

Changgu Lee

List of Publications by Citations

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

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 | Measurement of the elastic properties and intrinsic strength of monolayer graphene. <i>Science</i> , 2008 , 321, 385-8 | 33.3 | 14811 |
| 80 | Atomically thin MoS ₂ a new direct-gap semiconductor. <i>Physical Review Letters</i> , 2010 , 105, 136805 | 7.4 | 10306 |
| 79 | Anomalous lattice vibrations of single- and few-layer MoS ₂ . <i>ACS Nano</i> , 2010 , 4, 2695-700 | 16.7 | 3330 |
| 78 | Frictional characteristics of atomically thin sheets. <i>Science</i> , 2010 , 328, 76-80 | 33.3 | 1242 |
| 77 | Flexible and transparent MoS ₂ field-effect transistors on hexagonal boron nitride-graphene heterostructures. <i>ACS Nano</i> , 2013 , 7, 7931-6 | 16.7 | 800 |
| 76 | Chemical vapor deposition-grown graphene: the thinnest solid lubricant. <i>ACS Nano</i> , 2011 , 5, 5107-14 | 16.7 | 388 |
| 75 | Nonlinear elastic behavior of two-dimensional molybdenum disulfide. <i>Physical Review B</i> , 2013 , 87, | 3.3 | 312 |
| 74 | Synthesis of large-area multilayer hexagonal boron nitride for high material performance. <i>Nature Communications</i> , 2015 , 6, 8662 | 17.4 | 298 |
| 73 | Friction anisotropy-driven domain imaging on exfoliated monolayer graphene. <i>Science</i> , 2011 , 333, 607-10 | 33.3 | 241 |
| 72 | Direct exfoliation and dispersion of two-dimensional materials in pure water via temperature control. <i>Nature Communications</i> , 2015 , 6, 8294 | 17.4 | 226 |
| 71 | Substrate effect on thickness-dependent friction on graphene. <i>Physica Status Solidi (B): Basic Research</i> , 2010 , 247, 2909-2914 | 1.3 | 161 |
| 70 | Synthesis of wafer-scale uniform molybdenum disulfide films with control over the layer number using a gas phase sulfur precursor. <i>Nanoscale</i> , 2014 , 6, 2821-6 | 7.7 | 153 |
| 69 | Hard magnetic properties in nanoflake van der Waals FeGeTe. <i>Nature Communications</i> , 2018 , 9, 1554 | 17.4 | 149 |
| 68 | Low-Temperature Synthesis of Large-Scale Molybdenum Disulfide Thin Films Directly on a Plastic Substrate Using Plasma-Enhanced Chemical Vapor Deposition. <i>Advanced Materials</i> , 2015 , 27, 5223-9 | 24 | 136 |
| 67 | Work function variation of MoS ₂ atomic layers grown with chemical vapor deposition: The effects of thickness and the adsorption of water/oxygen molecules. <i>Applied Physics Letters</i> , 2015 , 106, 251606 | 3.4 | 124 |
| 66 | Effect of surface morphology on friction of graphene on various substrates. <i>Nanoscale</i> , 2013 , 5, 3063-9 | 7.7 | 124 |
| 65 | Evaluation of hexagonal boron nitride nano-sheets as a lubricant additive in water. <i>Wear</i> , 2013 , 302, 981-986 | 3.9 | 122 |

