Can Li

List of Publications by Year
in descending order

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61	6,475	218381	344852
papers	citations	26 h-index	36 g-index

62	62	62	4389
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Analogue signal and image processing with large memristor crossbars. Nature Electronics, 2018, 1, 52-59.	13.1	879
2	Fully memristive neural networks for pattern classification with unsupervised learning. Nature Electronics, 2018, 1, 137-145.	13.1	787
3	Efficient and self-adaptive in-situ learning in multilayer memristor neural networks. Nature Communications, 2018, 9, 2385.	5.8	575
4	Memristorâ€Based Analog Computation and Neural Network Classification with a Dot Product Engine. Advanced Materials, 2018, 30, 1705914.	11.1	517
5	Memristor crossbar arrays with 6-nm half-pitch and 2-nm critical dimension. Nature Nanotechnology, 2019, 14, 35-39.	15.6	381
6	Anatomy of Ag/Hafniaâ€Based Selectors with 10¹⁰ Nonlinearity. Advanced Materials, 2017, 29, 1604457.	11.1	292
7	Long short-term memory networks in memristor crossbar arrays. Nature Machine Intelligence, 2019, 1, 49-57.	8.3	288
8	A novel true random number generator based on a stochastic diffusive memristor. Nature Communications, 2017, 8, 882.	5.8	287
9	Reinforcement learning with analogue memristor arrays. Nature Electronics, 2019, 2, 115-124.	13.1	247
10	Three-dimensional memristor circuits as complex neural networks. Nature Electronics, 2020, 3, 225-232.	13.1	242
11	Threshold Switching of Ag or Cu in Dielectrics: Materials, Mechanism, and Applications. Advanced Functional Materials, 2018, 28, 1704862.	7.8	239
12	In situ training of feed-forward and recurrent convolutional memristor networks. Nature Machine Intelligence, 2019, 1, 434-442.	8.3	201
13	Capacitive neural network with neuro-transistors. Nature Communications, 2018, 9, 3208.	5.8	199
14	Power-efficient combinatorial optimization using intrinsic noise in memristor Hopfield neural networks. Nature Electronics, 2020, 3, 409-418.	13.1	196
15	Silicon Oxide (SiO_x): A Promising Material for Resistance Switching?. Advanced Materials, 2018, 30, e1801187.	11.1	156
16	Three-dimensional crossbar arrays of self-rectifying Si/SiO2/Si memristors. Nature Communications, 2017, 8, 15666.	5.8	153
17	Roadmap on emerging hardware and technology for machine learning. Nanotechnology, 2021, 32, 012002.	1.3	104
18	Artificial Neural Network (ANN) to Spiking Neural Network (SNN) Converters Based on Diffusive Memristors. Advanced Electronic Materials, 2019, 5, 1900060.	2.6	92

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19	Analog content-addressable memories with memristors. Nature Communications, 2020, 11, 1638.	5.8	86
20	Lowâ€Conductance and Multilevel CMOSâ€Integrated Nanoscale Oxide Memristors. Advanced Electronic Materials, 2019, 5, 1800876.	2.6	67
21	A provable key destruction scheme based on memristive crossbar arrays. Nature Electronics, 2018, 1, 548-554.	13.1	61
22	Inâ€Memory Computing with Memristor Content Addressable Memories for Pattern Matching. Advanced Materials, 2020, 32, e2003437.	11.1	54
23	Tree-based machine learning performed in-memory with memristive analog CAM. Nature Communications, 2021, 12, 5806.	5.8	44
24	Programmable Bidirectional Folding of Metallic Thin Films for 3D Chiral Optical Antennas. Advanced Materials, 2017, 29, 1606482.	11.1	40
25	Low voltage resistive switching devices based on chemically produced silicon oxide. Applied Physics Letters, 2013, 103, .	1.5	33
26	Memristor TCAMs Accelerate Regular Expression Matching for Network Intrusion Detection. IEEE Nanotechnology Magazine, 2019, 18, 963-970.	1.1	30
27	In-Memory Computing with Memristor Arrays. , 2018, , .		26
28	Focused-Ion-Beam Induced Rayleigh-Plateau Instability for Diversiform Suspended Nanostructure Fabrication. Scientific Reports, 2015, 5, 8236.	1.6	20
29	Mixed Precision Quantization for ReRAM-based DNN Inference Accelerators. , 2021, , .		19
30	Artificial neural networks based on memristive devices. Science China Information Sciences, 2018, 61, 1.	2.7	18
31	Timing Selector: Using Transient Switching Dynamics to Solve the Sneak Path Issue of Crossbar Arrays. Small Science, 2022, 2, 2100072.	5.8	18
32	Redundancy and Analog Slicing for Precise In-Memory Machine Learningâ€”Part I: Programming Techniques. IEEE Transactions on Electron Devices, 2021, 68, 4373-4378.	1.6	16
33	CMOS-integrated nanoscale memristive crossbars for CNN and optimization acceleration. , 2020, , .		15
34	Large Memristor Crossbars for Analog Computing. , 2018, , .		14
35	Three-Dimensional Crossbar Arrays of Self-rectifying Si/SiO2/Si Memristors. , 2019, , 791-813.		13
36	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.	7.8	10

