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	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
2	A 200 x 256 Image Sensor Heterogeneously Integrating a 2D Nanomaterial-Based Photo-FET Array and CMOS Time-to-Digital Converters. , 2022, , .		5
3	Two-dimensional materials prospects for non-volatile spintronic memories. Nature, 2022, 606, 663-673.	27.8	116
4	Reply to: On the measured dielectric constant of amorphous boron nitride. Nature, 2021, 590, E8-E10.	27.8	1
5	Surface roughness mediated specularity parameter of thin Cu films. Applied Physics Letters, 2021, 118, .	3.3	4
6	Promises and prospects of two-dimensional transistors. Nature, 2021, 591, 43-53.	27.8	548
7	Study of selective graphene growth on non-catalytic hetero-substrates. 2D Materials, 2020, 7, 011002.	4.4	5
8	Electrical resistivity of atomically smooth single-crystal Cu films. Physical Review B, 2020, 102, .	3.2	4
9	An Atomically Thin Optoelectronic Machine Vision Processor. Advanced Materials, 2020, 32, e2002431.	21.0	111
10	Suppressing Ï€â€“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
11	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
12	Highâ€Throughput Growth of Waferâ€Scale Monolayer Transition Metal Dichalcogenide via Vertical Ostwald Ripening. Advanced Materials, 2020, 32, e2003542.	21.0	69
13	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
14	Ultralow-dielectric-constant amorphous boron nitride. Nature, 2020, 582, 511-514.	27.8	173
15	Graphene-Based Etch Resist for Semiconductor Device Fabrication. ACS Applied Nano Materials, 2020, 3, 4635-4641.	5.0	4
16	Non-specular scattering of carriers from surface defects in thin metal interconnects. Journal of Applied Physics, 2020, 128, .	2.5	3
17	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
18	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

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19	Effect of encapsulation on electronic transport properties of nanoscale Cu(111) films. Scientific Reports, 2019, 9, 3488.	3.3	5
20	Interfaceâ€Driven Partial Dislocation Formation in 2D Heterostructures. Advanced Materials, 2019, 31, e1807486.	21.0	11
21	Fabrication of Metal/Graphene Hybrid Interconnects by Direct Graphene Growth and Their Integration Properties. Advanced Electronic Materials, 2018, 4, 1700624.	5.1	12
22	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
23	Highâ€Performance Triboelectric Nanogenerators Based on Electrospun Polyvinylidene Fluorideâ€“Silver Nanowire Composite Nanofibers. Advanced Functional Materials, 2018, 28, 1703778.	14.9	291
24	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
25	Two-Dimensional Materials Inserted at the Metal/Semiconductor Interface: Attractive Candidates for Semiconductor Device Contacts. Nano Letters, 2018, 18, 4878-4884.	9.1	34
26	Triboelectric Series of 2D Layered Materials. Advanced Materials, 2018, 30, e1801210.	21.0	179
27	Fermi Level Pinning at Electrical Metal Contacts of Monolayer Molybdenum Dichalcogenides. ACS Nano, 2017, 11, 1588-1596.	14.6	618
28	Potential role of motion for enhancing maximum output energy of triboelectric nanogenerator. APL Materials, 2017, 5, 074107.	5.1	25
29	CMOS-compatible catalytic growth of graphene on a silicon dioxide substrate. Applied Physics Letters, 2016, 109, .	3.3	14
30	Control of Triboelectrification by Engineering Surface Dipole and Surface Electronic State. ACS Applied Materials & Interfaces, 2016, 8, 18519-18525.	8.0	100
31	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
32	Formation of Hexagonal Boron Nitride by Metal Atomic Vacancy-Assisted Bâ€“N Molecular Diffusion. ACS Nano, 2015, 9, 633-638.	14.6	19
33	Electrically engineered polymer-carbon hybrid heterojunction for high-performance printed transistors. , 2014, , .		0
34	Nanocrystallineâ€Grapheneâ€Tailored Hexagonal Boron Nitride Thin Films. Angewandte Chemie - International Edition, 2014, 53, 11493-11497.	13.8	24
35	Designed Three-Dimensional Freestanding Single-Crystal Carbon Architectures. ACS Nano, 2014, 8, 11657-11665.	14.6	12
36	Transparent Flexible Graphene Triboelectric Nanogenerators. Advanced Materials, 2014, 26, 3918-3925.	21.0	391

