Memory devices and applications for in-memory compu

Citation Report

#	ARTICLE	IF	CITATIONS
1	Ion‚ÄêGated Transistor: An Enabler for Sensing and Computing Integration. Advanced Intelligent Systems, 2020, 2, 2000156.	6.1	27
2	Monitoring PSA levels as chemical state-variables in metal-oxide memristors. Scientific Reports, 2020, 10, 15281.	3.3	6
3	Neuro-inspired computing chips. Nature Electronics, 2020, 3, 371-382.	26.0	402
4	Hardware-Accelerated Platforms and Infrastructures for Network Functions: A Survey of Enabling Technologies and Research Studies. IEEE Access, 2020, 8, 132021-132085.	4.2	50
5	Recent advances in optical and optoelectronic data storage based on luminescent nanomaterials. Nanoscale, 2020, 12, 23391-23423.	5.6	47
6	In‚ÄêMemory Hamming Weight Calculation in a 1T1R Memristive Array. Advanced Electronic Materials, 2020, 6, 2000457.	5.1	17
7	Memristors‚Äî"From In‚ÄêMemory Computing, Deep Learning Acceleration, and Spiking Neural Networks to the Future of Neuromorphic and Bio‚ÄêInspired Computing. Advanced Intelligent Systems, 2020, 2, 2000085.	6.1	143
8	Memristive Computational Memory Using Memristor Overwrite Logic (MOL). IEEE Transactions on Very Large Scale Integration (VLSI) Systems, 2020, 28, 2370-2382.	3.1	16
9	Unveiling the structural origin to control resistance drift in phase-change memory materials. Materials Today, 2020, 41, 156-176.	14.2	96
10	Two-Fold Reduction of Switching Current Density in Phase Change Memory Using Bi‚Ç‚ÇTe‚ÇÉ Thermoelectric Interfacial Layer. IEEE Electron Device Letters, 2020, 41, 1657-1660.	3.9	17
11	Recent Progress on Memristive Convolutional Neural Networks for Edge Intelligence. Advanced Intelligent Systems, 2020, 2, 2000114.	6.1	19
12	Ultrahigh drive current and large selectivity in GeS selector. Nature Communications, 2020, 11, 4636.	12.8	83
13	Ultrahigh-Density 3-D Vertical RRAM With Stacked Junctionless Nanowires for In-Memory-Computing Applications. IEEE Transactions on Electron Devices, 2020, 67, 4626-4630.	3.0	6
14	In‚ÄêMemory Vector‚ÄêMatrix Multiplication in Monolithic Complementary Metal‚Äì"Oxide‚Äì"Semiconductor‚ÄêMemristor Integrated Circuits: Design Choices, Challenges, and Perspectives. Advanced Intelligent Systems, 2020, 2, 2000115.	6.1	100
15	Lead‚ÄêFree Dual‚ÄêPhase Halide Perovskites for Preconditioned Conducting‚ÄêBridge Memory. Small, 2020, 16, e2003225.	10.0	27
16	Recent Advances on Neuromorphic Devices Based on Chalcogenide Phase‚ÄêChange Materials. Advanced Functional Materials, 2020, 30, 2003419.	14.9	144
17	In-Memory Logic Operations and Neuromorphic Computing in Non-Volatile Random Access Memory. Materials, 2020, 13, 3532.	2.9	31
18	On-Chip Error-Triggered Learning of Multi-Layer Memristive Spiking Neural Networks. IEEE Journal on Emerging and Selected Topics in Circuits and Systems, 2020, 10, 522-535.	3.6	18

#	Article	IF	Citations
19	Integration and Co-design of Memristive Devices and Algorithms for Artificial Intelligence. IScience, 2020, 23, 101809.	4.1	49
20	In‑Memory Database Query. Advanced Intelligent Systems, 2020, 2, 2000141.	6.1	19
21	A Novel Stateful Logic Device and Circuit for In‑Memory Parity Programming in Crossbar Memory. Advanced Electronic Materials, 2020, 6, 2000672.	5.1	6
22	Neuromorphic Engineering: From Biological to Spike‑Based Hardware Nervous Systems. Advanced Materials, 2020, 32, e2003610.	21.0	153
23	Accurate deep neural network inference using computational phase-change memory. Nature Communications, 2020, 11, 2473.	12.8	263
24	Mixed-Precision Deep Learning Based on Computational Memory. Frontiers in Neuroscience, 2020, 14, 406.	2.8	61
25	In-memory hyperdimensional computing. Nature Electronics, 2020, 3, 327-337.	26.0	145
26	Experimental Demonstration of Supervised Learning in Spiking Neural Networks with Phase-Change Memory Synapses. Scientific Reports, 2020, 10, 8080.	3.3	48
27	Role of resistive memory devices in brain-inspired computing. , 2020, , 3-16.		7
28	Ferroelectric field-effect transistors for logic and *in-situ* memory applications. Nanotechnology, 2020, 31, 424007.	2.6	9
29	Improving Multilevel Writes on Vertical 3-D Cross-Point Resistive Memory. IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems, 2021, 40, 762-775.	2.7	2
30	Structure and Dynamics of Supercooled Liquid $Ge_2Sb_2Te_5$ from Machine‑Learning‑Driven Simulations. Physica Status Solidi - Rapid Research Letters, 2021, 15, 2000403.	2.4	4
31	Recent Progress of Protein‑Based Data Storage and Neuromorphic Devices. Advanced Intelligent Systems, 2021, 3, 2000180.	6.1	22
32	An SRAM-Based Multibit In-Memory Matrix-Vector Multiplier With a Precision That Scales Linearly in Area, Time, and Power. IEEE Transactions on Very Large Scale Integration (VLSI) Systems, 2021, 29, 372-385.	3.1	11
33	Artificial intelligence accelerated by light. Nature, 2021, 589, 25-26.	27.8	25
34	Circuit and System-Level Aspects of Phase Change Memory. IEEE Transactions on Circuits and Systems II: Express Briefs, 2021, 68, 844-850.	3.0	3
35	A Seamless, Reconfigurable, and Highly Parallel In-Memory Stochastic Computing Approach With Resistive Random Access Memory Array. IEEE Transactions on Electron Devices, 2021, 68, 103-108.	3.0	10
36	A Multi-Memristive Unit-Cell Array With Diagonal Interconnects for In-Memory Computing. IEEE Transactions on Circuits and Systems II: Express Briefs, 2021, 68, 3522-3526.	3.0	3

#	Article	IF	Citations
37	Double-Gated Ferroelectric-Gate Field-Effect-Transistor for Processing in Memory. IEEE Electron Device Letters, 2021, 42, 1607-1610.	3.9	8
38	Parallel convolutional processing using an integrated photonic tensor core. Nature, 2021, 589, 52-58.	27.8	723
39	Analog Neural Computing With Super-Resolution Memristor Crossbars. IEEE Transactions on Circuits and Systems I: Regular Papers, 2021, 68, 4470-4481.	5.4	22
40	Flexible boron nitride-based memristor for <i>in situ</i> digital and analogue neuromorphic computing applications. Materials Horizons, 2021, 8, 538-546.	12.2	73
41	Implementation of Image Compression by Using High-Precision In-Memory Computing Scheme Based on NOR Flash Memory. IEEE Electron Device Letters, 2021, 42, 1603-1606.	3.9	6
42	Compute-in-Memory Chips for Deep Learning: Recent Trends and Prospects. IEEE Circuits and Systems Magazine, 2021, 21, 31-56.	2.3	115
43	Synaptic transistors and neuromorphic systems based on carbon nano-materials. Nanoscale, 2021, 13, 7498-7522.	5.6	28
44	Efficient and Optimized Methods for Alleviating the Impacts of IR-Drop and Fault in RRAM Based Neural Computing Systems. IEEE Journal of the Electron Devices Society, 2021, 9, 645-652.	2.1	14
45	Ultra-Efficient Nonvolatile Approximate Full-Adder With Spin-Hall-Assisted MTJ Cells for In-Memory Computing Applications. IEEE Transactions on Magnetics, 2021, 57, 1-11.	2.1	16
46	Nanoscale molecular layers for memory devices: challenges and opportunities for commercialization. Journal of Materials Chemistry C, 2021, 9, 11497-11516.	5.5	18
47	System-Level Simulation for Integrated Phase-Change Photonics. Journal of Lightwave Technology, 2021, 39, 6392-6402.	4.6	6
48	Running Efficiently CNNs on the Edge Thanks to Hybrid SRAM-RRAM In-Memory Computing. , 2021, , .		3
49	Coupled VO2 Oscillators Circuit as Analog First Layer Filter in Convolutional Neural Networks. Frontiers in Neuroscience, 2021, 15, 628254.	2.8	25
50	Emerging Opportunities for 2D Semiconductor/Ferroelectric Transistorâ€Structure Devices. Advanced Materials, 2021, 33, e2005620.	21.0	76
51	Mixed-Signal Neuromorphic Computing Circuits Using Hybrid CMOS-RRAM Integration. IEEE Transactions on Circuits and Systems II: Express Briefs, 2021, 68, 581-586.	3.0	6
52	Memristive Data Ranking. , 2021, , .		11
53	Recent Advances on Multivalued Logic Gates: A Materials Perspective. Advanced Science, 2021, 8, 2004216.	11.2	52
54	Electric Field Gradientâ€Controlled Domain Switching for Size Effectâ€Resistant Multilevel Operations in HfO₂â€Based Ferroelectric Fieldâ€Effect Transistor. Advanced Functional Materials, 2021, 31, 2011077.	14.9	40

#	ARTICLE	IF	CITATIONS
55	Chemical order relaxation in a substitutional solid alloy around the critical temperature. Physical Review B, 2021, 103, .	3.2	1
56	Emulating artificial neuron and synaptic properties with SiO_2-based memristive devices by tuning threshold and bipolar switching effects. Journal Physics D: Applied Physics, 2021, 54, 225303.	2.8	23
57	Optimized programming algorithms for multilevel RRAM in hardware neural networks. , 2021, , .		15
58	Advances in magneto-ionic materials and perspectives for their application. APL Materials, 2021, 9, .	5.1	37
59	Nanochannel‐Based Interfacial Memristor: Electrokinetic Analysis of the Frequency Characteristics. Advanced Electronic Materials, 2021, 7, 2000848.	5.1	6
60	Change in Structure of Amorphous Sb–Te Phase‐Change Materials as a Function of Stoichiometry. Physica Status Solidi - Rapid Research Letters, 2021, 15, 2100064.	2.4	10
61	Functional Applications of Future Data Storage Devices. Advanced Electronic Materials, 2021, 7, 2001181.	5.1	20
62	Diffusive and Drift Halide Perovskite Memristive Barristors as Nociceptive and Synaptic Emulators for Neuromorphic Computing. Advanced Materials, 2021, 33, 2007851.	21.0	83
63	Mushroom-Type phase change memory with projection liner: An array-level demonstration of conductance drift and noise mitigation. , 2021, , .		11
64	Atomic‐Layer‐Deposition‐Based 2D Transition Metal Chalcogenides: Synthesis, Modulation, and Applications. Advanced Materials, 2021, 33, e2005907.	21.0	42
65	Artificial Synaptic Performance with Learning Behavior for Memristor Fabricated with Stacked Solution-Processed Switching Layers. ACS Applied Electronic Materials, 2021, 3, 1288-1300.	4.3	19
66	High‐Throughput Screening for Phase‐Change Memory Materials. Advanced Functional Materials, 2021, 31, 2009803.	14.9	43
67	0.5T0.5R—An Ultracompact RRAM Cell Uniquely Enabled by van der Waals Heterostructures. IEEE Transactions on Electron Devices, 2021, 68, 2033-2040.	3.0	22
68	In situ Parallel Training of Analog Neural Network Using Electrochemical Random-Access Memory. Frontiers in Neuroscience, 2021, 15, 636127.	2.8	24
69	Spin and orbital properties of perpendicular magnetic anisotropy for spin-orbit torque material devices. Applied Surface Science, 2021, 544, 148959.	6.1	10
70	One Transistor One Electrolyte‐Gated Transistor Based Spiking Neural Network for Power‐Efficient Neuromorphic Computing System. Advanced Functional Materials, 2021, 31, 2100042.	14.9	46
71	Memristors Based on (Zr, Hf, Nb, Ta, Mo, W) High‐Entropy Oxides. Advanced Electronic Materials, 2021, 7, 2001258.	5.1	22
72	Stimuli‐Responsive Memristive Materials for Artificial Synapses and Neuromorphic Computing. Advanced Materials, 2021, 33, e2006469.	21.0	88

#	Article	IF	Citations
73	On-Chip Photonic Synapses Based on Slot-Ridge Waveguides With PCMs For In-Memory Computing. IEEE Photonics Journal, 2021, 13, 1-13.	2.0	5
74	Robust high-dimensional memory-augmented neural networks. Nature Communications, 2021, 12, 2468.	12.8	50
75	Self-adaptive Matrix Equation Solving in Analog Memory Array 1. , 2021, , .		1
76	Non‐Volatile Electrolyte‐Gated Transistors Based on Graphdiyne/MoS$_2$ with Robust Stability for Low‐Power Neuromorphic Computing and Logic‐In‐Memory. Advanced Functional Materials, 2021, 31, 2100069.	14.9	66
77	All-Electrical Multifunctional Spin Logics by Adjusting the Spin Current Density Gradient in a Single Device. ACS Applied Electronic Materials, 2021, 3, 2646-2651.	4.3	10
78	Ferroelectric‐Nanocrack Switches for Memory and Complementary Logic with Zero Off‐current and Low Operating Voltage. Advanced Electronic Materials, 2021, 7, 2100023.	5.1	4
79	Accurate Weight Mapping in a Multi-Memristive Synaptic Unit. , 2021, , .		1
80	Synaptic devices based neuromorphic computing applications in artificial intelligence. Materials Today Physics, 2021, 18, 100393.	6.0	110
81	Low‐Power Memristive Logic Device Enabled by Controllable Oxidation of 2D HfSe$_2$ for In‐Memory Computing. Advanced Science, 2021, 8, e2005038.	11.2	47
82	Low-Power Memristor-Based Computing for Edge-AI Applications. , 2021, , .		13
83	Negative Photoconductance Effect: An Extension Function of the TiO$_x$‐Based Memristor. Advanced Science, 2021, 8, 2003765.	11.2	94
84	Reversible Barrier Switching of ZnO/RuO2 Schottky Diodes. Materials, 2021, 14, 2678.	2.9	5
85	Boosting spintronics with superconductivity. APL Materials, 2021, 9, .	5.1	23
86	Spike-dependent plasticity modulation in TiO2-based synaptic device. Journal of Materials Science: Materials in Electronics, 2021, 32, 13051-13061.	2.2	10
87	Energy Efficient In-Memory Hyperdimensional Encoding for Spatio-Temporal Signal Processing. IEEE Transactions on Circuits and Systems II: Express Briefs, 2021, 68, 1725-1729.	3.0	6
88	Valence Band Structure of Chalcogenide Obtained by X‐Ray Photoelectron Spectroscopy and Etching Technique. Physica Status Solidi (B): Basic Research, 2021, 258, 2100038.	1.5	5
89	Self-assembling crystalline peptide microrod for neuromorphic function implementation. Matter, 2021, 4, 1702-1719.	10.0	33
90	Engineered nanoparticle network models for autonomous computing. Journal of Chemical Physics, 2021, 154, 214702.	3.0	5

#	Article	IF	Citations
91	Ray-Based Framework for State Identification in Quantum Dot Devices. PRX Quantum, 2021, 2, .	9.2	9
92	Logic gates based on neuristors made from two-dimensional materials. Nature Electronics, 2021, 4, 399-404.	26.0	95
93	Emerging 2D Memory Devices for Inâ€Memory Computing. Advanced Materials, 2021, 33, e2007081.	21.0	92
94	Unbalanced Bit-slicing Scheme for Accurate Memristor-based Neural Network Architecture. , 2021, , .		9
95	Performance of Crossbar based Long Short Term Memory with Aging Memristors. , 2021, , .		0
96	The rise of intelligent matter. Nature, 2021, 594, 345-355.	27.8	228
97	HERMES Core â€" A 14nm CMOS and PCM-based In-Memory Compute Core using an array of 300ps/LSB Linearized CCO-based ADCs and local digital processing. , 2021, , .		48
98	Uncovering Phase Change Memory Energy Limits by Subâ€Nanosecond Probing of Power Dissipation Dynamics. Advanced Electronic Materials, 2021, 7, 2100217.	5.1	8
99	Lead-free halide perovskites, beyond solar cells and LEDs. JPhys Energy, 2021, 3, 032014.	5.3	11
100	End-to-end 100-TOPS/W Inference With Analog In-Memory Computing: Are We There Yet?. , 2021, , .		4
101	Multifunctional Optoelectronic Random Access Memory Device Based on Surfaceâ€Plasmaâ€Treated Inorganic Halide Perovskite. Advanced Electronic Materials, 2021, 7, 2100366.	5.1	15
102	Multi-Sample Online Learning for Spiking Neural Networks Based on Generalized Expectation Maximization. , 2021, , .		1
103	Unraveling the optical contrast in Sb$_2$Te and AgInSbTe phase-change materials. JPhys Photonics, 2021, 3, 034011.	4.6	12
104	An in-memory computing architecture based on two-dimensional semiconductors for multiply-accumulate operations. Nature Communications, 2021, 12, 3347.	12.8	46
105	Efficient Pipelined Execution of CNNs Based on In-Memory Computing and Graph Homomorphism Verification. IEEE Transactions on Computers, 2021, 70, 922-935.	3.4	9
106	Memory applications from 2D materials. Applied Physics Reviews, 2021, 8, 021306.	11.3	46
107	A Flexible and Fast PyTorch Toolkit for Simulating Training and Inference on Analog Crossbar Arrays. , 2021, , .		48
108	Halide perovskite memristors as flexible and reconfigurable physical unclonable functions. Nature Communications, 2021, 12, 3681.	12.8	107

#	Article	IF	Citations
109	A Flexible In-Memory Computing Architecture for Heterogeneously Quantized CNNs. , 2021, , .		4
110	Field-effect at electrical contacts to two-dimensional materials. Nano Research, 2021, 14, 4894-4900.	10.4	11
111	Memristive Crossbar Arrays for Storage and Computing Applications. Advanced Intelligent Systems, 2021, 3, 2100017.	6.1	80
112	High-performance VOx-based memristors with ultralow switching voltages prepared at room temperature. , 2021, , .		0
113	The viability of analog-based accelerators for neuromorphic computing: a survey. Neuromorphic Computing and Engineering, 2021, 1, 012001.	5.9	16
114	A Primer on Hyperdimensional Computing for iEEG Seizure Detection. Frontiers in Neurology, 2021, 12, 701791.	2.4	5
115	Self-Powered Synaptic Transistor for Artificial Perception. IEEE Electron Device Letters, 2021, 42, 1002-1005.	3.9	6
116	Reconfigurable Multifunctional Ambipolar Polymerâ€Blend Transistors with Improved Switchingâ€Off Capability. Advanced Functional Materials, 2021, 31, 2103369.	14.9	13
117	Controllable resistive switching of STO:Ag/SiO2-based memristor synapse for neuromorphic computing. Journal of Materials Science and Technology, 2022, 97, 254-263.	10.7	41
118	Artificial Graphene on Si Substrates: Fabrication and Transport Characteristics. ACS Nano, 2021, 15, 13703-13711.	14.6	5
119	Scalable massively parallel computing using continuous-time data representation in nanoscale crossbar array. Nature Nanotechnology, 2021, 16, 1079-1085.	31.5	53
120	A Marr's Threeâ€Level Analytical Framework for Neuromorphic Electronic Systems. Advanced Intelligent Systems, 2021, 3, 2100054.	6.1	3
121	Architecting for Artificial Intelligence with Emerging Nanotechnology. ACM Journal on Emerging Technologies in Computing Systems, 2021, 17, 1-33.	2.3	3
122	All-Optical Synapse With Directional Coupler Structure Based on Phase Change Material. IEEE Photonics Journal, 2021, 13, 1-6.	2.0	3
123	Spintronics for Energy- Efficient Computing: An Overview and Outlook. Proceedings of the IEEE, 2021, 109, 1398-1417.	21.3	112
124	Implementation of Highly Reliable and Energy Efficient inâ€Memory Hamming Distance Computations in 1 Kb 1â€Transistorâ€1â€Memristor Arrays. Advanced Materials Technologies, 0, , 2100745.	5.8	12
125	Strongly temperature dependent ferroelectric switching in AlN, Al1-xScxN, and Al1-xBxN thin films. Applied Physics Letters, 2021, 119, .	3.3	55
126	High-Performance Inâ‚‚Oâ‚ƒ-Based 1T1R FET for BEOL Memory Application. IEEE Transactions on Electron Devices, 2021, 68, 3775-3779.	3.0	3