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37	Redundancy and Analog Slicing for Precise In-Memory Machine Learningâ€"Part II: Applications and Benchmark. IEEE Transactions on Electron Devices, 2021, 68, 4379-4383.	1.6	8
38	Learning with Resistive Switching Neural Networks. , 2019, , .		6
39	Analog error correcting codes for defect tolerant matrix multiplication in crossbars. , 2020, , .		6
40	Device engineering and CMOS integration of nanoscale memristors. , 2014, , .		5
41	Unconventional computing with diffusive memristors. , 2018, , .		4
42	Differentiable Content Addressable Memory with Memristors. Advanced Electronic Materials, 2022, 8, .	2.6	3
43	Extending the Scaling Limit of Silicon Channel Transistors Through hhk-Silicene Monolayer: A Computational Study. IEEE Transactions on Electron Devices, 2022, 69, 3494-3498.	1.6	3
44	The trend of emerging non-volatile TCAM for parallel search and AI applications. , 2022, 1, 100012.		3
45	Ultra-fine nanofabrication by hybrid of energetic ion induced fluidization and stress. , 2011, , .		2
46	Ultrasensitive mass sensor using the out-of-phase vibration eigenstate of intercoupled dual-microcantilevers. , 2011, , .		2
47	Scalable 3D Ta:SiO x Memristive Devices. Advanced Electronic Materials, 2019, 5, 1800958.	2.6	2
48	Experimentally-Validated Crossbar Model for Defect-Aware Training of Neural Networks. IEEE Transactions on Circuits and Systems II: Express Briefs, 2022, 69, 2468-2472.	2.2	2
49	In-Memory Computing with Non-volatile Memristor CAM Circuits. , 2022, , 105-139.		2
50	Fabrication and analysis of integrated MEMS pyramidal horn antenna for terahertz applications. , 2012, , .		1
51	Fabrication of silica nanowire bunch arrays in SiO vapor generated by oxygen plasma etching of silicon. , 2013, , .		1
52	Fabrication of anisotropic nanomaterial by precise and large-area nanowire operation with focused-ion-beam. , 2013, , .		1
53	Fabrication of suspended periodic nanostructure by focused ion beam induced material migration and Rayleigh-Plateau instability. , 2013, , .		1
54	Future Computing Systems (FCS) to Support "Understanding" Capability. , 2019, , .		1

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55	BATMANN: A Binarized-All-Through Memory-Augmented Neural Network for Efficient In-Memory Computing. , 2021, , .		1
56	Ta/HfO₂ memristors: from device physics to neural networks. Japanese Journal of Applied Physics, 0, , .	0.8	1
57	Ta/HfO2-based Memristor and Crossbar Arrays for In-Memory Computing. , 2022, , 167-188.		1
58	Stress-assistant selective etching mechanism for lithography-independent nanofabrication. , 2009, , .		0
59	Switching layer engineering for memristive devices. , 2014, , .		0
60	Nanofabrication: Programmable Bidirectional Folding of Metallic Thin Films for 3D Chiral Optical Antennas (Adv. Mater. 19/2017). Advanced Materials, 2017, 29, .	11.1	0
61	Defect tolerant in-memory analog computing with CMOS-integrated nanoscale crossbars: Invited. , 2021, , .		0