Changgu Lee

List of Publications by Year in Descending Order

81 papers	34,525 citations	35 h-index	87 g-index
87 ext. papers	38,618 ext. citations	9.9 avg, IF	7.35 L-index

#	Paper	IF	Citations
81	Synthesis of 2D semiconducting single crystalline BiS for high performance electronics. *Physical Chemistry Chemical Physics*, **2021**, 23, 26806-26812	3.6	0
80	Asymmetric carrier transport and weak localization in few layer graphene grown directly on a dielectric substrate. *Physical Chemistry Chemical Physics*, **2021**, 23, 25284-25290	3.6	2
79	Interface Engineering of Magnetic Anisotropy in van der Waals Ferromagnet-based Heterostructures. *ACS Nano*, **2021**, 15, 16395-16403	16.7	1
78	Resonant tunnelling diodes based on twisted black phosphorus homostructures. *Nature Electronics*, **2021**, 4, 269-276	28.4	9
77	Spin Dynamics Slowdown near the Antiferromagnetic Critical Point in Atomically Thin FePS. *Nano Letters*, **2021**, 21, 5045-5052	11.5	3
76	Polarized Raman Spectra and Complex Raman Tensors of Antiferromagnetic Semiconductor CrPS4. *Journal of Physical Chemistry C*, **2021**, 125, 2691-2698	3.8	4
75	Direct Observation of Fe-Ge Ordering in Fe5−xGeTe2 Crystals and Resultant Helimagnetism. *Advanced Functional Materials*, **2021**, 31, 2009758	15.6	8
74	Iron-based ferromagnetic van der Waals materials. *Journal Physics D: Applied Physics*, **2021**, 54, 473002	3	2
73	Phase-Engineered Molybdenum Telluride/Black Phosphorus Van der Waals Heterojunctions for Tunable Multivalued Logic. *ACS Applied Materials & Interfaces*, **2020**, 12, 14119-14124	9.5	16
72	Exchange Bias Effect in Ferro-/Antiferromagnetic van der Waals Heterostructures. *Nano Letters*, **2020**, 20, 3978-3985	11.5	6
71	Interlayer magnetism in Fe3−xGeTe2. *Physical Review Materials*, **2020**, 4,	3.2	8
70	Vertically Stacked CVD-Grown 2D Heterostructure for Wafer-Scale Electronics. *ACS Applied Materials & Interfaces*, **2019**, 11, 35444-35450	9.5	18
69	Van der Waals Broken-Gap p-n Heterojunction Tunnel Diode Based on Black Phosphorus and Rhenium Disulfide. *ACS Applied Materials & Interfaces*, **2019**, 11, 8266-8275	9.5	29
68	Wafer-scale and patternable synthesis of NbS2 for electrodes of organic transistors and logic gates. *Journal of Materials Chemistry C*, **2019**, 7, 8599-8606	7.1	5
67	Crossover between Photochemical and Photothermal Oxidations of Atomically Thin Magnetic Semiconductor CrPS. *Nano Letters*, **2019**, 19, 4043-4051	11.5	16
66	Selectively Metallized 2D Materials for Simple Logic Devices. *ACS Applied Materials & Interfaces* , **2019**, 11, 18571-18579	9.5	8
65	Antiferromagnetic coupling of van der Waals ferromagnetic FeGeTe. *Nanotechnology*, **2019**, 30, 245701	3.4	25

