

# Seyoung Kim

## List of Publications by Citations

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32  
papers

10,907  
citations

17  
h-index

39  
g-index

39  
ext. papers

11,931  
ext. citations

6.7  
avg, IF

5.44  
L-index

#	Paper	IF	Citations
32	Large-area synthesis of high-quality and uniform graphene films on copper foils. <i>Science</i> , <b>2009</b> , 324, 1312-1313	35.3	8900
31	Realization of a high mobility dual-gated graphene field-effect transistor with Al <sub>2</sub> O <sub>3</sub> dielectric. <i>Applied Physics Letters</i> , <b>2009</b> , 94, 062107	3.4	737
30	Neuromorphic computing using non-volatile memory. <i>Advances in Physics: X</i> , <b>2017</b> , 2, 89-124	5.1	424
29	Coulomb drag of massless fermions in graphene. <i>Physical Review B</i> , <b>2011</b> , 83,	3.3	145
28	Dielectric thickness dependence of carrier mobility in graphene with HfO <sub>2</sub> top dielectric. <i>Applied Physics Letters</i> , <b>2010</b> , 97, 123105	3.4	91
27	Alloying conducting channels for reliable neuromorphic computing. <i>Nature Nanotechnology</i> , <b>2020</b> , 15, 574-579	28.7	74
26	Direct measurement of the Fermi energy in graphene using a double-layer heterostructure. <i>Physical Review Letters</i> , <b>2012</b> , 108, 116404	7.4	65
25	ECRAM as Scalable Synaptic Cell for High-Speed, Low-Power Neuromorphic Computing <b>2018</b> ,		60
24	Low-frequency acoustic phonon temperature distribution in electrically biased graphene. <i>Nano Letters</i> , <b>2011</b> , 11, 85-90	11.5	57
23	Graphene for CMOS and Beyond CMOS Applications. <i>Proceedings of the IEEE</i> , <b>2010</b> , 98, 2032-2046	14.3	57
22	Coulomb drag and magnetotransport in graphene double layers. <i>Solid State Communications</i> , <b>2012</b> , 152, 1283-1288	1.6	46
21	Spin-polarized to valley-polarized transition in graphene bilayers at $\theta = 0$ in high magnetic fields. <i>Physical Review Letters</i> , <b>2011</b> , 107, 016803	7.4	44
20	Quantum Hall effect in Bernal stacked and twisted bilayer graphene grown on Cu by chemical vapor deposition. <i>Physical Review B</i> , <b>2012</b> , 85,	3.3	40
19	Magnetotransport properties of quasi-free-standing epitaxial graphene bilayer on SiC: evidence for Bernal stacking. <i>Nano Letters</i> , <b>2011</b> , 11, 3624-8	11.5	34
18	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> , <b>2017</b> , 114, 4082-4086	11.5	23
17	Metal-oxide based, CMOS-compatible ECRAM for Deep Learning Accelerator <b>2019</b> ,		23
16	Analog CMOS-based resistive processing unit for deep neural network training <b>2017</b> ,		19

15	Impact of electrolyte density on synaptic characteristics of oxygen-based ionic synaptic transistor. <i>Applied Physics Letters</i> , <b>2021</b> , 119, 103503	3.4	10
14	Pr <sub>0.7</sub> Ca <sub>0.3</sub> MnO <sub>3</sub> -Based Three-Terminal Synapse for Neuromorphic Computing. <i>IEEE Electron Device Letters</i> , <b>2020</b> , 41, 1500-1503	4.4	9
13	Improvement of Synaptic Properties in Oxygen-Based Synaptic Transistors Due to the Accelerated Ion Migration in Sub-Stoichiometric Channels. <i>Advanced Electronic Materials</i> , <b>2021</b> , 7, 2100219	6.4	9
12	Reliability Challenges with Materials for Analog Computing <b>2019</b> ,		6
11	Elucidating Ionic Programming Dynamics of Metal-Oxide Electrochemical Memory for Neuromorphic Computing. <i>Advanced Electronic Materials</i> , <b>2021</b> , 7, 2100185	6.4	6
10	Improved Pattern Recognition Accuracy of Hardware Neural Network: Deactivating Short Failed Synapse Device by Adopting Ovonic Threshold Switching (OTS)-Based Fuse Device. <i>IEEE Electron Device Letters</i> , <b>2020</b> , 41, 1436-1439	4.4	5
9	Excellent Pattern Recognition Accuracy of Neural Networks Using Hybrid Synapses and Complementary Training. <i>IEEE Electron Device Letters</i> , <b>2021</b> , 42, 609-612	4.4	4
8	Mechanical properties of CBiC composite materials fabricated by the SiCr alloy melt-infiltration method. <i>Journal of Composite Materials</i> , <b>2015</b> , 49, 3057-3066	2.7	3
7	Gate capacitance scaling and graphene field-effect transistors with ultra-thin top-gate dielectrics <b>2011</b> ,		3
6	Impact of Operating Temperature on Pattern Recognition Accuracy of Resistive Array-Based Hardware Neural Networks. <i>IEEE Electron Device Letters</i> , <b>2021</b> , 42, 763-766	4.4	3
5	Temperature-dependent studies of the electrical properties and the conduction mechanism of HfO <sub>x</sub> -based RRAM <b>2014</b> ,		2
4	Impact of Asymmetric Weight Update on Neural Network Training With Tiki-Taka Algorithm.. <i>Frontiers in Neuroscience</i> , <b>2021</b> , 15, 767953	5.1	2
3	Experimental measurement of ungated channel region conductance in a multi-terminal, metal oxide-based ECRAM. <i>Semiconductor Science and Technology</i> ,	1.8	2
2	Neural Network Training Acceleration With RRAM-Based Hybrid Synapses. <i>Frontiers in Neuroscience</i> , <b>2021</b> , 15, 690418	5.1	1
1	Hardware and Software Co-optimization for the Initialization Failure of the ReRAM-based Cross-bar Array. <i>ACM Journal on Emerging Technologies in Computing Systems</i> , <b>2020</b> , 16, 1-19	1.7	0