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|----|---|------|----|
| 64 | Field-effect transistor with a chemically synthesized MoS ₂ sensing channel for label-free and highly sensitive electrical detection of DNA hybridization. <i>Nano Research</i> , 2015 , 8, 2340-2350 | 10 | 94 |
| 63 | Recoverable Slippage Mechanism in Multilayer Graphene Leads to Repeatable Energy Dissipation. <i>ACS Nano</i> , 2016 , 10, 1820-8 | 16.7 | 89 |
| 62 | Enhanced Raman Scattering of Rhodamine 6G Films on Two-Dimensional Transition Metal Dichalcogenides Correlated to Photoinduced Charge Transfer. <i>Chemistry of Materials</i> , 2016 , 28, 180-187 | 9.6 | 88 |
| 61 | Graphene oxide membrane for liquid phase organic molecular separation. <i>Carbon</i> , 2014 , 77, 933-938 | 10.4 | 81 |
| 60 | Characteristics and effects of diffused water between graphene and a SiO ₂ substrate. <i>Nano Research</i> , 2012 , 5, 710-717 | 10 | 71 |
| 59 | Thickness Dependence of the Mechanical Properties of Free-Standing Graphene Oxide Papers. <i>Advanced Functional Materials</i> , 2015 , 25, 3756-3763 | 15.6 | 59 |
| 58 | Structural and Optical Properties of Single- and Few-Layer Magnetic Semiconductor CrPS. <i>ACS Nano</i> , 2017 , 11, 10935-10944 | 16.7 | 57 |
| 57 | Antisymmetric magnetoresistance in van der Waals FeGeTe/graphite/FeGeTe trilayer heterostructures. <i>Science Advances</i> , 2019 , 5, eaaw0409 | 14.3 | 57 |
| 56 | Large-Area CVD-Grown Sub-2 V ReS Transistors and Logic Gates. <i>Nano Letters</i> , 2017 , 17, 2999-3005 | 11.5 | 52 |
| 55 | Ultrahigh Photoresponsive Device Based on ReS /Graphene Heterostructure. <i>Small</i> , 2018 , 14, e1802593 | 11 | 52 |
| 54 | Optical properties of large-area ultrathin MoS ₂ films: Evolution from a single layer to multilayers. <i>Journal of Applied Physics</i> , 2014 , 116, 183509 | 2.5 | 51 |
| 53 | Visualization and manipulation of magnetic domains in the quasi-two-dimensional material Fe ₃ GeTe ₂ . <i>Physical Review B</i> , 2018 , 97, | 3.3 | 49 |
| 52 | Gate-Tunable Hole and Electron Carrier Transport in Atomically Thin Dual-Channel WSe /MoS Heterostructure for Ambipolar Field-Effect Transistors. <i>Advanced Materials</i> , 2016 , 28, 9519-9525 | 24 | 49 |
| 51 | Multifunctional van der Waals Broken-Gap Heterojunction. <i>Small</i> , 2019 , 15, e1804885 | 11 | 42 |
| 50 | Graphene oxide papers with high water adsorption capacity for air dehumidification. <i>Scientific Reports</i> , 2017 , 7, 9761 | 4.9 | 42 |
| 49 | Ultraclean and Direct Transfer of a Wafer-Scale MoS Thin Film onto a Plastic Substrate. <i>Advanced Materials</i> , 2017 , 29, 1603928 | 24 | 37 |
| 48 | A robust and conductive metal-impregnated graphene oxide membrane selectively separating organic vapors. <i>Chemical Communications</i> , 2015 , 51, 2671-4 | 5.8 | 36 |
| 47 | A conductive copolymer of graphene oxide/poly(1-(3-aminopropyl)pyrrole) and the adsorption of metal ions. <i>Polymer Chemistry</i> , 2014 , 5, 4466 | 4.9 | 35 |

