Recommended Methods to Study Resistive Switching Device

#	Paper	IF	Citations
369	Controlling Conductive Filament and Tributyrin Sensing Using an Optimized Porous Iridium Interfacial Layer in Cu/Ir/TiNxOy/TiN. *Advanced Electronic Materials*, **2018**, 5, 1800288	6.4	8
368	Transformation of threshold volatile switching to quantum point contact originated nonvolatile switching in graphene interface controlled memory devices. **2019**, 1, 3753-3760		26
367	Fully photon modulated heterostructure for neuromorphic computing. **2019**, 65, 104000		45
366	Memristive Synapses and Neurons for Bioinspired Computing. *Advanced Electronic Materials*, **2019**, 5, 1900287	6.4	66
365	Graphitic carbon nitride nanosheets for solution processed non-volatile memory devices. **2019**, 7, 10203-10210		20
364	A new technique to analyze RTN signals in resistive memories. **2019**, 215, 110994		6
363	Robust Memristor Networks for Neuromorphic Computation Applications. **2019**, 12,		2
362	Quantized Conduction Device with 6-Bit Storage Based on Electrically Controllable Break Junctions. *Advanced Electronic Materials*, **2019**, 5, 1900744	6.4	43
361	A Fully Printed Flexible MoS2 Memristive Artificial Synapse with Femtojoule Switching Energy. *Advanced Electronic Materials*, **2019**, 5, 1900740	6.4	71
360	Low power and high uniformity of HfOx-based RRAM via tip-enhanced electric fields. **2019**, 62, 1		5
359	Metric for Quantifying Switching Variability in Resistive Switching Devices. **2019**, 40, 1546-1549		0
358	Graphene-Boron Nitride-Graphene Cross-Point Memristors with Three Stable Resistive States. **2019**, 11, 37999-38005		29
357	Modeling of Diffusion and Incorporation of Interstitial Oxygen Ions at the TiN/SiO Interface. **2019**, 11, 36232-36243		4
356	Emerging synaptic devices: from two-terminal memristors to multiterminal neuromorphic transistors. **2019**, 8, 100059		33
355	Memristive Electronic Synapses Made by Anodic Oxidation. **2019**, 31, 8394-8401		16
354	Keggin-type polyoxometalate cluster as an active component for redox-based nonvolatile memory. **2019**, 4, 697-704		24
353	Configurable multi-state non-volatile memory behaviors in TiC nanosheets. **2019**, 11, 7102-7110		45

334	Controlling Resistive Switching by Using an Optimized MoS Interfacial Layer and the Role of Top Electrodes on Ascorbic Acid Sensing in TaO -Based RRAM. **2019**, 35, 3897-3906		25
333	The effect of ion implantation and annealing on forming process in Al2O3/HfO2/Al2O3 memristor structure. **2019**, 1410, 012210		
332	RRAM Device Models: A Comparative Analysis With Experimental Validation. **2019**, 7, 168963-168980		17
331	Toward Fully Printed Memristive Elements: a-TiO2 Electronic Synapse from Functionalized Nanoparticle Ink. **2019**, 1, 2692-2700		8
330	Resistive Switching and Charge Transport in Laser-Fabricated Graphene Oxide Memristors: A Time Series and Quantum Point Contact Modeling Approach. **2019**, 12,		5
329	An Electrical Characterisation Methodology for Benchmarking Memristive Device Technologies. **2019**, 9, 19412		11
328	Organic Memristor Utilizing Copper Phthalocyanine Nanowires with Infrared Response and Cation Regulating Properties. *Advanced Electronic Materials*, **2019**, 5, 1800793	6.4	28
327	Raman Characterization on Two-Dimensional Materials-Based Thermoelectricity. **2018**, 24,		10
326	Near-Infrared Annihilation of Conductive Filaments in Quasiplane MoSe /Bi Se Nanosheets for Mimicking Heterosynaptic Plasticity. **2019**, 15, e1805431		55
325	Resistive Random Access Memory: A Review of Device Challenges. **2020**, 37, 377-390		30
324	Double-gate InZnO synaptic transistor with aqueous-solution-processed wheat flour electrolyte. **2020**, 77, 105518		9
323	Near-Infrared-Irradiation-Mediated Synaptic Behavior from Tunable Charge-Trapping Dynamics. *Advanced Electronic Materials*, **2020**, 6, 1900765	6.4	25
322	Ultralow switching voltage slope based on two-dimensional materials for integrated memory and neuromorphic applications. **2020**, 69, 104472		23
321	Synaptic Plasticity and Filtering Emulated in Metal Organic Frameworks Nanosheets Based Transistors. *Advanced Electronic Materials*, **2020**, 6, 1900978	6.4	30
320	Nonpolar Resistive Switching of Multilayer-hBN-Based Memories. *Advanced Electronic Materials*, **2020**, 6, 1900979	6.4	17
319	Neural network based analysis of random telegraph noise in resistive random access memories. **2020**, 35, 025021		5
318	Kinetic Monte Carlo Simulation of Interface-Controlled Hafnia-Based Resistive Memory. **2020**, 67, 118-124		4
317	2D Layered Materials for Memristive and Neuromorphic Applications. *Advanced Electronic Materials*, **2020**, 6, 1901107	6.4	53

