Kwanpyo Kim

List of Publications by Year
in descending order

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95	7,788	109137	49773
papers	citations	35 h-index	87 g-index

98	98	98	13172
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	High-Resolution EM of Colloidal Nanocrystal Growth Using Graphene Liquid Cells. Science, 2012, 336, 61-64.	6.0	989
2	An atomic-resolution nanomechanical mass sensor. Nature Nanotechnology, 2008, 3, 533-537.	15.6	944
3	Highly Skinâ€Conformal Microhairy Sensor for Pulse Signal Amplification. Advanced Materials, 2015, 27, 634-640.	11.1	621
4	Grain Boundary Mapping in Polycrystalline Graphene. ACS Nano, 2011, 5, 2142-2146.	7.3	566
5	Raman Spectroscopy Study of Rotated Double-Layer Graphene: Misorientation-Angle Dependence of Electronic Structure. Physical Review Letters, 2012, 108, 246103.	2.9	486
6	Multiply folded graphene. Physical Review B, 2011, 83, .	1.1	269
7	Electrical Control of Optical Plasmon Resonance with Graphene. Nano Letters, 2012, 12, 5598-5602.	4.5	266
8	Selective metal deposition at graphene line defects by atomic layer deposition. Nature Communications, 2014, 5, 4781.	5.8	243
9	3D structure of individual nanocrystals in solution by electron microscopy. Science, 2015, 349, 290-295.	6.0	238
10	Ultrahigh Surface Area Three-Dimensional Porous Graphitic Carbon from Conjugated Polymeric Molecular Framework. ACS Central Science, 2015, 1, 68-76.	5.3	207
11	Ripping Graphene: Preferred Directions. Nano Letters, 2012, 12, 293-297.	4.5	200
12	3D Motion of DNA-Au Nanoconjugates in Graphene Liquid Cell Electron Microscopy. Nano Letters, 2013, 13, 4556-4561.	4.5	184
13	Graphene Nanoribbons Obtained by Electrically Unwrapping Carbon Nanotubes. ACS Nano, 2010, 4, 1362-1366.	7.3	151
14	Structural and Electrical Investigation of C₆₀â€“Graphene Vertical Heterostructures. ACS Nano, 2015, 9, 5922-5928.	7.3	151
15	Subnanometer Vacancy Defects Introduced on Graphene by Oxygen Gas. Journal of the American Chemical Society, 2014, 136, 2232-2235.	6.6	125
16	Largeâ€Area Assembly of Densely Aligned Singleâ€Walled Carbon Nanotubes Using Solution Shearing and Their Application to Fieldâ€Effect Transistors. Advanced Materials, 2015, 27, 2656-2662.	11.1	123
17	Reversible disorder-order transitions in atomic crystal nucleation. Science, 2021, 371, 498-503.	6.0	117
18	Atomically perfect torn graphene edges and their reversible reconstruction. Nature Communications, 2013, 4, 2723.	5.8	110

