Changgu Lee

List of Publications by Year
in descending order

84 papers	42,069 citations	93792 39 h-index	62345 84 g-index
87 all docs	87 docs citations	87 times ranked	49042 citing authors

#	Article	IF	Citations
1	<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:msub><mml:mi>Cr</mml:mi><mml:mn>2</mml:mn></mm mathvariant="normal">S</mml:mi><mml:mn>3</mml:mn></mml:msub></mml:mrow></mml:math> a bipolar semiconducting fully compensated ferrimagnet. Physical Review Materials, 2022, 6, .	0.9	1
2	Raman Scattering Measurement of Suspended Graphene under Extreme Strain Induced by Nanoindentation. Advanced Materials, 2022, 34, .	11.1	12
3	Polarized Raman Spectra and Complex Raman Tensors of Antiferromagnetic Semiconductor CrPS₄. Journal of Physical Chemistry C, 2021, 125, 2691-2698.	1.5	12
4	Direct Observation of Feâ€Ge Ordering in Fe_{5â^’}<i>_x</i>GeTe₂ Crystals and Resultant Helimagnetism. Advanced Functional Materials, 2021, 31, 2009758.	7.8	33
5	Resonant tunnelling diodes based on twisted black phosphorus homostructures. Nature Electronics, 2021, 4, 269-276.	13.1	41
6	Spin Dynamics Slowdown near the Antiferromagnetic Critical Point in Atomically Thin FePS₃. Nano Letters, 2021, 21, 5045-5052.	4.5	21
7	Iron-based ferromagnetic van der Waals materials. Journal Physics D: Applied Physics, 2021, 54, 473002.	1.3	5
8	Asymmetric carrier transport and weak localization in few layer graphene grown directly on a dielectric substrate. Physical Chemistry Chemical Physics, 2021, 23, 25284-25290.	1.3	5
9	Measurements of the Electrical Conductivity of Monolayer Graphene Flakes Using Conductive Atomic Force Microscopy. Nanomaterials, 2021, 11, 2575.	1.9	23
10	Interface Engineering of Magnetic Anisotropy in van der Waals Ferromagnet-based Heterostructures. ACS Nano, 2021, 15, 16395-16403.	7.3	7
11	Synthesis of 2D semiconducting single crystalline Bi₂S₃ for high performance electronics. Physical Chemistry Chemical Physics, 2021, 23, 26806-26812.	1.3	4
12	Phase-Engineered Molybdenum Telluride/Black Phosphorus Van der Waals Heterojunctions for Tunable Multivalued Logic. ACS Applied Materials & Interfaces, 2020, 12, 14119-14124.	4.0	27
13	Exchange Bias Effect in Ferro-/Antiferromagnetic van der Waals Heterostructures. Nano Letters, 2020, 20, 3978-3985.	4.5	13
14	Interlayer magnetism in <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:msub><mml:mi>Fe</mml:mi><mml:mro Physical Review Materials, 2020, 4, .	0.9	12
15	Bionanoelectronic platform with a lipid bilayer/CVD-grown MoS2 hybrid. Biosensors and Bioelectronics, 2019, 142, 111512.	5.3	11
16	Antisymmetric magnetoresistance in van der Waals Fe ₃ GeTe ₂ /graphite/Fe ₃ GeTe ₂ trilayer heterostructures. Science Advances, 2019, 5, eaaw0409.	4.7	119
17	First-principles study of ferromagnetic metal Fe5GeTe2. Nano Materials Science, 2019, 1, 299-303.	3.9	26
18	Vertically Stacked CVD-Grown 2D Heterostructure for Wafer-Scale Electronics. ACS Applied Materials & Interfaces, 2019, 11, 35444-35450.	4.0	27