298	Resistive Switching Behaviour of $\mathrm{PVP}/\mathrm{HfO}_{\mathrm{x}}$ Hybrid RRAM on Flexible Substrate. **2020**,	
297	Reversible dielectric breakdown in h-BN stacks: a statistical study of the switching voltages. **2020**,	
296	Effect of film thickness and temperature on the resistive switching characteristics of the Pt/HfO2/Al2O3/TiN structure. **2020**, 173, 107880	6
295	Voltage Amplitude-Controlled Synaptic Plasticity from Complementary Resistive Switching in Alloying HfOx with AlOx-Based RRAM. **2020**, 10, 1410	15
294	Synaptic Characteristics from Homogeneous Resistive Switching in Pt/AlO/TiN Stack. **2020**, 10,	15
293	Bidirectional Volatile Signatures of Metal-Oxide Memristors⊡Part II: Modeling. **2020**, 67, 5166-5173	3
292	Variability-Aware Modeling of Filamentary Oxide-Based Bipolar Resistive Switching Cells Using SPICE Level Compact Models. **2020**, 67, 4618-4630	17
291	Resistive Switching in Few-Layer Hexagonal Boron Nitride Mediated by Defects and Interfacial Charge Transfer. **2020**, 12, 46288-46295	3
290	Oxygen Vacancy Density Dependence with a Hopping Conduction Mechanism in Multilevel Switching Behavior of HfO2-Based Resistive Random Access Memory Devices. **2020**, 2, 3160-3170	8
289	Simulation of Resistive Switching in Memristor Structures Based on Transition Metal Oxides. **2020**, 49, 303-313	1
288	A High-Performance Memristor Device and Its Filter Circuit Application. **2020**, 14, 2000389	1
287	Short-Term Memory Dynamics of TiN/Ti/TiO/SiO/Si Resistive Random Access Memory. **2020**, 10,	13
286	Emulation of Biological Synapse Characteristics from Cu/AlN/TiN Conductive Bridge Random Access Memory. **2020**, 10,	18
285	Recent Advances on Neuromorphic Devices Based on Chalcogenide Phase-Change Materials. **2020**, 30, 2003419	54
284	Nonvolatile Multistates Memories for High-Density Data Storage. **2020**, 12, 42449-42471	36
283	An Electrical Model for Trap Coupling Effects on Random Telegraph Noise. **2020**, 41, 1596-1599	4
282	Printable and Flexible Planar Silver Electrodes-Based Resistive Switching Sensory Array. **2020**, 1,	2
281	Improved Pulse-Controlled Conductance Adjustment in Trilayer Resistors by Suppressing Current Overshoot. **2020**, 10,	4

262 Synaptic Characteristics of Amorphous Boron Nitride-Based Memristors on a Highly Doped Silicon Substrate for Neuromorphic Engineering. **2020**, 12, 33908-33916 24

261 Temperature-resilient solid-state organic artificial synapses for neuromorphic computing. **2020**, 6, 67

260 Two-dimensional materials for next-generation computing technologies. **2020**, 15, 545-557 196

259 Organic and hybrid photoelectroactive polymer for memories and neuromorphic computing. **2020**, 223-250 1

258 Influence of the magnetic field on dielectric breakdown in memristors based on h-BN stacks. **2020**,

257 Modeling and Simulation of Resistive Random Access Memory With Graphene Electrode. **2020**, 67, 915-921 4

256 Resistive Switching in Graphene Oxide. **2020**, 7, 22

255 Multifunctional Polymer Memory via Bi-Interfacial Topography for Pressure Perception Recognition. **2020**, 7, 1902864 9

254 Neuromorphic nanoelectronic materials. **2020**, 15, 517-528 207

253 Low power high speed 3-bit multilevel resistive switching in TiO2 thin film using oxidisable electrode. **2020**, 53, 225303 6

252 Metal-oxide interface reactions and their effect on integrated resistive/threshold switching in NbO. **2020**, 31, 235701 8

251 Experimental investigations of local stochastic resistive switching in yttria stabilized zirconia film on a conductive substrate. **2020**, 2020, 024005 2

250 Optically Modulated Threshold Switching in Core�hell Quantum Dot Based Memristive Device. **2020**, 30, 1909114 25

249 Electroforming in Metal-Oxide Memristive Synapses. **2020**, 12, 11806-11814 9

248 Nonvolatile Resistive Switching in Nanocrystalline Molybdenum Disulfide with Ion-Based Plasticity. *Advanced Electronic Materials*, **2020**, 6, 1900892 6.4 7

247 Simultaneous protonation/deprotonation mechanism in polyaniline-based devices as complementary resistive switches. **2020**, 79, 105628 6

246 Broadband photoelectric tunable quantum dot based resistive random access memory. **2020**, 8, 2178-2185 13

245 Electrolyte-gated transistors for synaptic electronics, neuromorphic computing, and adaptable biointerfacing. **2020**, 7, 011307 79

244   Resistive switching in Strontium iridate based thin films. **2020**, 501, 166419   1

243   Impact of interfaces on bipolar resistive switching behavior in amorphous GeSbTe thin films. **2020**, 53, 184002   6

242   Effect of the Pressure Exerted by Probe Station Tips in the Electrical Characteristics of Memristors. *Advanced Electronic Materials*, **2020**, 6, 1901226   6.4   5

