Charles Mackin

List of Publications by Year
in descending order

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19 papers	454 citations	758635 12 h-index	1199166 12 g-index
20 all docs	20 docs citations	20 times ranked	673 citing authors

#	Article	IF	Citations
1	Precision of bit slicing with in-memory computing based on analog phase-change memory crossbars. Neuromorphic Computing and Engineering, 2022, 2, 014009.	2.8	18
2	Optimised weight programming for analogue memory-based deep neural networks. Nature Communications, 2022, 13, .	5.8	21
3	Mushroom-Type phase change memory with projection liner: An array-level demonstration of conductance drift and noise mitigation. , 2021, , .		11
4	Circuit Techniques for Efficient Acceleration of Deep Neural Network Inference with Analog-AI (Invited). , 2021, , .		1
5	Toward Software-Equivalent Accuracy on Transformer-Based Deep Neural Networks With Analog Memory Devices. Frontiers in Computational Neuroscience, 2021, 15, 675741.	1.2	14
6	Noise-Resilient DNN: Tolerating Noise in PCM-Based AI Accelerators via Noise-Aware Training. IEEE Transactions on Electron Devices, 2021, 68, 4356-4362.	1.6	21
7	Fully On-Chip MAC at 14 nm Enabled by Accurate Row-Wise Programming of PCM-Based Weights and Parallel Vector-Transport in Duration-Format. IEEE Transactions on Electron Devices, 2021, 68, 6629-6636.	1.6	33
8	Chemical sensor systems based on 2D and thin film materials. 2D Materials, 2020, 7, 022002.	2.0	34
9	AI hardware acceleration with analog memory: Microarchitectures for low energy at high speed. IBM Journal of Research and Development, 2019, 63, 8:1-8:14.	3.2	39
10	Accelerating Deep Neural Networks with Analog Memory Devices. , 2019, , .		3
11	Weight Programming in DNN Analog Hardware Accelerators in the Presence of NVM Variability. Advanced Electronic Materials, 2019, 5, 1900026.	2.6	30
12	Reducing the Impact of Phase-Change Memory Conductance Drift on the Inference of large-scale Hardware Neural Networks. , 2019, , .		42
13	Chemiresistive Graphene Sensors for Ammonia Detection. ACS Applied Materials & Interfaces, 2018, 10, 16169-16176.	4.0	100
14	Correction: Large-scale sensor systems based on graphene electrolyte-gated field-effect transistors. Analyst, The, 2018, 143, 580-580.	1.7	0
15	Frequency Response of Graphene Electrolyte-Gated Field-Effect Transistors. Sensors, 2018, 18, 494.	2.1	20
16	Large-scale sensor systems based on graphene electrolyte-gated field-effect transistors. Analyst, The, 2016, 141, 2704-2711.	1.7	19
17	A Currentâ€“Voltage Model for Graphene Electrolyte-Gated Field-Effect Transistors. IEEE Transactions on Electron Devices, 2014, 61, 3971-3977.	1.6	33
18	Rapid exploration of processing and design guidelines to overcome carbon nanotube variations. , 2013, , .		14

#	Article	IF	Citations
19	Two-dimensional materials for ubiquitous electronics. , 2013, , .		1