Sunkook Kim

List of Publications by Year in Descending Order

124 papers	4,806 citations	25 h-index	67 g-index
144 ext. papers	5,575 ext. citations	8.5 avg, IF	5.39 L-index

#	Paper	IF	Citations
124	Skin-conformable photoplethysmogram sensors for energy-efficient always-on cardiovascular monitoring systems. *Nano Energy*, **2022**, 92, 106773	17.1	3
123	Embedded Structural-Durability-Health Monitoring System Integrated with Multi-Sensors and a Wideband Antenna. *IEEE Internet of Things Journal*, **2022**, 1-1	10.7	
122	Resistive Water Level Sensors Based on AgNWs/PEDOT:PSS--PEGME Hybrid Film for Agricultural Monitoring Systems.. *ACS Omega*, **2022**, 7, 15459-15466	3.9	
121	Highly enhanced ferroelectricity in HfO-based ferroelectric thin film by light ion bombardment.. *Science*, **2022**, 376, 731-738	33.3	6
120	Mechanically Stable Kirigami Deformable Resonant Circuits for Wireless Vibration and Pressure Sensor Applications. *ACS Applied Materials & Interfaces*, **2021**, 13, 54162-54169	9.5	2
119	Smart Patch for Skin Temperature: Preliminary Study to Evaluate Psychometrics and Feasibility. *Sensors*, **2021**, 21,	3.8	5
118	Multifunctional molybdenum disulfide flash memory using a PEDOT:PSS floating gate. *NPG Asia Materials*, **2021**, 13,	10.3	5
117	High-Performance Non-Volatile InGaZnO Based Flash Memory Device Embedded with a Monolayer Au Nanoparticles. *Nanomaterials*, **2021**, 11,	5.4	5
116	Direct growth of orthorhombic Hf0.5Zr0.5O2 thin films for hysteresis-free MoS2 negative capacitance field-effect transistors. *Npj 2D Materials and Applications*, **2021**, 5,	8.8	8
115	Effectively Enhanced Broadband Phototransistors Based on Multilayer WSe2/Pentacene. *Advanced Electronic Materials*, **2021**, 7, 2100003	6.4	3
114	Nanonet: Low-temperature-processed tellurium nanowire network for scalable p-type field-effect transistors and a highly sensitive phototransistor array. *NPG Asia Materials*, **2021**, 13,	10.3	6
113	Highly sensitive active pixel image sensor array driven by large-area bilayer MoS transistor circuitry. *Nature Communications*, **2021**, 12, 3559	17.4	24
112	Pulsed Gate Switching of MoS2 Field-Effect Transistor Based on Flexible Polyimide Substrate for Ultrasonic Detectors. *Advanced Functional Materials*, **2021**, 31, 2007389	15.6	5
111	Ultrafast prototyping of large-area stretchable electronic systems by laser ablation technique for controllable robotic arm operations. *IEEE Transactions on Industrial Electronics*, **2021**, 1-1	8.9	6
110	Highly stretchable metal-polymer hybrid conductors for wearable and self-cleaning sensors. *NPG Asia Materials*, **2021**, 13,	10.3	11
109	Sub-Thermionic Negative Capacitance Field Effect Transistors with Solution Combustion-Derived Hf0.5Zr0.5O2. *Advanced Functional Materials*, **2021**, 31, 2103748	15.6	5
108	Customization of MoS2 Phototransistors via Thiol-Based Functionalization. *Advanced Electronic Materials*, **2021**, 7, 2100644	6.4	2

107	Neuromorphic Active Pixel Image Sensor Array for Visual Memory. *ACS Nano*, **2021**, 15, 15362-15370	16.7	9
106	High photoresponsivity of multilayer MoSe2 phototransistors decorated with Au nanoseeds. *Applied Physics Letters*, **2021**, 119, 131102	3.4	3
105	Chaotic Organic Crystal Phosphorescent Patterns for Physical Unclonable Functions. *Advanced Materials*, **2021**, 33, e2102542	24	5