241   Engineering of defects in resistive random access memory devices. **2020**, 127, 051101   32

240   Evolution of 0.7 conductance anomaly in electric field driven ferromagnetic CuO junction based resistive random access memory devices. **2020**, 116, 053502   3

239   Stretchable and Wearable Resistive Switching Random-Access Memory. **2020**, 2, 2000007   8

238   Enhancement of DC/AC resistive switching performance in AlOx memristor by two-technique bilayer approach. **2020**, 116, 173504   11

237   Highly Stable and Flexible Memristive Devices Based on Polyvinylpyrrolidone: WS Quantum Dots. **2020**, 10, 5793   10

236   Multilevel Memristive GeTe Devices. **2021**, 15, 2000475   1

235   Fault Tolerance of Memristor-Based Perceptron Network for Neural Interface. **2021**, 11, 84-90   3

234   Recent Progress in Solution-Based Metal Oxide Resistive Switching Devices. **2021**, 33, e2004328   36

233   Bottom-Electrode Nanoasperities as a Root of the High-Performance Resistive-Switching Effect. **2021**, 15, 2000461   1

232   Quantum Mechanical Model for Filament Formation in Metal-Insulator-Metal Memristors. **2021**, 20, 113-122   2

231   Phototunable memories and reconfigurable logic applications based on natural melanin. **2021**, 9, 3569-3577   5

230   Photo-induced negative differential resistance and carrier-transport mechanisms in Bi2FeCrO6 resistive switching memory devices.   0

229   Metal-organic frameworks for chemical sensing devices. **2021**, 8, 2387-2419   25

228   Resistive switching kinetics of parylene-based memristive devices with Cu active electrodes. **2021**, 1758, 012025

227   Optimized Synthesis Method for Ultra-Low Power Multi-Input Material Implication Logic With Emerging Non-Volatile Memories. **2021**, 1-11   1

226	Enhancing Reliability of Studies on Single Filament Memristive Switching via an Unconventional cAFM Approach. **2021**, 11,	3
225	Synaptic transistors and neuromorphic systems based on carbon nano-materials. **2021**, 13, 7498-7522	12
224	Synaptic devices based on HfO2 memristors. **2021**, 383-426	1
223	ZnO Based Resistive Random Access Memory Device: A Prospective Multifunctional Next-Generation Memory. **2021**, 9, 105012-105047	4
222	Electron-beam-irradiated rhenium disulfide memristors with low variability for neuromorphic computing. **2021**, 5,	24
221	Engineering the Threshold Switching Response of NbO-Based Memristors by Ti Doping. **2021**, 13, 2845-2852	5
220	Advanced temperature dependent statistical analysis of forming voltage distributions for three different HfO2-based RRAM technologies. **2021**, 176, 107961	2
219	Exploring Phase-Change Memory: From Material Systems to Device Physics. **2021**, 15, 2000394	5
218	Study of Quantized Hardware Deep Neural Networks Based on Resistive Switching Devices, Conventional versus Convolutional Approaches. **2021**, 10, 346	12
217	Memristor variability and stochastic physical properties modeling from a multivariate time series approach. **2021**, 143, 110461	13
216	Printed resistive switching memory operated by screen-printed microbattery via shared electrode. **2021**, 239-240, 111524	2
215	Ultralow switching voltage and power consumption of GeS2 thin film resistive switching memory. **2021**, 11, 2150004	2
214	An Efficient Approach Based on Tuned Nanoionics to Maximize Memory Characteristics in Ag-Based Devices. *Advanced Electronic Materials*, **2021**, 7, 2100022	6.4	11
213	Optical Tuning of Resistance Switching in Polycrystalline Gallium Phosphide Thin Films. **2021**, 12, 2327-2333	3
212	Stochastic resonance in a metal-oxide memristive device. **2021**, 144, 110723	30
211	Gradually Tunable Conductance in TiO2/Al2O3 Bilayer Resistors for Synaptic Device. **2021**, 11, 440	11
210	BiOSe-Based Memristor-Aided Logic. **2021**, 13, 15391-15398	7
209	PAni-based complementary resistive switches: the effects of Ag on physical properties and switching mechanism. **2021**, 127, 1	2