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19	Van der Waals Broken-Gap pâ€“n Heterojunction Tunnel Diode Based on Black Phosphorus and Rhenium Disulfide. ACS Applied Materials & Interfaces, 2019, 11, 8266-8275.	4.0	58
20	Wafer-scale and patternable synthesis of NbS₂ for electrodes of organic transistors and logic gates. Journal of Materials Chemistry C, 2019, 7, 8599-8606.	2.7	6
21	Crossover between Photochemical and Photothermal Oxidations of Atomically Thin Magnetic Semiconductor CrPS₄. Nano Letters, 2019, 19, 4043-4051.	4.5	26
22	Selectively Metallized 2D Materials for Simple Logic Devices. ACS Applied Materials & Interfaces, 2019, 11, 18571-18579.	4.0	17
23	Antiferromagnetic coupling of van der Waals ferromagnetic Fe₃GeTe₂. Nanotechnology, 2019, 30, 245701.	1.3	53
24	Ultrafast and low-temperature synthesis of patternable MoS₂ using laser irradiation. Journal Physics D: Applied Physics, 2019, 52, 18LT01.	1.3	8
25	Designing Carbon/Oxygen Ratios of Graphene Oxide Membranes for Proton Exchange Membrane Fuel Cells. Journal of Nanomaterials, 2019, 2019, 1-9.	1.5	18
26	Wafer-Scale Substitutional Doping of Monolayer MoS₂ Films for High-Performance Optoelectronic Devices. ACS Applied Materials & Interfaces, 2019, 11, 12613-12621.	4.0	39
27	Dominant in-plane cleavage direction of CrPS4. Computational Materials Science, 2019, 162, 277-280.	1.4	6
28	Comparison of Frictional Properties of CVD-Grown MoS2 and Graphene Films under Dry Sliding Conditions. Nanomaterials, 2019, 9, 293.	1.9	17
29	Multifunctional van der Waals Brokenâ€Gap Heterojunction. Small, 2019, 15, e1804885.	5.2	71
30	Mechanical characterization of phase-changed single-layer MoS ₂ sheets. 2D Materials, 2019, 6, 025024.	2.0	14
31	Energy Dissipation in Black Phosphorus Heterostructured Devices. Advanced Materials Interfaces, 2019, 6, 1801528.	1.9	14
32	Hard magnetic properties in nanoflake van der Waals Fe3GeTe2. Nature Communications, 2018, 9, 1554.	5.8	272
33	Visualization and manipulation of magnetic domains in the quasi-two-dimensional material <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:mi mathvariant="normal">F</mml:mi><mml:msub><mml:mi mathvariant="normal">e</mml:mi><mml:mn>3</mml:mn></mml:msub><mml:mi>GeT</mml:mi><mml:msub><mml:mi mathvariant="normal">e</mml:mi><mml:mn>2</mml:mn></mml:msub></mml:mrow></mml:math>. Physical Review B, 2018, 97, .	1.1	74
34	Nanopatched Graphene with Molecular Selfâ€Assembly Toward Grapheneâ€“Organic Hybrid Soft Electronics. Advanced Materials, 2018, 30, e1706480.	11.1	26
35	Large-area niobium disulfide thin films as transparent electrodes for devices based on two-dimensional materials. Nanoscale, 2018, 10, 1056-1062.	2.8	44
36	Photoresponsive Devices: Ultrahigh Photoresponsive Device Based on ReS2 /Graphene Heterostructure (Small 45/2018). Small, 2018, 14, 1870211.	5.2	1

