## A fast, high-endurance and scalable non-volatile memor Ta2O5â^'x/TaO2â^'x bilayer structures

Nature Materials 10, 625-630

DOI: 10.1038/nmat3070

**Citation Report** 

#	ARTICLE	IF	CITATIONS
5	Enhanced and reproducible X-ray emission in a low-energy plasma focus. Europhysics Letters, 2006, 73, 42-48.	2.0	18
6	Filamentary-switching model in RRAM for time, energy and scaling projections. , 2011, , .		39
7	Progress in CMOS-memristor integration. , 2011, , .		7
8	Flexible Memristive Memory Array on Plastic Substrates. Nano Letters, 2011, 11, 5438-5442.	9.1	250
9	Emerging non-volatile memories. , 2011, , .		165
10	Measuring the switching dynamics and energy efficiency of tantalum oxide memristors. Nanotechnology, 2011, 22, 505402.	2.6	99
11	Sub-nanosecond switching of a tantalum oxide memristor. Nanotechnology, 2011, 22, 485203.	2.6	596
13	Memory materials: a unifying description. Materials Today, 2011, 14, 584-591.	14.2	74
14	Electrically Bistable Properties of Layer-by-Layer Assembled Multilayers Based on Protein Nanoparticles. ACS Nano, 2011, 5, 9918-9926.	14.6	94
15	Anatomy of a Nanoscale Conduction Channel Reveals the Mechanism of a Highâ€Performance Memristor. Advanced Materials, 2011, 23, 5633-5640.	21.0	393
16	Reducing operation current of Ni-doped silicon oxide resistance random access memory by supercritical CO2 fluid treatment. Applied Physics Letters, 2011, 99, .	3.3	53
17	Elimination of high transient currents and electrode damage during electroformation of TiO <sub>2</sub> -based resistive switching devices. Journal Physics D: Applied Physics, 2012, 45, 395101.	2.8	20
18	Formation and Rupture of Multiple Conductive Filaments in a Cu/TaOx/Pt Device. ECS Solid State Letters, 2012, 1, Q48-Q50.	1.4	11
19	Forming mechanism of the bipolar resistance switching in double-layer memristive nanodevices. Nanotechnology, 2012, 23, 315202.	2.6	22
20	Multi-level switching of triple-layered TaOx RRAM with excellent reliability for storage class memory. , 2012, , .		119
21	Oxygen migration process in the interfaces during bipolar resistance switching behavior of WO <i>3â^*x</i> -based nanoionics devices. Applied Physics Letters, 2012, 100, .	3.3	46
22	Memristive devices as parameter setting elements in programmable gain amplifiers. Applied Physics Letters, 2012, 101, 243502.	3.3	31
23	Resistive switching characteristics of solution-deposited Gd, Dy, and Ce-doped ZrO2 films. Applied Physics Letters, 2012, 100, .	3.3	49

