Seyoung Kim

List of Publications by Year
in descending order

38 papers	12,675 citations	430874 18 h-index	501196 28 g-index
39 all docs	39 docs citations	39 times ranked	17805 citing authors

#	Article	IF	Citations
1	Neural Network Training With Asymmetric Crosspoint Elements. Frontiers in Artificial Intelligence, 2022, 5, .	3.4	9
2	Integrate-and-Fire Neuron With Li-Based Electrochemical Random Access Memory Using Native Linear Current Integration Characteristics. IEEE Transactions on Electron Devices, 2022, 69, 4889-4893.	3.0	0
3	Excellent Pattern Recognition Accuracy of Neural Networks Using Hybrid Synapses and Complementary Training. IEEE Electron Device Letters, 2021, 42, 609-612.	3.9	6
4	Impact of Operating Temperature on Pattern Recognition Accuracy of Resistive Array-Based Hardware Neural Networks. IEEE Electron Device Letters, 2021, 42, 763-766.	3.9	7
5	Improvement of Synaptic Properties in Oxygenâ€Based Synaptic Transistors Due to the Accelerated Ion Migration in Subâ€Stoichiometric Channels. Advanced Electronic Materials, 2021, 7, 2100219.	5.1	24
6	Elucidating Ionic Programming Dynamics of Metalâ€Oxide Electrochemical Memory for Neuromorphic Computing. Advanced Electronic Materials, 2021, 7, 2100185.	5.1	20
7	Neural Network Training Acceleration With RRAM-Based Hybrid Synapses. Frontiers in Neuroscience, 2021, 15, 690418.	2.8	2
8	Experimental measurement of ungated channel region conductance in a multi-terminal, metal oxide-based ECRAM. Semiconductor Science and Technology, 2021, 36, 114002.	2.0	8
9	Impact of electrolyte density on synaptic characteristics of oxygen-based ionic synaptic transistor. Applied Physics Letters, 2021, 119, .	3.3	18
10	Impact of Asymmetric Weight Update on Neural Network Training With Tiki-Taka Algorithm. Frontiers in Neuroscience, 2021, 15, 767953.	2.8	12
11	Improved On-chip Training Efficiency at Elevated Temperature and Excellent Inference Accuracy with Retention (> 10⁸ s) of $ext{Pr}_{0.7}ext{Ca}_{0.3}ext{MnO}_{3-mathrm{x}}$ ECRAM Synapse Device for Hardware Neural Network. , 2021, , .		5
12	Improved Pattern Recognition Accuracy of Hardware Neural Network: Deactivating Short Failed Synapse Device by Adopting Ovonic Threshold Switching (OTS)-Based Fuse Device. IEEE Electron Device Letters, 2020, 41, 1436-1439.	3.9	7
13	Pr_{0.7}Ca_{0.3}MnO₃-Based Three-Terminal Synapse for Neuromorphic Computing. IEEE Electron Device Letters, 2020, 41, 1500-1503.	3.9	21
14	Alloying conducting channels for reliable neuromorphic computing. Nature Nanotechnology, 2020, 15, 574-579.	31.5	160
15	Hardware and Software Co-optimization for the Initialization Failure of the ReRAM-based Cross-bar Array. ACM Journal on Emerging Technologies in Computing Systems, 2020, 16, 1-19.	2.3	1
16	Reliability Challenges with Materials for Analog Computing. , 2019, , .		14
17	Metal-oxide based, CMOS-compatible ECRAM for Deep Learning Accelerator. , 2019, , .		48
18	ECRAM as Scalable Synaptic Cell for High-Speed, Low-Power Neuromorphic Computing. , 2018, , .		94

#	Article	IF	Citations
19	Neuromorphic computing using non-volatile memory. Advances in Physics: X, 2017, 2, 89-124.	4.1	629
20	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
21	Analog CMOS-based resistive processing unit for deep neural network training. , 2017, , .		39
22	Mechanical properties of Câ€“SiC composite materials fabricated by the Siâ€“Cr alloy melt-infiltration method. Journal of Composite Materials, 2015, 49, 3057-3066.	2.4	6
23	Temperature-dependent studies of the electrical properties and the conduction mechanism of HfOx-based RRAM. , 2014, , .		7
24	Direct Measurement of the Fermi Energy in Graphene Using a Double-Layer Heterostructure. Physical Review Letters, 2012, 108, 116404.	7.8	77
25	Coulomb drag and magnetotransport in graphene double layers. Solid State Communications, 2012, 152, 1283-1288.	1.9	56
26	Quantum Hall effect in Bernal stacked and twisted bilayer graphene grown on Cu by chemical vapor deposition. Physical Review B, 2012, 85, .	3.2	48
27	Gate capacitance scaling and graphene field-effect transistors with ultra-thin top-gate dielectrics. , 2011, , .		4
28	Low-Frequency Acoustic Phonon Temperature Distribution in Electrically Biased Graphene. Nano Letters, 2011, 11, 85-90.	9.1	63
29	Magnetotransport Properties of Quasi-Free-Standing Epitaxial Graphene Bilayer on SiC: Evidence for Bernal Stacking. Nano Letters, 2011, 11, 3624-3628.	9.1	39
30	Spin-Polarized to Valley-Polarized Transition in Graphene Bilayers at<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mi>Î½</mml:mi><mml:mo>=</mml:mo><mml:mn>0</mml:mn></mml:math>in High Magnetic Fields. Physical Review Letters, 2011, 107, 016803.	7.8	50
31	Coulomb drag of massless fermions in graphene. Physical Review B, 2011, 83, .	3.2	165
32	Graphene for CMOS and Beyond CMOS Applications. Proceedings of the IEEE, 2010, 98, 2032-2046.	21.3	73
33	Dielectric thickness dependence of carrier mobility in graphene with HfO2 top dielectric. Applied Physics Letters, 2010, 97, .	3.3	97
34	Thickness dependence of carrier mobility in mono- and bi-layer graphene with HfO<inf>2</inf> gate dielectric. , 2010, , .		0
35	High-k Dielectrics for Ge, III-V and Graphene MOSFETs. ECS Transactions, 2009, 25, 285-299.	0.5	0
36	Large-Area Synthesis of High-Quality and Uniform Graphene Films on Copper Foils. Science, 2009, 324, 1312-1314.	12.6	10,000

#	Article	IF	Citations
37	Realization of a high mobility dual-gated graphene field-effect transistor with Al2O3 dielectric. Applied Physics Letters, 2009, 94, .	3.3	827
38	Analytical thermal noise model suitable for circuit design using short-channel MOSFETs. , 0, , .		2