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37	Topological Insulator-Based van der Waals Heterostructures for Effective Control of Massless and Massive Dirac Fermions. Nano Letters, 2018, 18, 8047-8053.	4.5	25
38	Ultrahigh Photoresponsive Device Based on ReS₂/Graphene Heterostructure. Small, 2018, 14, e1802593.	5.2	75
39	Ambipolar transport based on CVD-synthesized ReSe ₂. 2D Materials, 2017, 4, 025014.	2.0	31
40	Large-Area CVD-Grown Sub-2 V ReS₂ Transistors and Logic Gates. Nano Letters, 2017, 17, 2999-3005.	4.5	68
41	On-stack two-dimensional conversion of MoS ₂ into MoO ₃. 2D Materials, 2017, 4, 014003.	2.0	51
42	Self-Assembly of Silver Nanowire Ring Structures Driven by the Compressive Force of a Liquid Droplet. Langmuir, 2017, 33, 3367-3372.	1.6	6
43	Ultraclean and Direct Transfer of a Waferâ€Scale MoS₂ Thin Film onto a Plastic Substrate. Advanced Materials, 2017, 29, 1603928.	11.1	42
44	Structural and Optical Properties of Single- and Few-Layer Magnetic Semiconductor CrPS₄. ACS Nano, 2017, 11, 10935-10944.	7.3	85
45	Preface for a special issue on 2D materials: growth, characterisation, properties and devices. Journal Physics D: Applied Physics, 2017, 50, 440401.	1.3	1
46	Graphene oxide papers with high water adsorption capacity for air dehumidification. Scientific Reports, 2017, 7, 9761.	1.6	63
47	A comprehensive study of piezomagnetic response in CrPS₄monolayer: mechanical, electronic properties and magnetic ordering under strains. Journal of Physics Condensed Matter, 2017, 29, 405801.	0.7	28
48	Adhesion and Self-Healing between Monolayer Molybdenum Disulfide and Silicon Oxide. Scientific Reports, 2017, 7, 14740.	1.6	18
49	Bias-assisted atomic force microscope nanolithography on NbS₂thin films grown by chemical vapor deposition. Journal Physics D: Applied Physics, 2016, 49, 484001.	1.3	11
50	Wafer-scale monolayer MoS₂grown by chemical vapor deposition using a reaction of MoO₃and H₂S. Journal of Physics Condensed Matter, 2016, 28, 184002.	0.7	39
51	Gateâ€Tunable Hole and Electron Carrier Transport in Atomically Thin Dualâ€Channel WSe₂/MoS₂ Heterostructure for Ambipolar Fieldâ€Effect Transistors. Advanced Materials, 2016, 28, 9519-9525.	11.1	70
52	Large-area single-crystal graphene grown on a recrystallized Cu(111) surface by using a hole-pocket method. Nanoscale, 2016, 8, 13781-13789.	2.8	23
53	Recoverable Slippage Mechanism in Multilayer Graphene Leads to Repeatable Energy Dissipation. ACS Nano, 2016, 10, 1820-1828.	7.3	112
54	Line-defect mediated formation of hole and Mo clusters in monolayer molybdenum disulfide. 2D Materials, 2016, 3, 014002.	2.0	21

