

# Chul-Ho Lee

## List of Publications by Year in Descending Order

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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.

93  
papers

7,728  
citations

38  
h-index

87  
g-index

99  
ext. papers

8,835  
ext. citations

13.1  
avg, IF

5.82  
L-index

#	Paper	IF	Citations
93	Hetero-Integration of Silicon Nanomembranes with 2D Materials for Bioresorbable, Wireless Neurochemical System.. <i>Advanced Materials</i> , <b>2022</b> , e2108203	24	3
92	Band Structure Engineering of WSe <sub>2</sub> Homo-Junction Interfaces via Thickness Control. <i>Advanced Materials Interfaces</i> , <b>2022</b> , 9, 2101763	4.6	1
91	Electrically driven strain-induced deterministic single-photon emitters in a van der Waals heterostructure. <i>Science Advances</i> , <b>2021</b> , 7, eabj3176	14.3	3
90	Atomic-layer-confined multiple quantum wells enabled by monolithic bandgap engineering of transition metal dichalcogenides. <i>Science Advances</i> , <b>2021</b> , 7,	14.3	2
89	Grain Boundaries Boost Oxygen Evolution Reaction in NiFe Electrocatalysts.. <i>Small Methods</i> , <b>2021</b> , 5, e2000755	12.8	7
88	Design of 2D Layered Catalyst by Coherent Heteroepitaxial Conversion for Robust Hydrogen Generation. <i>Advanced Functional Materials</i> , <b>2021</b> , 31, 2005449	15.6	4
87	Enhanced Photoluminescence of Multiple Two-Dimensional van der Waals Heterostructures Fabricated by Layer-by-Layer Oxidation of MoS <sub>2</sub> . <i>ACS Applied Materials &amp; Interfaces</i> , <b>2021</b> , 13, 1245-1252	9.52	8
86	Polarization Control of Deterministic Single-Photon Emitters in Monolayer WSe <sub>2</sub> . <i>Nano Letters</i> , <b>2021</b> , 21, 1546-1554	11.5	12
85	Vertically aligned MoS <sub>2</sub> thin film catalysts with Fe-Ni sulfide nanoparticles by one-step sulfurization for efficient solar water reduction. <i>Chemical Engineering Journal</i> , <b>2021</b> , 418, 129369	14.7	8
84	The Schottky-Mott Rule Expanded for Two-Dimensional Semiconductors: Influence of Substrate Dielectric Screening. <i>ACS Nano</i> , <b>2021</b> , 15, 14794-14803	16.7	2
83	Remote modulation doping in van der Waals heterostructure transistors. <i>Nature Electronics</i> , <b>2021</b> , 4, 664-670	28.4	11
82	Tailoring the Interfacial Band Offset by the Molecular Dipole Orientation for a Molecular Heterojunction Selector. <i>Advanced Science</i> , <b>2021</b> , 8, e2101390	13.6	6
81	An in-plane WSe <sub>2</sub> p-n homojunction two-dimensional diode by laser-induced doping. <i>Journal of Materials Chemistry C</i> , <b>2020</b> , 8, 8393-8398	7.1	8
80	Remote heteroepitaxy of GaN microrod heterostructures for deformable light-emitting diodes and wafer recycle. <i>Science Advances</i> , <b>2020</b> , 6, eaaz5180	14.3	40
79	Tunable rectification in a molecular heterojunction with two-dimensional semiconductors. <i>Nature Communications</i> , <b>2020</b> , 11, 1412	17.4	10
78	Monolithic Interface Contact Engineering to Boost Optoelectronic Performances of 2D Semiconductor Photovoltaic Heterojunctions. <i>Nano Letters</i> , <b>2020</b> , 20, 2443-2451	11.5	21
77	Optoelectronics of Multijunction Heterostructures of Transition Metal Dichalcogenides. <i>Nano Letters</i> , <b>2020</b> , 20, 1934-1943	11.5	13