208	Resistance random access memory performance of MgZnO-based device with varying film thickness by an asymmetric electrode of Au/ITO. **2021**, 15, 101001	0
207	Bipolar Resistive Switching in Junctions of Gallium Oxide and p-type Silicon. **2021**, 21, 2666-2674	8
206	MXenes for memristive and tactile sensory systems. **2021**, 8, 011316	8
205	Time series modeling of the cycle-to-cycle variability in h-BN based memristors. **2021**,	1
204	Effect of Ag source layer thickness on the switching mechanism of TiN/Ag/SiN x /TiN conductive bridging random access memory observed at sub-μA current. **2021**, 36, 055014	2
203	Controllable high-performance memristors based on 2D FeGeTeoxide for biological synapse imitation. **2021**, 32,	2
202	Electronic Phenomena, Electroforming, Resistive Switching, and Defect Conduction Bands in Metal-Insulator-Metal Diodes. **2021**, 101-128	
201	Random Telegraph Noise in Metal-Oxide Memristors for True Random Number Generators: A Materials Study. **2021**, 31, 2102172	8
200	Progressive RESET induced by Joule heating in hBN RRAMs. **2021**, 118, 143101	5
199	Memristive Stateful Logic for Edge Boolean Computers. **2021**, 3, 2000278	10
198	Improved Synaptic Device Properties of HfAlOx Dielectric on Highly Doped Silicon Substrate by Partial Reset Process. **2021**, 11, 772	1
197	Solution-Processed Memristor Devices Using a Colloidal Quantum Dot-Polymer Composite. **2021**, 11, 5020	
196	Study of RTN signals in resistive switching devices based on neural networks. **2021**, 108034	1
195	Low-Power Memristive Logic Device Enabled by Controllable Oxidation of 2D HfSe for In-Memory Computing. **2021**, 8, e2005038	13
194	Spectral decomposition of thermal conductivity: Comparing velocity decomposition methods in homogeneous molecular dynamics simulations. **2021**, 103,	9
193	On the Thermal Models for Resistive Random Access Memory Circuit Simulation. **2021**, 11,	14
192	Modeling Photodetection at the Graphene/Ag2S Interface. **2021**, 15, 2100120	0
191	Deep Insight into Steep-Slope Threshold Switching with Record Selectivity (>4⬛010) Controlled by Metal-Ion Movement through Vacancy-Induced-Percolation Path: Quantum-Level Control of Hybrid-Filament. **2021**, 31, 2104054	17

190	In Situ Observation of Low-Power Nano-Synaptic Response in Graphene Oxide Using Conductive Atomic Force Microscopy. **2021**, 17, e2101100	11
189	Complementary Photo-Synapses Based on Light-Stimulated Porphyrin-Coated Silicon Nanowires Field-Effect Transistors (LPSNFET). **2021**, 17, e2101434	4
188	Lead-free halide perovskites, beyond solar cells and LEDs. **2021**, 3, 032014	3
187	Electroforming-free nonvolatile resistive switching of redox-exfoliated MoSnanoflakes loaded polystyrene thin film with synaptic functionality. **2021**, 32,	4
186	Conductive Polymer-Based Bioelectronic Platforms toward Sustainable and Biointegrated Devices: A Journey from Skin to Brain across Human Body Interfaces. 2100293	7
185	Materials Strategies for Organic Neuromorphic Devices. **2021**, 51, 47-71	10
184	Recent Progress in Selector and Self-Rectifying Devices for Resistive Random-Access Memory Application. **2021**, 15, 2100199	4
183	Effects of Oxygen Precursor on Resistive Switching Properties of CMOS Compatible HfO2-Based RRAM. **2021**, 11, 1350	0
182	Tunable Negative Differential Resistance and Resistive Switching Properties of Amorphous WOx Devices. **2021**, 68, 3807-3812	0
181	Low power multilevel resistive switching in titanium oxide-based RRAM devices by interface engineering. **2021**, 6, 601-601	2
180	Experimental study of the series resistance effect and its impact on the compact modeling of the conduction characteristics of HfO2-based resistive switching memories. **2021**, 130, 054503	10
179	Ordering of Oxygen Vacancies and Related Ferroelectric Properties in HfO_{2-} **2021**, 127, 087602	5
178	The capabilities of nanoelectronic 2-D materials for bio-inspired computing and drug delivery indicate their significance in modern drug design. **2021**, 279, 119272	3
177	Application of Resistive Random Access Memory in Hardware Security: A Review. *Advanced Electronic Materials*, 2100536	6.4	7
176	Temperature of Conductive Nanofilaments in Hexagonal Boron Nitride Based Memristors Showing Threshold Resistive Switching. *Advanced Electronic Materials*, 2100580	6.4	4
175	Impedance Spectroscopy Dynamics of Biological Neural Elements: From Memristors to Neurons and Synapses. **2021**, 125, 9934-9949	11
174	Epitaxial layered Sb2Te3 thin films for memory and neuromorphic applications. **2021**, 8, 045027	3
173	To the Issue of the Memristor⊠HRS and LRS States Degradation and Data Retention Time. **2021**, 50, 311-325	2

172   Wafer-Scale 2D Hafnium Diselenide Based Memristor Crossbar Array for Energy-Efficient Neural Network Hardware. **2021**, e2103376   27

171   Two- and three-terminal HfO2-based multilevel resistive memories for neuromorphic analog synaptic elements.   5

170   Bias Polarity Dependent Threshold Switching and Bipolar Resistive Switching of TiN/TaOx/ITO Device. **2021**, 11, 1531

169   Imaging Dielectric Breakdown in Valence Change Memory. 2102313   3

168   Variability and Yield in h-BN-Based Memristive Circuits: The Role of Each Type of Defect. **2021**, 33, e2103656   16

167   Non-Uniform Spline Quasi-Interpolation to Extract the Series Resistance in Resistive Switching Memristors for Compact Modeling Purposes. **2021**, 9, 2159   5

166   Multilevel Switching in Phase-Change Photonic Memory Devices. **2021**, 15, 2100291   1

165   Automated Testing Algorithm for the Improvement of 1T1R ReRAM Endurance. **2021**, 68, 4891-4896   0

164   Harmonic Analysis of the Nonlinear Response of Graphene Oxide-Based Memristors. **2021**, 68, 4938-4943

163   Influence of variability on the performance of HfO2 memristor-based convolutional neural networks. **2021**, 185, 108064   1

