Memristive technologies for data storage, computation, communication

Science 376, DOI: 10.1126/science.abj9979

Citation Report

| # | Article | IF | CITATIONS |
|----|---|------|-----------|
| 1 | Neuromorphic-computing-based adaptive learning using ion dynamics in flexible energy storage devices. National Science Review, 2022, 9, . | 9.5 | 31 |
| 2 | Wear-out and breakdown of Ta2O5/Nb:SrTiO3 stacks. Solid-State Electronics, 2022, 198, 108462. | 1.4 | 0 |
| 3 | Modeling the Variability of Au/Ti/h-BN/Au Memristive Devices. IEEE Transactions on Electron Devices, 2023, 70, 1533-1539. | 3.0 | 5 |
| 4 | Electrode Engineering in Memristors Development for Non-/Erasable Storage, Random Number Generator, and Synaptic Applications. , 2022, , . | | 0 |
| 5 | Tunable full-color emission phosphors: Enhanced security application via a patterned 3-dimensions code. Ceramics International, 2023, 49, 345-356. | 4.8 | 6 |
| 6 | Parameter extraction techniques for the analysis and modeling of resistive memories. Microelectronic Engineering, 2022, 265, 111876. | 2.4 | 9 |
| 7 | Spiking neural networks based on two-dimensional materials. Npj 2D Materials and Applications, 2022, 6, . | 7.9 | 20 |
| 8 | A Statistical Study of Resistive Switching Parameters in Au/Ta/ZrO ₂ (Y)/Ta ₂ O ₅ /TiN/Ti Memristive Devices. Physica Status Solidi (A) Applications and Materials Science, 2023, 220, . | 1.8 | 2 |
| 9 | Roles of Lowâ€Dimensional Nanomaterials in Pursuing Human–Machine–Thing Natural Interaction. Advanced Materials, 2023, 35, . | 21.0 | 4 |
| 10 | The Impact of Electrostatic Interactions Between Defects on the Characteristics of Random Telegraph Noise. IEEE Transactions on Electron Devices, 2022, 69, 6991-6998. | 3.0 | 4 |
| 11 | Compact artificial neuron based on anti-ferroelectric transistor. Nature Communications, 2022, 13, . | 12.8 | 31 |
| 12 | Performance Improvement of an Al/TiO ₂ /Al Electronic Bipolar Resistive Switching Memory Cell via Inserting an Ultrathin ZrO ₂ Layer. ACS Applied Electronic Materials, 2022, 4, 5351-5360. | 4.3 | 3 |
| 13 | An electronic synaptic memory device based on four-cation mixed halide perovskite. Discover Materials, 2022, 2, . | 2.8 | 5 |
| 14 | Emerging MXeneâ€Based Memristors for Inâ€Memory, Neuromorphic Computing, and Logic Operation. Advanced Functional Materials, 2023, 33, . | 14.9 | 32 |
| 15 | Thermal effects on TiN/Ti/HfO ₂ /Pt memristors charge conduction. Journal of Applied Physics, 2022, 132, 194501. | 2.5 | 1 |
| 16 | Experimental and Modeling Study of Metal–Insulator Interfaces to Control the Electronic Transport in Single Nanowire Memristive Devices. ACS Applied Materials & Interfaces, 2022, 14, 53027-53037. | 8.0 | 7 |
| 17 | BETTER: Bayesian-Based Training and Lightweight Transfer Architecture for Reliable and High-Speed Memristor Neural Network Deployment. IEEE Transactions on Circuits and Systems II: Express Briefs, 2023, 70, 1846-1850. | 3.0 | 0 |
| 18 | Pseudo-flexible resistive switching characteristics of nano-bowl-like NiO arrays on mica substrates. Applied Surface Science, 2023, 613, 155994. | 6.1 | 2 |

| # | Article | IF | CITATIONS |
|----|---|------|-----------|
| 19 | A High-Speed and High-Efficiency Diverse Error Margin Write-Verify Scheme for an RRAM-Based Neuromorphic Hardware Accelerator. IEEE Transactions on Circuits and Systems II: Express Briefs, 2023, 70, 1366-1370. | 3.0 | 0 |
| 20 | Parameter Extraction Methods for Assessing Device-to-Device and Cycle-to-Cycle Variability of Memristive Devices at Wafer Scale. IEEE Transactions on Electron Devices, 2023, 70, 360-365. | 3.0 | 3 |
| 21 | Engineering coexistence between free and trapped carriers via extrinsic polarons. Physical Review Materials, 2022, 6, . | 2.4 | 1 |
| 22 | Hardware implementation of self-organizing maps using memristors, a simulation study. , 2022, , . | | 0 |
| 23 | An enhanced Verilog-A compact model for bipolar RRAMs including transient thermal effects and series resistance. , 2022, , . | | 0 |
| 24 | Electrospun Nanofiberâ€Based Synaptic Transistor with Tunable Plasticity for Neuromorphic Computing. Advanced Functional Materials, 2023, 33, . | 14.9 | 8 |
