Gang Hee Han

List of Publications by Year
in descending order

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Version: 2024-02-01

69 papers	8,691 citations	53794 45 h-index	98798 67 g-index
70 all docs	70 docs citations	70 times ranked	14069 citing authors

#	Article	IF	Citations
1	Recent development of two-dimensional transition metal dichalcogenides and their applications. Materials Today, 2017, 20, 116-130.	14.2	1,852
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	Influence of Copper Morphology in Forming Nucleation Seeds for Graphene Growth. Nano Letters, 2011, 11, 4144-4148.	9.1	373
4	Probing graphene grain boundaries with optical microscopy. Nature, 2012, 490, 235-239.	27.8	352
5	Layer-by-Layer Doping of Few-Layer Graphene Film. ACS Nano, 2010, 4, 4595-4600.	14.6	293
6	Seeded growth of highly crystalline molybdenum disulphide monolayers at controlled locations. Nature Communications, 2015, 6, 6128.	12.8	259
7	van der Waals Metallic Transition Metal Dichalcogenides. Chemical Reviews, 2018, 118, 6297-6336.	47.7	252
8	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
9	Fano Resonance and Spectrally Modified Photoluminescence Enhancement in Monolayer MoS₂ Integrated with Plasmonic Nanoantenna Array. Nano Letters, 2015, 15, 3646-3653.	9.1	246
10	Heat Dissipation of Transparent Graphene Defoggers. Advanced Functional Materials, 2012, 22, 4819-4826.	14.9	238
11	Biexciton Emission from Edges and Grain Boundaries of Triangular WS₂ Monolayers. ACS Nano, 2016, 10, 2399-2405.	14.6	220
12	Large Work Function Modulation of Monolayer MoS₂ by Ambient Gases. ACS Nano, 2016, 10, 6100-6107.	14.6	188
13	Contact resistance between metal and carbon nanotube interconnects: Effect of work function and wettability. Applied Physics Letters, 2009, 95, .	3.3	184
14	Misorientation-angle-dependent electrical transport across molybdenum disulfide grain boundaries. Nature Communications, 2016, 7, 10426.	12.8	172
15	Continuous Growth of Hexagonal Graphene and Boron Nitride In-Plane Heterostructures by Atmospheric Pressure Chemical Vapor Deposition. ACS Nano, 2013, 7, 10129-10138.	14.6	170
16	Synthesis of Centimeter-Scale Monolayer Tungsten Disulfide Film on Gold Foils. ACS Nano, 2015, 9, 5510-5519.	14.6	166
17	Small Hysteresis Nanocarbon-Based Integrated Circuits on Flexible and Transparent Plastic Substrate. Nano Letters, 2011, 11, 1344-1350.	9.1	142
18	Frictional Behavior of Atomically Thin Sheets: Hexagonal-Shaped Graphene Islands Grown on Copper by Chemical Vapor Deposition. ACS Nano, 2014, 8, 5010-5021.	14.6	136