162   A revew of in situ transmission electron microscopy study on the switching mechanism and packaging reliability in non-volatile memory. **2021**, 42, 013102   3

161   Design of n-base width of two-terminal-electrode vertical thyristor for cross-point memory cell without selector. **2021**, 32, 14LT01   1

160   Multiply accumulate operations in memristor crossbar arrays for analog computing. **2021**, 42, 013104   7

159   Design and synthesis of low temperature printed metal oxide memristors. **2021**, 9, 3911-3918   6

158   A Library of Atomically Thin 2D Materials Featuring the Conductive-Point Resistive Switching Phenomenon. **2021**, 33, 2007792   27

157   Resistive switching kinetics and second-order effects in parylene-based memristors. **2020**, 117, 243501   8

156   Kinetic Monte Carlo analysis of data retention in Al:HfO2-based resistive random access memories. **2020**, 35, 115012   11

155   Diffusion of oxygen in amorphous tantalum oxide. **2019**, 3,   4

| 154 | A physically based SPICE model for RRAMs including RTN. **2020**, | 2 |

| 153 | Oxide-based resistive switching-based devices: fabrication, influence parameters and applications. **2021**, 9, 15755-15788 | 8 |

| 152 | Optimizing endurance performance of Ga2O3 random resistive access memories by altering oxygen vacancy content. **2021**, 48, 3185-3185 | 2 |

| 151 | Low-Energy Oxygen Plasma Injection of 2D Bi2Se3 Realizes Highly Controllable Resistive Random Access Memory. 2108455 | 5 |

| 150 | Technology agnostic frequency characterization methodology for memristors. **2021**, 11, 20599 | 1 |

| 149 | Nonvolatile Reconfigurable 2D Schottky Barrier Transistors. **2021**, 21, 9318-9324 | 10 |

| 148 | Resistive Switching Characteristics of ZnO-Based RRAM on Silicon Substrate. **2021**, 11, 1572 | 0 |

| 147 | The effect of the top electrode on the switching behavior of bipolar Al2O3/ZnO RRAM. **2021**, 250, 111637 | 0 |

| 146 | Demonstration of Threshold Switching and Bipolar Resistive Switching in Ag/SnOx/TiN Memory Device. **2021**, 11, 1605 | 0 |

| 145 | Artificial Neurons Based on Ag/VC/W Threshold Switching Memristors. **2021**, 11, | 7 |

| 144 | Operando Direct Observation of Filament Formation in Resistive Switching Devices Enabled by a Topological Transformation Molecule. **2021**, 21, 9262-9269 | 1 |

| 143 | Density functional theory study of oxygen vacancy defect diffusion properties in Ta2O5. **2020**, 59, 121003 | 2 |

| 142 | Standards for the Characterization of Endurance in Resistive Switching Devices. **2021**, | 36 |

| 141 | In-memory computing with emerging nonvolatile memory devices. **2021**, 64, 1 | 6 |

| 140 | Mixed Ionic-Electronic Charge Transport in Layered Black-Phosphorus for Low-Power Memory. 2107068 | 4 |

| 139 | Conductance Quantization Behavior in Pt/SiN/TaN RRAM Device for Multilevel Cell. **2021**, 11, 1918 | 1 |

| 138 | Mixed anodic oxides for forming-free memristors revealed by combinatorial screening of hafnium-tantalum system. **2021**, 26, 101270 | 0 |

| 137 | Halide Perovskites for Resistive Switching Memory. **2021**, 12, 11673-11682 | 14 |

136   High-Speed Ionic Synaptic Memory Based on 2D Titanium Carbide MXene. 2109970   9

135   Multi-Level Resistive Switching of Pt/HfO2/TaN Memory Device. **2021**, 11, 1885   0

134   Highly Stable Forming-Free Bipolar Resistive Switching in Cu Layer Stacked Amorphous Carbon Oxide: Transition between C?C Bonding Complexes. *Advanced Electronic Materials*, 2100660   6.4   1

133   Multilevel switching memristor by compliance current adjustment for off-chip training of neuromorphic system. **2021**, 153, 111587   11

132   A Compact Modeling Methodology for Experimental Memristive Devices. **2021**, 1-1

131   Investigation on asymmetric resistive switching (RS) characteristics in p-NiO/n-ZnO heterojunctions. **2022**, 254, 111669   2

130   Thermal Reliability Considerations of Resistive Synaptic Devices for 3D CIM System Performance. **2021**,   1

129   Modelling electroforming process under constant bias voltage conditions. **2021**, 2086, 012030

128   Resistive Switching Devices Producing Giant Random Telegraph Noise. **2022**, 43, 146-149

127   Two-dimensional materials for artificial synapses: toward a practical application.   1

126   A transport model describing how defect accumulation leads to intrinsic dielectric breakdown and post-breakdown conduction. **2022**, 128, 114459   0

125   Scanning Probe Lithography: State-of-the-Art and Future Perspectives.. **2022**, 13,   1

124   Comprehensive study on unipolar RRAM charge conduction and stochastic features: a simulation approach. **2022**, 55, 155104   1

123   Zinc oxide and indium-gallium-zinc-oxide bi-layer synaptic device with highly linear long-term potentiation and depression characteristics.. **2022**, 12, 1259   3