#	Article	IF	Citations
127	Near-channel classifier: symbiotic communication and classification in high-dimensional space. Brain Informatics, 2021, 8, 16.	3.0	9
128	In Memory Energy Application for Resistive Random Access Memory. Advanced Electronic Materials, 0, , 2100297.	5.1	7
129	Spintronic computational memory using symmetry-dependent spin–orbit torque switching. Journal Physics D: Applied Physics, 2021, 54, 465001.	2.8	1
130	Artificial Astrocyte Memristor with Recoverable Linearity for Neuromorphic Computing. Advanced Electronic Materials, 2022, 8, 2100669.	5.1	10
131	Room temperature demonstration of in-materio reservoir computing for optimizing Boolean function with single-walled carbon nanotube/porphyrin-polyoxometalate composite. Applied Physics Express, 2021, 14, 105003.	2.4	11
132	Decision trees within a molecular memristor. Nature, 2021, 597, 51-56.	27.8	78
133	Quantum Artificial Synapses. Advanced Quantum Technologies, 2021, 4, 2100072.	3.9	8
134	High-Throughput Calculations on the Decomposition Reactions of Off-Stoichiometry GeSbTe Alloys for Embedded Memories. Nanomaterials, 2021, 11, 2382.	4.1	12
135	Ultrafast machine vision with artificial neural network devices based on a GaN-based micro-LED array. Optics Express, 2021, 29, 31963.	3.4	4
136	Projected Mushroom Type Phase–Change Memory. Advanced Functional Materials, 2021, 31, 2106547.	14.9	21
137	Comprehensive Model of Electron Conduction in Oxide-Based Memristive Devices. ACS Applied Electronic Materials, 2021, 3, 3674-3692.	4.3	48
138	Statistical temperature coefficient distribution in analog RRAM array: impact on neuromorphic system and mitigation method. Journal Physics D: Applied Physics, 2022, 55, 015110.	2.8	1
139	Analysis and mitigation of parasitic resistance effects for analog in-memory neural network acceleration. Semiconductor Science and Technology, 2021, 36, 114004.	2.0	4
140	2D materials–based homogeneous transistor-memory architecture for neuromorphic hardware. Science, 2021, 373, 1353-1358.	12.6	177
141	A review on properties, applications, and deposition techniques of antimony selenide. Solar Energy Materials and Solar Cells, 2021, 230, 111223.	6.2	43
142	A 5 μW Standard Cell Memory-Based Configurable Hyperdimensional Computing Accelerator for Always-on Smart Sensing. IEEE Transactions on Circuits and Systems I: Regular Papers, 2021, 68, 4116-4128.	5.4	12
143	Multifunctional computing-in-memory SRAM cells based on two-surface-channel MoS2 transistors. IScience, 2021, 24, 103138.	4.1	4
144	Controlled Majority-Inverter Graph Logic With Highly Nonlinear, Self-Rectifying Memristor. IEEE Transactions on Electron Devices, 2021, 68, 4897-4902.	3.0	12

#	ARTICLE	IF	CITATIONS
145	Bonding nature and optical contrast of TiTe2/Sb2Te3 phase-change heterostructure. Materials Science in Semiconductor Processing, 2021, 135, 106080.	4.0	13
146	Ion beam-assisted solid phase epitaxy of SiGe and its application for analog memristors. Journal of Alloys and Compounds, 2021, 884, 161086.	5.5	5
147	A Native SPICE Implementation of Memristor Models for Simulation of Neuromorphic Analog Signal Processing Circuits. ACM Transactions on Design Automation of Electronic Systems, 2022, 27, 1-24.	2.6	3
148	Native O and Se Vacancy Defects in Bi_2O_5Se, $Bi_2O_9Se_3$, and $Bi_2O_{10}Se_3$ Dielectrics for Nanoelectronics. Physica Status Solidi - Rapid Research Letters, 2021, 15, 2000540.	2.4	1
149	Efficient Parallel Multiâ€Bit Logicâ€inâ€Memory Based on a Ultrafast Ferroelectric Tunnel Junction Memristor. Advanced Electronic Materials, 2021, 7, 2000988.	5.1	12
150	Materials Screening for Disorderâ€Controlled Chalcogenide Crystals for Phaseâ€Change Memory Applications. Advanced Materials, 2021, 33, e2006221.	21.0	32
151	An organic synaptic transistor with integration of memory and neuromorphic computing. Journal of Materials Chemistry C, 2021, 9, 9972-9981.	5.5	7
152	SRIF: Scalable and Reliable Integrate and Fire Circuit ADC for Memristor-Based CIM Architectures. IEEE Transactions on Circuits and Systems I: Regular Papers, 2021, 68, 1917-1930.	5.4	10
153	Design Exploration of ReRAM-Based Crossbar for AI Inference. IEEE Access, 2021, 9, 70430-70442.	4.2	3
154	OCC: An Automated End-to-End Machine Learning Optimizing Compiler for Computing-In-Memory. IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems, 2022, 41, 1674-1686.	2.7	7
155	*In Situ* Aging-Aware Error Monitoring Scheme for IMPLY-Based Memristive Computing-in-Memory Systems. IEEE Transactions on Circuits and Systems I: Regular Papers, 2022, 69, 309-321.	5.4	9
156	Multiply accumulate operations in memristor crossbar arrays for analog computing. Journal of Semiconductors, 2021, 42, 013104.	3.7	32
157	CMOS back-end compatible memristors for *in situ* digital and neuromorphic computing applications. Materials Horizons, 2021, 8, 3345-3355.	12.2	12
158	Hardware Implementation of Neuromorphic Computing Using Largeâ€Scale Memristor Crossbar Arrays. Advanced Intelligent Systems, 2021, 3, 2000137.	6.1	96
159	Artificial Neural Networks Based on Memristive Devices: From Device to System. Advanced Intelligent Systems, 2020, 2, 2000149.	6.1	39
160	Conductance Switching in Molecular Self-Assembled Monolayers for Application of Data Storage. Journal of Physical Chemistry C, 2021, 125, 1069-1074.	3.1	6
161	Bifunctional Silver-Doped ZnO for Reliable and Stable Organicâ€"Inorganic Hybrid Perovskite Memory. ACS Applied Materials & Interfaces, 2021, 13, 1021-1026.	8.0	14
162	Proof-of-PUF Enabled Blockchain: Concurrent Data and Device Security for Internet-of-Energy. Sensors, 2021, 21, 28.	3.8	22

#	ARTICLE	IF	CITATIONS
163	A Drift-Resilient Hardware Implementation of Neural Accelerators Based on Phase Change Memory Devices. IEEE Transactions on Electron Devices, 2021, 68, 6076-6081.	3.0	6
164	Low Latency YOLOv3-Tiny Accelerator for Low-Cost FPGA Using General Matrix Multiplication Principle. IEEE Access, 2021, 9, 141890-141913.	4.2	19
165	High-Conductance, Ohmic-like HfZrO4 Ferroelectric Memristor. , 2021, , .		2
166	Mitigating State-Drift in Memristor Crossbar Arrays for Vector Matrix Multiplication. , 0, , .		2
167	Coupled Oscillator Networks forÂvonÂNeumann and Non-von Neumann Computing. Learning and Analytics in Intelligent Systems, 2022, , 179-207.	0.6	1
168	Statistical Analysis of Uniform Switching Characteristics of Ta2O5-Based Memristors by Embedding In-Situ Grown 2D-MoS2 Buffer Layers. Materials, 2021, 14, 6275.	2.9	5
169	MemSor: Emergence of the Inâ€Memory Sensing Technology for the Digital Transformation. Physica Status Solidi (A) Applications and Materials Science, 2022, 219, 2100528.	1.8	4
170	Dopant-Tunable Ultrathin Transparent Conductive Oxides for Efficient Energy Conversion Devices. Nano-Micro Letters, 2021, 13, 211.	27.0	13
171	Stochastic Spiking Behavior in Neuromorphic Networks Enables True Random Number Generation. ACS Applied Materials & Interfaces, 2021, 13, 52861-52870.	8.0	14
172	Precision of synaptic weights programmed in phase-change memory devices for deep learning inference. , 2020, , .		17
173	Prospects for photonic implementations of neuromorphic devices and systems. , 2020, , .		1
174	Self-Rectifying Al$_2$O$_3$/TaO$_x$ Memristor With Gradual Operation at Low Current by Interfacial Layer. IEEE Transactions on Electron Devices, 2021, 68, 6100-6105.	3.0	15
175	Optimization Schemes for In-Memory Linear Regression Circuit With Memristor Arrays. IEEE Transactions on Circuits and Systems I: Regular Papers, 2021, 68, 4900-4909.	5.4	6
176	Natural Acidic Polysaccharideâ€Based Memristors for Transient Electronics: Highly Controllable Quantized Conductance for Integrated Memory and Nonvolatile Logic Applications. Advanced Materials, 2021, 33, e2104023.	21.0	30
177	Grain Boundary Confinement of Silver Imidazole for Resistive Switching. Advanced Functional Materials, 2022, 32, 2108598.	14.9	11
178	The Road for 2D Semiconductors in the Silicon Age. Advanced Materials, 2022, 34, e2106886.	21.0	57
179	Compliance Current-dependent Dual-functional Unipolar and Threshold Resistive Switching in Silver Nanowires-egg Albumen Composites-based Device. Journal of Physics: Conference Series, 2021, 2065, 012001.	0.4	0
180	In-memory computing with emerging nonvolatile memory devices. Science China Information Sciences, 2021, 64, 1.	4.3	31

#	Article	IF	Citations
181	F3D: Accelerating 3D Convolutional Neural Networks in Frequency Space Using ReRAM. , 2021, , .		3
182	Accelerating Inference of Convolutional Neural Networks Using In-memory Computing. Frontiers in Computational Neuroscience, 2021, 15, 674154.	2.1	0
183	Reliability Aspects of Memristive Devices for Computation-in-Memory Applications. , 2021, , .		0
184	Solving sparse linear systems with approximate inverse preconditioners on analog devices. , 2021, , .		3
185	Challenges and Opportunities of Energy-Efficient CIM SoC Design for Edge AI Devices. , 2021, , .		0
186	Tailoring the Structural and Optical Properties of Germanium Telluride Phase-Change Materials by Indium Incorporation. Nanomaterials, 2021, 11, 3029.	4.1	9
187	Miniaturizing neural networks for charge state autotuning in quantum dots. Machine Learning: Science and Technology, 2022, 3, 015001.	5.0	7
188	Electrolyte-gated neuromorphic transistors for brain-like dynamic computing. Journal of Applied Physics, 2021, 130, .	2.5	30
189	Geometric Design of Confined Conducting Filaments in Resistive Random Access Memory by Al_2O_3 Nanodome-Shaped Arrays (NDSAs) via Glancing-Angle Deposition Technology Toward Neuromorphic Computing. , 2021, 3, 1757-1766.		4
190	Field-free programmable spin logics based on spin Hall effect. Applied Physics Letters, 2021, 119, .	3.3	1
191	ReSe2-Based RRAM and Circuit-Level Model for Neuromorphic Computing. Frontiers in Nanotechnology, 2021, 3, .	4.8	9
192	Nano-composite phase-change antimony thin film for fast and persistent memory operations. Materials Today Physics, 2022, 22, 100584.	6.0	6
193	Progress and Challenges for Memtransistors in Neuromorphic Circuits and Systems. Advanced Materials, 2022, 34, e2108025.	21.0	40
194	Strategic allocation of two-dimensional van der Waals semiconductor as an oxygen reservoir for boosting resistive switching reliability. Applied Surface Science, 2022, 577, 151936.	6.1	2
195	Design of In-Memory Parallel-Prefix Adders. Journal of Low Power Electronics and Applications, 2021, 11, 45.	2.0	4
196	Adjustable Leaky-Integrate-and-fire neurons based on memristor-coupled capacitors. Materials Today Advances, 2021, 12, 100192.	5.2	15
197	Long Short-Term Memory Implementation Exploiting Passive RRAM Crossbar Array. IEEE Transactions on Electron Devices, 2022, 69, 1743-1751.	3.0	6
198	Hybrid-SIMD: a Modular and Reconfigurable approach to Beyond von Neumann Computing. IEEE Transactions on Computers, 2021, , 1-1.	3.4	1

#	Article	IF	Citations
199	A Neuromorphic Brain Interface Based on RRAM Crossbar Arrays for High Throughput Real-Time Spike Sorting. IEEE Transactions on Electron Devices, 2022, 69, 2137-2144.	3.0	6
200	Circuit Implementation Using Emerging Technologies: Enabling energy-efficient electronics for biomedical and power management applications. IEEE Solid-State Circuits Magazine, 2021, 13, 24-43.	0.4	0
201	Engineering Spiking Neurons Using Threshold Switching Devices for High-Efficient Neuromorphic Computing. Frontiers in Neuroscience, 2021, 15, 786694.	2.8	11
202	A 2.86-TOPS/W CMCB based Edge ML and RO-PUF engine for IoT based nano-electronic material applications. Materials Today: Proceedings, 2022, , .	1.8	0
203	An Accurate, Error-Tolerant, and Energy-Efficient Neural Network Inference Engine Based on SONOS Analog Memory. IEEE Transactions on Circuits and Systems I: Regular Papers, 2022, 69, 1480-1493.	5.4	11
204	Evolution and modulation of Ag filament dynamics within memristive devices based on necklace-like Ag@TiO$_2$ nanowire networks. Nanotechnology, 2022, 33, 135203.	2.6	3
205	Modeling and simulating in-memory memristive deep learning systems: An overview of current efforts. Array, 2022, 13, 100116.	4.0	10
206	Accelerating Spiking Neural Networks using Memristive Crossbar Arrays. , 2020, , .		1
207	HybridSNN: Combining Bio-Machine Strengths by Boosting Adaptive Spiking Neural Networks. IEEE Transactions on Neural Networks and Learning Systems, 2023, 34, 5841-5855.	11.3	4
208	Optical Modulation in a Si Microring Resonator Inspired by Biological Classical Conditioning. , 2021, , .		0
209	High-Conductance, Ohmic-like HfZrO4 Ferroelectric Memristor. , 2021, , .		0
210	A Survey of Stochastic Computing in Energy-Efficient DNNs On-Edge. , 2021, , .		0
211	A Low-Cost, Nanowatt, Millimeter-Scale Memristive-Vacuum Sensor. IEEE Sensors Journal, 2022, 22, 6080-6087.	4.7	1
212	2022 roadmap on neuromorphic computing and engineering. Neuromorphic Computing and Engineering, 2022, 2, 022501.	5.9	217
213	Retinomorphic optoelectronic devices for intelligent machine vision. IScience, 2022, 25, 103729.	4.1	16
214	Dual-configuration in-memory computing bitcells using SiO$_x$ RRAM for binary neural networks. Applied Physics Letters, 2022, 120, .	3.3	12
215	Memristor-Based Binarized Spiking Neural Networks: Challenges and applications. IEEE Nanotechnology Magazine, 2022, 16, 14-23.	1.3	39
216	A crossbar array of magnetoresistive memory devices for in-memory computing. Nature, 2022, 601, 211-216.	27.8	214

#	ARTICLE	IF	CITATIONS
217	Variability Estimation in Resistive Switching Devices, a Numerical and Kinetic Monte Carlo Perspective. SSRN Electronic Journal, 0, , .	0.4	0
218	Evolutionary 2D organic crystals for optoelectronic transistors and neuromorphic computing. Neuromorphic Computing and Engineering, 2022, 2, 012001.	5.9	9
219	Floating-gate based PN blending optoelectronic synaptic transistor for neural machine translation. Science China Materials, 2022, 65, 1383-1390.	6.3	4
220	Designing Conductive–Bridge Phase–Change Memory to Enable Ultralow Programming Power. Advanced Science, 2022, 9, e2103478.	11.2	26
221	Comprehensive study on unipolar RRAM charge conduction and stochastic features: a simulation approach. Journal Physics D: Applied Physics, 2022, 55, 155104.	2.8	3
222	Precision of bit slicing with in-memory computing based on analog phase-change memory crossbars. Neuromorphic Computing and Engineering, 2022, 2, 014009.	5.9	18
223	HERMES-Core—A 1.59-TOPS/mm^2 PCM on 14-nm CMOS In-Memory Compute Core Using 300-ps/LSB Linearized CCO-Based ADCs. IEEE Journal of Solid-State Circuits, 2022, 57, 1027-1038.	5.4	49
224	Bonding Nature and Optical Properties of As_2Te_3 Phase–Change Material. Physica Status Solidi - Rapid Research Letters, 2022, 16, .	2.4	5
225	A Low-Cost Training Method of ReRAM Inference Accelerator Chips for Binarized Neural Networks to Recover Accuracy Degradation due to Statistical Variabilities. IEICE Transactions on Electronics, 2022, E105.C, 375-384.	0.6	1
226	Unraveling Crystallization Mechanisms and Electronic Structure of Phase–Change Materials by Large–Scale Ab Initio Simulations. Advanced Materials, 2022, 34, e2109139.	21.0	21
227	Dual-Ferroelectric-Coupling-Engineered Two-Dimensional Transistors for Multifunctional In-Memory Computing. ACS Nano, 2022, 16, 3362-3372.	14.6	51
228	Volatile and Nonvolatile Memristive Devices for Neuromorphic Computing. Advanced Electronic Materials, 2022, 8, .	5.1	94
229	CCoW: Optimizing Copy-on-Write Considering the Spatial Locality in Workloads. Electronics (Switzerland), 2022, 11, 461.	3.1	1
230	Electrically Reconfigurable Organic Logic Gates: A Promising Perspective on a Dual–Gate Antiambipolar Transistor. Advanced Materials, 2022, 34, e2109491.	21.0	17
231	Hints for a General Understanding of the Epitaxial Rules for van der Waals Epitaxy from Ge–Sb–Te Alloys. Advanced Materials Interfaces, 2022, 9, .	3.7	6
232	Variability estimation in resistive switching devices, a numerical and kinetic Monte Carlo perspective. Microelectronic Engineering, 2022, 257, 111736.	2.4	15
233	Suppressed electronic contribution in thermal conductivity of $Ge_2Sb_2Se_4Te$. Nature Communications, 2021, 12, 7187.	12.8	23
234	Density dependent local structures in InTe phase-change materials. APL Materials, 2021, 9, 121105.	5.1	3