| 25 | Hardware and Information Security Primitives Based on 2D Materials and Devices. Advanced Materials, 2023, 35, . | 21.0 | 11 |
| 26 | Two-dimensional materials for bio-realistic neuronal computing networks. Matter, 2022, 5, 4133-4152. | 10.0 | 10 |
| 27 | Insights into nonvolatile resistive switching in monolayer hexagonal boron nitride. Journal of Applied Physics, 2022, 132, . | 2.5 | 3 |
| 28 | Electronic Circuits made of 2D Materials. Advanced Materials, 2022, 34, . | 21.0 | 4 |
| 29 | Understanding the Influence of Metal Oxide Layer Thickness and Defects on Resistive Switching Behavior Through Numerical Modeling. Physica Status Solidi (A) Applications and Materials Science, 2023, 220, . | 1.8 | 1 |
| 30 | Printed Electronics Based on 2D Material Inks: Preparation, Properties, and Applications toward Memristors. Small Methods, 2023, 7, . | 8.6 | 8 |
| 31 | A review of memristor: material and structure design, device performance, applications and prospects. Science and Technology of Advanced Materials, 2023, 24, . | 6.1 | 24 |
| 32 | Investigation of lithium (Li) doping on the resistive switching property of p-Li:NiO/n- β-Ga ₂ O ₃ thin-film based heterojunction devices. Applied Physics Letters, 2023, 122, 023501. | 3.3 | 3 |
| 33 | Editorial: Neuro-inspired sensing and computing: Novel materials, devices, and systems. Frontiers in Computational Neuroscience, 0, 17, . | 2.1 | 0 |
| 34 | Tunability of voltage pulse mediated memristive functionality by varying doping concentration in SrTiO3. Applied Physics Letters, 2023, 122, . | 3.3 | 3 |
| 35 | Performance estimation for the memristor-based computing-in-memory implementation of extremely factorized network for real-time and low-power semantic segmentation. Neural Networks, 2023, 160, 202-215. | 5.9 | 4 |
| 36 | Gradient descent-based programming of analog in-memory computing cores. , 2022, , . | | 7 |

| # | Article | IF | CITATIONS |
|----|---|------|-----------|
| 37 | Electro-mechano responsive elastomers with self-tunable conductivity and stiffness. Science Advances, 2023, 9, . | 10.3 | 13 |
| 38 | Evaluating charge-type of polyelectrolyte as dielectric layer in memristor and synapse emulation. Nanoscale Horizons, 2023, 8, 509-515. | 8.0 | 3 |
| 39 | An approach to non-homogenous phase-type distributions through multiple cut-points. Quality Engineering, 2023, 35, 619-638. | 1.1 | 2 |
| 40 | Linking the Intrinsic Electrical Response of Ferroelectric Devices to Material Properties by means of Impedance Spectroscopy. IEEE Transactions on Device and Materials Reliability, 2023, , 1-1. | 2.0 | 1 |
| 41 | The improvement of endurance characteristics in a superlattice-like material-based phase change device. Semiconductor Science and Technology, 2023, 38, 045008. | 2.0 | 1 |
| 42 | Learning from the Brain: Bioinspired Nanofluidics. Journal of Physical Chemistry Letters, 2023, 14, 2891-2900. | 4.6 | 13 |
| 43 | Variability and power enhancement of current controlled resistive switching devices. Microelectronic Engineering, 2023, 276, 112008. | 2.4 | 0 |
| 44 | Enhanced tunneling electroresistance effect in Pt/BiAlO3/Pt ferroelectric tunnel junctions by a graphene interlayer. Applied Surface Science, 2023, 619, 156726. | 6.1 | 4 |
| 45 | Toward the Speed Limit of Phaseâ \in Change Memory. Advanced Materials, 2023, 35, . | 21.0 | 14 |
| 46 | Enhance the Properties of Bil ₃ â€Based Resistive Switching Devices via Mixing Ag and Au Electrodes. Advanced Materials Interfaces, 2023, 10, . | 3.7 | 1 |
| 47 | Impedance Spectroscopy of Ferroelectric Capacitors and Ferroelectric Tunnel Junctions. , 2022, , . | | 2 |
| 48 | In-Memory Computing Discussion Group. , 2022, , . | | 0 |
| 49 | Status and prospects of MXene-based nanoelectronic devices. Matter, 2023, 6, 800-837. | 10.0 | 19 |
| 50 | Liquid-Based Memory Devices for Next-Generation Computing. ACS Applied Electronic Materials, 2023, 5, 664-673. | 4.3 | 6 |
| 51 | Memristive Memory Enhancement by Device Miniaturization for Neuromorphic Computing. Advanced Electronic Materials, 2023, 9, . | 5.1 | 3 |