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19	Scalable Production of Highly Sensitive Nanosensors Based on Graphene Functionalized with a Designed G Protein-Coupled Receptor. Nano Letters, 2014, 14, 2709-2714.	9.1	105
20	Photochemical Reaction in Monolayer MoS₂ via Correlated Photoluminescence, Raman Spectroscopy, and Atomic Force Microscopy. ACS Nano, 2016, 10, 5230-5236.	14.6	101
21	Stranskiâ€“Krastanov and Volmerâ€“Weber CVD Growth Regimes To Control the Stacking Order in Bilayer Graphene. Nano Letters, 2016, 16, 6403-6410.	9.1	95
22	Laser Thinning for Monolayer Graphene Formation: Heat Sink and Interference Effect. ACS Nano, 2011, 5, 263-268.	14.6	94
23	Characterization of the structural defects in CVD-grown monolayered MoS₂using near-field photoluminescence imaging. Nanoscale, 2015, 7, 11909-11914.	5.6	92
24	Semiconductorâ€“Insulatorâ€“Semiconductor Diode Consisting of Monolayer MoS₂, h-BN, and GaN Heterostructure. ACS Nano, 2015, 9, 10032-10038.	14.6	88
25	Thickness-dependent in-plane thermal conductivity of suspended MoS₂ grown by chemical vapor deposition. Nanoscale, 2017, 9, 2541-2547.	5.6	86
26	Transferâ€Free Growth of Fewâ€Layer Graphene by Selfâ€Assembled Monolayers. Advanced Materials, 2011, 23, 4392-4397.	21.0	79
27	Electron Excess Doping and Effective Schottky Barrier Reduction on the MoS₂/h-BN Heterostructure. Nano Letters, 2016, 16, 6383-6389.	9.1	78
28	Metalâ€“Insulatorâ€“Semiconductor Diode Consisting of Two-Dimensional Nanomaterials. Nano Letters, 2016, 16, 1858-1862.	9.1	74
29	Optical Gain in MoS₂ via Coupling with Nanostructured Substrate: Fabryâ€“Perot Interference and Plasmonic Excitation. ACS Nano, 2016, 10, 8192-8198.	14.6	69
30	Vertically Conductive MoS₂ Spiral Pyramid. Advanced Materials, 2016, 28, 7723-7728.	21.0	63
31	Simultaneous Hosting of Positive and Negative Trions and the Enhanced Direct Band Emission in MoSe₂/MoS₂ Heterostacked Multilayers. ACS Nano, 2016, 10, 6211-6219.	14.6	62
32	Graphene/Substrate Charge Transfer Characterized by Inverse Photoelectron Spectroscopy. Journal of Physical Chemistry C, 2010, 114, 21618-21624.	3.1	61
33	Two-dimensional membrane as elastic shell with proof on the folds revealed by three-dimensional atomic mapping. Nature Communications, 2015, 6, 8935.	12.8	59
34	Visualizing Point Defects in Transition-Metal Dichalcogenides Using Optical Microscopy. ACS Nano, 2016, 10, 770-777.	14.6	58
35	Junction-Structure-Dependent Schottky Barrier Inhomogeneity and Device Ideality of Monolayer MoS₂ Field-Effect Transistors. ACS Applied Materials & Interfaces, 2017, 9, 11240-11246.	8.0	57
36	Load-Dependent Friction Hysteresis on Graphene. ACS Nano, 2016, 10, 5161-5168.	14.6	56

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37	Role of alkali metal promoter in enhancing lateral growth of monolayer transition metal dichalcogenides. Nanotechnology, 2017, 28, 36LT01.	2.6	56
38	Selective Amplification of the Primary Exciton in a<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:mi>Mo</mml:mi><mml:msub><mml:mi mathvariant="normal">S</mml:mi><mml:mn>2</mml:mn></mml:msub></mml:mrow></mml:math>Monolayer. Physical Review Letters, 2015, 115, 226801.	7.8	54
39	LARGE-AREA GRAPHENE-BASED FLEXIBLE TRANSPARENT CONDUCTING FILMS. Nano, 2009, 04, 83-90.	1.0	50
40	Efficient Excitonâ€“Plasmon Conversion in Ag Nanowire/Monolayer MoS₂ Hybrids: Direct Imaging and Quantitative Estimation of Plasmon Coupling and Propagation. Advanced Optical Materials, 2015, 3, 943-947.	7.3	48
41	Spectroscopic Visualization of Grain Boundaries of Monolayer Molybdenum Disulfide by Stacking Bilayers. ACS Nano, 2015, 9, 11042-11048.	14.6	47
42	Enhanced Light Emission from Monolayer Semiconductors by Forming Heterostructures with ZnO Thin Films. ACS Applied Materials & Interfaces, 2016, 8, 28809-28815.	8.0	47
43	Edge Contact for Carrier Injection and Transport in MoS₂ Field-Effect Transistors. ACS Nano, 2019, 13, 13169-13175.	14.6	47
44	DNA-decorated graphene nanomesh for detection of chemical vapors. Applied Physics Letters, 2013, 103, 183110.	3.3	45
45	Scalable arrays of chemical vapor sensors based on DNA-decorated graphene. Nano Research, 2014, 7, 95-103.	10.4	45
46	Near-field spectral mapping of individual exciton complexes of monolayer WS₂correlated with local defects and charge population. Nanoscale, 2017, 9, 2272-2278.	5.6	44
47	Synthesis of Edge-Closed Graphene Ribbons with Enhanced Conductivity. ACS Nano, 2010, 4, 5480-5486.	14.6	41
48	Modulating Electronic Properties of Monolayer MoS₂ via Electron-Withdrawing Functional Groups of Graphene Oxide. ACS Nano, 2016, 10, 10446-10453.	14.6	41
49	Observation of Charge Transfer in Heterostructures Composed of MoSe₂ Quantum Dots and a Monolayer of MoS₂ or WSe₂. Journal of Physical Chemistry C, 2017, 121, 1997-2004.	3.1	41
50	Graphene/Carbon Nanotube Hybridâ€Based Transparent 2D Optical Array. Advanced Materials, 2011, 23, 3809-3814.	21.0	37
51	Understanding Coulomb Scattering Mechanism in Monolayer MoS₂ Channel in the Presence of h-BN Buffer Layer. ACS Applied Materials & Interfaces, 2017, 9, 5006-5013.	8.0	37
52	UV-LIGHT-ASSISTED OXIDATIVE sp3 HYBRIDIZATION OF GRAPHENE. Nano, 2011, 06, 409-418.	1.0	36
53	POLY(ETHYLENE CO-VINYL ACETATE)-ASSISTED ONE-STEP TRANSFER OF ULTRA-LARGE GRAPHENE. Nano, 2011, 06, 59-65.	1.0	35
54	Integrated Freestanding Twoâ€dimensional Transition Metal Dichalcogenides. Advanced Materials, 2017, 29, 1700308.	21.0	33