76	Temperature dependence of optical properties of monolayer WS <sub>2</sub> by spectroscopic ellipsometry. <i>Applied Surface Science</i> , <b>2020</b> , 511, 145503	6.7	11
75	2D semiconducting materials for electronic and optoelectronic applications: potential and challenge. <i>2D Materials</i> , <b>2020</b> , 7, 022003	5.9	73
74	Memristors Based on 2D Materials as an Artificial Synapse for Neuromorphic Electronics. <i>Advanced Materials</i> , <b>2020</b> , 32, e2002092	24	81
73	Multioperation-Mode Light-Emitting Field-Effect Transistors Based on van der Waals Heterostructure. <i>Advanced Materials</i> , <b>2020</b> , 32, e2003567	24	4
72	Nonvolatile and Neuromorphic Memory Devices Using Interfacial Traps in Two-Dimensional WSe <sub>2</sub> /MoTe <sub>2</sub> Stack Channel. <i>ACS Nano</i> , <b>2020</b> , 14, 12064-12071	16.7	15
71	Boosting the photocatalytic hydrogen evolution performance via an atomically thin 2D heterojunction visualized by scanning photoelectrochemical microscopy. <i>Nano Energy</i> , <b>2019</b> , 65, 104053	17.1	11
70	All-2D ReS <sub>2</sub> transistors with split gates for logic circuitry. <i>Scientific Reports</i> , <b>2019</b> , 9, 10354	4.9	13
69	Seamless MoTe <sub>2</sub> Homo Junction PIN Diode toward 1300 nm Short-Wave Infrared Detection. <i>Advanced Optical Materials</i> , <b>2019</b> , 7, 1900768	8.1	11
68	Skin-Like, Dynamically Stretchable, Planar Supercapacitors with Buckled Carbon Nanotube/Mn-Mo Mixed Oxide Electrodes and Air-Stable Organic Electrolyte. <i>ACS Nano</i> , <b>2019</b> , 13, 855-866	16.7	55
67	Self-Powered Chemical Sensing Driven by Graphene-Based Photovoltaic Heterojunctions with Chemically Tunable Built-In Potentials. <i>Small</i> , <b>2019</b> , 15, e1804303	11	11
66	Enhanced nucleation of germanium on graphene via dipole engineering. <i>Nanoscale</i> , <b>2018</b> , 10, 5689-5694	7.7	9
65	Highly efficient computer algorithm for identifying layer thickness of atomically thin 2D materials. <i>Journal Physics D: Applied Physics</i> , <b>2018</b> , 51, 11LT03	3	4
64	Enhanced Chemical Reactivity of Graphene by Fermi Level Modulation. <i>Chemistry of Materials</i> , <b>2018</b> , 30, 5602-5609	9.6	11
63	Generation, transport and detection of valley-locked spin photocurrent in WSe <sub>2</sub> -graphene-BiSe <sub>3</sub> heterostructures. <i>Nature Nanotechnology</i> , <b>2018</b> , 13, 910-914	28.7	17
62	Correlational Effects of the Molecular-Tilt Configuration and the Intermolecular van der Waals Interaction on the Charge Transport in the Molecular Junction. <i>Nano Letters</i> , <b>2018</b> , 18, 4322-4330	11.5	6
61	Synaptic Barristor Based on Phase-Engineered 2D Heterostructures. <i>Advanced Materials</i> , <b>2018</b> , 30, e1801447	14.7	99
60	Photovoltaic Field-Effect Transistors Using a MoS <sub>2</sub> and Organic Rubrene van der Waals Hybrid. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2018</b> , 10, 29848-29856	9.5	29
59	Precise temperature sensing with nanoscale thermal sensors based on diamond NV centers. <i>Current Applied Physics</i> , <b>2018</b> , 18, 1066-1070	2.6	6

58	Area-Selective Atomic Layer Deposition Using Si Precursors as Inhibitors. <i>Chemistry of Materials</i> , <b>2018</b> , 30, 7603-7610	9.6	52
57	Direct observation of grain boundaries in chemical vapor deposited graphene. <i>Carbon</i> , <b>2017</b> , 115, 147-153	3.4	16
56	Inorganic Rubidium Cation as an Enhancer for Photovoltaic Performance and Moisture Stability of HC(NH <sub>2</sub> ) <sub>2</sub> PbI <sub>3</sub> Perovskite Solar Cells. <i>Advanced Functional Materials</i> , <b>2017</b> , 27, 1605988	15.6	148
55	Thickness-dependent Schottky barrier height of MoS field-effect transistors. <i>Nanoscale</i> , <b>2017</b> , 9, 6151-6157	1.7	88
54	Epitaxially Self-Assembled Alkane Layers for Graphene Electronics. <i>Advanced Materials</i> , <b>2017</b> , 29, 1603925	2.1	21
53	Recovery of the Pristine Surface of Black Phosphorus by Water Rinsing and Its Device Application. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2017</b> , 9, 21382-21389	9.5	9
52	Structurally Engineered Nanoporous TaO Selector-Less Memristor for High Uniformity and Low Power Consumption. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2017</b> , 9, 34015-34023	9.5	13
51	Single crystalline ZnO radial homojunction light-emitting diodes fabricated by metalorganic chemical vapour deposition. <i>Nanotechnology</i> , <b>2017</b> , 28, 394001	3.4	8
50	Pd-nanodot decorated MoS <sub>2</sub> nanosheets as a highly efficient photocatalyst for the visible-light-induced Suzuki-Miyaura coupling reaction. <i>Journal of Materials Chemistry A</i> , <b>2017</b> , 5, 24965-24971	1.3	47
49	Wafer-scale transferable molybdenum disulfide thin-film catalysts for photoelectrochemical hydrogen production. <i>Energy and Environmental Science</i> , <b>2016</b> , 9, 2240-2248	35.4	150
48	Microtube Light-Emitting Diode Arrays with Metal Cores. <i>ACS Nano</i> , <b>2016</b> , 10, 3114-20	16.7	12
47	van der Waals Solids from Self-Assembled Nanoscale Building Blocks. <i>Nano Letters</i> , <b>2016</b> , 16, 1445-9	11.5	47
46	Low temperature synthesis of garnet type solid electrolyte by modified polymer complex process and its characterization. <i>Materials Research Bulletin</i> , <b>2016</b> , 83, 309-315	5.1	13
45	Two-Dimensional Semiconductor Optoelectronics Based on van der Waals Heterostructures. <i>Nanomaterials</i> , <b>2016</b> , 6,	5.4	79
44	Maximized performance of dye solar cells on plastic: a combined theoretical and experimental optimization approach. <i>Energy and Environmental Science</i> , <b>2016</b> , 9, 2061-2071	35.4	15
43	Low-temperature solution-processed Li-doped SnO <sub>2</sub> as an effective electron transporting layer for high-performance flexible and wearable perovskite solar cells. <i>Nano Energy</i> , <b>2016</b> , 26, 208-215	17.1	331
42	Patterning Superatom Dopants on Transition Metal Dichalcogenides. <i>Nano Letters</i> , <b>2016</b> , 16, 3385-9	11.5	44
41	Highly crumpled graphene nano-networks as electrocatalytic counter electrode in photovoltaics. <i>Applied Catalysis B: Environmental</i> , <b>2016</b> , 192, 342-349	21.8	18