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19	Highâ€temperature stability of suspended singleâ€layer graphene. Physica Status Solidi - Rapid Research Letters, 2010, 4, 302-304.	1.2	86
20	Graphene Nanopore with a Self-Integrated Optical Antenna. Nano Letters, 2014, 14, 5584-5589.	4.5	79
21	Controlled aqueous synthesis of ultra-long copper nanowires for stretchable transparent conducting electrode. Journal of Materials Chemistry C, 2016, 4, 1441-1447.	2.7	78
22	Graphene-templated directional growth of an inorganic nanowire. Nature Nanotechnology, 2015, 10, 423-428.	15.6	75
23	High-performance oxygen reduction and evolution carbon catalysis: From mechanistic studies to device integration. Nano Research, 2017, 10, 1163-1177.	5.8	66
24	Water-Mediated Photochemical Treatments for Low-Temperature Passivation of Metal-Oxide Thin-Film Transistors. ACS Applied Materials & Interfaces, 2016, 8, 10403-10412.	4.0	57
25	Graphene Veils and Sandwiches. Nano Letters, 2011, 11, 3290-3294.	4.5	54
26	Growth and Simultaneous Valleys Manipulation of Two-Dimensional MoSe₂-WSe₂ Lateral Heterostructure. ACS Nano, 2017, 11, 8822-8829.	7.3	54
27	Epitaxially Grown Strained Pentacene Thin Film on Graphene Membrane. Small, 2015, 11, 2037-2043.	5.2	53
28	Intense Dark Exciton Emission from Strongly Quantum-Confined CsPbBr₃ Nanocrystals. Nano Letters, 2020, 20, 7321-7326.	4.5	53
29	Chemical Vapor-Deposited Hexagonal Boron Nitride as a Scalable Template for High-Performance Organic Field-Effect Transistors. Chemistry of Materials, 2017, 29, 2341-2347.	3.2	52
30	Î³-GeSe: A New Hexagonal Polymorph from Group IVâ€“VI Monochalcogenides. Nano Letters, 2021, 21, 4305-4313.	4.5	52
31	Ultrastiff, Strong, and Highly Thermally Conductive Crystalline Graphitic Films with Mixed Stacking Order. Advanced Materials, 2019, 31, e1903039.	11.1	49
32	Direct growth of aligned graphitic nanoribbons from a DNA template by chemical vapour deposition. Nature Communications, 2013, 4, 2402.	5.8	47
33	Nucleation and Growth of the HfO₂ Dielectric Layer for Graphene-Based Devices. Chemistry of Materials, 2015, 27, 5868-5877.	3.2	43
34	Atomic-scale imaging of few-layer black phosphorus and its reconstructed edge. Journal Physics D: Applied Physics, 2017, 50, 084003.	1.3	42
35	Ultrafast 27â€‰GHz cutoff frequency in vertical WSe2 Schottky diodes with extremely low contact resistance. Nature Communications, 2020, 11, 1574.	5.8	39
36	Nonvolatile and Neuromorphic Memory Devices Using Interfacial Traps in Two-Dimensional WSe₂/MoTe₂ Stack Channel. ACS Nano, 2020, 14, 12064-12071.	7.3	38

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37	Nitrogen-Plasma-Treated Continuous Monolayer MoS₂ for Improving Hydrogen Evolution Reaction. ACS Omega, 2019, 4, 21509-21515.	1.6	34
38	Self-organized growth and self-assembly of nanostructures on 2D materials. FlatChem, 2017, 5, 50-68.	2.8	33
39	Shapeâ€Controlled, Selfâ€Wrapped Carbon Nanotube 3D Electronics. Advanced Science, 2015, 2, 1500103.	5.6	32
40	Graphene Edges and Beyond: Temperature-Driven Structures and Electromagnetic Properties. ACS Nano, 2015, 9, 4669-4674.	7.3	31
41	One-Dimensional Assembly on Two-Dimensions: AuCN Nanowire Epitaxy on Graphene for Hybrid Phototransistors. Nano Letters, 2018, 18, 6214-6221.	4.5	30
42	Tuning Nanoelectromechanical Resonators with Mass Migration. Nano Letters, 2009, 9, 3209-3213.	4.5	28
43	Large-Scale Production of Graphene Nanoribbons from Electrospun Polymers. Journal of the American Chemical Society, 2014, 136, 17284-17291.	6.6	26
44	Strong Fermi-Level Pinning at Metal/n-Si(001) Interface Ensured by Forming an Intact Schottky Contact with a Graphene Insertion Layer. Nano Letters, 2017, 17, 44-49.	4.5	26
45	Morphology-Conserving Non-Kirkendall Anion Exchange of Metal Oxide Nanocrystals. Journal of the American Chemical Society, 2020, 142, 9130-9134.	6.6	25
46	Optical phonons of SnSe(1â^'x)Sx layered semiconductor alloys. Scientific Reports, 2020, 10, 11761.	1.6	24
47	2D TMD Channel Transistors with ZnO Nanowire Gate for Extended Nonvolatile Memory Applications. Advanced Functional Materials, 2020, 30, 2004140.	7.8	24
48	Evolution of defect formation during atomically precise desulfurization of monolayer MoS2. Communications Materials, 2021, 2, .	2.9	23
49	Engineering MoSe2/MoS2 heterojunction traps in 2D transistors for multilevel memory, multiscale display, and synaptic functions. Npj 2D Materials and Applications, 2022, 6, .	3.9	23
50	p-Channel Field-Effect Transistors Based on C₆₀ Doped with Molybdenum Trioxide. ACS Applied Materials & Interfaces, 2013, 5, 2337-2341.	4.0	22
51	Fabrication and Imaging of Monolayer Phosphorene with Preferred Edge Configurations via Graphene-Assisted Layer-by-Layer Thinning. Nano Letters, 2020, 20, 559-566.	4.5	22
52	High Performance Î²â€Ga₂O₃ Schottky Barrier Transistors with Large Work Function TMD Gate of NbS₂ and TaS₂. Advanced Functional Materials, 2021, 31, 2010303.	7.8	22
53	The Hide-and-Seek of Grain Boundaries from MoirÃ© Pattern Fringe of Two-Dimensional Graphene. Scientific Reports, 2015, 5, 12508.	1.6	21
54	Light-Induced Anisotropic Morphological Dynamics of Black Phosphorus Membranes Visualized by Dark-Field Ultrafast Electron Microscopy. ACS Nano, 2020, 14, 11383-11393.	7.3	21

