

Sungkyu Kim

List of Publications by Year in descending order

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Version: 2024-02-01

37
papers

3,742
citations

257450

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330143

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39
all docs

39
docs citations

39
times ranked

5568
citing authors

#	ARTICLE	IF	CITATIONS
1	SiGe epitaxial memory for neuromorphic computing with reproducible high performance based on engineered dislocations. Nature Materials, 2018, 17, 335-340.	27.5	518
2	Remote epitaxy through graphene enables two-dimensional material-based layer transfer. Nature, 2017, 544, 340-343.	27.8	410
3	Principle of direct van der Waals epitaxy of single-crystalline films on epitaxial graphene. Nature Communications, 2014, 5, 4836.	12.8	325
4	Path towards graphene commercialization from lab to market. Nature Nanotechnology, 2019, 14, 927-938.	31.5	235
5	Heterogeneous integration of single-crystalline complex-oxide membranes. Nature, 2020, 578, 75-81.	27.8	218
6	Integration of bulk materials with two-dimensional materials for physical coupling and applications. Nature Materials, 2019, 18, 550-560.	27.5	211
7	Controlled crack propagation for atomic precision handling of wafer-scale two-dimensional materials. Science, 2018, 362, 665-670.	12.6	208
8	Polarity governs atomic interaction through two-dimensional materials. Nature Materials, 2018, 17, 999-1004.	27.5	182
9	Layer-Resolved Graphene Transfer via Engineered Strain Layers. Science, 2013, 342, 833-836.	12.6	174
10	Alloying conducting channels for reliable neuromorphic computing. Nature Nanotechnology, 2020, 15, 574-579.	31.5	160
11	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
12	Ledge-directed epitaxy of continuously self-aligned single-crystalline nanoribbons of transition metal dichalcogenides. Nature Materials, 2020, 19, 1300-1306.	27.5	104
13	Extremely Large Gate Modulation in Vertical Graphene/WSe ₂ Heterojunction Barrier Based on a Novel Transport Mechanism. Advanced Materials, 2016, 28, 5293-5299.	21.0	92
14	Long-term reliable physical health monitoring by sweat pore-inspired perforated electronic skins. Science Advances, 2021, 7, .	10.3	89
15	Atomic Layer Deposited Aluminum Oxide for Interface Passivation of Cu ₂ ZnSn(S,Se) ₄ Thin-Film Solar Cells. Advanced Energy Materials, 2016, 6, 1600198.	19.5	75
16	Graphene-assisted spontaneous relaxation towards dislocation-free heteroepitaxy. Nature Nanotechnology, 2020, 15, 272-276.	31.5	71
17	Impact of 2D-3D Heterointerface on Remote Epitaxial Interaction through Graphene. ACS Nano, 2021, 15, 10587-10596.	14.6	57
18	Reconfigurable heterogeneous integration using stackable chips with embedded artificial intelligence. Nature Electronics, 2022, 5, 386-393.	26.0	57

#	ARTICLE	IF	CITATIONS
19	Remote epitaxy. <i>Nature Reviews Methods Primers</i> , 2022, 2, .	21.2	47
20	Selective Nanoscale Mass Transport across Atomically Thin Single Crystalline Graphene Membranes. <i>Advanced Materials</i> , 2017, 29, 1605896.	21.0	46
21	Laser-irradiated Holey Graphene-supported Single-Atom Catalyst towards Hydrogen Evolution and Oxygen Reduction. <i>Advanced Energy Materials</i> , 2021, 11, 2101619.	19.5	43
22	Unveiling the carrier transport mechanism in epitaxial graphene for forming wafer-scale, single-domain graphene. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2017, 114, 4082-4086.	7.1	34
23	Graphene Buffer Layer on SiC as a Release Layer for High-Quality Freestanding Semiconductor Membranes. <i>Nano Letters</i> , 2021, 21, 4013-4020.	9.1	34
24	Conjugated polyelectrolyte with potassium cations enables inverted perovskite solar cells with an efficiency over 20%. <i>Journal of Materials Chemistry A</i> , 2020, 8, 8238-8243.	10.3	33
25	High Volumetric Energy and Power Density Li ₂ TiSiO ₅ Battery Anodes via Graphene Functionalization. <i>Matter</i> , 2020, 3, 522-533.	10.0	27
26	Perspective: Uniform switching of artificial synapses for large-scale neuromorphic arrays. <i>APL Materials</i> , 2018, 6, .	5.1	26
27	Role of transferred graphene on atomic interaction of GaAs for remote epitaxy. <i>Journal of Applied Physics</i> , 2021, 130, .	2.5	23
28	Linear and Symmetric Li-Based Composite Memristors for Efficient Supervised Learning. <i>ACS Applied Materials & Interfaces</i> , 2022, 14, 5673-5681.	8.0	18
29	Observation of a flat band and bandgap in millimeter-scale twisted bilayer graphene. <i>Communications Materials</i> , 2021, 2, .	6.9	15
30	Uncovering material deformations via machine learning combined with four-dimensional scanning transmission electron microscopy. <i>Npj Computational Materials</i> , 2022, 8, .	8.7	15
31	Atomic layer-by-layer etching of graphene directly grown on SrTiO ₃ substrates for high-yield remote epitaxy and lift-off. <i>APL Materials</i> , 2022, 10, .	5.1	12
32	Enhancing nanostructured nickel-rich lithium-ion battery cathodes via surface stabilization. <i>Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films</i> , 2020, 38, 063210.	2.1	8
33	Influences of ALD Al ₂ O ₃ on the surface band-bending of c-plane, Ga-face GaN. <i>Japanese Journal of Applied Physics</i> , 2022, 61, 011003.	1.5	7
34	Strong Interfacial Charge Trapping in Ultrathin SrRuO ₃ on SrTiO ₃ Probed by Noise Spectroscopy. <i>Journal of Physical Chemistry Letters</i> , 2022, 13, 5618-5625.	4.6	4
35	Graphene/III-V Hybrid Diode Optical Modulator. , 2018, , .		2
36	Sub-50%cm/s surface recombination velocity in InGaAsP/InP ridges. <i>Applied Physics Letters</i> , 2021, 119, 191102.	3.3	2

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37	Fundamentals and applications of mixed-dimensional heterostructures. APL Materials, 2022, 10, .	5.1	2