| 52 | Multiscale Modeling of Metal-Oxide-Metal Conductive Bridging Random-Access Memory Cells: From <i>Ab Initio</i> to Finite-Element Calculations. Physical Review Applied, 2023, 19, . | 3.8 | 4 |
| 53 | Implementing hardware primitives based on memristive spatiotemporal variability into cryptography applications. , 2023, 2, 100040. | | 2 |
| 54 | LabOSat-01: A Payload for In-Orbit Device Characterization. IEEE Embedded Systems Letters, 2024, 16, 45-48. | 1.9 | 0 |

| # | Article | IF | CITATIONS |
|----|---|------|-----------|
| 55 | Laser printed microelectronics. Nature Communications, 2023, 14, . | 12.8 | 14 |
| 56 | Emerging Iontronic Neural Devices for Neuromorphic Sensory Computing. Advanced Materials, 2023, 35, . | 21.0 | 18 |
| 57 | Thermal Characterization of Conductive Filaments in Unipolar Resistive Memories. Micromachines, 2023, 14, 630. | 2.9 | 1 |
| 58 | Emerging memristive neurons for neuromorphic computing and sensing. Science and Technology of Advanced Materials, 2023, 24, . | 6.1 | 9 |
| 59 | On the switching mechanism and optimisation of ion irradiation enabled 2D MoS ₂ memristors. Nanoscale, 2023, 15, 6408-6416. | 5.6 | 2 |
| 60 | From memristive devices to neuromorphic systems. Applied Physics Letters, 2023, 122, 110501. | 3.3 | 4 |
| 61 | Variability in Resistive Memories. Advanced Intelligent Systems, 2023, 5, . | 6.1 | 25 |
| 62 | Local electric field perturbations due to trapping mechanisms at defects: What random telegraph noise reveals. Journal of Applied Physics, 2023, 133, . | 2.5 | 2 |
| 63 | Bioâ€Inspired Artificial Perceptual Devices for Neuromorphic Computing and Gesture Recognition. Advanced Functional Materials, 2023, 33, . | 14.9 | 15 |
| 64 | Polyelectrolyte-confined fluidic memristor for neuromorphic computing in aqueous environment. Science Bulletin, 2023, , . | 9.0 | 1 |
| 65 | Hybrid 2D–CMOS microchips for memristive applications. Nature, 2023, 618, 57-62. | 27.8 | 54 |
| 66 | Thousands of conductance levels in memristors integrated on CMOS. Nature, 2023, 615, 823-829. | 27.8 | 66 |
| 67 | Tuning the conductance topology in solids. Journal of Applied Physics, 2023, 133, . | 2.5 | 3 |
| 68 | In-memory factorization of holographic perceptual representations. Nature Nanotechnology, 2023, 18, 479-485. | 31.5 | 4 |
| 69 | Reliability Improvement and Effective Switching Layer Model of Thinâ€Film MoS ₂ Memristors. Advanced Functional Materials, 2024, 34, . | 14.9 | 7 |
| 70 | Local Activity in a Selfâ€Assembled Quantum Dot System. Advanced Quantum Technologies, 0, , . | 3.9 | 0 |
| 71 | Static and Small-Signal Modeling of Radiofrequency Hexagonal Boron Nitride Switches. IEEE Journal of the Electron Devices Society, 2023, 11, 658-664. | 2.1 | 1 |
| 72 | Biologically plausible information propagation in a complementary metal-oxide semiconductor integrate-and-fire artificial neuron circuit with memristive synapses. Nano Futures, 2023, 7, 025003. | 2.2 | 1 |

| # | Article | IF | Citations |
|----|--|------|-----------|
| 73 | Resistive switching study on diffusive memristors using electrochemical impedance spectroscopy. Journal Physics D: Applied Physics, 2023, 56, 305102. | 2.8 | 2 |
| 74 | Highly Reliable Textileâ€Type Memristor by Designing Aligned Nanochannels. Advanced Materials, 2023, 35, . | 21.0 | 3 |
| 75 | Parallel in-memory wireless computing. Nature Electronics, 2023, 6, 381-389. | 26.0 | 10 |
| 76 | Effective Current-Driven Memory Operations for Low-Power ReRAM Applications. IEEE Access, 2023, 11, 51260-51269. | 4.2 | 2 |
| 77 | A Fully Inkjet-Printed Unipolar Metal Oxide Memristor for Nonvolatile Memory in Printed Electronics. IEEE Transactions on Electron Devices, 2023, 70, 3051-3056. | 3.0 | 1 |
| 78 | Potentiation and depression behaviour in a two-terminal memristor based on nanostructured bilayer ZrO _x /Au films. Journal Physics D: Applied Physics, 2023, 56, 355301. | 2.8 | 2 |
| 79 | Ferroelectric materials for neuroinspired computing applications. Fundamental Research, 2023, , . | 3.3 | 2 |
| 81 | The gap between academia and industry in resistive switching research. Nature Electronics, 2023, 6, 260-263. | 26.0 | 11 |