#	Article	IF	Citations
235	Neuromorphic behaviour in discontinuous metal films. Nanoscale Horizons, 2022, 7, 437-445.	8.0	4
236	Generalized Key-Value Memory to Flexibly Adjust Redundancy in Memory-Augmented Networks. IEEE Transactions on Neural Networks and Learning Systems, 2023, 34, 10993-10998.	11.3	4
237	Multimode modulated memristors for in-sensor computing system. Wuli Xuebao/Acta Physica Sinica, 2022, 71, 148502.	0.5	2
238	Towards a better understanding of the forming and resistive switching behavior of Ti-doped HfO$_x$ RRAM. Journal of Materials Chemistry C, 2022, 10, 5896-5904.	5.5	16
239	CODEX: Stochastic Encoding Method to Relax Resistive Crossbar Accelerator Design Requirements. IEEE Transactions on Circuits and Systems II: Express Briefs, 2022, 69, 3356-3360.	3.0	2
240	Fast Read-After-Write and Depolarization Fields in High Endurance n-Type Ferroelectric FETs. IEEE Electron Device Letters, 2022, 43, 717-720.	3.9	23
241	Impact of Phase‐Change Memory Flicker Noise and Weight Drift on Analog Hardware Inference for Large‐Scale Deep Learning Networks. Advanced Intelligent Systems, 2022, 4, .	6.1	4
242	First‐Principles Calculation of Transport and Thermoelectric Coefficients in Liquid Ge$_2$Sb$_2$Te$_5$. Physica Status Solidi - Rapid Research Letters, 2022, 16, .	2.4	4
243	Error Detection and Correction Method Toward Fully Memristive Stateful Logic Design. Advanced Intelligent Systems, 2022, 4, .	6.1	5
244	Bio‐Inspired 3D Artificial Neuromorphic Circuits. Advanced Functional Materials, 2022, 32, .	14.9	45
245	Real‐Time Correlation Detection via Online Learning of a Spiking Neural Network with a Conductive‐Bridge Neuron. Advanced Electronic Materials, 2022, 8, .	5.1	5
246	An ultra-compact leaky integrate-and-fire neuron with long and tunable time constant utilizing pseudo resistors for spiking neural networks. Japanese Journal of Applied Physics, 2022, 61, SC1051.	1.5	4
247	Tuning Resistive Switching Behavior by Controlling Internal Ionic Dynamics for Biorealistic Implementation of Synaptic Plasticity. Advanced Electronic Materials, 2022, 8, .	5.1	7
248	é'''ç¢²å•é‡'Sb2Te3ä¸ç©ºä½æ—å°åŒ—çš,,åŽŸä½ç"µåœ˜¾å¾®®å¦¦ç"ç©©¶. Chinese Science Bulletin, 2022, , .	0.7	1
249	Intelligent Sensing: Enabling the Next "Automation Age", 2022, , .		1
250	Efficient Training of the Memristive Deep Belief Net Immune to Non‐Idealities of the Synaptic Devices. Advanced Intelligent Systems, 2022, 4, .	6.1	8
251	Low-Power Artificial Neural Network Perceptron Based on Monolayer MoS$_2$. ACS Nano, 2022, 16, 3684-3694.	14.6	20
252	Long-Term Accuracy Enhancement of Binary Neural Networks Based on Optimized Three-Dimensional Memristor Array. Micromachines, 2022, 13, 308.	2.9	2

#	Article	IF	Citations
253	UnIC: Towards Unmanned Intelligent Cluster and Its Integration into Society. Engineering, 2022, 12, 24-38.	6.7	5
254	Flexible neuromorphic electronics based on low-dimensional materials. Science China Materials, 2022, 65, 2154-2159.	6.3	5
255	Effect of cycling on ultra-thin $HfZrO_4$, ferroelectric synaptic weights. Neuromorphic Computing and Engineering, 2022, 2, 024001.	5.9	12
256	Improved Performance of NbOx Resistive Switching Memory by In-Situ N Doping. Nanomaterials, 2022, 12, 1029.	4.1	7
257	Interface Formation during the Growth of Phase Change Material Heterostructures Based on Ge-Rich Ge-Sb-Te Alloys. Nanomaterials, 2022, 12, 1007.	4.1	4
258	Molecular ferroelectric/semiconductor interfacial memristors for artificial synapses. Npj Flexible Electronics, 2022, 6, .	10.7	17
259	An adaptive synaptic array using Fowler–Nordheim dynamic analog memory. Nature Communications, 2022, 13, 1670.	12.8	7
260	Programmable black phosphorus image sensor for broadband optoelectronic edge computing. Nature Communications, 2022, 13, 1485.	12.8	67
261	Electrical Properties of Eggshell-Derived CaO Composited with Polyvinylpyrrolidone for Bistable Device. Integrated Ferroelectrics, 2022, 224, 246-255.	0.7	0
262	Reconfigurable and Efficient Implementation of 16 Boolean Logics and Full‐Adder Functions with Memristor Crossbar for Beyond von Neumann In‐Memory Computing. Advanced Science, 2022, 9, e2200036.	11.2	13
263	NAND and NOR logic-in-memory comprising silicon nanowire feedback field-effect transistors. Scientific Reports, 2022, 12, 3643.	3.3	5
264	Floating Gate Carbon Nanotube Dual-Gate Field-Effect Transistor for Reconfigurable AND/OR Logic Gates. ACS Applied Electronic Materials, 2022, 4, 1684-1691.	4.3	9
265	Effect of weight overlap region on neuromorphic system with memristive synaptic devices. Chaos, Solitons and Fractals, 2022, 157, 111999.	5.1	9
266	Redefining microelectronics. Microelectronic Engineering, 2022, 258, 111767.	2.4	1
267	Ultrahigh‐Speed In‐Memory Electronics Enabled by Proximity‐Oxidation‐Evolved Metal Oxide Redox Transistors. Advanced Materials, 2022, 34, e2200122.	21.0	5
268	Multilevel memory and artificial synaptic plasticity in P(VDF-TrFE)-based ferroelectric field effect transistors. Nano Energy, 2022, 98, 107252.	16.0	26
269	A backpropagation with gradient accumulation algorithm capable of tolerating memristor non-idealities for training memristive neural networks. Neurocomputing, 2022, 494, 89-103.	5.9	4
270	In‐Plane Twinning Defects in Hexagonal $GeSb_2Te_4$. Advanced Materials Technologies, 0, , 2200214.	5.8	2

#	Article	IF	Citations
271	Time-Domain Analysis of Chalcogenide Threshold Switching: From ns to ps Scale. Frontiers in Physics, 2022, 10, .	2.1	0
272	A Functional Novel Logic for Max/Min Computing in One-Transistor-One-Resistor Devices With Resistive Random Access Memory (RRAM). IEEE Transactions on Electron Devices, 2022, 69, 1811-1815.	3.0	4
273	In‐Memory Computing using Memristor Arrays with Ultrathin 2D $PdSeO_x$/$PdSe_2$ Heterostructure. Advanced Materials, 2022, 34, e2201488.	21.0	36
274	Halide perovskite based synaptic devices for neuromorphic systems. Materials Today Physics, 2022, 24, 100667.	6.0	7
275	Artificial synaptic and self-rectifying properties of crystalline (Na1-K)NbO3 thin films grown on Sr2Nb3O10 nanosheet seed layers. Journal of Materials Science and Technology, 2022, 123, 136-143.	10.7	7
276	Neuromorphic Properties of Forming-Free Non-Filamentary TiN/Ta2O5/Ta Structures with an Asymmetric Current–Voltage Characteristic. Nanobiotechnology Reports, 2021, 16, 804-810.	0.6	2
277	XNOR-BSNN: In-Memory Computing Model for Deep Binarized Spiking Neural Network. , 2021, , .		0
278	High-density logic-in-memory devices using vertical indium arsenide nanowires on silicon. Nature Electronics, 2021, 4, 914-920.	26.0	22
279	Design-Technology Co-Optimizations (DTCO) for General-Purpose Computing In-Memory Based on 55nm NOR Flash Technology. , 2021, , .		8
280	Back‐End CMOS Compatible and Flexible Ferroelectric Memories for Neuromorphic Computing and Adaptive Sensing. Advanced Intelligent Systems, 2022, 4, .	6.1	17
281	An Analysis on the Architecture and the Size of Quantized Hardware Neural Networks Based on Memristors. Electronics (Switzerland), 2021, 10, 3141.	3.1	2
282	High-frequency spin wave modes excited by strain pulse in vortex state magnetostrictive nanomagnets. AIP Advances, 2021, 11, 125314.	1.3	0
283	Stochasticity invariance control in $Pr_{1-x}Ca_xMnO_3$ RRAM to enable large-scale stochastic recurrent neural networks. Neuromorphic Computing and Engineering, 2022, 2, 014001.	5.9	3
284	Global minimization via classical tunneling assisted by collective force field formation. Science Advances, 2021, 7, eabh1542.	10.3	11
287	Modeling of Gate Tunable Synaptic Device for Neuromorphic Applications. Frontiers in Physics, 2021, 9, .	2.1	2
288	Applying Neuromorphic Computing Simulation in Band Gap Prediction and Chemical Reaction Classification. ACS Omega, 2022, 7, 168-175.	3.5	2
289	High Driving Current Selector Based on As-Implanted HfO_2 Thin Film for 3D Phase Change Memory. ACS Applied Electronic Materials, 2022, 4, 99-103.	4.3	2
290	Linear Error Correction Codec Implementation Based on an In-Memory Computing Architecture for Nonvolatile Memories. IEEE Transactions on Electron Devices, 2022, 69, 3455-3461.	3.0	3

#	Article	IF	Citations
291	Electrochemically driven dual bipolar resistive switching in LaNiO$_3$/SmNiO$_3$/Nb:SrTiO$_3$ heterostructures fabricated through selective area epitaxy. Journal of Materials Chemistry C, 2022, 10, 7707-7716.	5.5	8
292	A 40-nm MLC-RRAM Compute-in-Memory Macro With Sparsity Control, On-Chip Write-Verify, and Temperature-Independent ADC References. IEEE Journal of Solid-State Circuits, 2022, 57, 2868-2877.	5.4	21
293	Electronically Reconfigurable Photonic Switches Incorporating Plasmonic Structures and Phase Change Materials. Advanced Science, 2022, 9, e2200383.	11.2	29
294	Experimental validation of state equations and dynamic route maps for phase change memristive devices. Scientific Reports, 2022, 12, 6488.	3.3	5
295	Ta/HfO$_2$ memristors: from device physics to neural networks. Japanese Journal of Applied Physics, 0, , .	1.5	1
296	Hardware-Software Co-Design of an In-Memory Transformer Network Accelerator. Frontiers in Electronics, 2022, 3, .	3.2	2
297	Dynamic Model of the Short-Term Synaptic Behaviors of PEDOT-based Organic Electrochemical Transistors with Modified Shockley Equations. ACS Omega, 2022, 7, 14622-14629.	3.5	7
299	CMOS-compatible compute-in-memory accelerators based on integrated ferroelectric synaptic arrays for convolution neural networks. Science Advances, 2022, 8, eabm8537.	10.3	30
300	Accelerating Inference of Convolutional Neural Networks Using In-memory Computing. Frontiers in Computational Neuroscience, 2021, 15, 674154.	2.1	16
301	D-NAT: Data-Driven Non-Ideality Aware Training Framework for Fabricated Computing-In-Memory Macros. IEEE Journal on Emerging and Selected Topics in Circuits and Systems, 2022, 12, 381-392.	3.6	2
302	Nonvolatile Plasmonics Based on Optically Reprogrammable Phase Change Materials. IEEE Photonics Journal, 2022, 14, 1-8.	2.0	6
303	COIN: Communication-Aware In-Memory Acceleration for Graph Convolutional Networks. IEEE Journal on Emerging and Selected Topics in Circuits and Systems, 2022, 12, 472-485.	3.6	4
304	A Mini Tutorial of Processing in Memory: From Principles, Devices to Prototypes. IEEE Transactions on Circuits and Systems II: Express Briefs, 2022, 69, 3044-3050.	3.0	3
305	MOL-Based In-Memory Computing of Binary Neural Networks. IEEE Transactions on Very Large Scale Integration (VLSI) Systems, 2022, 30, 869-880.	3.1	0
306	Time Domain Analog Neuromorphic Engine Based on High-Density Non-Volatile Memory in Single-Poly CMOS. IEEE Access, 2022, 10, 49154-49166.	4.2	6
307	Statistical model of program/verify algorithms in resistive-switching memories for in-memory neural network accelerators. , 2022, , .		5
308	Reliability of Non-Volatile Memory Devices for Neuromorphic Applications: A Modeling Perspective (Invited). , 2022, , .		3
309	Towards a Truly Integrated Vector Processing Unit for Memory-bound Applications Based on a Cost-competitive Computational SRAM Design Solution. ACM Journal on Emerging Technologies in Computing Systems, 2022, 18, 1-26.	2.3	4

#	ARTICLE	IF	CITATIONS
310	Frontier applications of perovskites beyond photovoltaics. Journal of Semiconductors, 2022, 43, 040203.	3.7	7
311	Conductance-Aware Quantization Based on Minimum Error Substitution for Non-Linear-Conductance-State Tolerance in Neural Computing Systems. Micromachines, 2022, 13, 667.	2.9	1
312	Enhanced Artificial Synaptic Properties Enabled by Arrays of Electrolyte-Gated Electrospun InZnO Nanowires. ACS Applied Electronic Materials, 2022, 4, 2570-2579.	4.3	20
313	Chalcogenide optomemristors for multi-factor neuromorphic computation. Nature Communications, 2022, 13, 2247.	12.8	22
314	Emerging Optical In–Memory Computing Sensor Synapses Based on Low–Dimensional Nanomaterials for Neuromorphic Networks. Advanced Intelligent Systems, 2022, 4, .	6.1	13
315	An Integrated Photorefractive Analog Matrix-Vector Multiplier for Machine Learning. Applied Sciences (Switzerland), 2022, 12, 4226.	2.5	4
316	DNA Memristors and Their Application to Reservoir Computing. ACS Synthetic Biology, 2022, 11, 2202-2213.	3.8	5
317	Microcavity Exciton–Polariton Quantum Spin Fluids. Advanced Quantum Technologies, 2022, 5, .	3.9	14
318	Logic and memory characteristics of an inverter comprising a feedback FET and a MOSFET. Semiconductor Science and Technology, 2022, 37, 065025.	2.0	4
319	Reconfigurable Logic–in–Memory Using Silicon Transistors. Advanced Materials Technologies, 2022, 7, .	5.8	7
320	Accurate and efficient molecular dynamics based on machine learning and non von Neumann architecture. Npj Computational Materials, 2022, 8, .	8.7	11
321	Neural Network Training With Asymmetric Crosspoint Elements. Frontiers in Artificial Intelligence, 2022, 5, .	3.4	9
322	Toward memristive in-memory computing: principles and applications. Frontiers of Optoelectronics, 2022, 15, .	3.7	17
323	Integrated Memory Devices Based on 2D Materials. Advanced Materials, 2022, 34, e2201880.	21.0	33
324	Material and Structural Engineering of Ovonic Threshold Switch for Highly Reliable Performance. Advanced Electronic Materials, 2022, 8, .	5.1	5
325	Tunable, Nucleation-Driven Stochasticity in Nanoscale Silicon Oxide Resistive Switching Memory Devices. ACS Applied Nano Materials, 2022, 5, 6691-6698.	5.0	2
326	A Heterogeneous In-Memory Computing Cluster for Flexible End-to-End Inference of Real-World Deep Neural Networks. IEEE Journal on Emerging and Selected Topics in Circuits and Systems, 2022, 12, 422-435.	3.6	18
328	Photonic (computational) memories: tunable nanophotonics for data storage and computing. Nanophotonics, 2022, 11, 3823-3854.	6.0	37

#	Article	IF	Citations
329	IGZO synaptic thin-film transistors with embedded AlO$_x$ charge-trapping layers. Applied Physics Express, 2022, 15, 061005.	2.4	7
330	Mechanism and Impact of Bipolar Current Voltage Asymmetry in Computational Phase–Change Memory. Advanced Materials, 2023, 35, e2201238.	21.0	8
331	Structural Assessment of Interfaces in Projected Phase-Change Memory. Nanomaterials, 2022, 12, 1702.	4.1	2
332	Mixed–Precision Continual Learning Based on Computational Resistance Random Access Memory. Advanced Intelligent Systems, 2022, 4, .	6.1	4
333	Energy-Efficient III–V Tunnel FET-Based Synaptic Device with Enhanced Charge Trapping Ability Utilizing Both Hot Hole and Hot Electron Injections for Analog Neuromorphic Computing. ACS Applied Materials & Interfaces, 2022, 14, 24592-24601.	8.0	5
334	Performance Optimization of Atomic Layer Deposited HfO$_x$ Memristor by Annealing With Back-End-of-Line Compatibility. IEEE Electron Device Letters, 2022, 43, 1141-1144.	3.9	9
335	Interface–Modulated Resistive Switching in Mo–Irradiated ReS$_2$ for Neuromorphic Computing. Advanced Materials, 2022, 34, .	21.0	25
336	An epitaxial perovskite as a compact neuristor: electrical self-oscillations in TbMnO$_3$ thin films. Journal Physics D: Applied Physics, 2022, 55, 335305.	2.8	4
337	Ferroelectric polymers for neuromorphic computing. Applied Physics Reviews, 2022, 9, .	11.3	31
338	Mixed-Precision Partial Differential Equation Solver Design Based on Nonvolatile Memory. IEEE Transactions on Electron Devices, 2022, 69, 3708-3715.	3.0	3
339	In-Memory Hamming Error-Correcting Code in Memristor Crossbar. IEEE Transactions on Electron Devices, 2022, 69, 3700-3707.	3.0	2
340	Implementation of Highly Reliable and Energy–Efficient Nonvolatile In–Memory Computing using Multistate Domain Wall Spin–Orbit Torque Device. Advanced Intelligent Systems, 2022, 4, .	6.1	13
341	Impact of titanium doping and pulsing conditions on the analog temporal response of hafnium oxide based memristor synapses. Journal of Applied Physics, 2022, 131, .	2.5	11
342	Defect generation in a data-storage layer by strong ion bombardment for multilevel non-volatile memory applications. Materials Today Nano, 2022, 19, 100226.	4.6	1
343	Convolutional Echo–State Network with Random Memristors for Spatiotemporal Signal Classification. Advanced Intelligent Systems, 2022, 4, .	6.1	10
344	Empirical Characterization of ReRAM Devices Using Memory Maps and a Dynamic Route Map. Electronics (Switzerland), 2022, 11, 1672.	3.1	1
345	Construction of an Intelligent Arrangement Model for Vocal Music Based on HPC Cluster Programming. Scientific Programming, 2022, 2022, 1-13.	0.7	1
346	Equalizing Excitation–Inhibition via the Ambipolar Photoresponse of Al$_2$O$_3$/graphene Hybrid Neuromorphic Devices. Advanced Electronic Materials, 0, , 2200319.	5.1	2