TION RE

#	Article	IF	CITATIONS
24	Detection of filament formation in forming-free resistive switching SrTiO3 devices with Ti top electrodes. Applied Physics Letters, 2012, 100, .	3.3	51
25	Resistive switching and activity-dependent modifications in Ni-doped graphene oxide thin films. Applied Physics Letters, 2012, 101, 063104.	3.3	33
26	Multi-state resistive switching memory with secure information storage in Au/BiFe0.95Mn0.05O3/La5/8Ca3/8MnO3 heterostructure. Applied Physics Letters, 2012, 100, .	3.3	30
27	Dynamic-Load-Enabled Ultra-low Power Multiple-State RRAM Devices. Scientific Reports, 2012, 2, 744.	3.3	46
28	High frequency clipper like behavior of tri-layer nickel oxide stack. Applied Physics Letters, 2012, 100, 152113.	3.3	0
29	Impact of interfacial resistance switching on thermoelectric effect of Nb-doped SrTiO3 single crystalline. Journal of Applied Physics, 2012, 111, 063702.	2.5	6
30	Oxygen migration induced resistive switching effect and its thermal stability in W/TaO <i>x</i> /Pt structure. Applied Physics Letters, 2012, 100, .	3.3	103
31	Oxide based memristive devices. , 2012, , .		1
32	A Look Up Table design with 3D bipolar RRAMs. , 2012, , .		4
33	Initial Assessment of the Effects of Radiation on the Electrical Characteristics of \${m TaO}_{m x}\$ Memristive Memories. IEEE Transactions on Nuclear Science, 2012, 59, 2987-2994.	2.0	69
34	Improvement of Resistive Switching Uniformity by Introducing a Thin NbOx Interface Layer. ECS Solid State Letters, 2012, 1, Q35-Q38.	1.4	18
35	Switching Properties of Titanium Dioxide Nanowire Memristor. Japanese Journal of Applied Physics, 2012, 51, 11PE09.	1.5	10
36	Future silicon technology. , 2012, , .		3
37	Science and Engineering Beyond Moore's Law. Proceedings of the IEEE, 2012, 100, 1720-1749.	21.3	220
38	Evaluation of the local temperature of conductive filaments in resistive switching materials. Nanotechnology, 2012, 23, 465201.	2.6	29
39	Incommensurate Modulated Structures in the Ta2O5 - Al2O3 System. Australian Journal of Chemistry, 2012, 65, 851.	0.9	9
40	Investigation for Resistive Switching by Controlling Overflow Current in Resistance Change Nonvolatile Memory. IEEE Nanotechnology Magazine, 2012, 11, 1122-1125.	2.0	5
41	Nitride memristors. Applied Physics A: Materials Science and Processing, 2012, 109, 1-4.	2.3	63

#	Article	IF	CITATIONS
42	Understanding of the endurance failure in scaled HfO <inf>2</inf> -based 1T1R RRAM through vacancy mobility degradation. , 2012, , .		36
43	Highly-scalable threshold switching select device based on chaclogenide glasses for 3D nanoscaled memory arrays. , 2012, , .		53
44	Engineering nonlinearity into memristors for passive crossbar applications. Applied Physics Letters, 2012, 100, .	3.3	179
45	Influence of the SET current on the resistive switching properties of tantalum oxide created by oxygen implantation. Applied Physics Letters, 2012, 100, 142111.	3.3	10
46	Investigation of resistive switching in bipolar TaOx-based resistive random access memory. , 2012, , .		1
47	Dual Defects of Cation and Anion in Memristive Nonvolatile Memory of Metal Oxides. Journal of the American Chemical Society, 2012, 134, 2535-2538.	13.7	44
48	Resistive switching in aluminum nitride. , 2012, , .		9
49	\$hbox{HfO}_{2}\$-Based RRAM Devices With Varying Contact Sizes and Their Electrical Behavior. IEEE Electron Device Letters, 2012, 33, 1060-1062.	3.9	10
50	High Current Density and Nonlinearity Combination of Selection Device Based on TaO <sub><i>x</i></sub> /TiO <sub>2</sub> /TaO <sub><i>x</i></sub> Structure for One Selector–One Resistor Arrays. ACS Nano, 2012, 6, 8166-8172.	14.6	138
51	Modeling for multilevel switching in oxide-based bipolar resistive memory. Nanotechnology, 2012, 23, 225702.	2.6	52
52	Memristive analog arithmetic within cellular arrays. , 2012, , .		3
53	Cu-Embedded AlN-Based Nonpolar Nonvolatile Resistive Switching Memory. IEEE Electron Device Letters, 2012, 33, 1711-1713.	3.9	36
54	Resistive Switching Induced by Metallic Filaments Formation through Poly(3,4-ethylene-dioxythiophene):Poly(styrenesulfonate). ACS Applied Materials & Interfaces, 2012, 4, 447-453.	8.0	98
55	Prominent Thermodynamical Interaction with Surroundings on Nanoscale Memristive Switching of Metal Oxides. Nano Letters, 2012, 12, 5684-5690.	9.1	40
56	Metal–Oxide RRAM. Proceedings of the IEEE, 2012, 100, 1951-1970.	21.3	2,225
57	Conduction band caused by oxygen vacancies in aluminum oxide for resistance random access memory. Journal of Applied Physics, 2012, 112, .	2.5	63
58	The Molecular Basis of Memory. ACS Chemical Neuroscience, 2012, 3, 633-642.	3.5	27
59	ZnO <sub>1–<i>x</i></sub> Nanorod Arrays/ZnO Thin Film Bilayer Structure: From Homojunction Diode and High-Performance Memristor to Complementary 1D1R Application. ACS Nano, 2012, 6, 8407-8414.	14.6	132

