

# Sungkyu Kim

## List of Publications by Year in descending order

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37  
papers

3,742  
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257450

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docs citations

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times ranked

5568  
citing authors

#	ARTICLE	IF	CITATIONS
1	Influences of ALD Al <sub>2</sub> O <sub>3</sub> on the surface band-bending of c-plane, Ga-face GaN. Japanese Journal of Applied Physics, 2022, 61, 011003.	1.5	7
2	Linear and Symmetric Li-Based Composite Memristors for Efficient Supervised Learning. ACS Applied Materials & Interfaces, 2022, 14, 5673-5681.	8.0	18
3	Atomic layer-by-layer etching of graphene directly grown on SrTiO <sub>3</sub> substrates for high-yield remote epitaxy and lift-off. APL Materials, 2022, 10, .	5.1	12
4	Uncovering material deformations via machine learning combined with four-dimensional scanning transmission electron microscopy. Npj Computational Materials, 2022, 8, .	8.7	15
5	Remote epitaxy. Nature Reviews Methods Primers, 2022, 2, .	21.2	47
6	Strong Interfacial Charge Trapping in Ultrathin SrRuO <sub>3</sub> on SrTiO <sub>3</sub> Probed by Noise Spectroscopy. Journal of Physical Chemistry Letters, 2022, 13, 5618-5625.	4.6	4
7	Reconfigurable heterogeneous integration using stackable chips with embedded artificial intelligence. Nature Electronics, 2022, 5, 386-393.	26.0	57
8	Fundamentals and applications of mixed-dimensional heterostructures. APL Materials, 2022, 10, .	5.1	2
9	Graphene Buffer Layer on SiC as a Release Layer for High-Quality Freestanding Semiconductor Membranes. Nano Letters, 2021, 21, 4013-4020.	9.1	34
10	Impact of 2D-3D Heterointerface on Remote Epitaxial Interaction through Graphene. ACS Nano, 2021, 15, 10587-10596.	14.6	57
11	Long-term reliable physical health monitoring by sweat pore-inspired perforated electronic skins. Science Advances, 2021, 7, .	10.3	89
12	Laser-irradiated Holey Graphene-Supported Single-Atom Catalyst towards Hydrogen Evolution and Oxygen Reduction. Advanced Energy Materials, 2021, 11, 2101619.	19.5	43
13	Role of transferred graphene on atomic interaction of GaAs for remote epitaxy. Journal of Applied Physics, 2021, 130, .	2.5	23
14	Sub-50%cm/s surface recombination velocity in InGaAsP/InP ridges. Applied Physics Letters, 2021, 119, 191102.	3.3	2
15	Observation of a flat band and bandgap in millimeter-scale twisted bilayer graphene. Communications Materials, 2021, 2, .	6.9	15
16	Enhancing nanostructured nickel-rich lithium-ion battery cathodes via surface stabilization. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2020, 38, 063210.	2.1	8
17	High Volumetric Energy and Power Density Li <sub>2</sub> TiSiO <sub>5</sub> Battery Anodes via Graphene Functionalization. Matter, 2020, 3, 522-533.	10.0	27
18	Ledge-directed epitaxy of continuously self-aligned single-crystalline nanoribbons of transition metal dichalcogenides. Nature Materials, 2020, 19, 1300-1306.	27.5	104

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19	Alloying conducting channels for reliable neuromorphic computing. Nature Nanotechnology, 2020, 15, 574-579.	31.5	160
20	Graphene-assisted spontaneous relaxation towards dislocation-free heteroepitaxy. Nature Nanotechnology, 2020, 15, 272-276.	31.5	71
21	Conjugated polyelectrolyte with potassium cations enables inverted perovskite solar cells with an efficiency over 20%. Journal of Materials Chemistry A, 2020, 8, 8238-8243.	10.3	33
22	Heterogeneous integration of single-crystalline complex-oxide membranes. Nature, 2020, 578, 75-81.	27.8	218
23	Integration of bulk materials with two-dimensional materials for physical coupling and applications. Nature Materials, 2019, 18, 550-560.	27.5	211
24	Path towards graphene commercialization from lab to market. Nature Nanotechnology, 2019, 14, 927-938.	31.5	235
25	Epitaxial growth and layer-transfer techniques for heterogeneous integration of materials for electronic and photonic devices. Nature Electronics, 2019, 2, 439-450.	26.0	155
26	SiGe epitaxial memory for neuromorphic computing with reproducible high performance based on engineered dislocations. Nature Materials, 2018, 17, 335-340.	27.5	518
27	Perspective: Uniform switching of artificial synapses for large-scale neuromorphic arrays. APL Materials, 2018, 6, .	5.1	26
28	Polarity governs atomic interaction through two-dimensional materials. Nature Materials, 2018, 17, 999-1004.	27.5	182
29	Controlled crack propagation for atomic precision handling of wafer-scale two-dimensional materials. Science, 2018, 362, 665-670.	12.6	208
30	Graphene/III-V Hybrid Diode Optical Modulator. , 2018, , .		2
31	Remote epitaxy through graphene enables two-dimensional material-based layer transfer. Nature, 2017, 544, 340-343.	27.8	410
32	Unveiling the carrier transport mechanism in epitaxial graphene for forming wafer-scale, single-domain graphene. Proceedings of the National Academy of Sciences of the United States of America, 2017, 114, 4082-4086.	7.1	34
33	Selective Nanoscale Mass Transport across Atomically Thin Single Crystalline Graphene Membranes. Advanced Materials, 2017, 29, 1605896.	21.0	46
34	Extremely Large Gate Modulation in Vertical Graphene/WSe <sub>2</sub> Heterojunction Barristor Based on a Novel Transport Mechanism. Advanced Materials, 2016, 28, 5293-5299.	21.0	92
35	Atomic Layer Deposited Aluminum Oxide for Interface Passivation of Cu <sub>2</sub> ZnSn(S,Se) <sub>4</sub> Thin-Film Solar Cells. Advanced Energy Materials, 2016, 6, 1600198.	19.5	75
36	Principle of direct van der Waals epitaxy of single-crystalline films on epitaxial graphene. Nature Communications, 2014, 5, 4836.	12.8	325

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37	Layer-Resolved Graphene Transfer via Engineered Strain Layers. <i>Science</i> , 2013, 342, 833-836.	12.6	174