#	ARTICLE	IF	CITATIONS
347	Uniform, fast, and reliable CMOS compatible resistive switching memory. Journal of Semiconductors, 2022, 43, 054102.	3.7	2
348	Continual Learning Electrical Conduction in Resistive‐Switching‐Memory Materials. Advanced Theory and Simulations, 2022, 5, .	2.8	2
349	First-principles investigation of amorphous Ge-Sb-Se-Te optical phase-change materials. Optical Materials Express, 2022, 12, 2497.	3.0	12
350	Memristive technologies for data storage, computation, encryption, and radio-frequency communication. Science, 2022, 376, .	12.6	220
351	An integrated photonics engine for unsupervised correlation detection. Science Advances, 2022, 8, .	10.3	8
352	An experimental and simulation study of the role of thermal effects on variability in TiN/Ti/HfO2/W resistive switching nonlinear devices. Chaos, Solitons and Fractals, 2022, 160, 112247.	5.1	7
353	Non-volatile memory based in-memory computing technology. Wuli Xuebao/Acta Physica Sinica, 2022, 71, 148507.	0.5	1
354	Seizure Detection and Prediction by Parallel Memristive Convolutional Neural Networks. IEEE Transactions on Biomedical Circuits and Systems, 2022, 16, 609-625.	4.0	10
355	Memristor-Based In-Memory Computing Architecture for Scientific Computing. , 2022, , 141-165.		1
356	Ta/HfO2-based Memristor and Crossbar Arrays for In-Memory Computing. , 2022, , 167-188.		1
357	Modeling and Signal Integrity Analysis of RRAM-Based Neuromorphic Chip Crossbar Array Using Partial Equivalent Element Circuit (PEEC) Method. IEEE Transactions on Circuits and Systems I: Regular Papers, 2022, 69, 3490-3500.	5.4	7
358	Approximations in Deep Learning. , 2022, , 467-512.		2
359	Pattern Formation in an M-CNN Structure Utilizing a Locally Active NbOx Memristor. , 2022, , 79-101.		3
360	FAT: An In-Memory Accelerator With Fast Addition for Ternary Weight Neural Networks. IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems, 2023, 42, 781-794.	2.7	2
361	2022 roadmap on neuromorphic devices and applications research in China. Neuromorphic Computing and Engineering, 2022, 2, 042501.	5.9	4
362	Colloidal MoS2 quantum dots for high-performance low power resistive memory devices with excellent temperature stability. Applied Physics Letters, 2022, 120, .	3.3	8
363	Silicon-Based Metastructure Optical Scattering Multiply–Accumulate Computation Chip. Nanomaterials, 2022, 12, 2136.	4.1	2
364	Ferroelectric coupling for dual-mode non-filamentary memristors. Applied Physics Reviews, 2022, 9, .	11.3	12

#	Article	IF	Citations
365	Neuromorphic Photonic Memory Devices Using Ultrafast, Non‐Volatile Phase‐Change Materials. Advanced Materials, 2023, 35, .	21.0	33
366	Metal Halide Perovskite-Based Memristors for Emerging Memory Applications. Journal of Physical Chemistry Letters, 2022, 13, 5638-5647.	4.6	38
367	Evolutionary Learning of Binary Neural Network Using a TaO$_x$ Memristor via Stochastic Stateful Logic. Advanced Intelligent Systems, 0, , 2200058.	6.1	3
368	A Novel Encrypted Computing-in-Memory (eCIM) by Implementing Random Telegraph Noise (RTN) as Keys Based on 55 nm NOR Flash Technology. IEEE Electron Device Letters, 2022, 43, 1455-1458.	3.9	2
369	Ge1-Xsx Chalcogenide Alloys for Ots Applications Using Magnetron Sputtering. SSRN Electronic Journal, 0, , .	0.4	0
370	FlashMAC: A Time-Frequency Hybrid MAC Architecture With Variable Latency-Aware Scheduling for TinyML Systems. IEEE Journal of Solid-State Circuits, 2022, 57, 2944-2956.	5.4	1
371	Embedded memory solutions: Charge storage based, resistive and magnetic. , 2022, , 159-215.		2
372	A Compact Fully Ferroelectric-FETs Reservoir Computing Network With Sub-100 ns Operating Speed. IEEE Electron Device Letters, 2022, 43, 1555-1558.	3.9	8
373	An Efficient Variation-tolerant Method for RRAM-based Neural Network. , 2022, , .		1
374	Exploring the Ligand Functionality, Electronic Band Gaps, and Switching Characteristics of Single Wells‐Dawson‐Type Polyoxometalates on Gold. Advanced Materials Interfaces, 2022, 9, .	3.7	7
375	Optimised weight programming for analogue memory-based deep neural networks. Nature Communications, 2022, 13, .	12.8	21
376	Neuromorphic Skin Based on Emerging Artificial Synapses. Advanced Materials Technologies, 2022, 7, .	5.8	11
377	A Van Der Waals Photo‐Ferroelectric Synapse. Advanced Electronic Materials, 2022, 8, .	5.1	5
378	Sub-femto-Joule energy consumption memory device based on van der Waals heterostructure for in-memory computing. , 2022, 1, 100014.		3
379	Energy-efficient In-Memory Address Calculation. Transactions on Architecture and Code Optimization, 2022, 19, 1-16.	2.0	5
380	Medium-Temperature-Oxidized GeOx Resistive-Switching Random-Access Memory and Its Applicability in Processing-in-Memory Computing. Nanoscale Research Letters, 2022, 17, .	5.7	10
381	Filamentary TaO$_x$/HfO$_2$ ReRAM Devices for Neural Networks Training with Analog In‐Memory Computing. Advanced Electronic Materials, 2022, 8, .	5.1	12
382	Cluster-type analogue memristor by engineering redox dynamics for high-performance neuromorphic computing. Nature Communications, 2022, 13, .	12.8	26

#	ARTICLE	IF	CITATIONS
383	Computing Nearer to Data. Computer, 2022, 55, 82-87.	1.1	4
384	Phase change in GeTe/Sb2Te3 superlattices: Formation of the vacancy-ordered metastable cubic structure via Ge migration. Applied Surface Science, 2022, 602, 154274.	6.1	3
385	Heterogeneous Integration of Atomically Thin Semiconductors for Non‐von Neumann CMOS. Small, 2022, 18, .	10.0	20
386	Two‐Terminal Self‐Gating Random‐Access Memory Based on Partially Aligned 2D Heterostructures. Advanced Electronic Materials, 2022, 8, .	5.1	1
387	Memristive, Spintronic, and 2D‐Materials‐Based Devices to Improve and Complement Computing Hardware. Advanced Intelligent Systems, 2022, 4, .	6.1	13
388	Adjustment of active protons of end-electron-withdrawing groups in small molecules for different memory characteristics. Dyes and Pigments, 2022, 205, 110570.	3.7	2
389	In‐Memory Mathematical Operations with Spin‐Orbit Torque Devices. Advanced Science, 2022, 9, .	11.2	4
390	All‐Electrical Programmable Domain‐Wall Spin Logic‐In‐Memory Device. Advanced Electronic Materials, 2022, 8, .	5.1	2
391	Pattern formation dynamics in a Memristor Cellular Nonlinear Network structure with a numerically stable VO_2 memristor model. Japanese Journal of Applied Physics, 2022, 61, SM0807.	1.5	9
392	Tuning oxygen vacancies and resistive switching behaviors in amorphous Y2O3 film-based memories. Journal of Alloys and Compounds, 2022, 923, 166399.	5.5	3
393	Low-power anisotropic molecular electronic memristors. Applied Materials Today, 2022, 29, 101569.	4.3	1
394	Time-Multiplexed In-Memory Computation Scheme for Mapping Quantized Neural Networks on Hybrid CMOS-OxRAM Building Blocks. IEEE Nanotechnology Magazine, 2022, 21, 406-412.	2.0	1
395	Emulating Switching From Short-Term to Long-Term Plasticity of Bio-Synapse Using Split Gate MOSFET. IEEE Nanotechnology Magazine, 2022, 21, 449-454.	2.0	3
396	Phase-change materials for energy-efficient photonic memory and computing. MRS Bulletin, 2022, 47, 502-510.	3.5	13
397	Realization of Memristor-aided Logic Gates with Analog Memristive Devices. , 2022, , .		1
398	$La_2NiO_{4+\delta}$‐Based Memristive Devices Integrated on Si‐Based Substrates. Advanced Materials Technologies, 2022, 7, .	5.8	2
399	Unveiling the Effect of Superlattice Interfaces and Intermixing on Phase Change Memory Performance. Nano Letters, 2022, 22, 6285-6291.	9.1	19
400	Metaplastic and energy-efficient biocompatible graphene artificial synaptic transistors for enhanced accuracy neuromorphic computing. Nature Communications, 2022, 13, .	12.8	39

#	Article	IF	Citations
401	Generation of Multi-Lobe Chua Corsage Memristor and Its Neural Oscillation. Micromachines, 2022, 13, 1330.	2.9	3
402	Review on the Basic Circuit Elements and Memristor Interpretation: Analysis, Technology and Applications. Journal of Low Power Electronics and Applications, 2022, 12, 44.	2.0	6
403	Reservoir computing on a silicon platform with a ferroelectric field-effect transistor. , 2022, 1, .		31
404	Toward A Formalized Approach for Spike Sorting Algorithms and Hardware Evaluation. , 2022, , .		0
405	A review of CNN accelerators for embedded systems based on RISC-V. , 2022, , .		2
406	Synergy of Spin–Orbit Torque and Built–In Field in Magnetic Tunnel Junctions with Tilted Magnetic Anisotropy: Toward Tunable and Reliable Spintronic Neurons. Advanced Science, 2022, 9, .	11.2	8
407	The study of phase change properties of $Sb_{70}Se_{30}$ thin film with scandium and aluminum doping. Journal Physics D: Applied Physics, 2022, 55, 425105.	2.8	2
408	The Effect of Deposition Conditions on Heterointerface–Driven Band Alignment and Resistive Switching Properties. Advanced Electronic Materials, 2022, 8, .	5.1	0
410	Improved gradual resistive switching range and $1000\times$ on/off ratio in HfO_x RRAM achieved with a $Ge_2Sb_2Te_5$ thermal barrier. Applied Physics Letters, 2022, 121, 082103.	3.3	3
411	Thermoplasmonic Nanomagnetic Logic Gates. Physical Review Applied, 2022, 18, .	3.8	2
412	Flexible and Compatible Synaptic Transistor Based on Electrospun In_2O_3 Nanofibers. IEEE Transactions on Electron Devices, 2022, 69, 5363-5367.	3.0	9
413	Anomalous crystallization kinetics of ultrafast ScSbTe phase-change memory materials induced by nitrogen doping. Acta Materialia, 2022, 238, 118211.	7.9	4
414	ML-HW Co-Design of Noise-Robust TinyML Models and Always-On Analog Compute-in-Memory Edge Accelerator. IEEE Micro, 2022, 42, 76-87.	1.8	11
415	Nanofloating gate modulated synaptic organic light-emitting transistors for reconfigurable displays. Science Advances, 2022, 8, .	10.3	10
416	Editorial: Emerging non-volatile memories and beyond: From fundamental physics to applications. Frontiers in Physics, 0, 10, .	2.1	0
417	Energy Efficient Learning With Low Resolution Stochastic Domain Wall Synapse for Deep Neural Networks. IEEE Access, 2022, 10, 84946-84959.	4.2	9
418	MR-PIPA: An Integrated Multilevel RRAM (HfO_x)-Based Processing-In-Pixel Accelerator. IEEE Journal on Exploratory Solid-State Computational Devices and Circuits, 2022, 8, 59-67.	1.5	12
419	Modeling the Variability of Au/Ti/h-BN/Au Memristive Devices. IEEE Transactions on Electron Devices, 2023, 70, 1533-1539.	3.0	5

#	Article	IF	Citations
420	Antimony Chalcogenides Based Thin-Film Solar Cell. Advances in Sustainability Science and Technology, 2022, , 151-178.	0.6	0
421	Graphene-Based Wireless Agile Interconnects for Massive Heterogeneous Multi-Chip Processors. IEEE Wireless Communications, 2023, 30, 162-169.	9.0	9
422	Accurate and Energy-Efficient Bit-Slicing for RRAM-Based Neural Networks. IEEE Transactions on Emerging Topics in Computational Intelligence, 2023, 7, 164-177.	4.9	5
423	Light-Controlled Switching in Electro-Optical Memristors. , 2022, , .		0
424	Operating Systems and Hypervisors for Network Functions: A Survey of Enabling Technologies and Research Studies. IEEE Access, 2022, 10, 79825-79873.	4.2	6
425	Scale up your In-Memory Accelerator: Leveraging Wireless-on-Chip Communication for AIMC-based CNN Inference. , 2022, , .		2
426	Biologically-inspired training of spiking recurrent neural networks with neuromorphic hardware. , 2022, , .		1
427	MemSE: Fast MSE Prediction for Noisy Memristor-Based DNN Accelerators. , 2022, , .		0
428	Ge1−xSx chalcogenide alloys for OTS applications using magnetron sputtering. Journal of Alloys and Compounds, 2023, 930, 167409.	5.5	3
429	Wireless On-Chip Communications for Scalable In-memory Hyperdimensional Computing. , 2022, , .		4
430	Minimizing the Programming Power of Phase Change Memory by Using Graphene Nanoribbon Edgeâ€Contact. Advanced Science, 2022, 9, .	11.2	12
431	Mechanism Analysis and Highly Scaled Aluminum Nitrideâ€Based Selfâ€Rectifying Memristors. Advanced Electronic Materials, 0, , 2200702.	5.1	0
432	Diffusive Memristors with Uniform and Tunable Relaxation Time for Spike Generation in Eventâ€Based Pattern Recognition. Advanced Materials, 2023, 35, .	21.0	10
433	Ferroelectric control of charge-to-spin conversion in WTe_2. Physical Review Materials, 2022, 6, .	2.4	3
434	An Ultralow Power Li $_x$ TiO $_2$ â€Based Synaptic Transistor for Scalable Neuromorphic Computing. Advanced Electronic Materials, 0, , 2200607.	5.1	3
435	Highly Linear and Symmetric Synaptic Memtransistors Based on Polarization Switching in Twoâ€Dimensional Ferroelectric Semiconductors. Small, 2022, 18, .	10.0	21
436	Resistance Drift Convergence and Inversion in Amorphous Phase Change Materials. Advanced Functional Materials, 2022, 32, .	14.9	4
437	On-Surface Single-Molecule Identification of Mass-Selected Cyclodextrin-Supported Polyoxovanadates for Multistate Resistive-Switching Memory Applications. ACS Applied Nano Materials, 2022, 5, 14216-14220.	5.0	11

#	Article	IF	Citations
438	In situ characterization of vacancy ordering in Ge-Sb-Te phase-change memory alloys. Fundamental Research, 2022, , .	3.3	4
439	Spiking neural networks based on two-dimensional materials. Npj 2D Materials and Applications, 2022, 6, .	7.9	20
440	Design of projected phase-change memory mushroom cells for low-resistance drift. MRS Bulletin, 0, , .	3.5	2
441	Reconfigurable Compute-In-Memory on Field-Programmable Ferroelectric Diodes. Nano Letters, 2022, 22, 7690-7698.	9.1	17
442	Ferroâ€floating memory: Dualâ€mode ferroelectric floating memory and its application to inâ€memory computing. InformaÄnÃ-MateriÃ¡ly, 2022, 4, .	17.3	4
443	Multiple connected artificial synapses based on electromigrated Au nanogaps. Journal of Vacuum Science and Technology B:Nanotechnology and Microelectronics, 2022, 40, .	1.2	3
444	A thermally crosslinked ion-gel gated artificial synapse. Chinese Chemical Letters, 2023, 34, 107842.	9.0	2
445	Ferroelectrics-Integrated Two-Dimensional Devices toward Next-Generation Electronics. ACS Nano, 2022, 16, 13595-13611.	14.6	42
446	Observation of MagnÃ©li Phase Filament Formation in MoO_x Artificial Synapse. Advanced Electronic Materials, 2022, 8, .	5.1	5
447	Controlling the Formation of Conductive Pathways in Memristive Devices. Advanced Science, 2022, 9, .	11.2	7
448	Highly Deterministic One-Shot Setâ€"Reset Programming Scheme in PCMO Resistive Random-Access Memory. ACS Applied Electronic Materials, 2022, 4, 4921-4928.	4.3	0
449	Physical Insights into Vacancy-Based Memtransistors: Toward Power Efficiency, Reliable Operation, and Scalability. ACS Nano, 2022, 16, 14308-14322.	14.6	8
450	In-sensor image memorization and encoding via optical neurons for bio-stimulus domain reduction toward visual cognitive processing. Nature Communications, 2022, 13, .	12.8	25
451	Memristorâ€Based Security Primitives Robust to Malicious Attacks for Highly Secure Neuromorphic Systems. Advanced Intelligent Systems, 2022, 4, .	6.1	5
452	Air quality index prediction via multi-task machine learning technique: spatial analysis for human capital and intensive air quality monitoring stations. Air Quality, Atmosphere and Health, 2023, 16, 85-97.	3.3	3
453	Associative Learning with Oxide-based Electrolyte-gated Transistor Synapses. Wuji Cailiao Xuebao/Journal of Inorganic Materials, 2022, , 519.	1.3	0
454	Synapse transistors based on $Li_7La_3Zr_2O_{12}$ (LLZO) nanofibers/polyvinyl alcohol (PVA) composite gate dielectric for neuromorphic application. Journal of Materials Chemistry C, 2022, 10, 16379-16387.	5.5	3
455	Enhancing Adversarial Attacks on Single-Layer NVM Crossbar-Based Neural Networks with Power Consumption Information. , 2022, , .		1

#	Article	IF	Citations
456	Visible-Light-Stimulated Synaptic Phototransistors Based on CdSe Quantum Dot/In–Ga–Zn–O Hybrid Channels. Nanoscale Research Letters, 2022, 17, .	5.7	3
457	Orientation Independent Growth of Uniform Ferroelectric Hf$_{0.5}$Zr$_{0.5}$O$_2$ Thin Films on Silicon for High-Density 3D Memory Applications. Advanced Functional Materials, 2022, 32, .	14.9	11
458	Atomic-scale tuning of ultrathin memristors. Communications Physics, 2022, 5, .	5.3	3
459	An optoelectronic synapse based on α-In2Se3 with controllable temporal dynamics for multimode and multiscale reservoir computing. Nature Electronics, 2022, 5, 761-773.	26.0	127
460	Electrically Tuning Interfacial Ion Redistribution for mica/WSe$_2$ Memory Transistor. Advanced Electronic Materials, 2023, 9, .	5.1	3
461	3D-FPIM: An Extreme Energy-Efficient DNN Acceleration System Using 3D NAND Flash-Based In-Situ PIM Unit. , 2022, , .		0
462	All-atomristor logic gates. Nano Research, 2023, 16, 1688-1694.	10.4	4
463	Low-Cost Fabricated MgSnO Electrolyte-Gated Synaptic Transistor with Dual Modulation of Excitation and Inhibition. Advanced Electronic Materials, 2022, 8, .	5.1	10
464	SPICE Model of Analog Content-Addressable Memory Based on 2G FeFET Crossbar. Studies in Computational Intelligence, 2023, , 271-276.	0.9	1
465	Ferroelectric Polarized in Transistor Channel Polarity Modulation for Reward-Modulated Spike-Time-Dependent Plasticity Application. Journal of Physical Chemistry Letters, 2022, 13, 10056-10064.	4.6	3
466	Reservoir Computing with Charge-Trap Memory Based on a MoS$_2$ Channel for Neuromorphic Engineering. Advanced Materials, 2023, 35, .	21.0	16
467	Bayesian neural networks using magnetic tunnel junction-based probabilistic in-memory computing. Frontiers in Nanotechnology, 0, 4, .	4.8	6
468	Electrochemical Ionic Synapses: Progress and Perspectives. Advanced Materials, 2023, 35, .	21.0	13
469	Impact of process-induced ellipticity on the RESET process of cylindrical phase change memory devices. Physica Scripta, 0, , .	2.5	0
471	Convergence of Neural Networks with a Class of Real Memristors with Rectifying Characteristics. Mathematics, 2022, 10, 4024.	2.2	0
472	Carrier Dynamics for the Collective Resonant Tunneling in Quantum Dot-Based Artificial Graphene. ACS Applied Electronic Materials, 2022, 4, 5617-5624.	4.3	0
473	An artificial synapse based on Sr(Ti, Co)O3 films. Materials Today Communications, 2022, 33, 104754.	1.9	2
474	Two-stage conductivity switching of GST thin films induced by femtosecond laser radiation. Optics and Laser Technology, 2023, 157, 108773.	4.6	4