104	Biocompatible, Transparent, and High-Areal-Coverage Kirigami PEDOT:PSS Electrodes for Electrooculography-Derived Human-Machine Interactions. *ACS Sensors*, **2021**, 6, 967-975	9.2	11
103	Laser-Processed Stretchable-Gradient Interconnection-Based Temperature Sensor for a Real-Time Monitoring System. *ACS Applied Electronic Materials*, **2021**, 3, 5601-5607	4	1
102	Expeditiously Crystallized Pure Orthorhombic-HfZrO for Negative Capacitance Field Effect Transistors.. *ACS Applied Materials & Interfaces*, **2021**, 13, 60250-60260	9.5	0
101	Highly Linear and Stable Flexible Temperature Sensors Based on Laser-Induced Carbonization of Polyimide Substrates for Personal Mobile Monitoring. *Advanced Materials Technologies*, **2020**, 5, 2000014	6.8	13
100	Sensory Adaptation and Neuromorphic Phototransistors Based on CsPb(BrI) Perovskite and MoS Hybrid Structure. *ACS Nano*, **2020**, 14, 9796-9806	16.7	42
99	Improvement of the stability and optoelectronic characteristics of molybdenum disulfide thin-film transistors by applying a nitrocellulose passivation layer. *Journal of Information Display*, **2020**, 21, 123-130	4.1	8
98	Rapid and mass-producible synthesis of high-crystallinity MoSe nanosheets by ampoule-loaded chemical vapor deposition. *Nanoscale*, **2020**, 12, 6991-6999	7.7	4
97	Ultrasensitive Multilayer MoS2-Based Photodetector with Permanently Grounded Gate Effect. *Advanced Electronic Materials*, **2020**, 6, 1901256	6.4	9
96	Nickel telluride vertically aligned thin film by radio-frequency magnetron sputtering for hydrogen evolution reaction. *APL Materials*, **2020**, 8, 121104	5.7	2
95	. *IEEE Transactions on Industrial Electronics*, **2020**, 67, 8808-8816	8.9	21
94	Alcohol-based highly conductive polymer for conformal nanocoatings on hydrophobic surfaces toward a highly sensitive and stable pressure sensor. *NPG Asia Materials*, **2020**, 12,	10.3	13
93	Plasma diagnostic in LiMn2O4 thin film process for Li-ion battery application. *Surface and Coatings Technology*, **2020**, 397, 126066	4.4	1
92	Growth of Multiorientated Polycrystalline MoS Using Plasma-Enhanced Chemical Vapor Deposition for Efficient Hydrogen Evolution Reactions. *Nanomaterials*, **2020**, 10,	5.4	2
91	High-Speed Direct Writing of MoSe2 by Maskless and Gas-Free Laser-Assisted Selenization Process. *Journal of Physical Chemistry C*, **2020**, 124, 19333-19339	3.8	1
90	Trends in Low-Temperature Combustion Derived Thin Films for Solution-Processed Electronics. *Advanced Electronic Materials*, **2020**, 6, 2000464	6.4	7

89	High-Intensity Ultrasound-Assisted Low-Temperature Formulation of Lanthanum Zirconium Oxide Nanodispersion for Thin-Film Transistors. *ACS Applied Materials & Interfaces*, **2020**, 12, 44926-44933	9.5	5
88	Active-matrix monolithic gas sensor array based on MoS2 thin-film transistors. *Communications Materials*, **2020**, 1,	6	8
87	Exceptionally Uniform and Scalable Multilayer MoS Phototransistor Array Based on Large-Scale MoS Grown by RF Sputtering, Electron Beam Irradiation, and Sulfurization. *ACS Applied Materials & Interfaces*, **2020**, 12, 20645-20652	9.5	24
86	Large-area MoS2-MoOx heterojunction thin-film photodetectors with wide spectral range and enhanced photoresponse. *APL Materials*, **2019**, 7, 061101	5.7	13
85	Colorimetric Sensing Systems: A Colorimetric Multifunctional Sensing Method for Structural-Durability-Health Monitoring Systems (Adv. Mater. 23/2019). *Advanced Materials*, **2019**, 31, 1970163	24	2