122   Prospect and challenges of analog switching for neuromorphic hardware. **2022**, 120, 060501   7

121   Top electrode dependent resistive switching in M/ZnO/ITO memristors, M = Al, ITO, Cu, and Au. **2022**, 105388   5

120   Volatile and Nonvolatile Memristive Devices for Neuromorphic Computing. *Advanced Electronic Materials*, 2101127   6.4   17

119   Multiphysics Simulation of Crosstalk Effect in Resistive Random Access Memory with Different Metal Oxides.. **2022**, 13,

118	Variability estimation in resistive switching devices, a numerical and kinetic Monte Carlo perspective. **2022**, 257, 111736		5
117	Electric field induced Mott transition and bipolar resistive switching in La2Ti2O7-x thin film. **2022**, 26, 101395		
116	Novel charm of 2D materials engineering in memristor: when electronics encounter layered morphology.. **2022**,		8
115	Enhanced Resistive Switching Performance of Hafnium Oxide-Based Devices: Effects of Growth and Annealing Temperatures.		
114	Effects of Ambient and Annealing Temperature in HfO2 Based RRAM Device Modeling and Circuit-Level Implementation. **2022**, 11, 023012		0
113	BiOSe-Based True Random Number Generator for Security Applications.. **2022**,		5
112	Atomic scale memristive photon source.. **2022**, 11, 78		1
111	Nano-memristors with 4mV Switching Voltage Based On Surface-modified Copper Nanoparticles.. **2022**, e2201197		1
110	Memristors with Initial Low-Resistive State for Efficient Neuromorphic Systems. 2200001		3
109	A Bifunctional Memristor Enables Multiple Neuromorphic Computing Applications. *Advanced Electronic Materials*, 2101235	6.4	1
108	Physical Model for the Current Voltage Hysteresis and Impedance of Halide Perovskite Memristors. **2022**, 7, 1214-1222		10
107	Dynamic-quenching of a single-photon avalanche photodetector using an adaptive resistive switch.. **2022**, 13, 1517		1
106	The Bitlet Model: A Parameterized Analytical Model to Compare PIM and CPU Systems. **2022**, 18, 1-29		1
105	Effects of switching layer morphology on resistive switching behavior: A case study of electrochemically synthesized mixed-phase copper oxide memristive devices. **2022**, 27, 101460		2
104	Spatially inhomogeneous operation of phase-change memory. **2022**, 589, 153026		
103	A Two level Modeling Methodology for Memristive Devices. **2021**,		
102	An Analysis on the Architecture and the Size of Quantized Hardware Neural Networks Based on Memristors. **2021**, 10, 3141		1
101	Neuromorphic Dynamics at the Nanoscale in Silicon Suboxide RRAM. **2021**, 3,		0

| 100 | Inkjet Printing: A Cheap and Easy-to-Use Alternative to Wire Bonding for Academics. **2022**, 57, 2100210 | 0 |

| 99 | The nature of column boundaries in micro-structured silicon oxide nanolayers. **2021**, 9, 121107 | 1 |

| 98 | Computing-in-memory circuits and cross-layer integrated design and optimization: from SRAM to FeFET. **2022**, 52, 612 | |

| 97 | Memristive characteristics of composite Hafnium/Tantalum anodic oxides. | 0 |

| 96 | Resistive switching properties of amorphous Sm2Ti2O7 thin film prepared by RF sputtering for RRAM applications. **2022**, 910, 164960 | 0 |

| 95 | Resistive switching properties of monolayer h-BN atomristors with different electrodes. **2022**, 120, 173104 | 1 |

| 94 | Hafnium Oxide (HfO) - A Multifunctional Oxide: A Review on the Prospect and Challenges of Hafnium Oxide in Resistive Switching and Ferroelectric Memories.. **2022**, e2107575 | 9 |

| 93 | Integrated memory devices based on two-dimensional materials.. **2022**, e2201880 | 2 |

| 92 | Electron irradiation-induced defects for reliability improvement in monolayer MoS2-based conductive-point memory devices. **2022**, 6, | 4 |

| 91 | Enhanced resistive switching performance of hafnium oxide-based devices: Effects of growth and annealing temperatures. **2022**, 913, 165251 | 2 |

| 90 | Electrical Performance of Large-Area Y O Memristive Crossbar Array With Ultralow C2C Variability. **2022**, 1-7 | 0 |

| 89 | Review of Electrical Stimulus Methods of In Situ Transmission Electron Microscope to Study Resistive Random Access Memory. | 0 |

| 88 | Convolutional Echo-State Network with Random Memristors for Spatiotemporal Signal Classification. 2200027 | 1 |

| 87 | Memristive technologies for data storage, computation, encryption, and radio-frequency communication. **2022**, 376, | 24 |

| 86 | An experimental and simulation study of the role of thermal effects on variability in TiN/Ti/HfO2/W resistive switching nonlinear devices. **2022**, 160, 112247 | 1 |

| 85 | Novel Electronic Devices Based on Perovskite Materials. **2022**, 601-628 | |

| 84 | Electroforming-Free Y2O3 Memristive Crossbar Array with Low Variability. | 0 |

| 83 | Effect of Doping Different Cu Valence States in HfO2 on Resistive Switching Properties of RRAM. **2022**, 10, 85 | |