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55	Absorption dichroism of monolayer 1Tâ€²-MoTe ₂ in visible range. 2D Materials, 2016, 3, 031010.	4.4	32
56	Simple Chemical Treatment to n-Dope Transition-Metal Dichalcogenides and Enhance the Optical and Electrical Characteristics. ACS Applied Materials & Interfaces, 2017, 9, 11950-11958.	8.0	31
57	Band-gap engineering in chemically conjugated bilayer graphene:Ab initiocalculations. Physical Review B, 2012, 85, .	3.2	29
58	Soft Coulomb gap and asymmetric scaling towards metal-insulator quantum criticality in multilayer MoS2. Nature Communications, 2018, 9, 2052.	12.8	27
59	Optical Arrays: Graphene/Carbon Nanotube Hybrid-Based Transparent 2D Optical Array (Adv. Mater.) Tj ETQq1 1 0.784314 rgBT /Over	21.0	25
60	Dependence of Raman and absorption spectra of stacked bilayer MoS_2 on the stacking orientation. Optics Express, 2016, 24, 21551.	3.4	18
61	CRITERIA FOR PRODUCING YARNS FROM VERTICALLY ALIGNED CARBON NANOTUBES. Nano, 2010, 05, 31-38.	1.0	14
62	Anomalous Conductance near Percolative Metalâ€“Insulator Transition in Monolayer MoS2 at Low Voltage Regime. ACS Nano, 2019, 13, 6631-6637.	14.6	11
63	Quantum critical scaling for finite-temperature Mott-like metal-insulator crossover in few-layered <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:msub><mml:mi>MoS</mml:mi><mml:mn>2</mml:mn></ Physical Review B, 2020, 102, .	3.2	11
64	Low-temperature graphene growth using epochal catalyst of PdCo alloy. Applied Physics Letters, 2011, 99, .	3.3	9
65	Efficient Synthesis of Individual Single-Walled Carbon Nanotube by Water-Based Catalyst with Poly(vinylpyrrolidone). Journal of Nanoscience and Nanotechnology, 2008, 8, 329-334.	0.9	6
66	Locally enhanced lightâ€“matter interaction of MoS2 monolayers at density-controllable nanogrooves of template-stripped Ag films. Current Applied Physics, 2022, 33, 59-65.	2.4	6
67	Synthesis of large-area graphene layers on nickel film by chemical vapor deposition: wrinkle formation. Proceedings of SPIE, 2009, , .	0.8	4
68	Schottky barrier engineering in carbon nanotube with various metal electrodes. , 2007, , .		3
69	MoS<inf>2</inf> monolayers for propagating plasmon emitter and detector in long range. , 2015, , .		0