84	MoS Field-Effect Transistor-Amyloid-Hybrid Device for Signal Amplified Detection of MMP-9. *Analytical Chemistry*, **2019**, 91, 8252-8258	7.8	18
83	Highly Efficient Nanocarbon Coating Layer on the Nanostructured Copper Sulfide-Metal Organic Framework Derived Carbon for Advanced Sodium-Ion Battery Anode. *Materials*, **2019**, 12,	3.5	13
82	Ultra-Short Pulsed Laser Annealing Effects on MoS2 Transistors with Asymmetric and Symmetric Contacts. *Electronics (Switzerland)*, **2019**, 8, 222	2.6	3
81	A Colorimetric Multifunctional Sensing Method for Structural-Durability-Health Monitoring Systems. *Advanced Materials*, **2019**, 31, e1807552	24	14
80	Asymmetric Double-Gate Ga2O3 Nanomembrane Field-Effect Transistor for Energy-Efficient Power Devices. *Advanced Electronic Materials*, **2019**, 5, 1800938	6.4	19
79	Laser-Processed Nature-Inspired Deformable Structures for Breathable and Reusable Electrophysiological Sensors toward Controllable Home Electronic Appliances and Psychophysiological Stress Monitoring. *ACS Applied Materials & Interfaces*, **2019**, 11, 28387-28396	9.5	27
78	Low-temperature behaviors of multilayer MoS2 transistors with ohmic and Schottky contacts. *Applied Physics Letters*, **2019**, 115, 033501	3.4	7
77	On MoS Thin-Film Transistor Design Consideration for a NO Gas Sensor. *ACS Sensors*, **2019**, 4, 2930-2936	9.2	14
76	A Fully Integrated Flexible Heterogeneous Temperature and Humidity Sensor-Based Occupancy Detection Device for Smart Office Applications. *Advanced Materials Technologies*, **2019**, 4, 1900619	6.8	6
75	Resistive Water Sensors Based on PEDOT:PSS--PEGME Copolymer and Laser Treatment for Water Ingress Monitoring Systems. *ACS Sensors*, **2019**, 4, 3291-3297	9.2	5
74	Moving shot, an affordable and high-throughput setup for direct imaging of fast-moving microdroplets. *Microsystem Technologies*, **2019**, 25, 3417-3423	1.7	2
73	Highly Stable Thin-Film Transistors Based on Indium Oxynitride Semiconductor. *ACS Applied Materials & Interfaces*, **2018**, 10, 15873-15879	9.5	10
72	Interstitial Mo-Assisted Photovoltaic Effect in Multilayer MoSe Phototransistors. *Advanced Materials*, **2018**, 30, e1705542	24	28

71	Chemical Doping Effects on CVD-Grown Multilayer MoSe2 Transistor. *Advanced Electronic Materials*, **2018**, 4, 1700639	6.4	18
70	Temperature-Dependent Electrical Properties of Al2O3-Passivated Multilayer MoS2 Thin-Film Transistors. *Applied Sciences (Switzerland)*, **2018**, 8, 424	2.6	14
69	Flexible PI-Based Plant Drought Stress Sensor for Real-Time Monitoring System in Smart Farm. *Electronics (Switzerland)*, **2018**, 7, 114	2.6	16
68	Transition Metal Dichalcogenide Photodetectors **2018**,		3
67	Thin-Film Transistors: Chemical Doping Effects on CVD-Grown Multilayer MoSe2 Transistor (Adv. Electron. Mater. 6/2018). *Advanced Electronic Materials*, **2018**, 4, 1870032	6.4	
66	Chemical Doping Effects in Multilayer MoS and Its Application in Complementary Inverter. *ACS Applied Materials & Interfaces*, **2018**, 10, 23270-23276	9.5	15
65	Wireless Real-Time Temperature Monitoring of Blood Packages: Silver Nanowire-Embedded Flexible Temperature Sensors. *ACS Applied Materials & Interfaces*, **2018**, 10, 44678-44685	9.5	42
64	n-Type Doping Effect of CVD-Grown Multilayer MoSe2 Thin Film Transistors by Two-Step Functionalization. *Advanced Electronic Materials*, **2018**, 4, 1800308	6.4	18
