

# Yi Li

## List of Publications by Year in Descending Order

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

63

papers

1,632

citations

23

h-index

39

g-index

70

ext. papers

2,095

ext. citations

5.2

avg, IF

4.85

L-index

#	Paper	IF	Citations
63	Low-time-complexity document clustering using memristive dot product engine. <i>Science China Information Sciences</i> , <b>2022</b> , 65, 1	3.4	1
62	Toward memristive in-memory computing: principles and applications. <i>Frontiers of Optoelectronics</i> , <b>2022</b> , 15,	2.8	2
61	In-Memory Search with Phase Change Device-based Ternary Content Addressable Memory. <i>IEEE Electron Device Letters</i> , <b>2022</b> , 1-1	4.4	1
60	Energy-Efficient Memristive Euclidean Distance Engine for Brain-Inspired Competitive Learning. <i>Advanced Intelligent Systems</i> , <b>2021</b> , 3, 2170079	6	2
59	Pt/AlO <sub>x</sub> /TaO <sub>x</sub> /Ta Self-Rectifying Memristor With Record-Low Operation Current (. <i>IEEE Transactions on Electron Devices</i> , <b>2021</b> , 1-5	2.9	1
58	12.7 MA/cm <sup>2</sup> On-Current Density and High Uniformity Realized in AgGeSe/Al <sub>2</sub> O <sub>3</sub> Selectors. <i>IEEE Electron Device Letters</i> , <b>2021</b> , 42, 613-616	4.4	2
57	Low-Power Memristive Logic Device Enabled by Controllable Oxidation of 2D HfSe for In-Memory Computing. <i>Advanced Science</i> , <b>2021</b> , 8, e2005038	13.6	13
56	Complementary Memtransistor-Based Multilayer Neural Networks for Online Supervised Learning Through (Anti-)Spike-Timing-Dependent Plasticity. <i>IEEE Transactions on Neural Networks and Learning Systems</i> , <b>2021</b> , PP,	10.3	3
55	Cryptographic Key Generation and In Situ Encryption in One-Transistor-One-Resistor Memristors for Hardware Security. <i>Advanced Electronic Materials</i> , <b>2021</b> , 7, 2001182	6.4	3
54	Controlled Majority-Inverter Graph Logic With Highly Nonlinear, Self-Rectifying Memristor. <i>IEEE Transactions on Electron Devices</i> , <b>2021</b> , 68, 4897-4902	2.9	4
53	Multiply accumulate operations in memristor crossbar arrays for analog computing. <i>Journal of Semiconductors</i> , <b>2021</b> , 42, 013104	2.3	7
52	Recent Progress on Memristive Convolutional Neural Networks for Edge Intelligence. <i>Advanced Intelligent Systems</i> , <b>2020</b> , 2, 2070108	6	
51	Design of High Robustness BNN Inference Accelerator Based on Binary Memristors. <i>IEEE Transactions on Electron Devices</i> , <b>2020</b> , 67, 3435-3441	2.9	5
50	Forming-Free, Fast, Uniform, and High Endurance Resistive Switching From Cryogenic to High Temperatures in W/AlO <sub>x</sub> /Al <sub>2</sub> O <sub>3</sub> /Pt Bilayer Memristor. <i>IEEE Electron Device Letters</i> , <b>2020</b> , 41, 549-552	4.4	38
49	In-Memory Digital Comparator Based on a Single Multivalued One-Transistor-One-Resistor Memristor. <i>IEEE Transactions on Electron Devices</i> , <b>2020</b> , 67, 1293-1296	2.9	7
48	. <i>IEEE Electron Device Letters</i> , <b>2020</b> , 41, 353-356	4.4	20
47	. <i>IEEE Transactions on Electron Devices</i> , <b>2020</b> , 67, 895-901	2.9	18