| 82 | Design and demonstration of Cu/Al ₂ O ₃ /Cu RRAM with complementary resistance switching characteristic. , 2023, , . | | 0 |
| 83 | Collective Control of Potential onstrained Oxygen Vacancies in Oxide Heterostructures for Gradual Resistive Switching. Small, 2023, 19, . | 10.0 | 3 |
| 84 | Tri-level resistive switching characteristics and conductive mechanism of HfO ₂ /NiO _x /HfO ₂ . Wuli Xuebao/Acta Physica Sinica, 2023, . | 0.5 | 0 |
| 85 | 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 |
| 86 | Effects of the voltage ramp rate on the conduction characteristics of HfO ₂ -based resistive switching devices. Journal Physics D: Applied Physics, 2023, 56, 365108. | 2.8 | 2 |
| 87 | A 28-nm RRAM Computing-in-Memory Macro Using Weighted Hybrid 2T1R Cell Array and Reference Subtracting Sense Amplifier for Al Edge Inference. IEEE Journal of Solid-State Circuits, 2023, 58, 2839-2850. | 5.4 | 2 |
| 88 | IoT Sensor Challenges for Geothermal Energy Installations Monitoring: A Survey. Sensors, 2023, 23, 5577. | 3.8 | 1 |
| 89 | Flexible, Transparent, and Waferâ€6cale Artificial Synapse Array Based on TiO _{<i>x</i>} /Ti ₃ C ₂ T _{<i>x</i>} Film for Neuromorphic Computing. Advanced Materials, 2023, 35, . | 21.0 | 11 |
| 90 | 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 |
| 91 | Recent Advances and Future Prospects for Memristive Materials, Devices, and Systems. ACS Nano, 2023, 17, 11994-12039. | 14.6 | 34 |

| # | ARTICLE | IF | CITATIONS |
|-----|--|------|-----------|
| 92 | Wurtzite and fluorite ferroelectric materials for electronic memory. Nature Nanotechnology, 2023, 18, 422-441. | 31.5 | 25 |
| 93 | Large-area multilayer molybdenum disulfide for 2D memristors. Materials Today Nano, 2023, 23, 100353. | 4.6 | 1 |
| 94 | The Role of Defects and Interface Degradation on Ferroelectric HZO Capacitors Aging. , 2023, , . | | 2 |
| 95 | Highly Trustworthy In-Sensor Cryptography for Image Encryption and Authentication. ACS Nano, 2023, 17, 10291-10299. | 14.6 | 15 |
| 96 | Conductance quantization in h-BN memristors. Applied Physics Letters, 2023, 122, . | 3.3 | 5 |
| 97 | A Unified Framework to Explain Random Telegraph Noise Complexity in MOSFETs and RRAMs. , 2023, , . | | 0 |
| 98 | Inkjet-printed h-BN memristors for hardware security. Nanoscale, 2023, 15, 9985-9992. | 5.6 | 3 |
| 99 | Three-Level MIS Antifuse Formed by Polarity-Dependent Dielectric Breakdown on 3.5-nm SiO ₂ for One-Time Programmable Application. IEEE Transactions on Electron Devices, 2023, 70, 4133-4138. | 3.0 | 0 |
| 100 | Inherent Stochasticity of Ovonic Threshold Switch for Neuronal Dropout of Edge-Al Hardware. IEEE Electron Device Letters, 2023, , 1-1. | 3.9 | 0 |
| 101 | A Highâ€Entropyâ€Oxidesâ€Based Memristor: Outstanding Resistive Switching Performance and Mechanisms in Atomic Structural Evolution. Advanced Materials, 2023, 35, . | 21.0 | 2 |
| 102 | Inkjetâ€Printed Tungsten Oxide Memristor Displaying Nonâ€Volatile Memory and NeuromorphicÂ Properties. Advanced Functional Materials, 0, , . | 14.9 | 2 |
| 103 | Engineering Metal–Organic Frameworks with Tunable Colors for High-Performance Wireless Communication. Journal of the American Chemical Society, 2023, 145, 15435-15442. | 13.7 | 12 |
| 104 | Ultra-low power logic in memory with commercial grade memristors and FPGA-based smart-IMPLY architecture. Microelectronic Engineering, 2023, 280, 112062. | 2.4 | 1 |
| 105 | Imperfection-enabled memristive switching in van der Waals materials. Nature Electronics, 2023, 6, 491-505. | 26.0 | 12 |
| 106 | Unravelling the Data Retention Mechanisms under Thermal Stress on 2D Memristors. ACS Omega, 2023, 8, 27543-27552. | 3.5 | 1 |
| 107 | Non-volatile resistive switching mechanism in single-layer MoS ₂ memristors: insights from <i>ab initio</i> modelling of Au and MoS ₂ interfaces. Nanoscale Advances, 0, , . | 4.6 | 0 |
| 108 | Non-Volatile Bipolar TiN/LaMnO3/Pt Memristors with Optimized Performance. , 2023, 5, 100054. | | 0 |
| 109 | Neural Architecture Search with Inâ€Memory Multiply–Accumulate and Inâ€Memory Rank Based on Coating Layer Optimized Câ€Doped Ge ₂ Sb ₂ Te ₅ Phase Change Memory. Advanced Functional Materials, 2024, 34, . | 14.9 | 1 |