40	Highly Stable, Dual-Gated MoS <sub>2</sub> Transistors Encapsulated by Hexagonal Boron Nitride with Gate-Controllable Contact, Resistance, and Threshold Voltage. <i>ACS Nano</i> , <b>2015</b> , 9, 7019-26	16.7	256
39	Multi-terminal transport measurements of MoS <sub>2</sub> using a van der Waals heterostructure device platform. <i>Nature Nanotechnology</i> , <b>2015</b> , 10, 534-40	28.7	868
38	Highly Efficient Copper-Indium-Selenide Quantum Dot Solar Cells: Suppression of Carrier Recombination by Controlled ZnS Overlayers. <i>ACS Nano</i> , <b>2015</b> , 9, 11286-95	16.7	149
37	Synergistic strategies for the preparation of highly efficient dye-sensitized solar cells on plastic substrates: combination of chemical and physical sintering. <i>RSC Advances</i> , <b>2015</b> , 5, 76795-76803	3.7	6
36	van der Waals Heteroepitaxy of Semiconductor Nanowires. <i>Semiconductors and Semimetals</i> , <b>2015</b> , 125-1726	17.2	5
35	Emission color-tuned light-emitting diode microarrays of nonpolar In(x)Ga(1-x)N/GaN multishell nanotube heterostructures. <i>Scientific Reports</i> , <b>2015</b> , 5, 18020	4.9	14
34	Epitaxial growth of molecular crystals on van der waals substrates for high-performance organic electronics. <i>Advanced Materials</i> , <b>2014</b> , 26, 2812-7	24	103
33	Ferromagnetic ordering in superatomic solids. <i>Journal of the American Chemical Society</i> , <b>2014</b> , 136, 16926-34	66.4	47
32	Heterostructures based on inorganic and organic van der Waals systems. <i>APL Materials</i> , <b>2014</b> , 2, 092511	5.7	52
31	Atomically thin p-n junctions with van der Waals heterointerfaces. <i>Nature Nanotechnology</i> , <b>2014</b> , 9, 676-81.7	88.7	1598
30	Hydrothermal growth of ZnO microstructures on Ar plasma treated graphite. <i>Current Applied Physics</i> , <b>2014</b> , 14, 269-274	2.6	2
29	Flexible and transparent MoS <sub>2</sub> field-effect transistors on hexagonal boron nitride-graphene heterostructures. <i>ACS Nano</i> , <b>2013</b> , 7, 7931-6	16.7	800
28	Nanoscale atoms in solid-state chemistry. <i>Science</i> , <b>2013</b> , 341, 157-60	33.3	162
27	Epitaxial GaN microdisk lasers grown on graphene microdots. <i>Nano Letters</i> , <b>2013</b> , 13, 2782-5	11.5	68
26	GaN nanowire/thin film vertical structure p-n junction light-emitting diodes. <i>Applied Physics Letters</i> , <b>2013</b> , 103, 261116	3.4	18
25	Catalyst-Free Metal-Organic Vapor-Phase Epitaxy of ZnO and GaN Nanostructures for Visible Light-Emitting Devices. <i>Nanoscience and Technology</i> , <b>2012</b> , 37-66	0.6	1
24	Gallium nitride nanostructures for light-emitting diode applications. <i>Nano Energy</i> , <b>2012</b> , 1, 391-400	17.1	60
23	Position- and morphology-controlled ZnO nanostructures grown on graphene layers. <i>Advanced Materials</i> , <b>2012</b> , 24, 5565-9, 5564	24	57