46	Enhancement of DC/AC resistive switching performance in AlO <sub>x</sub> memristor by two-technique bilayer approach. <i>Applied Physics Letters</i> , <b>2020</b> , 116, 173504	3.4	11
45	Controllable and Stable Quantized Conductance States in a Pt/HfO <sub>x</sub> /ITO Memristor. <i>Advanced Electronic Materials</i> , <b>2020</b> , 6, 1901055	6.4	18
44	Adaptive Synaptic Memory via Lithium Ion Modulation in RRAM Devices. <i>Small</i> , <b>2020</b> , 16, e2003964	11	21
43	Controlled Memory and Threshold Switching Behaviors in a Heterogeneous Memristor for Neuromorphic Computing. <i>Advanced Electronic Materials</i> , <b>2020</b> , 6, 2000309	6.4	21
42	Low-Power Artificial Neurons Based on Ag/TiN/HfAlO <sub>x</sub> /Pt Threshold Switching Memristor for Neuromorphic Computing. <i>IEEE Electron Device Letters</i> , <b>2020</b> , 41, 1245-1248	4.4	31
41	In-Memory Hamming Weight Calculation in a 1T1R Memristive Array. <i>Advanced Electronic Materials</i> , <b>2020</b> , 6, 2000457	6.4	7
40	Recent Progress on Memristive Convolutional Neural Networks for Edge Intelligence. <i>Advanced Intelligent Systems</i> , <b>2020</b> , 2, 2000114	6	11
39	Enhancing LiAlO synaptic performance by reducing the Schottky barrier height for deep neural network applications. <i>Nanoscale</i> , <b>2020</b> , 12, 22970-22977	7.7	4
38	Recent Advances on Neuromorphic Devices Based on Chalcogenide Phase-Change Materials. <i>Advanced Functional Materials</i> , <b>2020</b> , 30, 2003419	15.6	54
37	Graphene/ferroelectric transistors as complementary synapses for supervised learning in spiking neural network. <i>Npj 2D Materials and Applications</i> , <b>2019</b> , 3,	8.8	39
36	Implementation of All 27 Possible Univariate Ternary Logics With a Single ZnO Memristor. <i>IEEE Transactions on Electron Devices</i> , <b>2019</b> , 66, 4710-4715	2.9	9
35	Nanochannel-Based Transport in an Interfacial Memristor Can Emulate the Analog Weight Modulation of Synapses. <i>Nano Letters</i> , <b>2019</b> , 19, 4279-4286	11.5	36
34	Optimal Tuning of Memristor Conductance Variation in Spiking Neural Networks for Online Unsupervised Learning. <i>IEEE Transactions on Electron Devices</i> , <b>2019</b> , 66, 2844-2849	2.9	7
33	An electro-photo-sensitive synaptic transistor for edge neuromorphic visual systems. <i>Nanoscale</i> , <b>2019</b> , 11, 17590-17599	7.7	34
32	Functional Demonstration of a Memristive Arithmetic Logic Unit (MemALU) for In-Memory Computing. <i>Advanced Functional Materials</i> , <b>2019</b> , 29, 1905660	15.6	35
31	LiSiOX-Based Analog Memristive Synapse for Neuromorphic Computing. <i>IEEE Electron Device Letters</i> , <b>2019</b> , 40, 542-545	4.4	33
30	Complementary Graphene-Ferroelectric Transistors (C-GFTs) as Synapses with Modulatable Plasticity for Supervised Learning <b>2019</b> ,		4
29	Gate Modulation of Excitatory and Inhibitory Synaptic Plasticity in a Low-Temperature Polysilicon Thin Film Synaptic Transistor. <i>ACS Applied Electronic Materials</i> , <b>2019</b> , 1, 132-140	4	14