| # | Article | IF | CITATIONS |
|-----|--|------|-----------|
| 110 | Perspectives on MXene-PZT based ferroelectric memristor in computation in memory applications. Applied Physics Letters, 2023, 123, . | 3.3 | 0 |
| 111 | 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 |
| 112 | Plasticity mechanism and memory formation in the chemical synapse. Nonlinear Dynamics, 2023, 111, 19411-19423. | 5.2 | 2 |
| 113 | Unveiling the structure and electronic characteristics of amorphous GeS for high performance threshold switching. Applied Physics Letters, 2023, 123, . | 3.3 | 0 |
| 114 | A review on device requirements of resistive random access memory (RRAM)-based neuromorphic computing. APL Materials, 2023, 11, . | 5.1 | 2 |
| 115 | Waferâ€Scale Memristor Array Based on Aligned Grain Boundaries of 2D Molybdenum Ditelluride for Application to Artificial Synapses. Advanced Functional Materials, 0, , . | 14.9 | 1 |
| 116 | Pulse-Programmed Short-Term Plasticity and Long-Term Potentiation of MoS2 Memristive Devices. IEEE Nanotechnology Magazine, 2023, 17, 24-29. | 1.3 | 0 |
| 117 | Wideâ€Bandgap Perovskiteâ€Inspired Materials: Defectâ€Driven Challenges for Highâ€Performance Optoelectronics. Advanced Functional Materials, 0, , . | 14.9 | 5 |
| 118 | In-memory computing based on phase change memory for high energy efficiency. Science China Information Sciences, 2023, 66, . | 4.3 | 0 |
| 119 | In-situ electro-responsive through-space coupling enabling foldamers as volatile memory elements. Nature Communications, 2023, 14, . | 12.8 | 2 |
| 120 | Edge learning using a fully integrated neuro-inspired memristor chip. Science, 2023, 381, 1205-1211. | 12.6 | 22 |
| 121 | Impact of the W etching process on the resistive switching properties of TiN/Ti/HfO2/W memristors. Solid-State Electronics, 2023, 207, 108718. | 1.4 | 1 |
| 122 | Controlled Synthesis and Electrical Properties Study of GeAs ₂ Te ₄ Single Crystals. Journal of Metastable and Nanocrystalline Materials, 0, 37, 23-32. | 0.1 | 0 |
| 123 | A 1S1R Model with the Monte Carlo Function for Subthreshold Sensing Operation. , 2023, , . | | 0 |
| 124 | Broadband Optoelectronic Synapse Enables Compact Monolithic Neuromorphic Machine Vision for Information Processing. Advanced Functional Materials, 2023, 33, . | 14.9 | 1 |
| 125 | Anomalous Behavior of the Tunneling Magnetoresistance in (CoFeB)x(LiNbO3)100 â^' x/Si Nanocomposite Film Structures Below the Percolation Threshold: Manifestations of the Cotunneling and Exchange Effects. JETP Letters, 2023, 118, 58-66. | 1.4 | 1 |
| 126 | Model of Multifilamentary Resistive Switching for a Memristor with Hopping Conductivity. Nanobiotechnology Reports, 2023, 18, 305-317. | 0.6 | 1 |
| 127 | Case Study of a Differential Single-Pole Double-Throw RF Switch Using Memristors. , 2023, , . | | 1 |

| # | Article | IF | CITATIONS |
|-----|---|------|-----------|
| 128 | Voltage Gated Domain Wall Magnetic Tunnel Junction for Neuromorphic Computing Applications. , 2023, , . | | 1 |
| 129 | Effects of BiFeO ₃ Thickness on the Writeâ€Onceâ€Readâ€Manyâ€Times Resistive Switching Behavior of Pt/BiFeO ₃ /LaNiO ₃ Heterostructure. Physica Status Solidi (A) Applications and Materials Science, 2023, 220, . | 1.8 | 1 |
| 130 | TiN/Ti/HfO2/TiN memristive devices for neuromorphic computing: from synaptic plasticity to stochastic resonance. Frontiers in Neuroscience, 0, 17, . | 2.8 | 1 |
| 131 | The effect of Cr atoms: From non-stoichiometric Ge-Te to Cr2Ge2Te6. Thin Solid Films, 2023, 783, 140062. | 1.8 | 0 |
| 132 | Technology and Integration Roadmap for Optoelectronic Memristor. Advanced Materials, 2024, 36, . | 21.0 | 2 |
| 133 | Mixedâ€Halide Perovskite Memristors with Gateâ€Tunable Functions Operating at Lowâ€Switching Electric Fields. Advanced Electronic Materials, 2023, 9, . | 5.1 | 2 |
| 134 | Resistive mechanisms and microscopic electrical models of metal oxide resistive memory. Physica Status Solidi (A) Applications and Materials Science, 0, , . | 1.8 | 0 |
| 135 | Effect of electrode materials on resistive switching behaviour of NbOx-based memristive devices. Scientific Reports, 2023, 13, . | 3.3 | 1 |