64	Ultrafast and low-temperature synthesis of patternable MoS2 using laser irradiation. *Journal Physics D: Applied Physics*, **2019**, 52, 18LT01	3	2
63	Designing Carbon/Oxygen Ratios of Graphene Oxide Membranes for Proton Exchange Membrane Fuel Cells. *Journal of Nanomaterials*, **2019**, 2019, 1-9	3.2	8
62	Wafer-Scale Substitutional Doping of Monolayer MoS Films for High-Performance Optoelectronic Devices. *ACS Applied Materials & Interfaces*, **2019**, 11, 12613-12621	9.5	24
61	Dominant in-plane cleavage direction of CrPS4. *Computational Materials Science*, **2019**, 162, 277-280	3.2	3
60	Comparison of Frictional Properties of CVD-Grown MoS and Graphene Films under Dry Sliding Conditions. *Nanomaterials*, **2019**, 9,	5.4	10
59	Multifunctional van der Waals Broken-Gap Heterojunction. *Small*, **2019**, 15, e1804885	11	42
58	Bionanoelectronic platform with a lipid bilayer/CVD-grown MoS hybrid. *Biosensors and Bioelectronics*, **2019**, 142, 111512	11.8	4
57	Antisymmetric magnetoresistance in van der Waals FeGeTe/graphite/FeGeTe trilayer heterostructures. *Science Advances*, **2019**, 5, eaaw0409	14.3	57
56	First-principles study of ferromagnetic metal Fe5GeTe2. *Nano Materials Science*, **2019**, 1, 299-303	10.2	15
55	Mechanical characterization of phase-changed single-layer MoS 2 sheets. *2D Materials*, **2019**, 6, 025024	5.9	6
54	Energy Dissipation in Black Phosphorus Heterostructured Devices. *Advanced Materials Interfaces*, **2019**, 6, 1801528	4.6	9
53	Hard magnetic properties in nanoflake van der Waals FeGeTe. *Nature Communications*, **2018**, 9, 1554	17.4	149
52	Visualization and manipulation of magnetic domains in the quasi-two-dimensional material Fe3GeTe2. *Physical Review B*, **2018**, 97,	3.3	49
51	Nanopatched Graphene with Molecular Self-Assembly Toward Graphene-Organic Hybrid Soft Electronics. *Advanced Materials*, **2018**, 30, e1706480	24	16
50	Large-area niobium disulfide thin films as transparent electrodes for devices based on two-dimensional materials. *Nanoscale*, **2018**, 10, 1056-1062	7.7	32
49	Photoresponsive Devices: Ultrahigh Photoresponsive Device Based on ReS2/Graphene Heterostructure (Small 45/2018). *Small*, **2018**, 14, 1870211	11	1
48	Topological Insulator-Based van der Waals Heterostructures for Effective Control of Massless and Massive Dirac Fermions. *Nano Letters*, **2018**, 18, 8047-8053	11.5	16
47	Ultrahigh Photoresponsive Device Based on ReS /Graphene Heterostructure. *Small*, **2018**, 14, e1802593	11	52

46	Ambipolar transport based on CVD-synthesized ReSe 2. *2D Materials*, **2017**, 4, 025014	5.9	22
45	Large-Area CVD-Grown Sub-2 V ReS Transistors and Logic Gates. *Nano Letters*, **2017**, 17, 2999-3005	11.5	52
44	On-stack two-dimensional conversion of MoS 2 into MoO 3. *2D Materials*, **2017**, 4, 014003	5.9	32
43	Self-Assembly of Silver Nanowire Ring Structures Driven by the Compressive Force of a Liquid Droplet. *Langmuir*, **2017**, 33, 3367-3372	4	5
42	Ultraclean and Direct Transfer of a Wafer-Scale MoS Thin Film onto a Plastic Substrate. *Advanced Materials*, **2017**, 29, 1603928	24	37
41	Structural and Optical Properties of Single- and Few-Layer Magnetic Semiconductor CrPS. *ACS Nano* , **2017**, 11, 10935-10944	16.7	57
40	Preface for a special issue on 2D materials: growth, characterisation, properties and devices. *Journal Physics D: Applied Physics*, **2017**, 50, 440401	3	1
39	Graphene oxide papers with high water adsorption capacity for air dehumidification. *Scientific Reports*, **2017**, 7, 9761	4.9	42
38	A comprehensive study of piezomagnetic response in CrPS monolayer: mechanical, electronic properties and magnetic ordering under strains. *Journal of Physics Condensed Matter*, **2017**, 29, 405801	1.8	18
37	Adhesion and Self-Healing between Monolayer Molybdenum Disulfide and Silicon Oxide. *Scientific Reports*, **2017**, 7, 14740	4.9	10
36	Gate-Tunable Hole and Electron Carrier Transport in Atomically Thin Dual-Channel WSe /MoS Heterostructure for Ambipolar Field-Effect Transistors. *Advanced Materials*, **2016**, 28, 9519-9525	24	49
35	Large-area single-crystal graphene grown on a recrystallized Cu(111) surface by using a hole-pocket method. *Nanoscale*, **2016**, 8, 13781-9	7.7	17
34	Recoverable Slippage Mechanism in Multilayer Graphene Leads to Repeatable Energy Dissipation. *ACS Nano*, **2016**, 10, 1820-8	16.7	89
33	Line-defect mediated formation of hole and Mo clusters in monolayer molybdenum disulfide. *2D Materials*, **2016**, 3, 014002	5.9	17
32	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	9.6	88
31	Bias-assisted atomic force microscope nanolithography on NbS2thin films grown by chemical vapor deposition. *Journal Physics D: Applied Physics*, **2016**, 49, 484001	3	10
30	Wafer-scale monolayer MoS2 grown by chemical vapor deposition using a reaction of MoO3 and H2S. *Journal of Physics Condensed Matter*, **2016**, 28, 184002	1.8	30
29	Thickness Dependence of the Mechanical Properties of Free-Standing Graphene Oxide Papers. *Advanced Functional Materials*, **2015**, 25, 3756-3763	15.6	59