#	Article	IF	Citations
475	In-Memory Computing Paradigms by Exploiting the Intrinsic Interactions Between STT and SOT. IEEE Transactions on Electron Devices, 2022, , 1-7.	3.0	1
476	3D-structured mesoporous silica memristors for neuromorphic switching and reservoir computing. Nanoscale, 2022, 14, 17170-17181.	5.6	9
477	A Survey of MRAM-Centric Computing: From Near Memory to In Memory. IEEE Transactions on Emerging Topics in Computing, 2023, 11, 318-330.	4.6	5
478	Neuromorphic In-memory RRAM NAND / NOR Circuit Performance Analysis in a CNN Training Framework on the Edge for Low Power IoT. IEEE Access, 2022, , 1-1.	4.2	0
479	Pipelined Memristive Analog-to-Digital Converter With Self-Adaptive Weight Tuning. IEEE Journal on Emerging and Selected Topics in Circuits and Systems, 2022, 12, 913-921.	3.6	1
480	ARBiS: A Hardware-Efficient SRAM CIM CNN Accelerator With Cyclic-Shift Weight Duplication and Parasitic-Capacitance Charge Sharing for AI Edge Application. IEEE Transactions on Circuits and Systems I: Regular Papers, 2023, 70, 364-377.	5.4	2
481	A Spiking Neural Network with Resistively Coupled Synapses Using Time-to-First-Spike Coding Towards Efficient Charge-Domain Computing. , 2022, , .		1
482	Stochastic dendrites enable online learning in mixed-signal neuromorphic processing systems. , 2022, , .		5
483	A tool for emulating neuromorphic architectures with memristive models and devices. , 2022, , .		0
484	Hardware calibrated learning to compensate heterogeneity in analog RRAM-based Spiking Neural Networks. , 2022, , .		3
485	HYPERLOCK: In-Memory Hyperdimensional Encryption in Memristor Crossbar Array. , 2022, , .		5
486	A Novel Approach in Edge Computing: In-Memory Sensing of Cancer Markers. , 2022, , .		2
487	High Uniformity Ferroelectric MoS2 Nonvolatile Memory Array. , 2022, , .		0
488	System Design for Computation-in-Memory: From Primitive to Complex Functions. , 2022, , .		6
489	Cortical-inspired placement and routing: minimizing the memory resources in multi-core neuromorphic processors. , 2022, , .		2
490	Tailoring the oxygen concentration in Ge-Sb-O alloys to enable femtojoule-level phase-change memory operations. Materials Futures, 2022, 1, 045302.	8.4	9
491	HZO-based FerroNEMS MAC for in-memory computing. Applied Physics Letters, 2022, 121, .	3.3	5
492	Spin torque generated by valley Hall effect in <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:msub><mml:mi>WSe</mml:mi><mml:mn>2</mml:mn></mml:msub></ Physical Review B, 2022, 106, .	3.2	5

#	Article	IF	Citations
493	Emerging MXeneâ€Based Memristors for Inâ€Memory, Neuromorphic Computing, and Logic Operation. Advanced Functional Materials, 2023, 33, .	14.9	32
494	Realization of memristor and synaptic simulation behaviors based on LiNbOx. Ceramics International, 2023, 49, 10083-10088.	4.8	1
495	Field-Free-Switching State Diagram of Perpendicular Magnetization Subjected to Conventional and Unconventional Spin-Orbit Torques. Physical Review Applied, 2022, 18, .	3.8	4
496	A memristive neural network based matrix equation solver with high versatility and high energy efficiency. Science China Information Sciences, 2023, 66, .	4.3	0
497	Silicon Wafer CMP Slurry Using a Hydrolysis Reaction Accelerator with an Amine Functional Group Remarkably Enhances Polishing Rate. Nanomaterials, 2022, 12, 3893.	4.1	2
498	Memristive/CMOS Devices for Neuromorphic Applications. Springer Handbooks, 2023, , 1167-1199.	0.6	0
499	Threshold Switching in Forming-Free Anodic Memristors Grown on Hfâ€"Nb Combinatorial Thin-Film Alloys. Nanomaterials, 2022, 12, 3944.	4.1	2
500	Ultrafast Nearâ€Ideal Phaseâ€Change Memristive Physical Unclonable Functions Driven by Amorphous State Variations. Advanced Science, 2022, 9, .	11.2	5
501	Reconfigurable logic-in-memory architectures based on a two-dimensional van der Waals heterostructure device. Nature Electronics, 2022, 5, 752-760.	26.0	51
502	Plasmonâ€Assisted Selfâ€Encrypted Allâ€Optical Memory. Advanced Functional Materials, 2023, 33, .	14.9	3
503	IndigenousÂFab-Lab Hybrid Device Integration for Phase Change Memory for In-Memory Computing. Communications in Computer and Information Science, 2022, , 468-477.	0.5	0
504	A perspective vision of micro/nano systems and technologies as enablers of 6g, super-iot, and tactile internet [point of view]. Proceedings of the IEEE, 2023, 111, 5-18.	21.3	3
505	A Heterogeneous and Programmable Compute-In-Memory Accelerator Architecture for Analog-AI Using Dense 2-D Mesh. IEEE Transactions on Very Large Scale Integration (VLSI) Systems, 2023, 31, 114-127.	3.1	14
506	Compressing convolutional neural networks with hierarchical Tucker-2 decomposition. Applied Soft Computing Journal, 2023, 132, 109856.	7.2	6
507	Coexistence of memory and threshold resistive switching identified by combinatorial screening in niobium-tantalum system. Applied Surface Science, 2023, 613, 155917.	6.1	3
508	ALPINE: Analog In-Memory Acceleration with Tight Processor Integration for Deep Learning. IEEE Transactions on Computers, 2022, , 1-14.	3.4	6
509	Energy-adaptive resistive switching with controllable thresholds in insulatorâ€"metal transition. RSC Advances, 2022, 12, 35579-35586.	3.6	3
510	A Novel Array Programming Scheme for Large Matrix Processing in Flash-Based Computing-in-Memory (CIM) With Ultrahigh Bit Density. IEEE Transactions on Electron Devices, 2023, 70, 461-467.	3.0	4

#	Article	IF	Citations
511	In-Memory Computing Architectures for Big Data and Machine Learning Applications. Communications in Computer and Information Science, 2022, , 19-33.	0.5	0
512	Ferroelectric Memory. , 2023, , 218-240.		0
513	Hardware Implementation for Spiking Neural Networks on Edge Devices. , 2023, , 227-248.		0
514	BaFe$_{12}$O$_{19}$ based Ferroelectric Memristor for Applications of True Random Number Generator. , 2022, , .		0
515	A Study of STT-RAM-based In-Memory Computing Across the Memory Hierarchy. , 2022, , .		1
516	Circuit and Training Techniques Compensating for Non-Ideal Effects in Memristor Neural Networks. , 2022, , .		0
517	Dielectric functions evolution and electronic bandgap manipulation by silicon doping for Sb$_2$Te$_3$ phase change films: Temperature dependent spectroscopic ellipsometry study. Journal of Applied Physics, 2022, 132, 205109.	2.5	0
518	Spintronic materials and devices towards an artificial neural network: accomplishments and the last mile. Materials Research Letters, 2023, 11, 305-326.	8.7	4
519	Artificial Intelligence and Advanced Materials. Advanced Materials, 2023, 35, .	21.0	10
520	A memristor-based Bayesian machine. Nature Electronics, 0, , .	26.0	13
521	A Spintronic 2M/7T Computation-in-Memory Cell. Journal of Low Power Electronics and Applications, 2022, 12, 63.	2.0	0
522	Characteristic Analysis and Circuit Implementation of a Novel Fractional-Order Memristor-Based Clamping Voltage Drift. Fractal and Fractional, 2023, 7, 2.	3.3	22
523	MAC-ECC: In-Situ Error Correction and Its Design Methodology for Reliable NVM-Based Compute-in-Memory Inference Engine. IEEE Journal on Emerging and Selected Topics in Circuits and Systems, 2022, 12, 835-845.	3.6	2
524	Band‐to‐Band Tunneling Control by External Forces: A Key Principle and Applications. Advanced Electronic Materials, 2023, 9, .	5.1	5
525	Understanding effect of distortions and vacancies in wurtzite AlScN ferroelectric memory materials: Vacancy-induced multiple defect state types and relaxation dependence in transition energy levels. AIP Advances, 2022, 12, .	1.3	2
526	Borophene-based materials for energy, sensors and information storage applications. , 2023, 2, e9120051.		42
527	First Order Rate Law Analysis for Reset State in Vanadium Oxide Thin Film Resistive Random Access Memory Devices. Nanomaterials, 2023, 13, 198.	4.1	3
528	Humanlike spontaneous motion coordination of robotic fingers through spatial multi-input spike signal multiplexing. Nature Communications, 2023, 14, .	12.8	7

#	Article	IF	Citations
529	On the Accuracy of Analog Neural Network Inference Accelerators. IEEE Circuits and Systems Magazine, 2022, 22, 26-48.	2.3	8
530	Structure and Crystallization Kinetics of As‐Deposited Films of the GeTe Phase Change Compound from Atomistic Simulations. Physica Status Solidi - Rapid Research Letters, 2023, 17, .	2.4	4
531	MEMRISTOR-BASED LSTM NETWORK FOR TEXT CLASSIFICATION. Fractals, 2023, 31, .	3.7	32
532	Neuromorphic Oscillators and Electronic Implementation of One Novel MFNN Model. IEEE Access, 2023, 11, 16076-16084.	4.2	0
533	Long-term memory and synapse-like dynamics in two-dimensional nanofluidic channels. Science, 2023, 379, 161-167.	12.6	67
534	Vertically Stacked Nanosheet FET: Charge- Trapping Memory and Synapse With Linear Weight Adjustability for Neuromorphic Computing Applications. IEEE Transactions on Electron Devices, 2023, 70, 1344-1350.	3.0	6
535	Elemental Redistribution During the Crystallization of Ge‐Cu‐Te Thin Films for Phase-Change Memory. ECS Journal of Solid State Science and Technology, 2023, 12, 014003.	1.8	1
536	Intelligent matter endows reconfigurable temperature and humidity sensations for in-sensor computing. Materials Horizons, 2023, 10, 1030-1041.	12.2	7
537	An artificial synapse based on molecular junctions. Nature Communications, 2023, 14, .	12.8	14
538	Multi-objective Hardware-aware Neural Architecture Search with Pareto Rank-preserving Surrogate Models. Transactions on Architecture and Code Optimization, 2023, 20, 1-21.	2.0	0
539	Ferroelectric Content-Addressable Memory Cells with IGZO Channel: Impact of Retention Degradation on the Multibit Operation. ACS Applied Electronic Materials, 2023, 5, 812-820.	4.3	4
540	Low-Dimensional-Materials-Based Flexible Artificial Synapse: Materials, Devices, and Systems. Nanomaterials, 2023, 13, 373.	4.1	8
541	MVSTT: A Multi-Value Computation-in-Memory based on Spin-Transfer Torque Memories. , 2022, , .		0
542	Rational Design on Polymorphous Phase Switching in Molybdenum Diselenide-Based Memristor Assisted by All-Solid-State Reversible Intercalation toward Neuromorphic Application. ACS Nano, 2023, 17, 84-93.	14.6	2
543	Power-Delay Area-Efficient Processing-In-Memory Based on Nanocrystalline Hafnia Ferroelectric Field-Effect Transistors. ACS Applied Materials & Interfaces, 2023, 15, 1463-1474.	8.0	3
544	Optically Controllable Organic Logic-in-Memory: An Innovative Approach toward Ternary Data Processing and Storage. Nano Letters, 2023, 23, 319-325.	9.1	8
545	Memristive Cosine‐Similarity‐Based Few‐Shot Learning with Lifelong Memory Adaptation. Advanced Intelligent Systems, 2023, 5, .	6.1	2
546	Ligand Exchange Reaction Enables Digital‐To‐Analog Resistive Switching and Artificial Synapse within Metal Nanoparticles. Advanced Functional Materials, 2023, 33, .	14.9	2

#	Article	IF	Citations
547	WHYPE: A Scale-Out Architecture With Wireless Over-the-Air Majority for Scalable In-Memory Hyperdimensional Computing. IEEE Journal on Emerging and Selected Topics in Circuits and Systems, 2023, 13, 137-149.	3.6	1
548	Energy Efficient Neuro–Inspired Phase–Change Memory Based on $Ge_4Sb_6Te_7$ as a Novel Epitaxial Nanocomposite. Advanced Materials, 2023, 35, .	21.0	4
549	Hardware Trojans based on two-dimensional memtransistors. Nanoscale Horizons, 2023, 8, 603-615.	8.0	2
550	Toward Single–Cell Multiple–Strategy Processing Shift Register Powered by Phase–Change Memory Materials. Advanced Intelligent Systems, 2023, 5, .	6.1	3
551	Accelerating AI using next-generation hardware: Possibilities and challenges with analog in-memory computing. , 2023, , .		0
552	Bias-Scalable Near-Memory CMOS Analog Processor for Machine Learning. IEEE Journal on Emerging and Selected Topics in Circuits and Systems, 2023, 13, 312-322.	3.6	0
553	Impact of Temperature-Induced Oxide Defects on $Hf_xZr_{1-x}O_2$ Ferroelectric Tunnel Junction Memristor Performance. IEEE Transactions on Electron Devices, 2023, 70, 1412-1416.	3.0	3
554	Highly-scaled and fully-integrated 3-dimensional ferroelectric transistor array for hardware implementation of neural networks. Nature Communications, 2023, 14, .	12.8	13
555	EqSpike: Spike-driven Equilibrium Propagation for Neuromorphic Implementations. , 0, , .		0
556	Ge2Sb2Se4Te1-based optical switching with directional coupler structure used for all-optical synapse. , 2023, , .		0
557	Severity-Based Hierarchical ECG Classification Using Neural Networks. IEEE Transactions on Biomedical Circuits and Systems, 2023, 17, 77-91.	4.0	5
558	Ternary Output Binary Neural Network With Zero-Skipping for MRAM-Based Digital In-Memory Computing. IEEE Transactions on Circuits and Systems II: Express Briefs, 2023, 70, 2655-2659.	3.0	2
559	Thickness scaling down to 5 nm of ferroelectric ScAlN on CMOS compatible molybdenum grown by molecular beam epitaxy. Applied Physics Letters, 2023, 122, .	3.3	21
560	A Survey on Optical Phase-Change Memory: The Promise and Challenges. IEEE Access, 2023, 11, 11781-11803.	4.2	10
561	Surface co-hydrophilization via ammonia inorganic strategy for low-temperature Cu/SiO2 hybrid bonding. Journal of Materials Science and Technology, 2023, 149, 161-166.	10.7	3
562	FPGA Implementation of Associative Processors. IEEE Transactions on Circuits and Systems II: Express Briefs, 2023, 70, 1774-1778.	3.0	0
563	Temporal Frame Filtering for Autonomous Driving Using 3D-Stacked Global Shutter CIS With IWO Buffer Memory and Near-Pixel Compute. IEEE Transactions on Circuits and Systems I: Regular Papers, 2023, 70, 2074-2084.	5.4	2
564	Highly parallel stateful Boolean logic gates based on aluminum-doped self-rectifying memristors in a vertical crossbar array structure. Nanoscale, 2023, 15, 6387-6395.	5.6	5

#	Article	IF	Citations
565	*Colloquium* : Advances in automation of quantum dot devices control. Reviews of Modern Physics, 2023, 95, .	45.6	9
566	Echo state graph neural networks with analogue random resistive memory arrays. Nature Machine Intelligence, 2023, 5, 104-113.	16.0	22
567	2T1C DRAM based on semiconducting MoS_2 and semimetallic graphene for in-memory computing. , 2023, , .		1
568	All-Digital Computing-in-Memory Macro Supporting FP64-Based Fused Multiply-Add Operation. Applied Sciences (Switzerland), 2023, 13, 4085.	2.5	0
569	Nanofluidics at the crossroads. Journal of Chemical Physics, 2023, 158, .	3.0	11
570	Characteristic time of transition from write error to retention error in voltage-controlled magnetoresistive random-access memory. Journal of Magnetism and Magnetic Materials, 2023, 572, 170624.	2.3	0
571	Multi-modulated optoelectronic memristor based on Ga2O3/MoS2 heterojunction for bionic synapses and artificial visual system. Nano Energy, 2023, 111, 108398.	16.0	24
572	Sophisticated deep learning with on-chip optical diffractive tensor processing. Photonics Research, 2023, 11, 1125.	7.0	4
573	Multilevel Fully Logic-Compatible Latch Array for Computing-in-Memory. IEEE Transactions on Electron Devices, 2023, 70, 2001-2008.	3.0	0
574	Experimental Assessment of Multilevel RRAM-Based Vector-Matrix Multiplication Operations for In-Memory Computing. IEEE Transactions on Electron Devices, 2023, 70, 2009-2014.	3.0	3
575	Reconfigurable Physical Reservoir in GaN/Î±-In$_2$Se$_3$ HEMTs Enabled by Out-of-Plane Local Polarization of Ferroelectric 2D Layer. ACS Nano, 2023, 17, 7695-7704.	14.6	10
576	A subranging nonuniform sampling memristive neural network-based analog-to-digital converter. , 2023, 4, 100038.		11
577	Intrinsic resistive switching in ultrathin SiOx memristors for neuromorphic inference accelerators. Applied Surface Science, 2023, 625, 157191.	6.1	2
578	A Polymorphic Memtransistor with Tunable Metallic and Semiconducting Channel. Advanced Materials, 0, , 2209089.	21.0	5
579	Reliability of Computing-In-Memory Concepts Based on Memristive Arrays. , 2022, , .		2
580	Optical and Electrical Memories for Analog Optical Computing. IEEE Journal of Selected Topics in Quantum Electronics, 2023, 29, 1-12.	2.9	10
581	A Ferroelectric Domain-Wall Transistor. Chinese Physics Letters, 2023, 40, 038501.	3.3	2
582	Mimicking Pain-Perceptual Sensitization and Pattern Recognition Based on Capacitance- and Conductance-Regulated Neuroplasticity in Neural Network. ACS Applied Materials & Interfaces, 2023, 15, 9593-9603.	8.0	3