| 136 | Memristive Devices for Neuromorphic and Deep Learning Applications. , 2023, , 680-704. | | 0 |
| 137 | Dual-gate Ferroelectric Field-effect Transistors: An Emerging Computational Memory for Advanced Logic Operations. , 2023, , 223-239. | | 0 |
| 138 | The influence of interface contact condition on resistive switching of Au/Nb:SrTiO3 heterojunctions. Applied Physics Letters, 2023, 123, . | 3.3 | 0 |
| 139 | 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 |
| 140 | Spiking Neurons with Neural Dynamics Implemented Using Stochastic Memristors. Advanced Electronic Materials, 2024, 10, . | 5.1 | 0 |
| 141 | Neurotransmitterâ€Mediated Plasticity in 2D Perovskite Memristor for Reinforcement Learning. Advanced Functional Materials, 2024, 34, . | 14.9 | 2 |
| 143 | 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 |
| 144 | Resistive switching modulation by incorporating thermally enhanced layer in HfO2-based memristor. Nanotechnology, 0, , . | 2.6 | 0 |
| 145 | Higher-dimensional processing using a photonic tensor core with continuous-time data. Nature Photonics, 2023, 17, 1080-1088. | 31.4 | 4 |
| 146 | Memristor crossbar with hafnium oxide nanowires in artificial vision system. AIP Conference Proceedings, 2023, , . | 0.4 | 0 |

| # | Article | IF | Citations |
|-----|--|------|-----------|
| 147 | Brainâ€Inspired Organic Electronics: Merging Neuromorphic Computing and Bioelectronics Using Conductive Polymers. Advanced Functional Materials, 0, , . | 14.9 | 3 |
| 148 | Spinel ferrites for resistive random access memory applications. Emergent Materials, 2024, 7, 103-131. | 5.7 | 0 |
| 149 | Research progress of artificial neural systems based on memristors. Materials Today Nano, 2024, 25, 100439. | 4.6 | 1 |
| 150 | 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 |
| 151 | Ni Singleâ€Atoms Based Memristors with Ultrafast Speed and Ultralong Data Retention. Advanced Materials, 2024, 36, . | 21.0 | 0 |
| 153 | Photonic Metaâ€Neurons. Laser and Photonics Reviews, 0, , . | 8.7 | 0 |
| 154 | Observation of Magnon Spin Transport in BiFeO ₃ Thin Films. Advanced Functional Materials, 0, , . | 14.9 | 1 |
| 155 | Using the IBM analog in-memory hardware acceleration kit for neural network training and inference. , 2023, 1, . | | 0 |
| 156 | 3D simulation of conductive nanofilaments in multilayer h-BN memristors <i>via</i> a circuit breaker approach. Materials Horizons, 2024, 11, 949-957. | 12.2 | 0 |
| 157 | Magnetic-ferroelectric synergic control of multilevel conducting states in van der Waals multiferroic tunnel junctions towards in-memory computing. Nanoscale, 2024, 16, 1331-1344. | 5.6 | 1 |
| 159 | Heterogeneous reservoir computing in second-order Ta ₂ O ₅ /HfO ₂ memristors. Nanoscale Horizons, 2024, 9, 427-437. | 8.0 | 0 |
| 160 | Ultralow Energy Consumption Angstrom-Fluidic Memristor. Nano Letters, 0, , . | 9.1 | 1 |
| 161 | Exploring thickness-dependent Cu/TiOx:Cu/Ti memristor and chaotic dynamics in a real fifth-order memristive circuit. Nonlinear Dynamics, 2024, 112, 1377-1394. | 5.2 | 0 |
| 162 | Recent advances in halide perovskite memristors: From materials to applications. Frontiers of Physics, 2024, 19, . | 5.0 | 0 |
| 163 | Thermal Dependence of the Resistance of TiN/Ti/HfO ₂ /Pt Memristors. , 2023, , . | | 0 |
| 165 | Relaxation Signal Analysis and Optimization of Analog Resistive Random Access Memory for Neuromorphic Computing. IEEE Transactions on Electron Devices, 2024, 71, 560-566. | 3.0 | 0 |
| 166 | Reconfigurable Physical Reservoir Enabled by Polarization of Ferroelectric Polymer P(VDF–TrFE) and Interface Chargeâ€Trapping/Detrapping in Dualâ€Gate IGZO Transistor. Advanced Functional Materials, 2024, 34, . | 14.9 | 0 |
| 167 | Voltage-Gated Domain Wall Magnetic Tunnel Junction for Neuromorphic Computing Applications. IEEE Transactions on Electron Devices, 2023, 70, 6293-6300. | 3.0 | 0 |

| # | Article | IF | Citations |
|-----|---|------|-----------|
| 168 | Characterization and Modeling of Variability in Commercial Self-Directed Channel Memristors. , 2023, , . | | 0 |