63	Enhanced Moisture-Reactive Hydrophilic-PTFE-Based Flexible Humidity Sensor for Real-Time Monitoring. *Sensors*, **2018**, 18,	3.8	13
62	Enhanced photoresponsivity of multilayer MoS2 transistors using high work function MoOx overlayer. *Applied Physics Letters*, **2017**, 110, 053112	3.4	11
61	Massive, eco-friendly, and facile fabrication of multi-functional anodic aluminum oxides: application to nanoporous templates and sensing platforms. *RSC Advances*, **2017**, 7, 4518-4530	3.7	4
60	66-1: Invited Paper: High Mobility Flexible 2D Multilayer MoS2 TFTs on Solution-Based Polyimide Substrates. *Digest of Technical Papers SID International Symposium*, **2017**, 48, 965-967	0.5	1
59	Recent progress in high-mobility thin-film transistors based on multilayer 2D materials. *Journal Physics D: Applied Physics*, **2017**, 50, 164001	3	16
58	A highly sensitive ultrathin-film iron corrosion sensor encapsulated by an anion exchange membrane embedded in mortar. *Construction and Building Materials*, **2017**, 156, 506-514	6.7	6
57	Label-Free and Recalibrated Multilayer MoS Biosensor for Point-of-Care Diagnostics. *ACS Applied Materials & Interfaces*, **2017**, 9, 43490-43497	9.5	36
56	Improving the Stability of High-Performance Multilayer MoS Field-Effect Transistors. *ACS Applied Materials & Interfaces*, **2017**, 9, 42943-42950	9.5	41
55	A highly sensitive chemical gas detecting transistor based on highly crystalline CVD-grown MoSe2 films. *Nano Research*, **2017**, 10, 1861-1871	10	73
54	Real-time electrical detection of epidermal skin MoS2 biosensor for point-of-care diagnostics. *Nano Research*, **2017**, 10, 767-775	10	33

53	Peimine Inhibits the Production of Proinflammatory Cytokines Through Regulation of the Phosphorylation of NF-B and MAPKs in HMC-1 Cells. *Pharmacognosy Magazine*, **2017**, 13, S359-S364	0.8	14
52	The doping mechanism and electrical performance of polyethylenimine-doped MoS2 transistor. *Physica Status Solidi C: Current Topics in Solid State Physics*, **2017**, 14, 1600262		9
51	High-Performance Flexible Multilayer MoS2 Transistors on Solution-Based Polyimide Substrates. *Advanced Functional Materials*, **2016**, 26, 2426-2434	15.6	63
50	A New Microstructure Development Model for the Evaluation of Concrete Setting Time. *Advances in Materials Science and Engineering*, **2016**, 2016, 1-10	1.5	3
49	High-Mobility Transistors Based on Large-Area and Highly Crystalline CVD-Grown MoSe2 Films on Insulating Substrates. *Advanced Materials*, **2016**, 28, 2316-21	24	87
48	Research Update: Nanoscale surface potential analysis of MoS2 field-effect transistors for biomolecular detection using Kelvin probe force microscopy. *APL Materials*, **2016**, 4, 100701	5.7	5
47	High performance and transparent multilayer MoS2 transistors: Tuning Schottky barrier characteristics. *AIP Advances*, **2016**, 6, 055026	1.5	11
46	Transistors: High-Mobility Transistors Based on Large-Area and Highly Crystalline CVD-Grown MoSe2 Films on Insulating Substrates (Adv. Mater. 12/2016). *Advanced Materials*, **2016**, 28, 2278-2278	24	3
45	High-mobility 2D layered semiconducting transistors based on large-area and highly crystalline CVD-grown MoSe2 for flexible electronics **2016**,		1