22	Graphene: Position- and Morphology-Controlled ZnO Nanostructures Grown on Graphene Layers (Adv. Mater. 41/2012). <i>Advanced Materials</i> , <b>2012</b> , 24, 5564-5564	24	
21	Inorganic nanostructures grown on graphene layers. <i>Nanoscale</i> , <b>2011</b> , 3, 3522-33	7.7	72
20	GaN/ZnO Nanotube Heterostructure Light-Emitting Diodes Fabricated on Si. <i>IEEE Journal of Selected Topics in Quantum Electronics</i> , <b>2011</b> , 17, 966-970	3.8	6
19	Visible-color-tunable light-emitting diodes. <i>Advanced Materials</i> , <b>2011</b> , 23, 3284-8	24	243
18	Flexible inorganic nanostructure light-emitting diodes fabricated on graphene films. <i>Advanced Materials</i> , <b>2011</b> , 23, 4614-9	24	186
17	Inorganic Optoelectronics: Visible-Color-Tunable Light-Emitting Diodes (Adv. Mater. 29/2011). <i>Advanced Materials</i> , <b>2011</b> , 23, 3224-3224	24	5
16	Scalable network electrical devices using ZnO nanowalls. <i>Nanotechnology</i> , <b>2011</b> , 22, 055205	3.4	23
15	Transferable GaN layers grown on ZnO-coated graphene layers for optoelectronic devices. <i>Science</i> , <b>2010</b> , 330, 655-7	33.3	494
14	Vertical pillar-superlattice array and graphene hybrid light emitting diodes. <i>Nano Letters</i> , <b>2010</b> , 10, 2783-8	11.5	126
13	GaN/In <sub>1-x</sub> Ga <sub>x</sub> N/GaN/ZnO nanoarchitecture light emitting diode microarrays. <i>Applied Physics Letters</i> , <b>2009</b> , 94, 213101	3.4	58
12	Modulation doping in ZnO nanorods for electrical nanodevice applications. <i>Applied Physics Letters</i> , <b>2009</b> , 94, 223117	3.4	25
11	Fabrication and Optical Characteristics of Position-Controlled ZnO Nanotubes and ZnO/Zn <sub>0.8</sub> Mg <sub>0.2</sub> O Coaxial Nanotube Quantum Structure Arrays. <i>Advanced Functional Materials</i> , <b>2009</b> , 19, 1601-1608	15.6	26
10	Shape-Controlled Nanoarchitectures Using Nanowalls. <i>Advanced Materials</i> , <b>2009</b> , 21, 222-226	24	57
9	ZnO/Mg <sub>0.2</sub> Zn <sub>0.8</sub> O coaxial nanorod heterostructures for high-performance electronic nanodevice applications. <i>Applied Physics Letters</i> , <b>2009</b> , 94, 043504	3.4	23
8	Thermoelectric power measurements of wide band gap semiconducting nanowires. <i>Applied Physics Letters</i> , <b>2009</b> , 94, 022106	3.4	75
7	Ultrafine ZnO nanowire electronic device arrays fabricated by selective metal-organic chemical vapor deposition. <i>Small</i> , <b>2009</b> , 5, 181-4	11	32
6	Position-controlled ZnO nanoflower arrays grown on glass substrates for electron emitter application. <i>Nanotechnology</i> , <b>2008</b> , 19, 315202	3.4	57
5	Low-frequency noise characterization of ZnO nanorod back-gate field-effect transistor structure. <i>Physica E: Low-Dimensional Systems and Nanostructures</i> , <b>2008</b> , 40, 2147-2149	3	7

4	Position-Controlled Selective Growth of ZnO Nanorods on Si Substrates Using Facet-Controlled GaN Micropatterns. <i>Advanced Materials</i> , <b>2007</b> , 19, 4416-4419	24	44
3	Controlled selective growth of ZnO nanorod and microrod arrays on Si substrates by a wet chemical method. <i>Applied Physics Letters</i> , <b>2006</b> , 89, 163128	3-4	107
2	Fabrication and electrical characteristics of dual-gate ZnO nanorod metaloxide semiconductor field-effect transistors. <i>Nanotechnology</i> , <b>2006</b> , 17, S327-S331	3-4	58
1	Electrical Modulation of Exciton Complexes in Light-Emitting Tunnel Transistors of a van der Waals Heterostructure. <i>ACS Photonics</i> ,	6-3	0