Jeehwan Kim

List of Publications by Year
in descending order

46 papers	4,447 citations	172457 29 h-index	233421 45 g-index
48 all docs	48 docs citations	48 times ranked	6617 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	High Efficiency Cu₂ZnSn(S,Se)₄ Solar Cells by Applying a Double In₂S₃/CdS Emitter. Advanced Materials, 2014, 26, 7427-7431.	21.0	400
4	Principle of direct van der Waals epitaxy of single-crystalline films on epitaxial graphene. Nature Communications, 2014, 5, 4836.	12.8	325
5	Path towards graphene commercialization from lab to market. Nature Nanotechnology, 2019, 14, 927-938.	31.5	235
6	Heterogeneous integration of single-crystalline complex-oxide membranes. Nature, 2020, 578, 75-81.	27.8	218
7	Integration of bulk materials with two-dimensional materials for physical coupling and applications. Nature Materials, 2019, 18, 550-560.	27.5	211
8	Controlled crack propagation for atomic precision handling of wafer-scale two-dimensional materials. Science, 2018, 362, 665-670.	12.6	208
9	Polarity governs atomic interaction through two-dimensional materials. Nature Materials, 2018, 17, 999-1004.	27.5	182
10	Layer-Resolved Graphene Transfer via Engineered Strain Layers. Science, 2013, 342, 833-836.	12.6	174
11	Alloying conducting channels for reliable neuromorphic computing. Nature Nanotechnology, 2020, 15, 574-579.	31.5	160
12	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
13	Ledge-directed epitaxy of continuously self-aligned single-crystalline nanoribbons of transition metal dichalcogenides. Nature Materials, 2020, 19, 1300-1306.	27.5	104
14	Extremely Large Gate Modulation in Vertical Graphene/WSe₂ Heterojunction Barristor Based on a Novel Transport Mechanism. Advanced Materials, 2016, 28, 5293-5299.	21.0	92
15	Long-term reliable physical health monitoring by sweat poreâ€“inspired perforated electronic skins. Science Advances, 2021, 7, .	10.3	89
16	Recent progress in Van der Waals (vdW) heterojunction-based electronic and optoelectronic devices. Carbon, 2018, 133, 78-89.	10.3	83
17	Light-Triggered Ternary Device and Inverter Based on Heterojunction of van der Waals Materials. ACS Nano, 2017, 11, 6319-6327.	14.6	78
18	Atomic Layer Deposited Aluminum Oxide for Interface Passivation of Cu₂ZnSn(S,Se)₄ Thinâ€Film Solar Cells. Advanced Energy Materials, 2016, 6, 1600198.	19.5	75

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19	Graphene-assisted spontaneous relaxation towards dislocation-free heteroepitaxy. Nature Nanotechnology, 2020, 15, 272-276.	31.5	71
20	Three-Dimensional a-Si:H Solar Cells on Glass Nanocone Arrays Patterned by Self-Assembled Sn Nanospheres. ACS Nano, 2012, 6, 265-271.	14.6	60
21	Impact of 2Dâ€"3D Heterointerface on Remote Epitaxial Interaction through Graphene. ACS Nano, 2021, 15, 10587-10596.	14.6	57
22	Reconfigurable heterogeneous integration using stackable chips with embedded artificial intelligence. Nature Electronics, 2022, 5, 386-393.	26.0	57
23	Improved germanium n+/p junction diodes formed by coimplantation of antimony and phosphorus. Applied Physics Letters, 2011, 98, .	3.3	52
24	Remote epitaxy. Nature Reviews Methods Primers, 2022, 2, .	21.2	47
25	Selective Nanoscale Mass Transport across Atomically Thin Single Crystalline Graphene Membranes. Advanced Materials, 2017, 29, 1605896.	21.0	46
26	Activation of Implanted n-Type Dopants in Ge Over the Active Concentration of 1Ã—10[sup 20]â€,cm[sup â^'3] Using Coimplantation of Sb and P. Electrochemical and Solid-State Letters, 2010, 13, H12.	2.2	37
27	Multiple implantation and multiple annealing of phosphorus doped germanium to achieve n-type activation near the theoretical limit. Applied Physics Letters, 2012, 101, .	3.3	35
28	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
29	Graphene Buffer Layer on SiC as a Release Layer for High-Quality Freestanding Semiconductor Membranes. Nano Letters, 2021, 21, 4013-4020.	9.1	34
30	Perspective: Uniform switching of artificial synapses for large-scale neuromorphic arrays. APL Materials, 2018, 6, .	5.1	26
31	Role of transferred graphene on atomic interaction of GaAs for remote epitaxy. Journal of Applied Physics, 2021, 130, .	2.5	23
32	The Role of High Work-Function Metallic Nanodots on the Performance of a-Si:H Solar Cells: Offering Ohmic Contact to Light Trapping. ACS Nano, 2010, 4, 7331-7336.	14.6	22
33	9.4% Efficient Amorphous Silicon Solar Cell on High Aspectâ€Ratio Glass Microcones. Advanced Materials, 2014, 26, 4082-4086.	21.0	19
34	Observation of a flat band and bandgap in millimeter-scale twisted bilayer graphene. Communications Materials, 2021, 2, .	6.9	15
35	Uncovering material deformations via machine learning combined with four-dimensional scanning transmission electron microscopy. Npj Computational Materials, 2022, 8, .	8.7	15
36	Fabrication of dislocation-free tensile strained Si thin films using controllably oxidized porous Si substrates. Applied Physics Letters, 2006, 89, 152117.	3.3	14

#	Article	IF	Citations
37	Atomic layer-by-layer etching of graphene directly grown on $SrTiO_3$ substrates for high-yield remote epitaxy and lift-off. APL Materials, 2022, 10, .	5.1	12
38	Van der Waals epitaxy and remote epitaxy of $LiNbO_3$ thin films by pulsed laser deposition. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2021, 39, .	2.1	11
39	A method for fabricating dislocation-free tensile-strained SiGe films via the oxidation of porous Si substrates. Applied Physics Letters, 2007, 91, 252108.	3.3	10
40	Efficiency enhancement of a-Si:H single junction solar cells by a-Ge:H incorporation at the p+ a-SiC:H/transparent conducting oxide interface. Applied Physics Letters, 2011, 99, 062102.	3.3	10
41	Investigation on critical failure thickness of hydrogenated/nonhydrogenated amorphous silicon films. Journal of Applied Physics, 2010, 107, .	2.5	7
42	Engineering of Contact Resistance between Transparent Singleâ€Walled Carbon Nanotube Films and aâ€Si:H Single Junction Solar Cells by Gold Nanodots. Advanced Materials, 2012, 24, 1899-1902.	21.0	7
43	Cracking behavior of evaporated amorphous silicon films. Thin Solid Films, 2010, 518, 4908-4910.	1.8	4
44	Graphene/III-V Hybrid Diode Optical Modulator. , 2018, , .		2
45	Fundamentals and applications of mixed-dimensional heterostructures. APL Materials, 2022, 10, .	5.1	2
46	Fabrication of dislocation-free Si films under uniaxial tension on porous Si compliant substrates. Thin Solid Films, 2008, 516, 7599-7603.	1.8	1