44	Phototransistors: Giant Photoamplification in Indirect-Bandgap Multilayer MoS2 Phototransistors with Local Bottom-Gate Structures (Adv. Mater. 13/2015). *Advanced Materials*, **2015**, 27, 2126-2126	24	3
43	Electrical Contact Analysis of Multilayer MoS2 Transistor With Molybdenum Source/Drain Electrodes. *IEEE Electron Device Letters*, **2015**, 36, 1215-1218	4.4	20
42	Highly Crystalline CVD-grown Multilayer MoSe2 Thin Film Transistor for Fast Photodetector. *Scientific Reports*, **2015**, 5, 15313	4.9	108
41	Photosensitivity enhancement in hydrogenated amorphous silicon thin-film phototransistors with gate underlap. *Applied Physics Letters*, **2015**, 107, 201103	3.4	5
40	A $alpha $ -Si:H Thin-Film Phototransistor for a Near-Infrared Touch Sensor. *IEEE Electron Device Letters*, **2015**, 36, 41-43	4.4	14
39	Evaluation of pulsed laser annealing for flexible multilayer MoS2 transistors. *Applied Physics Letters* , **2015**, 106, 113111	3.4	18
38	Optically transparent thin-film transistors based on 2D multilayer MoS and indium zinc oxide electrodes. *Nanotechnology*, **2015**, 26, 035202	3.4	16
37	Giant photoamplification in indirect-bandgap multilayer MoS2 phototransistors with local bottom-gate structures. *Advanced Materials*, **2015**, 27, 2224-30	24	92
36	Enhancement of photoresponsive electrical characteristics of multilayer MoS2 transistors using rubrene patches. *Nano Research*, **2015**, 8, 790-800	10	21

35	Two-dimensional layered MoS□biosensors enable highly sensitive detection of biomolecules. *Scientific Reports*, **2014**, 4, 7352	4.9	199
34	Electrical characteristics of multilayer MoS2 transistors at real operating temperatures with different ambient conditions. *Applied Physics Letters*, **2014**, 105, 152105	3.4	34
33	Rendering High Charge Density of States in Ionic Liquid-Gated MoS2 Transistors. *Journal of Physical Chemistry C*, **2014**, 118, 18278-18282	3.8	10
32	Flexible nano-hybrid inverter based on inkjet-printed organic and 2D multilayer MoS2 thin film transistor. *Organic Electronics*, **2014**, 15, 3038-3042	3.5	11
31	Selective and localized laser annealing effect for high-performance flexible multilayer MoS2 thin-film transistors. *Nano Research*, **2014**, 7, 1137-1145	10	55
30	High-temperature electrical behavior of a 2D multilayered MoS2 transistor. *Journal of the Korean Physical Society*, **2014**, 64, 945-948	0.6	4
29	Large-area atomically thin MoS2 nanosheets prepared using electrochemical exfoliation. *ACS Nano*, **2014**, 8, 6902-10	16.7	323
28	Analysis of flicker noise in two-dimensional multilayer MoS2 transistors. *Applied Physics Letters*, **2014**, 104, 083110	3.4	49
27	Electrical performance of local bottom-gated MoS2 thin-film transistors. *Journal of Information Display*, **2014**, 15, 107-110	4.1	
26	Nanowire-based ternary transistor by threshold-voltage manipulation. *Applied Physics Letters*, **2014**, 104, 143509	3.4	8
25	Improved growth behavior of atomic-layer-deposited high-k dielectrics on multilayer MoS2 by oxygen plasma pretreatment. *ACS Applied Materials & Interfaces*, **2013**, 5, 4739-44	9.5	137
24	Drop-cast and dye-sensitized ZnO nanorod-based visible-light photodetectors. *Physica Status Solidi - Rapid Research Letters*, **2013**, 7, 659-663	2.5	5
23	Multilayer transition-metal dichalcogenide channel Thin-Film Transistors **2012**,		4
22	High-mobility and low-power thin-film transistors based on multilayer MoS2 crystals. *Nature Communications*, **2012**, 3, 1011	17.4	1223