82	Application of Two-Dimensional Materials in Hardware Security for IoT: Progress and Perspective.		
81	Microstructural and electrical features of highly conducting Indium co-doped ZnO-based ceramics.		0
80	Memristive perovskite solar cells towards parallel solar energy harvesting and processing-in-memory computing.		0
79	Filamentary TaO x /HfO 2 ReRAM Devices for Neural Networks Training with Analog In-Memory Computing. *Advanced Electronic Materials*, 2200448	6.4	1
78	Two-dimensional ferroelectricity and antiferroelectricity for next-generation computing paradigms. **2022**, 5, 1999-2014		0
77	Nonvolatile Logic-in-Memory Computing based on Solution-Processed CuI Memristor. *Advanced Electronic Materials*, 2200089	6.4	
76	Inverter and Ternary Content-Addressable Memory Based on Carbon Nanotube Transistors Using Chemical Doping Strategy. *Advanced Electronic Materials*, 2200424	6.4	
75	Corrigendum to Spatially inhomogeneous operation of phase-change memory [Appl. Surf. Sci. 589 (2022) 153026]. **2022**, 154356		
74	Non-Volatile Resistive Switching in PtSe2-Based Crosspoint Memristors. **2022**,		
73	La 2 NiO 4+ Based Memristive Devices Integrated on Si-Based Substrates. 2200329		0
72	Structural Defects Improve the Memristive Characteristics of Epitaxial La 0.8 Sr 0.2 MnO 3 -Based Devices. **2022**, 9, 2200498		0
71	Low-Dimensional Metal-Halide Perovskites as High-Performance Materials for Memory Applications. 2203311		4
70	Polymer-based electronics that can learn to drive: That smart. **2022**, 5, 2439-2442		
69	Low-voltage ultrafast nonvolatile memory via direct charge injection through a threshold resistive-switching layer. **2022**, 13,		0
68	Advances in Emerging Photonic Memristive and Memristive-Like Devices. 2105577		1
67	Multi-level Cells and Quantized Conductance Characteristics of Al2O3-Based RRAM Device for Neuromorphic System. **2022**, 17,		1
66	Emulation of bio-synaptic behaviours in copper-doped zinc oxide memristors: A nanoscale scanning probe microscopic study. **2022**, 606, 154860		0
65	Wear-out and breakdown of Ta2O5/Nb:SrTiO3 stacks. **2022**, 198, 108462		0

64   Modeling the Variability of Au/Ti/h-BN/Au Memristive Devices. **2022**, 1-0   2

63   Plasma fireball-mediated ion implantation for nonvolatile memory application. **2023**, 607, 154999   0

62   Resistive Switching Crossbar Arrays Based on Layered Materials. 2205402   2

61   Thermal Management in Neuromorphic Materials, Devices, and Networks. 2205098   0

60   Enhancement of the chiral optical properties.   0

59   Bipolar Resistive Switching in Hafnium Oxide-Based Nanostructures with and without Nickel Nanoparticles. **2022**, 11, 2963   0

58   Parameter extraction techniques for the analysis and modeling of resistive memories. **2022**, 265, 111876   2

57   A statistical study of resistive switching parameters in Au/Ta/ZrO 2 (Y)/Ta 2 O 5 /TiN/Ti memristive devices.   1

56   Review on data-centric brain-inspired computing paradigms exploiting emerging memory devices. 2,   0

55   Forming-Free Pt/Ti/AlOx/CeOx/Pt Multilayer Memristors with Multistate and Synaptic Characteristics. **2022**, 2022, 1-9   0

54   Comprehensive physics-based RRAM compact model including the effect of variability and multi-level random telegraph noise. **2022**, 266, 111886   1

53   Resistive Switching and Hysteresis Phenomena at Nanoscale.   0

52   The gate injection-based field-effect synapse transistor with linear conductance update for online training. **2022**, 13,   1

51   Electrical Gating of the Charge-Density-Wave Phases in Two-Dimensional h-BN/1T-TaS2 Devices.   1

50   An Efficient Training Methodology of Hardware Neural Network Based on Wafer-Scale MoS 2 Synaptic Array. 2200909   0

49   Memristor Degradation Analysis Using Auxiliary Volt-Ampere Characteristics. **2022**, 13, 1691   1

48   Enhanced Resistive Switching and Synaptic Characteristics of ALD Deposited AlN-Based RRAM by Positive Soft Breakdown Process. **2022**, 23, 13249   0

47   Thermodynamic Equilibrium-Nonequilibrium Competition in Nanofilaments for Achieving Complementary Electronic Synapses. 2207885   0

