Clean transfer of graphene and its effect on contact resistance. Applied Physics Letters, 2013, 103, .	3.3	56
33	Quantum confinement-induced tunable exciton states in graphene oxide. Scientific Reports, 2013, 3, 2250.	3.3	52
34	Graphene surface induced specific self-assembly of poly(3-hexylthiophene) for nanohybrid optoelectronics: from first-principles calculation to experimental characterizations. Soft Matter, 2013, 9, 5355.	2.7	50
35	Hexagonal boron nitride assisted growth of stoichiometric Al 2 O 3 dielectric on graphene for triboelectric nanogenerators. Nano Energy, 2015, 12, 556-566.	16.0	43
36	Selective Oxidation on Metallic Carbon Nanotubes by Halogen Oxoanions. Journal of the American Chemical Society, 2008, 130, 2610-2616.	13.7	40

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37	High quality graphene-semiconducting oxide heterostructure for inverted organic photovoltaics. Journal of Materials Chemistry, 2012, 22, 13032.	6.7	38
38	Thermal Conversion of Electronic and Electrical Properties of AuCl₃-Doped Single-Walled Carbon Nanotubes. ACS Nano, 2011, 5, 1353-1359.	14.6	36
39	UV-LIGHT-ASSISTED OXIDATIVE sp3 HYBRIDIZATION OF GRAPHENE. Nano, 2011, 06, 409-418.	1.0	36
40	Control of density and LSPR of Au nanoparticles on graphene. Nanotechnology, 2013, 24, 275702.	2.6	36
41	POLY(ETHYLENE CO-VINYL ACETATE)-ASSISTED ONE-STEP TRANSFER OF ULTRA-LARGE GRAPHENE. Nano, 2011, 06, 59-65.	1.0	35
42	Nanopillar InGaN/GaN light emitting diodes integrated with homogeneous multilayer graphene electrodes. Journal of Materials Chemistry, 2011, 21, 17688.	6.7	35
43	Two-Dimensional Materials Inserted at the Metal/Semiconductor Interface: Attractive Candidates for Semiconductor Device Contacts. Nano Letters, 2018, 18, 4878-4884.	9.1	34
44	Design of a Polymerâ€“Carbon Nanohybrid Junction by Interface Modeling for Efficient Printed Transistors. ACS Nano, 2012, 6, 662-670.	14.6	29
45	Influence of Cu crystallographic orientation on electron transport in graphene. Applied Physics Letters, 2013, 102, .	3.3	26
46	Crack-Release Transfer Method of Wafer-Scale Grown Graphene Onto Large-Area Substrates. ACS Applied Materials & Interfaces, 2014, 6, 12588-12593.	8.0	25
47	Potential role of motion for enhancing maximum output energy of triboelectric nanogenerator. APL Materials, 2017, 5, 074107.	5.1	25
48	Nanocrystallineâ€Grapheneâ€Tailored Hexagonal Boron Nitride Thin Films. Angewandte Chemie - International Edition, 2014, 53, 11493-11497.	13.8	24
49	Precise Layer Control and Electronic State Modulation of a Transition Metal Dichalcogenide via Phaseâ€Transitionâ€Induced Growth. Advanced Materials, 2022, 34, e2103286.	21.0	21
50	Formation of Hexagonal Boron Nitride by Metal Atomic Vacancy-Assisted Bâ€“N Molecular Diffusion. ACS Nano, 2015, 9, 633-638.	14.6	19
51	Suppressing Ïâ€“Ï€ stacking interactions for enhanced solid-state emission of flat aromatic moleculesviaedge functionalization with picket-fence-type groups. Journal of Materials Chemistry C, 2020, 8, 17289-17296.	5.5	16
52	Highly Exfoliated Graphite Fluoride as a Precursor for Graphene Fluoride Dispersions and Films. Croatica Chemica Acta, 0, , 107-112.	0.4	15
53	CMOS-compatible catalytic growth of graphene on a silicon dioxide substrate. Applied Physics Letters, 2016, 109, .	3.3	14
54	Designed Three-Dimensional Freestanding Single-Crystal Carbon Architectures. ACS Nano, 2014, 8, 11657-11665.	14.6	12