#	ARTICLE	IF	CITATIONS
583	Hadamard product-based in-memory computing design for floating point neural network training. Neuromorphic Computing and Engineering, 2023, 3, 014009.	5.9	0
584	Hybrid Volatile/Nonvolatile Resistive Switching Memory in Ternary Metal Oxide Enabling Hopfield Neural Classification. ACS Applied Electronic Materials, 2023, 5, 896-904.	4.3	0
585	Decoding Algorithms and HW Strategies to Mitigate Uncertainties in a PCM-Based Analog Encoder for Compressed Sensing. Journal of Low Power Electronics and Applications, 2023, 13, 17.	2.0	0
586	Back-End-of-Line-Compatible Fin-Gate ZnO Ferroelectric Field-Effect Transistors. IEEE Transactions on Electron Devices, 2023, 70, 2059-2066.	3.0	1
587	Benchmarking energy consumption and latency for neuromorphic computing in condensed matter and particle physics. , 2023, 1, 016101.		3
588	Vertical Nonvolatile Schottky‐Barrier‐Field‐Effect Transistor with Self‐Gating Semimetal Contact. Advanced Functional Materials, 2023, 33, .	14.9	7
589	Antiambipolar Transistor with Double Negative Differential Transconductances for Organic Quaternary Logic Circuits. Advanced Functional Materials, 2023, 33, .	14.9	11
590	Tunable pheromone interactions among microswimmers. Proceedings of the National Academy of Sciences of the United States of America, 2023, 120, .	7.1	4
591	Time-series quantum reservoir computing with weak and projective measurements. Npj Quantum Information, 2023, 9, .	6.7	13
592	Research progress in architecture and application of RRAM with computing-in-memory. Nanoscale Advances, 2023, 5, 1559-1573.	4.6	3
593	Designing polar textures with ultrafast neuromorphic features from atomistic simulations. Neuromorphic Computing and Engineering, 2023, 3, 012002.	5.9	3
594	A Fast and Energy-Efficient Nanoelectromechanical Non-Volatile Memory for In-Memory Computing. , 2023, , .		0
595	Programmable Ferroelectric HZO NEMS Mechanical Multiplier for in-Memory Computing. , 2023, , .		1
596	Highly Reliable Ovonic Threshold Switch with TiN/GeTe/TiN Structure. Materials, 2023, 16, 2066.	2.9	3
597	A Fully Analog Deep Neural Network Inference Accelerator with Pipeline Registers Based on Master-Slave Switched Capacitors. IEICE Transactions on Electronics, 2023, E106.C, 477-485.	0.6	1
598	Controllable extrinsic ion transport in two-dimensional perovskite films for reproducible, low-voltage resistive switching. Science China Materials, 2023, 66, 2383-2392.	6.3	5
599	Emerging Iontronic Neural Devices for Neuromorphic Sensory Computing. Advanced Materials, 2023, 35, .	21.0	18
600	Ultrathin Nitride Ferroic Memory with Large ON/OFF Ratios for Analog In‐Memory Computing. Advanced Materials, 2023, 35, .	21.0	16

#	ARTICLE	IF	CITATIONS
601	Thermal Characterization of Conductive Filaments in Unipolar Resistive Memories. Micromachines, 2023, 14, 630.	2.9	1
602	Van der Waals Ferroelectric Semiconductor Field Effect Transistor for In-Memory Computing. ACS Nano, 2023, 17, 6095-6102.	14.6	10
603	Nanoscale Phase Change Material Array by Sub-Resolution Assist Feature for Storage Class Memory Application. Nanomaterials, 2023, 13, 1050.	4.1	0
604	Photoferroelectric All-van-der-Waals Heterostructure for Multimode Neuromorphic Ferroelectric Transistors. ACS Applied Materials & Interfaces, 2023, 15, 15732-15744.	8.0	17
605	Experimental Demonstration of Inâ€Memory Computing in a Ferrofluid System. Advanced Materials, 2023, 35, .	21.0	3
606	Variability in Resistive Memories. Advanced Intelligent Systems, 2023, 5, .	6.1	25
607	Heterosynaptic MoS_2 Memtransistors Emulating Biological Neuromodulation for Energyâ€Efficient Neuromorphic Electronics. Advanced Materials, 2023, 35, .	21.0	9
609	An ultrafast bipolar flash memory for self-activated in-memory computing. Nature Nanotechnology, 2023, 18, 486-492.	31.5	21
610	Layer Sensitivity Aware CNN Quantization for Resource Constrained Edge Devices. , 2022, , .		0
611	Challenges and Opportunities for Computing-in-Memory Chips. , 2023, , .		0
612	Realizing Extreme Endurance Through Fault-aware Wear Leveling and Improved Tolerance. , 2023, , .		0
613	A neuro-vector-symbolic architecture for solving Ravenâ€™s progressive matrices. Nature Machine Intelligence, 2023, 5, 363-375.	16.0	5
614	Spike sorting algorithms and their efficient hardware implementation: a comprehensive survey. Journal of Neural Engineering, 2023, 20, 021001.	3.5	1
615	Reversal of nanomagnets by propagating magnons in ferrimagnetic yttrium iron garnet enabling nonvolatile magnon memory. Nature Communications, 2023, 14, .	12.8	14
616	Accelerating Adversarial Attack using Process-in-Memory Architecture. , 2022, , .		0
617	Metavalent Bonding in Layered Phaseâ€Change Memory Materials. Advanced Science, 2023, 10, .	11.2	9
618	Versatile memristor implemented in van der Waals CuInP2S6. Nano Research, 2023, 16, 10191-10197.	10.4	7
619	In-memory factorization of holographic perceptual representations. Nature Nanotechnology, 2023, 18, 479-485.	31.5	4

#	ARTICLE	IF	CITATIONS
620	Quantum Dot Light‐Emitting Synaptic Transistor for Parallel Data Transmission of Diverse Artificial Neural Network. Advanced Materials Technologies, 2023, 8, .	5.8	1
621	An Ultracompact Single‐Ferroelectric Field‐Effect Transistor Binary and Multibit Associative Search Engine. Advanced Intelligent Systems, 2023, 5, .	6.1	4
622	Integration of Neuromorphic and Reconfigurable Logic‐in‐Memory Operations in an Electrolyte‐Manipulated Ferroelectric Organic Neuristor. Advanced Intelligent Systems, 2023, 5, .	6.1	1
623	Recent Advances in Artificial Intelligence Sensors. , 2023, 2, .		14
624	A Capacitive Computing-In-Memory Circuit With Low Input Loading SRAM Bitcell and Adjustable ADC Input Range. IEEE Transactions on Circuits and Systems II: Express Briefs, 2023, 70, 3268-3272.	3.0	1
625	All‐Optical‐Controlled Excitatory and Inhibitory Synaptic Signaling through Bipolar Photoresponse of an Oxide‐Based Phototransistor. Advanced Optical Materials, 2023, 11, .	7.3	5
626	Picosecond Time‐Scale Resistive Switching Monitored in Real‐Time. Advanced Electronic Materials, 2023, 9, .	5.1	6
627	Configurable NbO$_x$ Memristors as Artificial Synapses or Neurons Achieved by Regulating the Forming Compliance Current for the Spiking Neural Network. Advanced Electronic Materials, 0, , .	5.1	2
628	Sheathed Molecular Junctions for Unambiguous Determination of Charge‐Transport Properties. Advanced Materials Interfaces, 2023, 10, .	3.7	2
629	Ferroelectric topologically configurable multilevel logic unit. Neuromorphic Computing and Engineering, 2023, 3, 024003.	5.9	1
630	pH-dependent water permeability switching and its memory in MoS2 membranes. Nature, 2023, 616, 719-723.	27.8	20
631	A 6T-3M SOT-MRAM for in-memory computing with reconfigurable arithmetic operations. IEICE Electronics Express, 2023, , .	0.8	0
632	Highly Enhanced Polarization Switching Speed in HfO$_2$‐based Ferroelectric Thin Films via a Composition Gradient Strategy. Advanced Functional Materials, 2023, 33, .	14.9	4
633	Energy-efficient high-fidelity image reconstruction with memristor arrays for medical diagnosis. Nature Communications, 2023, 14, .	12.8	12
634	Stopping Voltage‐Dependent PCM and RRAM‐Based Neuromorphic Characteristics of Germanium Telluride. Advanced Functional Materials, 2024, 34, .	14.9	5
635	Poly 3-methylthiophene based memristor device for neuromorphic computing. Synthetic Metals, 2023, 296, 117360.	3.9	1
636	28Ânm high-k-metal gate ferroelectric field effect transistors based synapses â€" A comprehensive overview. , 2023, 4, 100048.		1
637	Classification tasks using input driven nonlinear magnetization dynamics in spin Hall oscillator. Scientific Reports, 2023, 13, .	3.3	2

#	Article	IF	Citations
638	Recent Research for HZO-Based Ferroelectric Memory towards In-Memory Computing Applications. Electronics (Switzerland), 2023, 12, 2297.	3.1	4
639	Ferroelectric materials for neuroinspired computing applications. Fundamental Research, 2023, , .	3.3	2
640	Impedance Spectroscopy on Hafnium Oxideâ€Based Memristive Devices. Advanced Electronic Materials, 2023, 9, .	5.1	4
641	Recent Progress in Multiterminal Memristors for Neuromorphic Applications. Advanced Electronic Materials, 2023, 9, .	5.1	5
642	A Highly Reliable Molybdenum Disulfideâ€Based Synaptic Memristor Using a Copper Migrationâ€Controlled Structure. Small, 2023, 19, .	10.0	5
643	Highly Efficient Reconfigurable Stateful Logic Operations Based on CuI Memristor-Only Arrays Prepared With a Solution-Based Process. IEEE Journal of the Electron Devices Society, 2023, 11, 269-273.	2.1	1
644	Accelerate and actualize: Can 2D materials bridge the gap between neuromorphic hardware and the human brain?. Matter, 2023, 6, 1348-1365.	10.0	2
645	Discrete thermokinetic computational model of laser-induced phase transitions in phase-changing materials. Applied Physics Letters, 2023, 122, .	3.3	1
646	Bio-inspired artificial synapse for neuromorphic computing based on NiO nanoparticle thin film. Scientific Reports, 2023, 13, .	3.3	6
647	A Brain-Inspired Hierarchical Interactive In-Memory Computing System and Its Application in Video Sentiment Analysis. IEEE Transactions on Circuits and Systems for Video Technology, 2023, 33, 7928-7942.	8.3	8
648	Internal ion transport in ionic 2D CuInP2S6 enabling multi-state neuromorphic computing with low operation current. Materials Today, 2023, 66, 9-16.	14.2	2
649	Recent developments in CVD growth and applications of 2D transition metal dichalcogenides. Frontiers of Physics, 2023, 18, .	5.0	11
650	300Âmm integration of a scalable phase change material spacer by inductively coupled plasma etching. Materials Science in Semiconductor Processing, 2023, 164, 107591.	4.0	0
651	Single silicon synaptic device for stochastic binary spike-timing-dependent plasticity. Semiconductor Science and Technology, 2023, 38, 075015.	2.0	0
652	Highly-dependable printed neuromorphic circuits based on additive manufacturing. Flexible and Printed Electronics, 2023, 8, 025018.	2.7	1
653	Fast and Accurate Facial Expression Image Classification and Regression Method Based on Knowledge Distillation. Applied Sciences (Switzerland), 2023, 13, 6409.	2.5	5
654	Ti/HfO2-Based RRAM with Superior Thermal Stability Based on Self-Limited TiOx. Electronics (Switzerland), 2023, 12, 2426.	3.1	1
655	Integrated optical memristors. Nature Photonics, 2023, 17, 561-572.	31.4	30

#	Article	IF	Citations
656	Synaptic properties of plasma-treated SnS2/h-BN van der Waals heterostructure. Applied Physics Letters, 2023, 122, .	3.3	1
658	IMAC-Sim:. , 2023, , .		0
659	Heterogeneous Integration of In-Memory Analog Computing Architectures with Tensor Processing Units. , 2023, , .		0
660	End-to-End DNN Inference on a Massively Parallel Analog In Memory Computing Architecture. , 2023, , .		0
661	Complementary Digital and Analog Resistive Switching Based on AlO$_x$ Monolayer Memristors for Mixed-Precision Neuromorphic Computing. IEEE Transactions on Electron Devices, 2023, 70, 4488-4492.	3.0	1
662	Bottom-Up and Top-Down Approaches for the Design of Neuromorphic Processing Systems: Tradeoffs and Synergies Between Natural and Artificial Intelligence. Proceedings of the IEEE, 2023, 111, 623-652.	21.3	7
663	Black Phosphorus/Ferroelectric P(VDF-TrFE) Field-Effect Transistors with High Mobility for Energy-Efficient Artificial Synapse in High-Accuracy Neuromorphic Computing. Nano Letters, 2023, 23, 6752-6759.	9.1	10
664	Atomic-scale polarization switching in wurtzite ferroelectrics. Science, 2023, 380, 1034-1038.	12.6	19
665	Strange Loops in Design and Technology: 59th DAC Keynote Speech. IEEE Design and Test, 2023, 40, 96-103.	1.2	1
666	Cost-effective memory protection and reliability evaluation based on machine error-tolerance: A case study on no-accuracy-loss YOLOv4 object detection model. Microelectronics Reliability, 2023, 147, 115039.	1.7	0
667	Dependence of Ta_2O_5 memristor storage and synaptic performances on oxygen content. Applied Physics Express, 0, , .	2.4	1
668	Probabilistic model of resistance jumps in memristive devices. Physical Review E, 2023, 107, .	2.1	1
669	AI/ML algorithms and applications in VLSI design and technology. The Integration VLSI Journal, 2023, 93, 102048.	2.1	3
670	Two-Terminal MoS_2 Memristor and the Homogeneous Integration with a MoS_2 Transistor for Neural Networks. Nano Letters, 2023, 23, 5869-5876.	9.1	9
671	All-optical spiking neural network and optical spike-time-dependent plasticity based on the self-pulsing effect within a micro-ring resonator. Applied Optics, 2023, 62, 5459.	1.8	1
672	Quantum Topological Neuristors for Advanced Neuromorphic Intelligent Systems. Advanced Science, 2023, 10, .	11.2	2
673	Single-shot optical neural network. Science Advances, 2023, 9, .	10.3	8
674	Sparse matrix multiplication in a record-low power self-rectifying memristor array for scientific computing. Science Advances, 2023, 9, .	10.3	9

#	Article	IF	Citations
675	A reconfigurable binary/ternary logic conversion-in-memory based on drain-aligned floating-gate heterojunction transistors. Nature Communications, 2023, 14, .	12.8	3
676	3‐Masks‐Processed Sub‐100 nm Amorphous InGaZnO Thin‐Film Transistors for Monolithic 3D Capacitor‐Less Dynamic Random Access Memories. Advanced Electronic Materials, 2023, 9, .	5.1	1
677	Improved ferroelectric properties of CMOS back-end-of-line compatible Hf0.5Zr0.5O2 thin films by introducing dielectric layers. Journal of Materiomics, 2024, 10, 277-284.	5.7	2
678	Anisotropic mass transport enables distinct synaptic behaviors on 2D material surface. , 2023, 5, 100047.		2
679	Recent Advances and Future Prospects for Memristive Materials, Devices, and Systems. ACS Nano, 2023, 17, 11994-12039.	14.6	34
680	Wurtzite and fluorite ferroelectric materials for electronic memory. Nature Nanotechnology, 2023, 18, 422-441.	31.5	25
681	Neuromorphic Artificial Vision Systems Based on Reconfigurable Ion‐Modulated Memtransistors. Advanced Intelligent Systems, 2023, 5, .	6.1	2
682	Spintronics intelligent devices. Science China: Physics, Mechanics and Astronomy, 2023, 66, .	5.1	5
683	A quest for ideal electric field-driven $MX@C_{70}$ endohedral fullerene memristors: which MX fits the best?. Physical Chemistry Chemical Physics, 2023, 25, 14245-14256.	2.8	3
684	Timing-accurate simulation framework for NVM-based compute-in-memory architecture exploration. IT - Information Technology, 2023, 65, 13-29.	0.9	0
685	Contrasting analog and digital resistive switching memory characteristics in solution-processed copper(i) thiocyanate and its polymer electrolyte-based memristive devices. Journal of Materials Chemistry C, 2023, 11, 7629-7640.	5.5	1
686	Large-area multilayer molybdenum disulfide for 2D memristors. Materials Today Nano, 2023, 23, 100353.	4.6	1
687	Probing the Melting Transitions in Phase-Change Superlattices via Thin Film Nanocalorimetry. Nano Letters, 2023, 23, 4587-4594.	9.1	1
688	Impact of Phase-Change Memory Drift on Energy Efficiency and Accuracy of Analog Compute-in-Memory Deep Learning Inference (Invited). , 2023, , .		0
689	Investigating Various Adder Architectures for Digital In-Memory Computing Using MAGIC-based Memristor Design Style. , 2022, , .		0
690	Conductance quantization in h-BN memristors. Applied Physics Letters, 2023, 122, .	3.3	5
691	Electrochemical‐Memristor‐Based Artificial Neurons and Synapses—Fundamentals, Applications, and Challenges. Advanced Materials, 2023, 35, .	21.0	11
692	HfO_x-Based Conductive Bridge Random Access Memory with Al_2O_3 Sandglass Nanostructures via Glancing Angle Deposition Technology toward Neuromorphic Applications. ACS Applied Nano Materials, 2023, 6, 9247-9256.	5.0	2

#	Article	IF	Citations
693	Scalable CMOS back-end-of-line-compatible AlScN/two-dimensional channel ferroelectric field-effect transistors. Nature Nanotechnology, 2023, 18, 1044-1050.	31.5	27
694	Spontaneous Threshold Lowering Neuron using Second‐Order Diffusive Memristor for Self‐Adaptive Spatial Attention. Advanced Science, 2023, 10, .	11.2	3
695	Moving Towards Game-Changing Technology: Fabrication and Application of HfO$_2$ RRAM for In-Memory Computing. , 2023, , .		1
696	Reconfigurable Logic-in-Memory Computing Based on a Polarity-Controllable Two-Dimensional Transistor. Nano Letters, 2023, 23, 5242-5249.	9.1	5
697	Impact of Scan Rate and Mobile Ion Concentration on the Anomalous J-V Curves of Metal Halide Perovskite-Based Memristors. IEEE Electron Device Letters, 2023, 44, 1276-1279.	3.9	1
698	Characterization of deep-level defects in highly-doped silicon with asymmetric structure by transient capacitance spectroscopy. Journal of Materials Science, 2023, 58, 10651-10659.	3.7	0
699	Recent advances in covalent organic polymers‐based thin films as memory devices. Journal of Polymer Science, 0, , .	3.8	9
700	Research progress on 2D ferroelectric and ferrovalley materials and their neuromorphic application. Science China: Physics, Mechanics and Astronomy, 2023, 66, .	5.1	3
701	Ultralow-Power and High-Speed In-Memory Computing Unit Based on Field-Accelerated Spin-Orbit Torque MRAM Utilizing Voltage-Controlled Magnetic Anisotropy. IEEE Transactions on Electron Devices, 2023, 70, 4150-4156.	3.0	0
702	Effect of Resistance variability in Vector Matrix Multiplication operations of 1T1R ReRAM crossbar arrays using an Embedded test platform. , 2023, , .		0
703	Towards Efficient In-Memory Computing Hardware for Quantized Neural Networks: State-of-the-Art, Open Challenges and Perspectives. IEEE Nanotechnology Magazine, 2023, 22, 377-386.	2.0	0
704	Inkjet‐Printed Tungsten Oxide Memristor Displaying Non‐Volatile Memory and Neuromorphic Properties. Advanced Functional Materials, 0, , .	14.9	2
705	RRAM-Based Precision-Scaleable Computing-In-Memory Scheme and Its Error Correction Approach. , 2023, , .		0
706	Read-disturb Detection Methodology for RRAM-based Computation-in-Memory Architecture. , 2023, , .		1
707	A 115.1 TOPS/W, 12.1 TOPS/mm^2 Computation-in-Memory using Ring-Oscillator based ADC for Edge AI. , 2023, , .		1
708	Mapping-aware Biased Training for Accurate Memristor-based Neural Networks. , 2023, , .		2
709	Online Spatio-Temporal Learning with Target Projection. , 2023, , .		1
710	Brain-inspired methods for achieving robust computation in heterogeneous mixed-signal neuromorphic processing systems. Neuromorphic Computing and Engineering, 2023, 3, 034002.	5.9	4