28	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	10	94
27	A robust and conductive metal-impregnated graphene oxide membrane selectively separating organic vapors. *Chemical Communications*, **2015**, 51, 2671-4	5.8	36
26	Synthesis of large-area multilayer hexagonal boron nitride for high material performance. *Nature Communications*, **2015**, 6, 8662	17.4	298
25	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, 251606	3.4	124
24	Direct exfoliation and dispersion of two-dimensional materials in pure water via temperature control. *Nature Communications*, **2015**, 6, 8294	17.4	226
23	Low-Temperature Synthesis of Large-Scale Molybdenum Disulfide Thin Films Directly on a Plastic Substrate Using Plasma-Enhanced Chemical Vapor Deposition. *Advanced Materials*, **2015**, 27, 5223-9	24	136
22	Synthesis of wafer-scale uniform molybdenum disulfide films with control over the layer number using a gas phase sulfur precursor. *Nanoscale*, **2014**, 6, 2821-6	7.7	153
21	Graphene oxide membrane for liquid phase organic molecular separation. *Carbon*, **2014**, 77, 933-938	10.4	81
20	A conductive copolymer of graphene oxide/poly(1-(3-aminopropyl)pyrrole) and the adsorption of metal ions. *Polymer Chemistry*, **2014**, 5, 4466	4.9	35
19	Optical properties of large-area ultrathin MoS2 films: Evolution from a single layer to multilayers. *Journal of Applied Physics*, **2014**, 116, 183509	2.5	51
18	Flexible and transparent MoS2 field-effect transistors on hexagonal boron nitride-graphene heterostructures. *ACS Nano*, **2013**, 7, 7931-6	16.7	800
17	Nonlinear elastic behavior of two-dimensional molybdenum disulfide. *Physical Review B*, **2013**, 87,	3.3	312
16	Effect of surface morphology on friction of graphene on various substrates. *Nanoscale*, **2013**, 5, 3063-9	7.7	124
15	Evaluation of hexagonal boron nitride nano-sheets as a lubricant additive in water. *Wear*, **2013**, 302, 981-986	3.5	122
14	Terahertz, optical, and Raman signatures of monolayer graphene behavior in thermally reduced graphene oxide films. *Journal of Applied Physics*, **2013**, 113, 183502	2.5	17
13	Characteristics and effects of diffused water between graphene and a SiO2 substrate. *Nano Research*, **2012**, 5, 710-717	10	71
12	A Silicon Microturbopump for a Rankine-Cycle Power Generation Microsystem—Part I: Component and System Design. *Journal of Microelectromechanical Systems*, **2011**, 20, 312-325	2.5	21
11	Friction anisotropy-driven domain imaging on exfoliated monolayer graphene. *Science*, **2011**, 333, 607-10	33.3	241

10	A Silicon Microturbopump for a Rankine-Cycle Power-Generation Microsystem Part II: Fabrication and Characterization. *Journal of Microelectromechanical Systems*, **2011**, 20, 326-338	2.5	19
9	Chemical vapor deposition-grown graphene: the thinnest solid lubricant. *ACS Nano*, **2011**, 5, 5107-14	16.7	388
8	Frictional characteristics of atomically thin sheets. *Science*, **2010**, 328, 76-80	33.3	1242
7	Anomalous lattice vibrations of single- and few-layer MoS2. *ACS Nano*, **2010**, 4, 2695-700	16.7	3330
6	Atomically thin MoS a new direct-gap semiconductor. *Physical Review Letters*, **2010**, 105, 136805	7.4	10306
5	Substrate effect on thickness-dependent friction on graphene. *Physica Status Solidi (B): Basic Research*, **2010**, 247, 2909-2914	1.3	161
4	Design Principles and Measured Performance of Multistage Radial Flow Microturbomachinery at Low Reynolds Numbers. *Journal of Fluids Engineering, Transactions of the ASME*, **2008**, 130,	2.1	4
3	Growth of serpentine carbon nanotubes on quartz substrates and their electrical properties. *Nano Research*, **2008**, 1, 427-433	10	28
2	Measurement of the elastic properties and intrinsic strength of monolayer graphene. *Science*, **2008**, 321, 385-8	33.3	14811
1	Raman scattering measurement of suspended graphene under extreme strain induced by nanoindentation. *Advanced Materials*,2200946	24	1