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55	Analysis of Defect Recovery in Reduced Graphene Oxide and Its Application as a Heater for Self-Healing Polymers. ACS Applied Materials & Interfaces, 2019, 11, 16804-16814.	4.0	19
56	Versatile Solutionâ€Processed Organicâ€“Inorganic Hybrid Superlattices for Ultraflexible and Transparent Highâ€Performance Optoelectronic Devices. Advanced Functional Materials, 2021, 31, 2103285.	7.8	19
57	Dramatic Reduction of Contact Resistance via Ultrathin LiF in Two-Dimensional MoS₂ Field Effect Transistors. Nano Letters, 2021, 21, 3503-3510.	4.5	18
58	Direct Fabrication of Zero- and One-Dimensional Metal Nanocrystals by Thermally Assisted Electromigration. ACS Nano, 2010, 4, 2999-3004.	7.3	16
59	Electronically Weak Coupled Bilayer MoS₂ at Various Twist Angles via Folding. ACS Applied Materials & Interfaces, 2021, 13, 22819-22827.	4.0	16
60	Oneâ€Interlayerâ€Twisted Multilayer MoS₂ MoirÃ© Superlattices. Advanced Functional Materials, 2022, 32, .	7.8	16
61	Tailoring Single- and Double-Sided Fluorination of Bilayer Graphene via Substrate Interactions. Nano Letters, 2021, 21, 891-898.	4.5	14
62	Anomalous Dimensionalityâ€Driven Phase Transition of MoTe₂ in Van der Waals Heterostructure. Advanced Functional Materials, 2021, 31, 2107376.	7.8	14
63	Quaternary NAND Logic and Complementary Ternary Inverter with pâ€MoTe₂/nâ€MoS₂ Heterostack Channel Transistors. Advanced Functional Materials, 2022, 32, .	7.8	14
64	STEM Image Analysis Based on Deep Learning: Identification of Vacancy Defects and Polymorphs of MoS₂. Nano Letters, 2022, 22, 4677-4685.	4.5	14
65	Universal Oriented van der Waals Epitaxy of 1D Cyanide Chains on Hexagonal 2D Crystals. Advanced Science, 2020, 7, 1900757.	5.6	13
66	Direct imaging of rotating molecules anchored on graphene. Nanoscale, 2016, 8, 13174-13180.	2.8	12
67	Hydrogenated Graphene Improves Neuronal Network Maturation and Excitatory Transmission. Advanced Biology, 2021, 5, e2000177.	1.4	12
68	Precise Identification of Grapheneâ€™s Crystal Structures by Removable Nanowire Epitaxy. Journal of Physical Chemistry Letters, 2017, 8, 1302-1309.	2.1	11
69	Selective Growth and Robust Valley Polarization of Bilayer 3R-MoS₂. ACS Applied Materials & Interfaces, 2021, 13, 57588-57596.	4.0	10
70	Tuning of Thermoelectric Properties of MoSe2 Thin Films Under Helium Ion Irradiation. Nanoscale Research Letters, 2022, 17, 26.	3.1	9
71	2D MoS₂ Charge Injection Memory Transistors Utilizing Heteroâ€Stack SiO₂/HfO₂ Dielectrics and Oxide Interface Traps. Advanced Electronic Materials, 2021, 7, 2100074.	2.6	8
72	Single-step synthesis of wrinkled MoSe2 thin films. Current Applied Physics, 2019, 19, 273-278.	1.1	7