#	ARTICLE	IF	CITATIONS
711	Carrier Type Exchange with the Sweep Direction in a WORM Memory Device. ACS Applied Electronic Materials, 2023, 5, 3917-3924.	4.3	3
712	SiCBit-PUF: Strong in-Cache Bitflip PUF Computation for Trusted SoCs. , 2023, , .		0
713	Secure computing with MRAM. Nature Electronics, 2023, 6, 475-476.	26.0	1
714	1F-1T Array: Current Limiting Transistor Cascoded FeFET Memory Array for Variation Tolerant Vector-Matrix Multiplication Operation. IEEE Nanotechnology Magazine, 2023, 22, 424-429.	2.0	2
715	Spiking CMOS-NVM mixed-signal neuromorphic ConvNet with circuit- and training-optimized temporal subsampling. Frontiers in Neuroscience, 0, 17, .	2.8	0
716	Silicon Nanowire Charge Trapping Memory for Energy-Efficient Neuromorphic Computing. IEEE Nanotechnology Magazine, 2023, 22, 409-416.	2.0	1
717	ANN Inference enabled by Variability Mitigation using 2T-1R Bit Cell-based Design Space Analysis. , 2023, , .		0
718	Quantum Transport Simulations of a Proposed Logic-In-Memory Device Based on a Bipolar Magnetic Semiconductor. Physical Review Applied, 2023, 20, .	3.8	1
719	A Survey on Approximate Multiplier Designs for Energy Efficiency: From Algorithms to Circuits. ACM Transactions on Design Automation of Electronic Systems, 2024, 29, 1-37.	2.6	4
720	Amorphous GaOx based charge trap memory device for neuromorphic applications. Solid-State Electronics, 2023, 207, 108717.	1.4	0
721	Area-Aware Optimization of MRAM Crossbar Array Bit-Cell for In-Memory Computing. IEEE Transactions on Electron Devices, 2023, 70, 4968-4971.	3.0	0
722	Activation Energy and Bipolar Switching Properties for the Co-Sputtering of ITOX:SiO2 Thin Films on Resistive Random Access Memory Devices. Nanomaterials, 2023, 13, 2179.	4.1	0
723	Improved resistive switching performance and mechanism analysis of MoO3 nanorods based memristors. Materials Today Communications, 2023, 36, 106770.	1.9	1
724	Research on the Architecture and Implementation of In-Memory Computing. , 2023, , .		0
725	Endurance Improvement of GaN Bipolar Charge Trapping Memory With Back Gate Injection. IEEE Electron Device Letters, 2023, 44, 1408-1411.	3.9	1
726	Finite State Automata Design using 1T1R ReRAM Crossbar. , 2023, , .		1
727	One-Transistor-Multiple-RRAM Cells for Energy-Efficient In-Memory Computing. , 2023, , .		0
728	Towards Energy-Efficient Computing Hardware Based on Memristive Nanodevices. IEEE Nanotechnology Magazine, 2023, , 1-9.	1.3	0

#	Article	IF	Citations
729	Chromatic Plasmonic Polarizer-Based Synapse for All-Optical Convolutional Neural Network. Nano Letters, 2023, 23, 9651-9656.	9.1	5
730	Benchmarking Multiplier Architectures for MAGIC Based In-Memory Computing. , 2023, , .		0
731	H3DAtten: Heterogeneous 3-D Integrated Hybrid Analog and Digital Compute-in-Memory Accelerator for Vision Transformer Self-Attention. IEEE Transactions on Very Large Scale Integration (VLSI) Systems, 2023, , 1-11.	3.1	0
732	Ferroelectric source follower for voltage-sensing nonvolatile memory and computing-in-memory. Journal Physics D: Applied Physics, 2023, 56, 465103.	2.8	2
733	Long-Term Potentiation and Depression with Vertically Stacked Nanosheet FET. , 2023, , .		0
734	A 64-core mixed-signal in-memory compute chip based on phase-change memory for deep neural network inference. Nature Electronics, 2023, 6, 680-693.	26.0	25
735	Speculative ECC and LCIM Enabled NUMA Device Core. , 2023, , .		0
736	A wavelength-multiplexed photonic tensor processor based on Mach-Zehnder modulator. , 2023, , .		0
737	Advanced interfacial phase change material: Structurally confined and interfacially extended superlattice. Materials Today, 2023, , .	14.2	0
738	Non-volatile tunable optics by design: From chalcogenide phase-change materials to device structures. Materials Today, 2023, 68, 334-355.	14.2	2
739	Complementary inverter and reward-modulated spike timing dependent plasticity circuit based on organic transistors. Materials Science in Semiconductor Processing, 2023, 167, 107803.	4.0	0
740	Nanoelectronics Using Metal–Insulator Transition. Advanced Materials, 2024, 36, .	21.0	1
741	Reconfigurable Logic-in-Memory Constructed Using an Organic Antiambipolar Transistor. Nano Letters, 2023, 23, 8339-8347.	9.1	1
742	Optimizing Reservoir Computing Based on an Alternating Input-Driven Spin-Torque Oscillator. Physical Review Applied, 2023, 20, .	3.8	0
743	Coexistence of Interfacial and Filamentary Resistance Switching in Ti/SiO$_x$/Au Resistive Memory Devices. IEEE Transactions on Electron Devices, 2023, 70, 5421-5427.	3.0	0
744	Hardware-aware training for large-scale and diverse deep learning inference workloads using in-memory computing-based accelerators. Nature Communications, 2023, 14, .	12.8	13
745	Analysis of Logic-in-Memory Full Adder Circuit With Floating Gate Field Effect Transistor (FGFET). IEEE Access, 2023, 11, 97778-97785.	4.2	2
746	Ferroelectric gating of two-dimensional semiconductors for the integration of steep-slope logic and neuromorphic devices. Nature Electronics, 2023, 6, 658-668.	26.0	13

#	Article	IF	Citations
747	Computational immunohistochemical mapping adds immune context to histological phenotypes in mouse models of colitis. Scientific Reports, 2023, 13, .	3.3	0
748	Multifilamentary switching of Cu/SiOx memristive devices with a Ge-implanted a-Si underlayer for analog synaptic devices. NPG Asia Materials, 2023, 15, .	7.9	0
749	Investigation on floating-gate field-effect transistor for logic-in-memory application. Journal Physics D: Applied Physics, 2023, 56, 495105.	2.8	0
750	Four levels of in-sensor computing in bionic olfaction: from discrete components to multi-modal integrations. Nanoscale Horizons, 2023, 8, 1301-1312.	8.0	1
751	Silicon based $Bi_{0.9}La_{0.1}FeO_3$ ferroelectric tunnel junction memristor for convolutional neural network application. Nanoscale, 2023, 15, 13009-13017.	5.6	1
752	From Brain Models to Robotic Embodied Cognition: How Does Biological Plausibility Inform Neuromorphic Systems?. Brain Sciences, 2023, 13, 1316.	2.3	2
753	Performance Enhancement of Organic Ternary Logic Circuits through UV Irradiation and Geometry Optimization. Advanced Materials Technologies, 2023, 8, .	5.8	0
754	Ferroelectric Domain Wall Memory and Logic. ACS Applied Electronic Materials, 2023, 5, 4692-4703.	4.3	4
755	Recent Progress in Silicon‐Based Photonic Integrated Circuits and Emerging Applications. Advanced Optical Materials, 2023, 11, .	7.3	2
756	Toward monolithic growth integration of nanowire electronics in 3D architecture: a review. Science China Information Sciences, 2023, 66, .	4.3	1
757	Bilayered Oxide Heterostructure‐Mediated Capacitance‐Based Neuroplasticity Modulation for Neuromorphic Classification. Advanced Functional Materials, 2023, 33, .	14.9	0
758	In-memory computing based on phase change memory for high energy efficiency. Science China Information Sciences, 2023, 66, .	4.3	0
759	Temperature Dependence of Electrical Properties and Conduction Mechanism of SiN_x‐Based Resistive Random Access Memory. Physica Status Solidi (A) Applications and Materials Science, 2023, 220, .	1.8	0
760	Memristive dynamics enabled neuromorphic computing systems. Science China Information Sciences, 2023, 66, .	4.3	4
761	Thermal atomic layer deposition of ternary Ge-S-Se alloy for advanced ovonic threshold switch selectors in three-dimensional cross-point memory array. Journal of Alloys and Compounds, 2023, 968, 172284.	5.5	0
762	In-situ electro-responsive through-space coupling enabling foldamers as volatile memory elements. Nature Communications, 2023, 14, .	12.8	2
763	Edge learning using a fully integrated neuro-inspired memristor chip. Science, 2023, 381, 1205-1211.	12.6	22
764	Reliable Memristor Crossbar Array Based on 2D Layered Nickel Phosphorus Trisulfide for Energy‐Efficient Neuromorphic Hardware. Small, 2024, 20, .	10.0	2

#	Article	IF	Citations
765	Open-loop analog programmable electrochemical memory array. Nature Communications, 2023, 14, .	12.8	4
766	Critical Discussion of Ex situ and In situ TEM Measurements on Memristive Devices. Springer Series on Bio- and Neurosystems, 2024, , 129-157.	0.2	0
767	Broadband Optoelectronic Synapse Enables Compact Monolithic Neuromorphic Machine Vision for Information Processing. Advanced Functional Materials, 2023, 33, .	14.9	1
768	Universal Approach for Calibrating Large‐Scale Electronic and Photonic Crossbar Arrays. Advanced Intelligent Systems, 2023, 5, .	6.1	0
770	An Efficient and Accurate Memristive Memory for Array-Based Spiking Neural Networks. IEEE Transactions on Circuits and Systems I: Regular Papers, 2023, 70, 4804-4815.	5.4	1
771	Realizing In-Memory Baseband Processing for Ultrafast and Energy-Efficient 6G. IEEE Internet of Things Journal, 2024, 11, 5169-5183.	8.7	1
772	Design and Implementation of a Hybrid, ADC/DAC-Free, Input-Sparsity-Aware, Precision Reconfigurable RRAM Processing-in-Memory Chip. IEEE Journal of Solid-State Circuits, 2023, , 1-10.	5.4	0
773	Coexistence of synaptic behaviour and negative differential resistance at room temperature in the resistive switching device based on natural indigo molecules. Dyes and Pigments, 2023, 219, 111638.	3.7	1
774	A Novel Flexible Artificial Synapse Based on Pseudocapacitor for High-Accuracy Neuromorphic Computing. , 2023, , .		0
775	AnalogNAS: A Neural Network Design Framework for Accurate Inference with Analog In-Memory Computing. , 2023, , .		0
776	Quantized Neural Network via Synaptic Segregation Based on Ternary Charge‐Trap Transistors. Advanced Electronic Materials, 2023, 9, .	5.1	0
777	FactSheets for Hardware-Aware AI Models: A Case Study of Analog In Memory Computing AI Models. , 2023, , .		0
778	Motivation and Challenges for Applying Photonic Neuromorphic Computing Technologies. , 2023, , .		0
779	Modelling in-device inference and classification of binary digits using nonlinear dynamics of spin Hall oscillator. , 2023, , .		0
780	The Demonstration of Photorefractive Synaptic Connections for an Integrated Photonic Crossbar Array. , 2023, , .		0
781	Reservoir Computing With Dynamic Reservoir using Cascaded DNA Memristors. IEEE Transactions on Biomedical Circuits and Systems, 2024, 18, 131-144.	4.0	0
782	Matrix-Vector Multiplication using Mixed Space-Frequency Multiplexing of Optical Frequency Combs. , 2023, , .		1
783	Overflow-free Compute Memories for Edge AI Acceleration. Transactions on Embedded Computing Systems, 2023, 22, 1-23.	2.9	0

#	Article	IF	Citations
784	XPert: Peripheral Circuit & Neural Architecture Co-search for Area and Energy-efficient Xbar-based Computing. , 2023, , .		1
785	A Convolution Neural Network Accelerator Design with Weight Mapping and Pipeline Optimization. , 2023, , .		1
786	Emerging Hardware Technologies and 3D System Integration for Ubiquitous Machine Intelligence. , 2023, , .		0
787	UpTime: Towards Flow-based In-Memory Computing with High Fault-Tolerance. , 2023, , .		0
788	Input-Aware Dynamic Timestep Spiking Neural Networks for Efficient In-Memory Computing. , 2023, , .		0
789	Broadband sensory networks with locally stored responsivities for neuromorphic machine vision. Science Advances, 2023, 9, .	10.3	2
790	IMBUE: In-Memory Boolean-to-CUrrent Inference ArchitecturE for Tsetlin Machines. , 2023, , .		0
791	TiN/Ti/HfO2/TiN memristive devices for neuromorphic computing: from synaptic plasticity to stochastic resonance. Frontiers in Neuroscience, 0, 17, .	2.8	1
792	Matter and Mind Matter. Springer Series on Bio- and Neurosystems, 2024, , 1-42.	0.2	0
793	Neuromorphic Circuits with Redox-Based Memristive Devices. Springer Series on Bio- and Neurosystems, 2024, , 43-85.	0.2	0
794	Redox-Based Bi-Layer Metal Oxide Memristive Devices. Springer Series on Bio- and Neurosystems, 2024, , 87-114.	0.2	0
795	iMAT: Energy-Efficient In-Memory Acceleration for Ternary Neural Networks With Sparse Dot Product. , 2023, , .		0
796	Area and Energy Efficient Short-Circuit-Logic-Based STT-MRAM Crossbar Array for Binary Neural Networks. IEEE Transactions on Circuits and Systems II: Express Briefs, 2024, 71, 1386-1390.	3.0	0
797	How to Achieve Large-Area Ultra-Fast Operation of MoS$_2$ Monolayer Flash Memories?. IEEE Nanotechnology Magazine, 2023, 17, 39-43.	1.3	0
798	CuInP$_2$S$_6$â€Based Electronic/Optoelectronic Synapse for Artificial Visual System Application. Advanced Functional Materials, 2024, 34, .	14.9	3
799	Fieldâ€Free Switching of Spin Crossbar Arrays by Asymmetric Spin Current Gradient. Advanced Functional Materials, 2024, 34, .	14.9	2
800	Robustness toÂVariability andÂAsymmetry ofÂIn-Memory On-Chip Training. Lecture Notes in Computer Science, 2023, , 249-257.	1.3	0
801	PowerGAN: A Machine Learning Approach for Power Sideâ€Channel Attack on Computeâ€inâ€Memory Accelerators. Advanced Intelligent Systems, 2023, 5, .	6.1	0

#	Article	IF	Citations
802	Device-scale atomistic modelling of phase-change memory materials. Nature Electronics, 2023, 6, 746-754.	26.0	10
804	Recent progress in InGaZnO FETs for high-density 2T0C DRAM applications. Science China Information Sciences, 2023, 66, .	4.3	0
805	DIMCA: An Area-Efficient Digital In-Memory Computing Macro Featuring Approximate Arithmetic Hardware in 28 nm. IEEE Journal of Solid-State Circuits, 2024, 59, 960-971.	5.4	0
806	Modeling of spin-orbit torque (SOT) channel and high-density SOT magnetic random-access memory. , 2023, , .		0
807	Enabling efficient machine learning with device-to-algorithm co-design of spintronic hardware: opportunities and challenge. , 2023, , .		0
808	Tempo-CIM: A RRAM Compute-in-Memory Neuromorphic Accelerator with Area-Efficient LIF Neuron and Split-Train-Merged-Inference Algorithm for Edge AI Application. IEEE Journal on Emerging and Selected Topics in Circuits and Systems, 2023, , 1-1.	3.6	0
809	Integration of HfO$_2$-based 3D OxRAM with GAA stacked-nanosheet transistor for high-density embedded memory. , 2023, , .		0
810	A 40-nm SONOS Digital CIM Using Simplified LUT Multiplier and Continuous Sample-Hold Sense Amplifier for AI Edge Inference. IEEE Transactions on Very Large Scale Integration (VLSI) Systems, 2023, 31, 2044-2052.	3.1	0
811	Mixed‐Halide Perovskite Memristors with Gate‐Tunable Functions Operating at Low‐Switching Electric Fields. Advanced Electronic Materials, 2023, 9, .	5.1	2
812	Hybrid Devices for Neuromorphic Applications. , 2023, , 622-655.		0
813	Memory Technology: Development, Fundamentals, and Future Trends. , 2023, , 1-36.		0
814	In-sensor Computing Based on Two-terminal Optoelectronic Memristors. , 2023, , 339-372.		0
815	Dual-gate Ferroelectric Field-effect Transistors: An Emerging Computational Memory for Advanced Logic Operations. , 2023, , 223-239.		0
816	Bring memristive in-memory computing into general-purpose machine learning: A perspective. , 2023, 1, .		0
817	A low-power vertical dual-gate neurotransistor with short-term memory for high energy-efficient neuromorphic computing. Nature Communications, 2023, 14, .	12.8	1
818	Exploiting the State Dependency of Conductance Variations in Memristive Devices for Accurate In-Memory Computing. IEEE Transactions on Electron Devices, 2023, 70, 6279-6285.	3.0	1
819	Reconfigurable Mott electronics for homogeneous neuromorphic platform. Chinese Physics B, 0, , .	1.4	0
820	A thorough investigation of the switching dynamics of TiN/Ti/10Ânm-HfO2/W resistive memories. Materials Science in Semiconductor Processing, 2024, 169, 107878.	4.0	0

#	Article	IF	Citations
821	Higher-dimensional processing using a photonic tensor core with continuous-time data. Nature Photonics, 2023, 17, 1080-1088.	31.4	4
822	A 2d Heterostructure‐Based Multifunctional Floating Gate Memory Device for Multimodal Reservoir Computing. Advanced Materials, 0, , .	21.0	0
823	Highly Reconfigurable Logic‐In‐Memory Operations in Tunable Gaussian Transistors for Multifunctional Image Processing. Advanced Functional Materials, 0, , .	14.9	0
824	Efficient Segment-Level Waveform Anomaly Detection for Memory Devices. , 2023, , .		0
825	Two‐Dimensional Memtransistors for Non‐Von Neumann Computing: Progress and Challenges. Advanced Functional Materials, 2024, 34, .	14.9	1
826	Online dynamical learning and sequence memory with neuromorphic nanowire networks. Nature Communications, 2023, 14, .	12.8	2
827	High-Performance Neuromorphic Computing and Logic Operation Based on a Self-Assembled Vertically Aligned Nanocomposite $SrTiO_3$:MgO Film Memristor. ACS Nano, 2023, 17, 21518-21530.	14.6	1
828	Resistive switching transparent SnO2 thin film sensitive to light and humidity. Scientific Reports, 2023, 13, .	3.3	0
829	Memristors with tunable characteristics based on the tellurene/Nb-doped MoS2 heterojunction toward bio-realistic synaptic emulation. Applied Physics Letters, 2023, 123, .	3.3	0
830	A full spectrum of computing-in-memory technologies. Nature Electronics, 2023, 6, 823-835.	26.0	3
831	A large-scale integrated vector–matrix multiplication processor based on monolayer molybdenum disulfide memories. Nature Electronics, 0, , .	26.0	1
832	Self‐Rectifying Memristors for Three‐DimensionalÂIn‐Memory Computing. Advanced Materials, 2024, 36, .	21.0	1
833	Dual‐logic‐in‐memory implementation with orthogonal polarization of van der Waals ferroelectric heterostructure. InformaÄnÃ-MateriÃ¡ly, 2024, 6, .	17.3	0
834	Low-Thermal-Budget Ferroelectric Field-Effect Transistors Based on $CuInP_2S_6$ and InZnO. ACS Applied Materials & Interfaces, 2023, 15, 53671-53677.	8.0	0
835	Memristor based electronic devices towards biomedical applications. Journal of Materials Chemistry C, 0, , .	5.5	0
836	Dynamics of polarization loss and imprint in bilayer ferroelectric tunnel junctions. Journal of Applied Physics, 2023, 134, .	2.5	0
837	Toward Ultimate Memory with Single-Molecule Multiferroics. Journal of the American Chemical Society, 2023, 145, 25357-25364.	13.7	0
838	High‐Density Artificial Synapse Array Consisting of Homogeneous Electrolyte‐Gated Transistors. Advanced Science, 2024, 11, .	11.2	1