21	High-detectivity multilayer MoS(2) phototransistors with spectral response from ultraviolet to infrared. *Advanced Materials*, **2012**, 24, 5832-6	24	814
20	Diffuse light-scattering properties of nanocracked and porous MoO3 films self-formed by electrodeposition and thermal annealing. *Physica Status Solidi (A) Applications and Materials Science*, **2012**, 209, 2161-2166	1.6	5
19	Atomic-layer-deposited ZnO thin-film transistors with various gate dielectrics. *Physica Status Solidi (A) Applications and Materials Science*, **2012**, 209, 2087-2090	1.6	20
18	Facile fabrication of forest-like ZnO hierarchical structures on conductive fabric substrate. *Physica Status Solidi - Rapid Research Letters*, **2012**, 6, 355-357	2.5	8

17	Phototransistors: High-Detectivity Multilayer MoS2 Phototransistors with Spectral Response from Ultraviolet to Infrared (Adv. Mater. 43/2012). *Advanced Materials*, **2012**, 24, 5902-5902	24	19
16	A Highly Sensitive Capacitive Touch Sensor Integrated on a Thin-Film-Encapsulated Active-Matrix OLED for Ultrathin Displays. *IEEE Transactions on Electron Devices*, **2011**, 58, 3609-3615	2.9	54
15	Low-power flexible organic light-emitting diode display device. *Advanced Materials*, **2011**, 23, 3511-6	24	294
14	Mechanically and optically reliable folding structure with a hyperelastic material for seamless foldable displays. *Applied Physics Letters*, **2011**, 98, 151904	3.4	26
13	Capacitance-voltage modeling of metal-ferroelectric-semiconductor capacitors based on epitaxial oxide heterostructures. *Applied Physics Letters*, **2011**, 98, 102901	3.4	17
12	DC modeling and the source of flicker noise in passivated carbon nanotube transistors. *Nanotechnology*, **2010**, 21, 385203	3.4	8
11	Fully transparent pixel circuits driven by random network carbon nanotube transistor circuitry. *ACS Nano*, **2010**, 4, 2994-8	16.7	54
10	18.4: A New Seamless Foldable OLED Display Composed of Multi Display Panels. *Digest of Technical Papers SID International Symposium*, **2010**, 41, 257	0.5	18
9	Fully transparent thin-film transistors based on aligned carbon nanotube arrays and indium tin oxide electrodes. *Advanced Materials*, **2009**, 21, 564-8	24	53
8	Doubly clamped single-walled carbon nanotube resonators operating in MHz frequencies		2
7	Fabrication of Highly Photosensitive MoS 2 Photodetector Films Using Rapid Electrohydrodynamic-Jet Printing Process. *Advanced Electronic Materials*,2101063	6.4	0
6	Sub-Zero Temperature Sensor Based on Laser-Written Carbon. *Advanced Electronic Materials*,2101252	6.4	0
5	Thin-Film Transistors Based on Transition Metal Dichalcogenides539-562		
4	Flexible Platform Oriented: Unipolar-Type Hybrid Dual-Channel Scalable Field-Effect Phototransistors Array Based on Tellurium Nanowires and Tellurium-Film with Highly Linear Photoresponsivity. *Advanced Electronic Materials*,2101331	6.4	1
3	All-day wearable health monitoring system. *EcoMat*,	9.4	3
2	Low-Temperature Carrier Transport Mechanism of Wafer-Scale Grown Polycrystalline Molybdenum Disulfide Thin-Film Transistor Based on Radio Frequency Sputtering and Sulfurization. *Advanced Materials Interfaces*,2102360	4.6	0
1	Ultrathin Al-Assisted Al 2 O 3 Passivation Layer for High-Stability Tungsten Diselenide Transistors and Their Ambipolar Inverter. *Advanced Electronic Materials*,2101012	6.4	