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| 46 | On-stack two-dimensional conversion of MoS ₂ into MoO ₃ . <i>2D Materials</i> , 2017 , 4, 014003 | 5.9 | 32 |
| 45 | Large-area niobium disulfide thin films as transparent electrodes for devices based on two-dimensional materials. <i>Nanoscale</i> , 2018 , 10, 1056-1062 | 7.7 | 32 |
| 44 | Wafer-scale monolayer MoS ₂ grown by chemical vapor deposition using a reaction of MoO ₃ and H ₂ S. <i>Journal of Physics Condensed Matter</i> , 2016 , 28, 184002 | 1.8 | 30 |
| 43 | Van der Waals Broken-Gap p-n Heterojunction Tunnel Diode Based on Black Phosphorus and Rhenium Disulfide. <i>ACS Applied Materials & Interfaces</i> , 2019 , 11, 8266-8275 | 9.5 | 29 |
| 42 | Growth of serpentine carbon nanotubes on quartz substrates and their electrical properties. <i>Nano Research</i> , 2008 , 1, 427-433 | 10 | 28 |
| 41 | Antiferromagnetic coupling of van der Waals ferromagnetic FeGeTe. <i>Nanotechnology</i> , 2019 , 30, 245701 | 3.4 | 25 |
| 40 | Wafer-Scale Substitutional Doping of Monolayer MoS Films for High-Performance Optoelectronic Devices. <i>ACS Applied Materials & Interfaces</i> , 2019 , 11, 12613-12621 | 9.5 | 24 |
| 39 | Ambipolar transport based on CVD-synthesized ReSe ₂ . <i>2D Materials</i> , 2017 , 4, 025014 | 5.9 | 22 |
| 38 | A Silicon Microturbopump for a Rankine-Cycle Power Generation Microsystem Part I: Component and System Design. <i>Journal of Microelectromechanical Systems</i> , 2011 , 20, 312-325 | 2.5 | 21 |
| 37 | A Silicon Microturbopump for a Rankine-Cycle Power-Generation Microsystem Part II: Fabrication and Characterization. <i>Journal of Microelectromechanical Systems</i> , 2011 , 20, 326-338 | 2.5 | 19 |
| 36 | Vertically Stacked CVD-Grown 2D Heterostructure for Wafer-Scale Electronics. <i>ACS Applied Materials & Interfaces</i> , 2019 , 11, 35444-35450 | 9.5 | 18 |
| 35 | A comprehensive study of piezomagnetic response in CrPS monolayer: mechanical, electronic properties and magnetic ordering under strains. <i>Journal of Physics Condensed Matter</i> , 2017 , 29, 405801 | 1.8 | 18 |
| 34 | Large-area single-crystal graphene grown on a recrystallized Cu(111) surface by using a hole-pocket method. <i>Nanoscale</i> , 2016 , 8, 13781-9 | 7.7 | 17 |
| 33 | Line-defect mediated formation of hole and Mo clusters in monolayer molybdenum disulfide. <i>2D Materials</i> , 2016 , 3, 014002 | 5.9 | 17 |
| 32 | Terahertz, optical, and Raman signatures of monolayer graphene behavior in thermally reduced graphene oxide films. <i>Journal of Applied Physics</i> , 2013 , 113, 183502 | 2.5 | 17 |
| 31 | Crossover between Photochemical and Photothermal Oxidations of Atomically Thin Magnetic Semiconductor CrPS. <i>Nano Letters</i> , 2019 , 19, 4043-4051 | 11.5 | 16 |
| 30 | Phase-Engineered Molybdenum Telluride/Black Phosphorus Van der Waals Heterojunctions for Tunable Multivalued Logic. <i>ACS Applied Materials & Interfaces</i> , 2020 , 12, 14119-14124 | 9.5 | 16 |
| 29 | Nanopatched Graphene with Molecular Self-Assembly Toward Graphene-Organic Hybrid Soft Electronics. <i>Advanced Materials</i> , 2018 , 30, e1706480 | 24 | 16 |