#	Article	IF	Citations
839	Programming Weights to Analog In-Memory Computing Cores by Direct Minimization of the Matrix-Vector Multiplication Error. IEEE Journal on Emerging and Selected Topics in Circuits and Systems, 2023, , 1-1.	3.6	0
840	Recent progress on ambipolar 2D semiconductors in emergent reconfigurable electronics and optoelectronics. Chinese Physics B, 0, , .	1.4	0
842	A Nonvolatile Bipolar Optical Fiber Memory Based on Phase Change Materials. ACS Photonics, 0, , .	6.6	0
843	The Future is Analog. , 2023, , .		1
844	Thick Does the Trick: Genesis of Ferroelectricity in 2D GeTe–Rich $(GeTe)_m(Sb_2Te_3)_n$ Lamellae. Advanced Science, 2024, 11, .	11.2	0
845	Application of Crop-Sum Algorithm to Character Recognition and Pedestrian Detection by Memory-Centric Computing. , 2023, , .		0
846	Memory-Based Computing for Energy-Efficient AI: Grand Challenges. , 2023, , .		0
847	Memristive devices with short-term and long-term memory behaviors for processing temporal information. Applied Physics Letters, 2023, 123, .	3.3	0
848	Self–assembled vapor-transport-deposited SnS nanoflake-based memory devices with synaptic learning properties. Applied Surface Science, 2024, 648, 158994.	6.1	2
849	High–Performance Memristors Based on Few–Layer Manganese Phosphorus Trisulfide for Neuromorphic Computing. Advanced Functional Materials, 2024, 34, .	14.9	1
850	A physics-based predictive model for pulse design to realize high-performance memristive neural networks. , 2023, 1, .		1
851	Using the IBM analog in-memory hardware acceleration kit for neural network training and inference. , 2023, 1, .		0
852	Enhanced spin Hall response from aligned Kramers-Weyl points in high Chern number semimetals. Physical Review B, 2023, 108, .	3.2	0
853	An in-sensor humidity computing system for contactless human–computer interaction. Materials Horizons, 2024, 11, 939-948.	12.2	0
854	Automated Synthesis for In-Memory Computing. , 2023, , .		0
855	Optics-informed deep learning over silicon photonic hardware. , 2023, , .		0
856	3D simulation of conductive nanofilaments in multilayer h-BN memristors *via* a circuit breaker approach. Materials Horizons, 2024, 11, 949-957.	12.2	0
857	Controlling Volatility and Nonvolatility of Memristive Devices by Sn Alloying. ACS Applied Electronic Materials, 0, , .	4.3	0

#	ARTICLE	IF	CITATIONS
858	Engineered Vertically Stacked NSFET Charge-Trapping Synapse for Neuromorphic Applications. ACS Applied Electronic Materials, 0, , .	4.3	0
859	Towards Energy-Efficient Spiking Neural Networks: A Robust Hybrid CMOS-Memristive Accelerator. ACM Journal on Emerging Technologies in Computing Systems, 2024, 20, 1-20.	2.3	0
860	åŸºäºŽäºŒç»´Î±-MoO3 çš,,å¾®å€¼å¯å,¨ç‰¹æ€§åšå…¶åŒé‡å¯¼ç"µæœºå^¶ç"ç©©¶. Science China Materials, 2023, 66, 4773-4781.	6.3	0
861	Proximity Effect-Induced Magnetoresistance Enhancement in a Fe$_3$GeTe$_2$/NbSe$_2$/Fe$_3$GeTe$_2$ Magnetic Tunnel Junction. ACS Applied Materials & Interfaces, 0, , .	8.0	0
862	Probabilistic Compute-in-Memory Design for Efficient Markov Chain Monte Carlo Sampling. IEEE Transactions on Circuits and Systems I: Regular Papers, 2023, , 1-14.	5.4	0
863	Hierarchical processing enabled by 2D ferroelectric semiconductor transistor for low-power and high-efficiency AI vision system. Science Bulletin, 2024, 69, 473-482.	9.0	0
864	Hydrophobically gated memristive nanopores for neuromorphic applications. Nature Communications, 2023, 14, .	12.8	3
865	Neuromorphic computing based on halide perovskites. Nature Electronics, 2023, 6, 949-962.	26.0	0
866	A Beat Signal Processing System with Parabolic Frequency Chirp Radar and Computation-in-Memory. , 2023, , .		0
867	HyDe: A Hybrid PCM/FeFET/SRAM Device-search for Optimizing Area and Energy-efficiencies in Analog IMC Platforms. IEEE Journal on Emerging and Selected Topics in Circuits and Systems, 2023, , 1-1.	3.6	0
868	How to Control the State Transformation from Short-Term Potentiation to Long-Term Potentiation of Charge Trapping Synapse?. , 2023, , .		0
869	Fabrication and integration of photonic devices for phase-change memory and neuromorphic computing. International Journal of Extreme Manufacturing, 0, , .	12.7	0
870	Spacer Engineering Enables Fineâ€Tuned Thin Film Microstructure and Efficient Charge Transport for Ultrasensitive 2D Perovskiteâ€Based Heterojunction Phototransistors and Optoelectronic Synapses. Small, 0, , .	10.0	1
871	Analog content-addressable memory from complementary FeFETs. , 2024, 2, 100218.		0
872	Advances in Machineâ€Learning Enhanced Nanosensors: From Cloud Artificial Intelligence Toward Future Edge Computing at Chip Level. Small Structures, 0, , .	12.0	4
873	Phase-Change Memory from Molecular Tellurides. ACS Nano, 0, , .	14.6	0
874	A novel time-domain in-memory computing unit using STT-MRAM. Microelectronic Engineering, 2023, , 112128.	2.4	0
875	Adaptable photonic artificial neurons for attention-based object identification. Nano Energy, 2024, 121, 109221.	16.0	0

#	ARTICLE	IF	CITATIONS
876	Flexible Photonic Synapses Using Vertical ZnO Nanotubes on Graphene Films. IEEE Journal of Selected Topics in Quantum Electronics, 2024, 30, 1-8.	2.9	0
877	A review of in-memory computing for machine learning: architectures, options. International Journal of Web Information Systems, 0, , .	2.4	0
878	Input-Aware Flow-Based In-Memory Computing. , 2023, , .		0
879	Ferroelectric Tunnel Junction Memristors for In‐Memory Computing Accelerators. Advanced Intelligent Systems, 0, , .	6.1	0
880	Solving Sparse Linear Systems via Flexible GMRES with In-Memory Analog Preconditioning. , 2023, , .		0
881	High-Performance Flexible Polymer Memristors Based on Silver Ions-Doped Polyethylenimine. IEEE Transactions on Electron Devices, 2023, , 1-5.	3.0	0
882	Improved Arithmetic Performance by Combining Stateful and Non‐Stateful Logic in Resistive Random Access Memory 1T–1R Crossbars. Advanced Intelligent Systems, 2024, 6, .	6.1	0
883	Cyclical Progress in Design and Technology. , 2023, , .		0
884	Ferroelectric-controlled graphene plasmonic surfaces for all-optical neuromorphic vision. Science China Technological Sciences, 0, , .	4.0	0
885	Path-Based Processing using In-Memory Systolic Arrays for Accelerating Data-Intensive Applications. , 2023, , .		0
886	Low-dimensional nanostructures for monolithic 3D-integrated flexible and stretchable electronics. Chemical Society Reviews, 2024, 53, 1316-1353.	38.1	3
887	The Integration of Two-Dimensional Materials and Ferroelectrics for Device Applications. ACS Nano, 2024, 18, 1778-1819.	14.6	1
888	Mosaic: in-memory computing and routing for small-world spike-based neuromorphic systems. Nature Communications, 2024, 15, .	12.8	1
889	Boron‐Doped Engineering for Carbon Quantum Dots‐Based Memristors with Controllable Memristance Stability. Small Methods, 0, , .	8.6	0
890	Amorphous Sb2Te3 nanowires: Synthesis, characterization and size-dependent phase transition behavior. Journal of Non-Crystalline Solids: X, 2024, 21, 100206.	1.2	0
891	Nonvolatile Memristive Materials and Physical Modeling for In‐Memory and In‐Sensor Computing. Small Science, 2024, 4, .	9.9	0
892	Verification of Flow-Based Computing Systems Using Bounded Model Checking. , 2023, , .		0
893	Power-Aware Training for Energy-Efficient Printed Neuromorphic Circuits. , 2023, , .		0

#	Article	IF	Citations
894	Impact of multi-domain effect on the effective carrier mobility of ferroelectric field-effect transistor. Nanotechnology, 2024, 35, 095706.	2.6	0
895	CMOS-Compatible Embedded Artificial Synaptic Device (eASD) for Neuromorphic Computing and AI Applications. IEEE Transactions on Electron Devices, 2024, 71, 1313-1319.	3.0	0
896	A Compact Model for Interface-Type Self-Rectifying Resistive Memory With Experiment Verification. IEEE Access, 2024, 12, 5081-5091.	4.2	1
897	A Network Intrusion Detection System with Broadband $WO_{3−x}$/$WO_{3−x}$–Ag/$WO_{3−x}$ Optoelectronic Memristor. Advanced Functional Materials, 0, , .	14.9	1
898	Modern computing: Vision and challenges. , 2024, 13, 100116.		0
899	Design and Assessment of Hybrid MTJ/CMOS Circuits for In-Memory-Computation. Journal of Low Power Electronics and Applications, 2024, 14, 3.	2.0	0
900	Fully-Fusible Convolutional Neural Networks for End-to-End Fused Architecture with FPGA Implementation. , 2023, , .		0
901	Reconfigurable and Parallel Computable Soft Mechanical Switch by Liquid Metal. Advanced Functional Materials, 2024, 34, .	14.9	0
902	Analog Resistive Switching Devices for Training Deep Neural Networks with the Novel Tiki-Taka Algorithm. Nano Letters, 2024, 24, 866-872.	9.1	1
903	Coupling effects of interface charge trapping and polarization switching in HfO2-based ferroelectric field effect transistors. APL Materials, 2024, 12, .	5.1	1
904	Emerging Technologies for Memory-Centric Computing. , 2024, , 3-29.		0
905	Distributed Analytics For Big Data: A Survey. Neurocomputing, 2024, 574, 127258.	5.9	0
906	Confirmation of charge carriers' types based on HOMO-LUMO positions in the active layer of a WORM memory device. Journal of Materials Science: Materials in Electronics, 2024, 35, .	2.2	1
907	A Memcomputing Approach to Prime Factorization. , 2023, , .		0
908	Ultraflexible Monolithic Three-Dimensional Static Random Access Memory. ACS Nano, 2024, 18, 3362-3368.	14.6	0
909	Content-Addressable Memories and Transformable Logic Circuits Based on Ferroelectric Reconfigurable Transistors for In-Memory Computing. ACS Nano, 2024, 18, 2763-2771.	14.6	0
910	Simultaneous Spike Processing for 3D NAND-Based Spiking Neural Networks. IEEE Electron Device Letters, 2024, 45, 340-343.	3.9	0
911	Memristor and spintronics as key technologies for upcoming computing resources. , 2024, , 1-19.		0

#	Article	IF	Citations
912	Performance improvement in reservoir computing by using HfZrO$_2$ FeFETs through operating voltage optimization. Japanese Journal of Applied Physics, 2024, 63, 03SP19.	1.5	0
913	Novel nanocomposite-superlattices for low energy and high stability nanoscale phase-change memory. Nature Communications, 2024, 15, .	12.8	0
914	Efficient Implementation of Boolean Logic Functions Using Double Gate Charge-Trapping Memory for In-Memory Computing. IEEE Transactions on Electron Devices, 2024, 71, 1879-1885.	3.0	0
915	Noise tailoring, noise annealing, and external perturbation injection strategies in memristive Hopfield neural networks. , 2024, 2, .		0
916	Mitigating Non-ideality Issues of Analog Computing-In-Memory in DNN-based designs. , 2023, , .		0
917	Special Session - Non-Volatile Memories: Challenges and Opportunities for Embedded System Architectures with Focus on Machine Learning Applications. , 2023, , .		0
918	On-Chip Optimization and Deep Reinforcement Learning in Memristor Based Computing. , 2023, , .		0
919	Non von Neumann computing concepts. , 2024, , 11-35.		0
920	Tuning Polarity in WSe$_2$/AlScN FeFETs via Contact Engineering. ACS Nano, 2024, 18, 4180-4188.	14.6	0
921	Challenges associated with phase-change material selection. , 2024, , 233-250.		0
922	Towards an On-Chip Analog Neural Network for Position Sensitivity in Anger Cameras. , 2022, , .		1
923	In-memory and in-sensor reservoir computing with memristive devices. , 2024, 2, .		0
924	Charge-Domain Implementation of a Neural Network in an Analog Integrated Circuit. , 2022, , .		0
925	Memristive PAD three-dimensional emotion generation system based on Dâ€"S evidence theory. Nonlinear Dynamics, 2024, 112, 4841-4861.	5.2	0
926	Nanoscale memristor devices: materials, fabrication, and artificial intelligence. Journal of Materials Chemistry C, 2024, 12, 3770-3810.	5.5	1
927	Photonic neural networks and optics-informed deep learning fundamentals. APL Photonics, 2024, 9, .	5.7	1
928	Siliconâ€Compatible Ferroelectric Tunnel Junctions with a SiO$_2$/Hf$_{0.5}$Zr$_{0.5}$O$_2$ Composite Barrier as Lowâ€Voltage and Ultraâ€Highâ€Speed Memristors. Advanced Materials, 2024, 36, .	21.0	0
929	Memoryâ€Processingâ€Display Integrated Hardware with Allâ€Inâ€One Structure for Intelligent Image Processing. Advanced Functional Materials, 0, , .	14.9	0

#	Article	IF	Citations
930	Unravelling the amorphous structure and crystallization mechanism of GeTe phase change memory materials. Nature Communications, 2024, 15, .	12.8	0
931	Oxovanadium electronics for in-memory, neuromorphic, and quantum computing applications. Materials Horizons, 2024, 11, 1838-1842.	12.2	0
932	MXene hybrid nanocomposites enable high performance memory devices and artificial synapse applications. Journal of Materials Chemistry C, 2024, 12, 3662-3671.	5.5	0
933	Programming Operations Analysis and Statistics in One Selector and One Memory Ovonic Threshold Switchingâ€‰+â€‰Phaseâ€Change Memory Doubleâ€Patterned Selfâ€Aligned Structure. Physica Status Solidi - Rapid Research Letters, 0, , .	2.4	0
934	2D Molecular Ferroelectric with Large Outâ€ofâ€plane Polarization for Inâ€Memory Computing. Advanced Functional Materials, 0, , .	14.9	0
935	Transfer-Free Analog and Digital Flexible Memristors Based on Boron Nitride Films. Nanomaterials, 2024, 14, 327.	4.1	0
936	Memristor-based storage system with convolutional autoencoder-based image compression network. Nature Communications, 2024, 15, .	12.8	0
937	Crystallization kinetics of nanoconfined GeTe slabs in GeTe/TiTe$$_2$$-like superlattices for phase change memories. Scientific Reports, 2024, 14, .	3.3	0
938	MAX Phase Ti$_2$AlN for HfO$_2$ Memristors with Ultraâ€Low Reset Current Density and Large On/Off Ratio. Advanced Functional Materials, 0, , .	14.9	0
939	Unraveling the crystallization kinetics of the Ge2Sb2Te5 phase change compound with a machine-learned interatomic potential. Npj Computational Materials, 2024, 10, .	8.7	0
940	In-plane ferroelectric-reconfigured interface towards dual-modal intelligent vision. , 2024, 5, 100052.		0
941	Utilizing modern computer architectures to solve mathematical optimization problems: A survey. Computers and Chemical Engineering, 2024, 184, 108627.	3.8	0
942	Thermal Compact Modeling and Resistive Switching Analysis in Titanium Oxide-Based Memristors. ACS Applied Electronic Materials, 2024, 6, 1424-1433.	4.3	1
943	Ergodicity, lack thereof, and the performance of reservoir computing with memristive networks. Nano Express, 2024, 5, 015021.	2.4	0
944	Recent Advances in In-Memory Computing: Exploring Memristor and Memtransistor Arrays with 2D Materials. Nano-Micro Letters, 2024, 16, .	27.0	0
945	Ferroelectric 2D SnS$_2$ Analog Synaptic FET. Advanced Science, 2024, 11, .	11.2	0
946	Multistate Compound Magnetic Tunnel Junction Synapses for Digital Recognition. ACS Applied Materials & Interfaces, 2024, 16, 10335-10343.	8.0	0
947	MeMPA: A Memory Mapped M-SIMD Co-Processor to Cope with the Memory Wall Issue. Electronics (Switzerland), 2024, 13, 854.	3.1	0

#	ARTICLE	IF	CITATIONS
948	Electrochemical random-access memory: recent advances in materials, devices, and systems towards neuromorphic computing. Nano Convergence, 2024, 11, .	12.1	0
949	Toward highly-robust MXene hybrid memristor by synergetic ionotronic modification and two-dimensional heterojunction. Chemical Engineering Journal, 2024, 486, 150100.	12.7	0
950	The emergence of compositionality in a brain-inspired cognitive architecture. Cognitive Systems Research, 2024, 86, 101215.	2.7	0
951	Logic-in-memory application of silicon nanotube-based FBFET with core-source architecture. Microelectronics Journal, 2024, 146, 106133.	2.0	0
952	Hardware implementation of memristor-based artificial neural networks. Nature Communications, 2024, 15, .	12.8	0
953	Dual-layer volatile memristor with ultralow voltage slope. Applied Physics Letters, 2024, 124, .	3.3	0
954	Neuromorphic Optical Data Storage Enabled by Nanophotonics: A Perspective. ACS Photonics, 2024, 11, 874-891.	6.6	0
956	Unraveling the origins of the coexisting localized-interfacial mechanism in oxide-based memristors in CMOS-integrated synaptic device implementations. Nanoscale Horizons, 2024, 9, 828-842.	8.0	0
957	A von-Neumann-like photonic processor and its application in studying quantum signature of chaos. Light: Science and Applications, 2024, 13, .	16.6	0
958	Magnon-Assisted Magnetization Reversal of $Ni_{81}Fe_{19}$ Nanostripes on $Y_3Fe_5O_{12}$ with Different Interfaces. ACS Nano, 2024, 18, 8641-8648.	14.6	0
959	Reliability effects of lateral filament confinement by nano-scaling the oxide in memristive devices. Nanoscale Horizons, 2024, 9, 764-774.	8.0	0
960	Energy efficient photonic memory based on electrically programmable embedded III-V/Si memristors: switches and filters. , 2024, 3, .		0
961	A collective AI via lifelong learning and sharing at the edge. Nature Machine Intelligence, 2024, 6, 251-264.	16.0	0
962	Binarized neural network of diode array with high concordance to vector–matrix multiplication. Scientific Reports, 2024, 14, .	3.3	0
963	Temperature-Dependent Feedback Operations of Triple-Gate Field-Effect Transistors. Nanomaterials, 2024, 14, 493.	4.1	0
964	Ferroelectric compute-in-memory annealer for combinatorial optimization problems. Nature Communications, 2024, 15, .	12.8	0
965	IGZO charge trap flash device for reconfigurable logic functions. Applied Physics Letters, 2024, 124, .	3.3	0
966	Multiphase Reset Induced Reliable Dual-Mode Resistance Switching of the $Ta/HfO_2/RuO_2$ Memristor. ACS Applied Materials & Interfaces, 2024, 16, 16462-16473.	8.0	0

#	ARTICLE	IF	CITATIONS
967	Analytical modelling of the transport in analog filamentary conductive-metal-oxide/HfO$_x$ ReRAM devices. Nanoscale Horizons, 2024, 9, 775-784.	8.0	0
968	Programmable Threshold Logic Implementations in a Memristor Crossbar Array. Nano Letters, 2024, 24, 3581-3589.	9.1	0