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55	Enhanced Raman Scattering of Rhodamine 6G Films on Two-Dimensional Transition Metal Dichalcogenides Correlated to Photoinduced Charge Transfer. Chemistry of Materials, 2016, 28, 180-187.	3.2	112
56	Lowâ€Temperature Synthesis of Largeâ€Scale Molybdenum Disulfide Thin Films Directly on a Plastic Substrate Using Plasmaâ€Enhanced Chemical Vapor Deposition. Advanced Materials, 2015, 27, 5223-5229.	11.1	180
57	Thickness Dependence of the Mechanical Properties of Freeâ€Standing Graphene Oxide Papers. Advanced Functional Materials, 2015, 25, 3756-3763.	7.8	75
58	Field-effect transistor with a chemically synthesized MoS2 sensing channel for label-free and highly sensitive electrical detection of DNA hybridization. Nano Research, 2015, 8, 2340-2350.	5.8	116
59	A robust and conductive metal-impregnated graphene oxide membrane selectively separating organic vapors. Chemical Communications, 2015, 51, 2671-2674.	2.2	42
60	Synthesis of large-area multilayer hexagonal boron nitride for high material performance. Nature Communications, 2015, 6, 8662.	5.8	403
61	Work function variation of MoS2 atomic layers grown with chemical vapor deposition: The effects of thickness and the adsorption of water/oxygen molecules. Applied Physics Letters, 2015, 106, .	1.5	167
62	Direct exfoliation and dispersion of two-dimensional materials in pure water via temperature control. Nature Communications, 2015, 6, 8294.	5.8	277
63	Optical properties of large-area ultrathin MoS2 films: Evolution from a single layer to multilayers. Journal of Applied Physics, 2014, 116, .	1.1	66
64	Synthesis of wafer-scale uniform molybdenum disulfide films with control over the layer number using a gas phase sulfur precursor. Nanoscale, 2014, 6, 2821.	2.8	166
65	Graphene oxide membrane for liquid phase organic molecular separation. Carbon, 2014, 77, 933-938.	5.4	93
66	A conductive copolymer of graphene oxide/poly(1-(3-aminopropyl)pyrrole) and the adsorption of metal ions. Polymer Chemistry, 2014, 5, 4466.	1.9	41
67	Flexible and Transparent MoS₂ Field-Effect Transistors on Hexagonal Boron Nitride-Graphene Heterostructures. ACS Nano, 2013, 7, 7931-7936.	7.3	947
68	Nonlinear elastic behavior of two-dimensional molybdenum disulfide. Physical Review B, 2013, 87, .	1.1	400
69	Effect of surface morphology on friction of graphene on various substrates. Nanoscale, 2013, 5, 3063.	2.8	148
70	Evaluation of hexagonal boron nitride nano-sheets as a lubricant additive in water. Wear, 2013, 302, 981-986.	1.5	146
71	Terahertz, optical, and Raman signatures of monolayer graphene behavior in thermally reduced graphene oxide films. Journal of Applied Physics, 2013, 113, .	1.1	20
72	Terahertz study of reduced graphene oxide. , 2012, , .		0

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73	Characteristics and effects of diffused water between graphene and a SiO2 substrate. Nano Research, 2012, 5, 710-717.	5.8	91
74	A Silicon Microturbopump for a Rankine-Cycle Power-Generation Microsystemâ€"Part II: Fabrication and Characterization. Journal of Microelectromechanical Systems, 2011, 20, 326-338.	1.7	23
75	Chemical Vapor Deposition-Grown Graphene: The Thinnest Solid Lubricant. ACS Nano, 2011, 5, 5107-5114.	7.3	462
76	A Silicon Microturbopump for a Rankine-Cycle Power Generation Microsystemâ€"Part I: Component and System Design. Journal of Microelectromechanical Systems, 2011, 20, 312-325.	1.7	26
77	Friction Anisotropyâ€"Driven Domain Imaging on Exfoliated Monolayer Graphene. Science, 2011, 333, 607-610.	6.0	284
78	Anomalous Lattice Vibrations of Single- and Few-Layer MoS₂. ACS Nano, 2010, 4, 2695-2700.	7.3	4,028
79	Atomically Thin<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:msub><mml:mi>MoS</mml:mi><mml:mn>2</mml:mn></mml:msub></mml:math>: A New Direct-Gap Semiconductor. Physical Review Letters, 2010, 105, 136805.	2.9	12,565
80	Substrate effect on thicknessâ€dependent friction on graphene. Physica Status Solidi (B): Basic Research, 2010, 247, 2909-2914.	0.7	206
81	Frictional Characteristics of Atomically Thin Sheets. Science, 2010, 328, 76-80.	6.0	1,504
82	Growth of serpentine carbon nanotubes on quartz substrates and their electrical properties. Nano Research, 2008, 1, 427-433.	5.8	28
83	Measurement of the Elastic Properties and Intrinsic Strength of Monolayer Graphene. Science, 2008, 321, 385-388.	6.0	17,513
84	Design Principles and Measured Performance of Multistage Radial Flow Microturbomachinery at Low Reynolds Numbers. Journal of Fluids Engineering, Transactions of the ASME, 2008, 130, .	0.8	6