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| 28 | Topological Insulator-Based van der Waals Heterostructures for Effective Control of Massless and Massive Dirac Fermions. <i>Nano Letters</i> , 2018 , 18, 8047-8053 | 11.5 | 16 |
| 27 | First-principles study of ferromagnetic metal Fe ₅ GeTe ₂ . <i>Nano Materials Science</i> , 2019 , 1, 299-303 | 10.2 | 15 |
| 26 | Comparison of Frictional Properties of CVD-Grown MoS ₂ and Graphene Films under Dry Sliding Conditions. <i>Nanomaterials</i> , 2019 , 9, | 5.4 | 10 |
| 25 | Adhesion and Self-Healing between Monolayer Molybdenum Disulfide and Silicon Oxide. <i>Scientific Reports</i> , 2017 , 7, 14740 | 4.9 | 10 |
| 24 | Bias-assisted atomic force microscope nanolithography on NbS ₂ thin films grown by chemical vapor deposition. <i>Journal Physics D: Applied Physics</i> , 2016 , 49, 484001 | 3 | 10 |
| 23 | Resonant tunnelling diodes based on twisted black phosphorus homostructures. <i>Nature Electronics</i> , 2021 , 4, 269-276 | 28.4 | 9 |
| 22 | Energy Dissipation in Black Phosphorus Heterostructured Devices. <i>Advanced Materials Interfaces</i> , 2019 , 6, 1801528 | 4.6 | 9 |
| 21 | Selectively Metallized 2D Materials for Simple Logic Devices. <i>ACS Applied Materials & Interfaces</i> , 2019 , 11, 18571-18579 | 9.5 | 8 |
| 20 | Designing Carbon/Oxygen Ratios of Graphene Oxide Membranes for Proton Exchange Membrane Fuel Cells. <i>Journal of Nanomaterials</i> , 2019 , 2019, 1-9 | 3.2 | 8 |
| 19 | Interlayer magnetism in Fe ₃ GeTe ₂ . <i>Physical Review Materials</i> , 2020 , 4, | 3.2 | 8 |
| 18 | Direct Observation of Fe-Ge Ordering in Fe ₅ GeTe ₂ Crystals and Resultant Helimagnetism. <i>Advanced Functional Materials</i> , 2021 , 31, 2009758 | 15.6 | 8 |
| 17 | Exchange Bias Effect in Ferro-/Antiferromagnetic van der Waals Heterostructures. <i>Nano Letters</i> , 2020 , 20, 3978-3985 | 11.5 | 6 |
| 16 | Mechanical characterization of phase-changed single-layer MoS ₂ sheets. <i>2D Materials</i> , 2019 , 6, 025024 | 5.9 | 6 |
| 15 | Self-Assembly of Silver Nanowire Ring Structures Driven by the Compressive Force of a Liquid Droplet. <i>Langmuir</i> , 2017 , 33, 3367-3372 | 4 | 5 |
| 14 | Wafer-scale and patternable synthesis of NbS ₂ for electrodes of organic transistors and logic gates. <i>Journal of Materials Chemistry C</i> , 2019 , 7, 8599-8606 | 7.1 | 5 |
| 13 | Bionanoelectronic platform with a lipid bilayer/CVD-grown MoS hybrid. <i>Biosensors and Bioelectronics</i> , 2019 , 142, 111512 | 11.8 | 4 |
| 12 | Design Principles and Measured Performance of Multistage Radial Flow Microturbomachinery at Low Reynolds Numbers. <i>Journal of Fluids Engineering, Transactions of the ASME</i> , 2008 , 130, | 2.1 | 4 |
| 11 | Polarized Raman Spectra and Complex Raman Tensors of Antiferromagnetic Semiconductor CrPS ₄ . <i>Journal of Physical Chemistry C</i> , 2021 , 125, 2691-2698 | 3.8 | 4 |

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|----|---|------|---|
| 10 | Dominant in-plane cleavage direction of CrPS4. <i>Computational Materials Science</i> , 2019 , 162, 277-280 | 3.2 | 3 |
| 9 | Spin Dynamics Slowdown near the Antiferromagnetic Critical Point in Atomically Thin FePS. <i>Nano Letters</i> , 2021 , 21, 5045-5052 | 11.5 | 3 |
| 8 | Ultrafast and low-temperature synthesis of patternable MoS2 using laser irradiation. <i>Journal Physics D: Applied Physics</i> , 2019 , 52, 18LT01 | 3 | 2 |
| 7 | Asymmetric carrier transport and weak localization in few layer graphene grown directly on a dielectric substrate. <i>Physical Chemistry Chemical Physics</i> , 2021 , 23, 25284-25290 | 3.6 | 2 |
| 6 | Iron-based ferromagnetic van der Waals materials. <i>Journal Physics D: Applied Physics</i> , 2021 , 54, 473002 | 3 | 2 |
| 5 | Preface for a special issue on 2D materials: growth, characterisation, properties and devices. <i>Journal Physics D: Applied Physics</i> , 2017 , 50, 440401 | 3 | 1 |
| 4 | Interface Engineering of Magnetic Anisotropy in van der Waals Ferromagnet-based Heterostructures. <i>ACS Nano</i> , 2021 , 15, 16395-16403 | 16.7 | 1 |
| 3 | Photoresponsive Devices: Ultrahigh Photoresponsive Device Based on ReS2/Graphene Heterostructure (Small 45/2018). <i>Small</i> , 2018 , 14, 1870211 | 11 | 1 |
| 2 | Raman scattering measurement of suspended graphene under extreme strain induced by nanoindentation. <i>Advanced Materials</i> , 2200946 | 24 | 1 |
| 1 | Synthesis of 2D semiconducting single crystalline BiS for high performance electronics. <i>Physical Chemistry Chemical Physics</i> , 2021 , 23, 26806-26812 | 3.6 | 0 |