46	Porphyrin-Based Metal–Organic Frameworks for Neuromorphic Electronics. 2200150	0
45	Electronegative metal dopants improve switching variability in Al2O3 resistive switching devices. **2022**, 6,	0
44	Existence of bipolar resistive switching with self-rectifying behavior in a p-CuCrO2/n-Si heterostructure. **2022**, 762, 139542	0
43	Machine learning-assisted design guidelines and performance prediction of CMOS-compatible metal oxide-based resistive switching memory devices. **2022**, 29, 101650	0
42	TID Effect and Damage Model of $^{\text{60}}$Co γ for the TiO$_{\text{2}}$ Nano-Rod-Based Resistive Switching Memory. **2022**, 1-6	0
41	Bidirectional Transition between Threshold and Bipolar Switching in Ag/SiO2/ITO Memristors. **2022**,	0
40	Scalable Al 2 O 3 TiO 2 Conductive Oxide Interfaces as Defect Reservoirs for Resistive Switching Devices. 2200800	1
39	Ferroelastic Domain Walls in BiFeO 3 as Memristive Networks. 2200292	0
38	Threshold Switching in Forming-Free Anodic Memristors Grown on Hf–Nb Combinatorial Thin-Film Alloys. **2022**, 12, 3944	0
37	A Highly Crystalline Single Layer Two-dimensional Polymer for Low Variability and Excellent Scalability Molecular Memristors. 2208377	0
36	Realization of Short- and Long-Term Memories at Nanoscale and their Temporal Evolution in Two-Terminal Memristive Synapses. **2023**, 611, 155563	0
35	Analytical Scaling of Trap-Limited Current in 2-D Ultrathin Dielectrics. **2022**, 1-6	1
34	Effect of annealing temperature on resistive switching behavior of Al/ La0.7Sr0.3MnO3 /LaNiO3 devices. **2023**, 46, 21-26	0
33	Coexistence of memory and threshold resistive switching identified by combinatorial screening in niobium-tantalum system. **2023**, 613, 155917	0
32	A Novel In-Sensor Computing Architecture Based on Single Photon Avalanche Diode and Dynamic Memristor. **2022**, 489-500	0
31	Resistive Switching Behavior of TiO2/(PVP:MoS2) Nanocomposite Bilayer Hybrid RRAM. **2022**, 478-485	0
30	Balanced Ternary Logic Gates with Memristors. **2022**,	0
29	Hardware implementation of self-organizing maps using memristors, a simulation study. **2022**,	0

28	An enhanced Verilog-A compact model for bipolar RRAMs including transient thermal effects and series resistance. **2022**,	0
27	Hardware and Information Security Primitives Based on Two-Dimensional Materials and Devices. 2205365	1
26	Fully Optical in Operando Investigation of Ambient Condition Electrical Switching in MoS 2 Nanodevices. 2209968	0
25	Neuronal-like Irregular Spiking Dynamics in Highly Volatile Memristive Intermediate-scale AgPt-Nanoparticle Assemblies. 2200131	0
24	First Order Rate Law Analysis for Reset State in Vanadium Oxide Thin Film Resistive Random Access Memory Devices. **2023**, 13, 198	0
23	3-D Heterogeneous Integration of RRAM-Based Compute-In-Memory: Impact of Integration Parameters on Inference Accuracy. **2022**, 1-8	0
22	CMOS-compatible self-aligned 3D memristive elements for reservoir computing systems. **2023**, 122, 022905	1
21	Investigation of Different Oxygen Partial Pressures on MgGa2O4-Resistive Random-Access Memory.	0
20	Highly Reliable Electrochemical Metallization Threshold Switch Through Conductive Filament Engineering Using Two-Dimensional PtSe 2 Insertion Layer. 2202296	0
19	Stochastic current response in diffusive memristor for security applications. **2023**, 100315	0
18	Oxynitride Amorphous Carbon Layer for Electrically and Thermally Robust Bipolar Resistive Switching. 2201090	0
17	Highly Reliable Threshold Switching Characteristics of Surface-Modulated Diffusive Memristors Immune to Atmospheric Changes. **2023**, 15, 5495-5503	0
16	Improved Performance of Hf x Zn y O-Based RRAM and its Switching Characteristics down to 4 K Temperature. 2201250	0
15	High-Temporal-Resolution Characterization Reveals Outstanding Random Telegraph Noise and the Origin of Dielectric Breakdown in h-BN Memristors. 2213816	0
14	Variability and power enhancement of current controlled resistive switching devices. **2023**, 112008	0
13	A Memristive Cell with Long Retention Time in 65 nm CMOS Technology.	0
12	Resistive switching behavior of TiO2/(PVP:MoS2) nanocomposite hybrid bilayer in rigid and flexible RRAM devices. **2023**, 4, 100029	0
11	Short-term memory characteristics in n-type-ZnO/p-type-NiO heterojunction synaptic devices for reservoir computing. **2023**, 625, 157153	0

10	Femtosecond Laser-Induced Nano-Joining of Volatile Tellurium Nanotube Memristor. **2023**, 13, 789	0
9	On the switching mechanism and optimisation of ion irradiation enabled 2D MoS2 memristors. **2023**, 15, 6408-6416	0
8	Resistive random access memory: introduction to device mechanism, materials and application to neuromorphic computing. **2023**, 18,	0
7	Variability in Resistive Memories. 2200338	0
6	Transition between resistive switching modes in asymmetric HfO2-based structures. **2023**, 275, 111983	0
5	Unraveling the importance of fabrication parameters of copper oxide-based resistive switching memory devices by machine learning techniques. **2023**, 13,	0
4	Achieving adjustable digital-to-analog conversion in memristors with embedded Cs2AgSbBr6 nanoparticles.	0
3	Holistic Variability Analysis in Resistive Switching Memories Using a Two-Dimensional Variability Coefficient. **2023**, 15, 19102-19110	0
2	The annealing temperature dependence of the RRAM effect and the oxygen vacancy mechanism for double perovskite Bi2FeCrO6 film. **2023**, 213, 112082	0
1	Integrated Memristor Network for Physiological Signal Processing.	0