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37	Crack-Release Transfer Method of Wafer-Scale Grown Graphene Onto Large-Area Substrates. ACS Applied Materials & Interfaces, 2014, 6, 12588-12593.	8.0	25
38	Control of density and LSPR of Au nanoparticles on graphene. Nanotechnology, 2013, 24, 275702.	2.6	36
39	Clean transfer of graphene and its effect on contact resistance. Applied Physics Letters, 2013, 103, .	3.3	56
40	Quantum confinement-induced tunable exciton states in graphene oxide. Scientific Reports, 2013, 3, 2250.	3.3	52
41	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
42	Influence of Cu crystallographic orientation on electron transport in graphene. Applied Physics Letters, 2013, 102, .	3.3	26
43	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
44	Synthesis of Multilayer Graphene Balls by Carbon Segregation from Nickel Nanoparticles. ACS Nano, 2012, 6, 6803-6811.	14.6	160
45	Design of a Polymerâ€“Carbon Nanohybrid Junction by Interface Modeling for Efficient Printed Transistors. ACS Nano, 2012, 6, 662-670.	14.6	29
46	High quality graphene-semiconducting oxide heterostructure for inverted organic photovoltaics. Journal of Materials Chemistry, 2012, 22, 13032.	6.7	38
47	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
48	Large-Scale Synthesis of High-Quality Hexagonal Boron Nitride Nanosheets for Large-Area Graphene Electronics. Nano Letters, 2012, 12, 714-718.	9.1	502
49	Thermal Conversion of Electronic and Electrical Properties of AuCl₃-Doped Single-Walled Carbon Nanotubes. ACS Nano, 2011, 5, 1353-1359.	14.6	36
50	POLY(ETHYLENE CO-VINYL ACETATE)-ASSISTED ONE-STEP TRANSFER OF ULTRA-LARGE GRAPHENE. Nano, 2011, 06, 59-65.	1.0	35
51	Influence of Copper Morphology in Forming Nucleation Seeds for Graphene Growth. Nano Letters, 2011, 11, 4144-4148.	9.1	373
52	Nanopillar InGaN/GaN light emitting diodes integrated with homogeneous multilayer graphene electrodes. Journal of Materials Chemistry, 2011, 21, 17688.	6.7	35
53	Selective growth of ZnO nanorods on SiO2/Si substrates using a graphene buffer layer. Nano Research, 2011, 4, 440-447.	10.4	63
54	Transferâ€Free Growth of Fewâ€Layer Graphene by Selfâ€Assembled Monolayers. Advanced Materials, 2011, 23, 4392-4397.	21.0	79

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55	Low-temperature graphene growth using epochal catalyst of PdCo alloy. Applied Physics Letters, 2011, 99, .	3.3	9
56	UV-LIGHT-ASSISTED OXIDATIVE sp3 HYBRIDIZATION OF GRAPHENE. Nano, 2011, 06, 409-418.	1.0	36
57	Fully Rollable Transparent Nanogenerators Based on Graphene Electrodes. Advanced Materials, 2010, 22, 2187-2192.	21.0	290
58	Transparent Organic P-Dopant in Carbon Nanotubes: Bis(trifluoromethanesulfonyl)imide. ACS Nano, 2010, 4, 6998-7004.	14.6	56
59	Nanoscale Networked Single-Walled Carbon-Nanotube Electrodes for Transparent Flexible Nanogenerators. Journal of Physical Chemistry C, 2010, 114, 1379-1384.	3.1	56
60	Layer-by-Layer Doping of Few-Layer Graphene Film. ACS Nano, 2010, 4, 4595-4600.	14.6	293
61	Doping strategy of carbon nanotubes with redox chemistry. New Journal of Chemistry, 2010, 34, 2183.	2.8	63
62	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
63	Synthesis of large-area graphene layers on nickel film by chemical vapor deposition: wrinkle formation. Proceedings of SPIE, 2009, , .	0.8	4
64	Restorable Type Conversion of Carbon Nanotube Transistor Using Pyrolytically Controlled Antioxidizing Photosynthesis Coenzyme. Advanced Functional Materials, 2009, 19, 2553-2559.	14.9	59
65	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
66	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
67	Controlling work function of reduced graphite oxide with Au-ion concentration. Chemical Physics Letters, 2009, 475, 91-95.	2.6	104
68	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
69	Refractive index engineering of transparent ZrO2â€“polydimethylsiloxane nanocomposites. Journal of Materials Chemistry, 2008, 18, 1751.	6.7	123
70	Selective Oxidation on Metallic Carbon Nanotubes by Halogen Oxoanions. Journal of the American Chemical Society, 2008, 130, 2610-2616.	13.7	40
71	Fermi Level Engineering of Single-Walled Carbon Nanotubes by AuCl₃ Doping. Journal of the American Chemical Society, 2008, 130, 12757-12761.	13.7	238
72	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

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73	Hierarchical organization of Au nanoparticles in a poly(vinyl carbazole) matrix for hybrid electronic devices. Nanotechnology, 2008, 19, 075606.	2.6	10
74	Spatial Control of Quantum Sized Nanocrystal Arrays onto Silicon Wafers. Journal of Nanoscience and Nanotechnology, 2007, 7, 4285-4293.	0.9	3
75	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
76	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
77	Highly Exfoliated Graphite Fluoride as a Precursor for Graphene Fluoride Dispersions and Films. Croatica Chemica Acta, 0, , 107-112.	0.4	15