28	Alleviating Conductance Nonlinearity via Pulse Shape Designs in TaOx Memristive Synapses. <i>IEEE Transactions on Electron Devices</i> , <b>2019</b> , 66, 810-813	2.9	13
27	Reconfigurable Boolean Logic in Memristive Crossbar: The Principle and Implementation. <i>IEEE Electron Device Letters</i> , <b>2019</b> , 40, 200-203	4.4	31
26	. <i>IEEE Electron Device Letters</i> , <b>2018</b> , 39, 496-499	4.4	26
25	Boolean and Sequential Logic in a One-Memristor-One-Resistor (1M1R) Structure for In-Memory Computing. <i>Advanced Electronic Materials</i> , <b>2018</b> , 4, 1800229	6.4	13
24	Model of dielectric breakdown in hafnia-based ferroelectric capacitors. <i>Journal of Applied Physics</i> , <b>2018</b> , 124, 024103	2.5	11
23	Memcomputing: fusion of memory and computing. <i>Science China Information Sciences</i> , <b>2018</b> , 61, 1	3.4	9
22	Beyond SiOx: an active electronics resurgence and biomimetic reactive oxygen species production and regulation from mitochondria. <i>Journal of Materials Chemistry C</i> , <b>2018</b> , 6, 12788-12799	7.1	7
21	Theoretical investigation of the Ag filament morphology in conductive bridge random access memories. <i>Journal of Applied Physics</i> , <b>2018</b> , 124, 152125	2.5	11
20	Efficient Implementation of Boolean and Full-Adder Functions With 1T1R RRAMs for Beyond Von Neumann In-Memory Computing. <i>IEEE Transactions on Electron Devices</i> , <b>2018</b> , 65, 4659-4666	2.9	35
19	Diverse spike-timing-dependent plasticity based on multilevel HfO x memristor for neuromorphic computing. <i>Applied Physics A: Materials Science and Processing</i> , <b>2018</b> , 124, 1	2.6	18
18	Reconfigurable logic in nanosecond Cu/GeTe/TiN filamentary memristors for energy-efficient in-memory computing. <i>Nanotechnology</i> , <b>2018</b> , 29, 385203	3.4	15
17	Nonvolatile reconfigurable sequential logic in a HfO resistive random access memory array. <i>Nanoscale</i> , <b>2017</b> , 9, 6649-6657	7.7	45
16	Synaptic Characteristics of Ag/AgInSbTe/Ta-Based Memristor for Pattern Recognition Applications. <i>IEEE Transactions on Electron Devices</i> , <b>2017</b> , 64, 1806-1811	2.9	61
15	Functionally Complete Boolean Logic in 1T1R Resistive Random Access Memory. <i>IEEE Electron Device Letters</i> , <b>2017</b> , 38, 179-182	4.4	57
14	Reprogrammable logic in memristive crossbar for in-memory computing. <i>Journal Physics D: Applied Physics</i> , <b>2017</b> , 50, 505102	3	27
13	Correlation analysis between the current fluctuation characteristics and the conductive filament morphology of HfO2-based memristor. <i>Applied Physics Letters</i> , <b>2017</b> , 111, 213505	3.4	11
12	Memristive Model for Synaptic Circuits. <i>IEEE Transactions on Circuits and Systems II: Express Briefs</i> , <b>2017</b> , 64, 767-771	3.5	67
11	Realization of Functional Complete Stateful Boolean Logic in Memristive Crossbar. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2016</b> , 8, 34559-34567	9.5	42

10	A hybrid memristor-CMOS XOR gate for nonvolatile logic computation. <i>Physica Status Solidi (A) Applications and Materials Science</i> , <b>2016</b> , 213, 1050-1054	1.6	22
9	16 Boolean logics in three steps with two anti-serially connected memristors. <i>Applied Physics Letters</i> , <b>2015</b> , 106, 233502	3.4	43
8	Associative Learning with Temporal Contiguity in a Memristive Circuit for Large-Scale Neuromorphic Networks. <i>Advanced Electronic Materials</i> , <b>2015</b> , 1, 1500125	6.4	57
7	Simple square pulses for implementing spike-timing-dependent plasticity in phase-change memory. <i>Physica Status Solidi - Rapid Research Letters</i> , <b>2015</b> , 9, 414-419	2.5	23
6	Activity-dependent synaptic plasticity of a chalcogenide electronic synapse for neuromorphic systems. <i>Scientific Reports</i> , <b>2014</b> , 4, 4906	4.9	174
5	Ultrafast synaptic events in a chalcogenide memristor. <i>Scientific Reports</i> , <b>2013</b> , 3, 1619	4.9	256
4	Nonvolatile AND, OR, and NOT Boolean logic gates based on phase-change memory. <i>Journal of Applied Physics</i> , <b>2013</b> , 114, 234503	2.5	29
3	Energy-Efficient Memristive Euclidean Distance Engine for Brain-Inspired Competitive Learning. <i>Advanced Intelligent Systems</i> , 2100114	6	3
2	Reconfigurable Synaptic and Neuronal Functions in a V/VO <sub>x</sub> /HfWO <sub>x</sub> /Pt Memristor for Nonpolar Spiking Convolutional Neural Network. <i>Advanced Functional Materials</i> , 2111996	15.6	7
1	A High-Performance Ag/TiN/HfO <sub>x</sub> /HfO <sub>y</sub> /HfO <sub>x</sub> /Pt Diffusive Memristor for Calibration-Free True Random Number Generator. <i>Advanced Electronic Materials</i> , 2200202	6.4	3