| 169 | A Comparison of Resistive Switching Parameters for Memristive Devices with HfO ₂ Mono Layers and Al ₂ O ₃ /HfO ₂ Bilayers at the Wafer Scale. , 2023, , . | | 0 |
| 170 | Phenol-Assisted Electrochemical Metallization of Peptide-Based Bimodal Memristors. , 0, , 275-280. | | 0 |
| 171 | Solution-Processed Robust Multifunctional Memristor of 2D Layered Material Thin Film. ACS Nano, 2024, 18, 1137-1148. | 14.6 | 0 |
| 172 | Materials for Memristors. Advanced Functional Materials, 0, , . | 14.9 | 0 |
| 173 | A Novel Fast Video Fragment Matching Algorithm for Copyright Protection. , 2023, , . | | 0 |
| 174 | Resource allocation in <scp>5G cloudâ€RAN</scp> using deep reinforcement learning algorithms: A review. Transactions on Emerging Telecommunications Technologies, 2024, 35, . | 3.9 | 0 |
| 175 | Low Power Volatile and Nonvolatile Memristive Devices from 1D MoO ₂ â€MoS ₂ Core–Shell Heterostructures for Future Bioâ€Inspired Computing. Small, 0, , . | 10.0 | 0 |
| 176 | Multibit, Leadâ€Free Cs ₂ SnI ₆ Resistive Random Access Memory with Selfâ€Compliance for Improved Accuracy in Binary Neural Network Application. Advanced Functional Materials, 0, , . | 14.9 | 1 |
| 177 | High Performance and Scalable Hybrid Memristor-CMOS Based Full Adder. IETE Journal of Research, 0, , 1-11. | 2.6 | 0 |
| 178 | Vertical Van Der Waals Epitaxy of pâ€Mo <i>_x</i> Re _{1â€} _{<i>X</i>} s ₂ on GaN for Ultrahigh Detectivity Uv–vis–NIR Photodetector. Advanced Optical Materials, 2024, 12, . | 7.3 | 0 |
| 179 | A ferroelectric fin diode for robust non-volatile memory. Nature Communications, 2024, 15, . | 12.8 | 0 |
| 180 | Multistate structures in a hydrogen-bonded polycatenation non-covalent organic framework with diverse resistive switching behaviors. Nature Communications, 2024, 15, . | 12.8 | 1 |
| 181 | Optoâ€Electrochemical Synaptic Memory in Supramolecularly Engineered Janus 2D MoS ₂ . Advanced Materials, 2024, 36, . | 21.0 | 2 |
| 182 | Physically Unclonable Holographic Encryption and Anticounterfeiting Based on the Light Propagation of Complex Medium and Fluorescent Labels. ACS Applied Materials & amp; Interfaces, 2024, 16, 2888-2901. | 8.0 | 0 |
| 183 | An ultra-low quiescent current power-on reset circuit with DDPG method. AEU - International Journal of Electronics and Communications, 2024, 175, 155097. | 2.9 | 0 |
| 184 | Electrochemical rewiring through quantum conductance effects in single metallic memristive nanowires. Nanoscale Horizons, 2024, 9, 416-426. | 8.0 | 0 |
| 185 | Information Transfer in Neuronal Circuits: From Biological Neurons to Neuromorphic Electronics. , 2024, 3, . | | 0 |

| # | ARTICLE | IF | CITATIONS |
|-----|--|------|-----------|
| 186 | Resistive Memory Devices at the Thinnest Limit: Progress and Challenges. Advanced Materials, 2024, 36, | 21.0 | 0 |
| 187 | From fundamentals to frontiers: a review of memristor mechanisms, modeling and emerging applications. Journal of Materials Chemistry C, 2024, 12, 1583-1608. | 5.5 | 0 |
| 188 | Memristive Response and Capacitive Spiking in Aqueous Ion Transport through Two-Dimensional Nanopore Arrays. Journal of Physical Chemistry Letters, 2024, 15, 665-670. | 4.6 | 0 |
| 189 | A Star Network of Bipolar Memristive Devices Enables Sensing and Temporal Computing. Sensors, 2024, 24, 512. | 3.8 | 0 |
| 190 | High-temperature tolerant TaO <i>X</i> /HfO2 self-rectifying memristor array with robust retention and ultra-low switching energy. Applied Physics Letters, 2024, 124, . | 3.3 | 0 |
| 191 | Tunneling electroresistance effect and low ON-state resistance-area product in monolayer-In2Se3-based van der Waals ferroelectric tunnel junctions. Surfaces and Interfaces, 2024, 46, 103977. | 3.0 | 0 |
| 192 | Quantum Conductance and Temperature Effects in Titanium Oxide-Based Memristive Devices. IEEE Transactions on Electron Devices, 2024, 71, 1872-1878. | 3.0 | 0 |
| 193 | Nanoscale memristor devices: materials, fabrication, and artificial intelligence. Journal of Materials Chemistry C, 2024, 12, 3770-3810. | 5.5 | 1 |
| 194 | Stochastic resonance in 2D materials based memristors. Npj 2D Materials and Applications, 2024, 8, . | 7.9 | 0 |