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55	Fabrication of Metal/Graphene Hybrid Interconnects by Direct Graphene Growth and Their Integration Properties. Advanced Electronic Materials, 2018, 4, 1700624.	5.1	12
56	Effect of semiconductor polymer backbone structures and side-chain parameters on the facile separation of semiconducting single-walled carbon nanotubes from as-synthesized mixtures. Applied Surface Science, 2018, 429, 264-271.	6.1	11
57	Interfaceâ€Driven Partial Dislocation Formation in 2D Heterostructures. Advanced Materials, 2019, 31, e1807486.	21.0	11
58	Hierarchical organization of Au nanoparticles in a poly(vinyl carbazole) matrix for hybrid electronic devices. Nanotechnology, 2008, 19, 075606.	2.6	10
59	Barrier height control in metal/silicon contacts with atomically thin MoS ₂ and WS ₂ interfacial layers. 2D Materials, 2018, 5, 041004.	4.4	10
60	Low-temperature graphene growth using epochal catalyst of PdCo alloy. Applied Physics Letters, 2011, 99, .	3.3	9
61	Spontaneous Formation of a ZnO Monolayer by the Redox Reaction of Zn on Graphene Oxide. ACS Applied Materials & Interfaces, 2020, 12, 54222-54229.	8.0	9
62	Introduction of an Al Seed Layer for Facile Adsorption of MoCl₅ during Atomic Layer Deposition of MoS₂. Physica Status Solidi (A) Applications and Materials Science, 2020, 217, 1901042.	1.8	6
63	Effect of encapsulation on electronic transport properties of nanoscale Cu(111) films. Scientific Reports, 2019, 9, 3488.	3.3	5
64	Study of selective graphene growth on non-catalytic hetero-substrates. 2D Materials, 2020, 7, 011002.	4.4	5
65	A 200 x 256 Image Sensor Heterogeneously Integrating a 2D Nanomaterial-Based Photo-FET Array and CMOS Time-to-Digital Converters. , 2022, , .		5
66	New Hydrophobic Microporous Dielectric Films Made on the Basis of the CTAB/TSC-2/TEOS Precursor Solution. Molecular Crystals and Liquid Crystals, 2006, 451, 99-106.	0.9	4
67	Synthesis of large-area graphene layers on nickel film by chemical vapor deposition: wrinkle formation. Proceedings of SPIE, 2009, , .	0.8	4
68	Electrical resistivity of atomically smooth single-crystal Cu films. Physical Review B, 2020, 102, .	3.2	4
69	Graphene-Based Etch Resist for Semiconductor Device Fabrication. ACS Applied Nano Materials, 2020, 3, 4635-4641.	5.0	4
70	Surface roughness mediated specularity parameter of thin Cu films. Applied Physics Letters, 2021, 118, .	3.3	4
71	Spatial Control of Quantum Sized Nanocrystal Arrays onto Silicon Wafers. Journal of Nanoscience and Nanotechnology, 2007, 7, 4285-4293.	0.9	3
72	Fabrication of free-standing nanoscale SiN membranes with enhanced burst pressure via improved etching process. Sensors and Actuators A: Physical, 2019, 297, 111538.	4.1	3

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73	Non-specular scattering of carriers from surface defects in thin metal interconnects. Journal of Applied Physics, 2020, 128, .	2.5	3
74	Use of Supercritical CO2 for Preparation of Novel Microporous CTAB/TCS-2/TEOS-Based Dielectric Films. Molecular Crystals and Liquid Crystals, 2006, 460, 75-83.	0.9	2
75	Reply to: On the measured dielectric constant of amorphous boron nitride. Nature, 2021, 590, E8-E10.	27.8	1
76	Conformationalâ€“Induced Doping Effect of Sodium Dodecyl Benzene Sulfonate on Single Walled Carbon Nanotubes. Journal of Nanoscience and Nanotechnology, 2012, 12, 1569-1572.	0.9	0
77	Electrically engineered polymer-carbon hybrid heterojunction for high-performance printed transistors. , 2014, , .		0