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73	Photo-response in 2D metal chalcogenide-ferroelectric oxide heterostructure controlled by spontaneous polarization. Journal of Materials Chemistry C, 2020, 8, 3724-3729.	2.7	7
74	Ammonium Salts: New Synergistic Additive for Chemical Vapor Deposition Growth of MoS₂. Journal of Physical Chemistry Letters, 2021, 12, 12384-12390.	2.1	7
75	Effect of Chemical Structure on Polymer-Templated Growth of Graphitic Nanoribbons. ACS Nano, 2015, 9, 9043-9049.	7.3	6
76	Direct imaging of structural disordering and heterogeneous dynamics of fullerene molecular liquid. Nature Communications, 2019, 10, 4395.	5.8	6
77	Single-Crystalline Metallic Films Induced by van der Waals Epitaxy on Black Phosphorus. Chemistry of Materials, 2021, 33, 3593-3601.	3.2	6
78	Mechanical removal of surface residues on graphene for TEM characterizations. Applied Microscopy, 2020, 50, 28.	0.8	6
79	Commensurate Assembly of C₆₀ on Black Phosphorus for Mixedâ€Dimensional van der Waals Transistors. Small, 2022, 18, e2105916.	5.2	6
80	Controlled synthesis of SnSxSe2â^'x nanoplate alloys via synergetic control of reactant activity and surface defect passivation control with surfactant and co-surfactant mixture. Journal of Solid State Chemistry, 2019, 278, 120887.	1.4	5
81	Nanoscale Molecular Building Blocks for Layerâ€byâ€Layer Assembly. Advanced Materials Interfaces, 2020, 7, 2000522.	1.9	3
82	Unidirectional Alignment of AgCN Microwires on Distorted Transition Metal Dichalcogenide Crystals. ACS Applied Materials & Interfaces, 2021, 13, 8727-8735.	4.0	3
83	A laser-driven optical atomizer: photothermal generation and transport of zeptoliter-droplets along a carbon nanotube deposited hollow optical fiber. Nanoscale, 2022, 14, 5138-5146.	2.8	3
84	Precise Determination of Offset between Optical Axis and Re-Chain Direction in Rhenium Disulfide. ACS Nano, 2022, 16, 9222-9227.	7.3	3
85	Graphene Nanopore with Self-Aligned Plasmonic Optical Antenna. Biophysical Journal, 2014, 106, 414a.	0.2	2
86	Damageâ€Free Charge Transfer Doping of 2D Transition Metal Dichalcogenide Channels by van der Waals Stamping of MoO 3 and LiF. Small Methods, 2022, , 2101073.	4.6	2
87	In-situ Observations of Pt Nanoparticle Growth at Atomic Resolution Using Graphene Liquid Cells and Cc Correction. Microscopy and Microanalysis, 2012, 18, 1096-1097.	0.2	1
88	Atomic-Resolution TEM Imaging of Phosphorene Protected by Graphene. Microscopy and Microanalysis, 2019, 25, 1696-1697.	0.2	1
89	Facile Identification of Graphene's Crystal Orientations by Optical Microscopy of Self-Aligned Microwires. , 2019, , .		1
90	TEM Imaging of Edges and Point Defects in Monolayer Phosphorene. Microscopy and Microanalysis, 2020, 26, 2348-2350.	0.2	1

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91	Electrical Control of Optical Plasmon Resonance with Graphene. , 2013, , .		1
92	In-Situ TEM Observation of Metal Zn Nanocrystal Growth on ZnO Films. Microscopy and Microanalysis, 2009, 15, 698-699.	0.2	0
93	B21-O-03The Identification of Grain Boundaries in Two-dimensional Graphene using Moire Pattern Fringe. Microscopy (Oxford, England), 2015, 64, i40.2-i40.	0.7	0
94	TEM Imaging and Electron Diffraction of Vertically Stacked Graphene/h-BN with Fine Control of Twist Angle. Microscopy and Microanalysis, 2019, 25, 2114-2115.	0.2	0
95	Unidirectional Assembly on Distorted Two-Dimensional Crystal Substrates. Microscopy and Microanalysis, 2021, 27, 892-893.	0.2	0