| 195 | Linearity Improvement of TiO _{<i>x</i>} â€Based Flexible Memristor Synapses Even Under Bending. Physica Status Solidi (A) Applications and Materials Science, 2024, 221, . | 1.8 | 0 |
| 196 | Electrical Manipulation of Antiferromagnetic Randomâ€Access Memory Device by the Interplay of Spinâ€Orbit Torque and Spinâ€Transfer Torque. Advanced Electronic Materials, 0, , . | 5.1 | 1 |
| 197 | Oxovanadium electronics for in-memory, neuromorphic, and quantum computing applications. Materials Horizons, 2024, 11, 1838-1842. | 12.2 | 0 |
| 198 | Compute-In-Memory Technologies for Deep Learning Acceleration. IEEE Nanotechnology Magazine, 2024, 18, 44-52. | 1.3 | 0 |
| 199 | Direct observation of conductive filaments from 3D views in memristive devices based on multilayered SiO2: Formation, Dissolution, and vaporization. Applied Surface Science, 2024, 655, 159584. | 6.1 | 0 |
| 200 | High Temperature Resistant Solarâ€Blind Ultraviolet Photosensor for Neuromorphic Computing and Cryptography. Advanced Functional Materials, 0, , . | 14.9 | 1 |
| 201 | Back-end-of-line integration of 2D materials on silicon microchips. , 2023, , . | | 0 |
| 202 | In-Memory Compute Chips with Carbon-based Projected Phase-Change Memory Devices. , 2023, , . | | 0 |
| 203 | Polygon Boolean operations and physical unclonable functions implemented by an Ag-embedded sodium-alginate-based memristor for image encryption/decryption. Applied Physics Letters, 2024, 124, . | 3.3 | 0 |

| # | Article | IF | CITATIONS |
|-----|---|------|-----------|
| 204 | Towards on-receptor computing: Electronic nociceptor embedded neuromorphic functionalities at nanoscale. Applied Materials Today, 2024, 37, 102103. | 4.3 | 0 |
| 205 | Thermal Compact Modeling and Resistive Switching Analysis in Titanium Oxide-Based Memristors. ACS Applied Electronic Materials, 2024, 6, 1424-1433. | 4.3 | 1 |
| 206 | Artificial Optoelectronic Synapses Based on Light ontrollable Ferroelectric Semiconductor Memristor. Advanced Optical Materials, 0, , . | 7.3 | 0 |
| 207 | Reservoir Computing Using Interfacial Memristors with Native SiO _{<i>x</i>} Nanostructures Modified by Room-Temperature Plasma Oxidation. ACS Applied Nano Materials, 2024, 7, 5030-5039. | 5.0 | 0 |
| 208 | Toward highly-robust MXene hybrid memristor by synergetic ionotronic modification and two-dimensional heterojunction. Chemical Engineering Journal, 2024, 486, 150100. | 12.7 | 0 |
| 209 | A roadmap for the development of human body digital twins. , 2024, 1, 199-207. | | 0 |
| 210 | One-vs-One, One-vs-Rest, and a novel Outcome-Driven One-vs-One binary classifiers enabled by optoelectronic memristors towards overcoming hardware limitations in multiclass classification. Discover Materials, 2024, 4, . | 2.8 | 0 |
| 211 | A phase-field simulation of easily switchable vortex structure for multilevel low-power ferroelectric memory. Journal of Materials Research and Technology, 2024, 29, 5241-5251. | 5.8 | 0 |
| 212 | Neuromorphic Optical Data Storage Enabled by Nanophotonics: A Perspective. ACS Photonics, 2024, 11, 874-891. | 6.6 | 0 |
| 214 | Ag-doped non–imperfection-enabled uniform memristive neuromorphic device based on van der Waals indium phosphorus sulfide. Science Advances, 2024, 10, . | 10.3 | 0 |
| 215 | Stochastic neuro-fuzzy system implemented in memristor crossbar arrays. Science Advances, 2024, 10, . | 10.3 | 0 |
| 216 | lon-confined transport supercapacitors: The encounter with energy electronics. Materials Today, 2024, , . | 14.2 | 0 |
| 217 | Generation and Storage of Random Voltage Values via Ring Oscillators Comprising Feedback Field-Effect Transistors. Nanomaterials, 2024, 14, 562. | 4.1 | 0 |
| 218 | Chemical Vapor Deposition Growth of 2D Ferroelectric Materials for Device Applications. Advanced Materials Technologies, 2024, 9, . | 5.8 | 0 |
| 219 | Ce-doping at Mn site to enhance resistive switching performance of spinel MnCo2O4 resistive random access memory devices. Ceramics International, 2024, 50, 20495-20503. | 4.8 | 0 |
| 220 | Oxygen tracer diffusion in amorphous hafnia films for resistive memory. Materials Horizons, 0, , . | 12.2 | 0 |