Can Li

List of Publications by Year in Descending Order

49 papers	3,995 citations	24 h-index	62 g-index
62 ext. papers	5,189 ext. citations	15.2 avg, IF	5.31 L-index

#	Paper	IF	Citations
49	Experimentally-Validated Crossbar Model for Defect-Aware Training of Neural Networks. *IEEE Transactions on Circuits and Systems II: Express Briefs*, **2022**, 1-1	3.5	0
48	Extending the Scaling Limit of Silicon Channel Transistors Through hhk-Silicene Monolayer: A Computational Study. *IEEE Transactions on Electron Devices*, **2022**, 1-5	2.9	0
47	Ta/HfO2-based Memristor and Crossbar Arrays for In-Memory Computing **2022**, 167-188		
46	In-Memory Computing with Non-volatile Memristor CAM Circuits **2022**, 105-139		1
45	Tree-based machine learning performed in-memory with memristive analog CAM. *Nature Communications*, **2021**, 12, 5806	17.4	8
44	Roadmap on emerging hardware and technology for machine learning. *Nanotechnology*, **2021**, 32, 012002	3.4	45
43	Mixed Precision Quantization for ReRAM-based DNN Inference Accelerators **2021**,		5
42	Redundancy and Analog Slicing for Precise In-Memory Machine Learning—Part II: Applications and Benchmark. *IEEE Transactions on Electron Devices*, **2021**, 68, 4379-4383	2.9	4
41	Redundancy and Analog Slicing for Precise In-Memory Machine Learning—Part I: Programming Techniques. *IEEE Transactions on Electron Devices*, **2021**, 68, 4373-4378	2.9	8
40	CMOS-integrated nanoscale memristive crossbars for CNN and optimization acceleration **2020**,		7
39	Power-efficient combinatorial optimization using intrinsic noise in memristor Hopfield neural networks. *Nature Electronics*, **2020**, 3, 409-418	28.4	79
38	Three-dimensional memristor circuits as complex neural networks. *Nature Electronics*, **2020**, 3, 225-232	28.4	112
37	Analog content-addressable memories with memristors. *Nature Communications*, **2020**, 11, 1638	17.4	28
36	Analog error correcting codes for defect tolerant matrix multiplication in crossbars **2020**,		2
35	In-Memory Computing with Memristor Content Addressable Memories for Pattern Matching. *Advanced Materials*, **2020**, 32, e2003437	24	27
34	Memristor TCAMs Accelerate Regular Expression Matching for Network Intrusion Detection. *IEEE Nanotechnology Magazine*, **2019**, 18, 963-970	2.6	17
33	In situ training of feed-forward and recurrent convolutional memristor networks. *Nature Machine Intelligence*, **2019**, 1, 434-442	22.5	93

32	Low-Conductance and Multilevel CMOS-Integrated Nanoscale Oxide Memristors. *Advanced Electronic Materials*, **2019**, 5, 1800876	6.4	46
31	Artificial Neural Network (ANN) to Spiking Neural Network (SNN) Converters Based on Diffusive Memristors. *Advanced Electronic Materials*, **2019**, 5, 1900060	6.4	55
30	Reinforcement learning with analogue memristor arrays. *Nature Electronics*, **2019**, 2, 115-124	28.4	166
29	Scalable 3D Ta:SiOx Memristive Devices. *Advanced Electronic Materials*, **2019**, 5, 1800958	6.4	2
28	Three-Dimensional Crossbar Arrays of Self-rectifying Si/SiO2/Si Memristors **2019**, 791-813		7
27	Learning with Resistive Switching Neural Networks **2019**,		4
26	**2019**,		1
25	Memristor crossbar arrays with 6-nm half-pitch and 2-nm critical dimension. *Nature Nanotechnology* , **2019**, 14, 35-39	28.7	231
24	Long short-term memory networks in memristor crossbar arrays. *Nature Machine Intelligence*, **2019**, 1, 49-57	22.5	176
23	Threshold Switching: Threshold Switching of Ag or Cu in Dielectrics: Materials, Mechanism, and Applications (Adv. Funct. Mater. 6/2018). *Advanced Functional Materials*, **2018**, 28, 1870036	15.6	7
22	Fully memristive neural networks for pattern classification with unsupervised learning. *Nature Electronics*, **2018**, 1, 137-145	28.4	511
21	Threshold Switching of Ag or Cu in Dielectrics: Materials, Mechanism, and Applications. *Advanced Functional Materials*, **2018**, 28, 1704862	15.6	168
20	Memristor-Based Analog Computation and Neural Network Classification with a Dot Product Engine. *Advanced Materials*, **2018**, 30, 1705914	24	339
19	Unconventional computing with diffusive memristors **2018**,		2
18	Large Memristor Crossbars for Analog Computing **2018**,		6
17	Capacitive neural network with neuro-transistors. *Nature Communications*, **2018**, 9, 3208	17.4	132
16	Efficient and self-adaptive in-situ learning in multilayer memristor neural networks. *Nature Communications*, **2018**, 9, 2385	17.4	371
15	Analogue signal and image processing with large memristor crossbars. *Nature Electronics*, **2018**, 1, 52-59	28.4	550

14	A provable key destruction scheme based on memristive crossbar arrays. *Nature Electronics*, **2018**, 1, 548-554	28.4	32
13	Artificial neural networks based on memristive devices. *Science China Information Sciences*, **2018**, 61, 1	3.4	9
12	Silicon Oxide (SiO): A Promising Material for Resistance Switching?. *Advanced Materials*, **2018**, 30, e1801187	24	105
11	In-Memory Computing with Memristor Arrays **2018**,		12
10	Anatomy of Ag/Hafnia-Based Selectors with 10 Nonlinearity. *Advanced Materials*, **2017**, 29, 1604457	24	245
9	Programmable Bidirectional Folding of Metallic Thin Films for 3D Chiral Optical Antennas. *Advanced Materials*, **2017**, 29, 1606482	24	29
8	Three-dimensional crossbar arrays of self-rectifying Si/SiO/Si memristors. *Nature Communications*, **2017**, 8, 15666	17.4	115
7	A novel true random number generator based on a stochastic diffusive memristor. *Nature Communications*, **2017**, 8, 882	17.4	180
6	Focused-ion-beam induced rayleigh-plateau instability for diversiform suspended nanostructure fabrication. *Scientific Reports*, **2015**, 5, 8236	4.9	19
5	Device engineering and CMOS integration of nanoscale memristors **2014**,		2
4	Low voltage resistive switching devices based on chemically produced silicon oxide. *Applied Physics Letters*, **2013**, 103, 062104	3.4	28
3	Ultrasensitive mass sensor using the out-of-phase vibration eigenstate of intercoupled dual-microcantilevers **2011**,		1
2	Timing Selector: Using Transient Switching Dynamics to Solve the Sneak Path Issue of Crossbar Arrays. *Small Science*,2100072		8
1	Differentiable Content Addressable Memory with Memristors. *Advanced Electronic Materials*,2101198	6.4	