# 60	ARTICLE Reversible changes between bipolar and unipolar resistance-switching phenomena in a Pt/SrTiO /Pt cell. Current Applied Physics, 2012, 12, 1515-1517.	IF 2.4	CITATIONS
61	Switching of nanosized filaments in NiO by conductive atomic force microscopy. Journal of Applied Physics, 2012, 112, .	2.5	37
62	Resistive switching in silicon suboxide films. Journal of Applied Physics, 2012, 111, .	2.5	217
63	Future silicon technology. , 2012, , .		5
64	Thickness-dependent resistance switching in Cr-doped SrTiO3. Journal of the Korean Physical Society, 2012, 61, 754-758.	0.7	1
65	Biologically-Inspired Electronics with Memory Circuit Elements. , 2012, , 15-36.		5
66	A Multilevel Memory Based on Proton-Doped Polyazomethine with an Excellent Uniformity in Resistive Switching. Journal of the American Chemical Society, 2012, 134, 17408-17411.	13.7	136
67	Analysis of Complementary RRAM Switching. IEEE Electron Device Letters, 2012, 33, 1186-1188.	3.9	60
68	The understanding of the memory nature and mechanism of the Ta2O5-gate-dielectric-based organic phototransistor memory. Organic Electronics, 2012, 13, 2917-2923.	2.6	9
69	Basic Process of Sputtering Deposition. , 2012, , 295-359.		8
70	Resistive switching effects in oxide sandwiched structures. Frontiers of Materials Science, 2012, 6, 183-206.	2.2	68
71	Continuous Electrical Tuning of the Chemical Composition of TaO <sub><i>x</i></sub> -Based Memristors. ACS Nano, 2012, 6, 2312-2318.	14.6	119
72	Repetitive switching behaviour of a memristor for passive crossbar applications. Journal Physics D: Applied Physics, 2012, 45, 505107.	2.8	3
73	Beyond von Neumann—logic operations in passive crossbar arrays alongside memory operations. Nanotechnology, 2012, 23, 305205.	2.6	315
74	Opportunity of Spinel Ferrite Materials in Nonvolatile Memory Device Applications Based on Their Resistive Switching Performances. Journal of the American Chemical Society, 2012, 134, 14658-14661.	13.7	233
75	Complementary resistive switching in tantalum oxide-based resistive memory devices. Applied Physics Letters, 2012, 100, .	3.3	192
76	Defect engineering: reduction effect of hydrogen atom impurities in HfO <sub>2</sub> -based resistive-switching memory devices. Nanotechnology, 2012, 23, 325702.	2.6	28
77	Designing memristors: Physics, materials science and engineering. , 2012, , .		1

#	Article	IF	CITATIONS
78	An Update on Emerging Memory: Progress to 2Xnm. , 2012, , .		18
79	Physical modeling of voltage-driven resistive switching in oxide RRAM. , 2012, , .		6
80	A unified model for unipolar resistive random access memory. Applied Physics Letters, 2012, 100, .	3.3	10
81	Resistive Switching by Voltage-Driven Ion Migration in Bipolar RRAM—Part I: Experimental Study. IEEE Transactions on Electron Devices, 2012, 59, 2461-2467.	3.0	215
82	A Functional Hybrid Memristor Crossbar-Array/CMOS System for Data Storage and Neuromorphic Applications. Nano Letters, 2012, 12, 389-395.	9.1	745
83	Highly scalable resistive switching memory cells using pore-size-controlled nanoporous alumina templates. Journal of Materials Chemistry, 2012, 22, 1852-1861.	6.7	21
84	In situ imaging of the conducting filament in a silicon oxide resistive switch. Scientific Reports, 2012, 2, 242.	3.3	153
85	Electrical memory devices based on inorganic/organic nanocomposites. NPG Asia Materials, 2012, 4, e18-e18.	7.9	162
86	Molecular Rotors as Switches. Sensors, 2012, 12, 11612-11637.	3.8	22
87	Unipolar resistive switching characteristics of pnictogen oxide films: Case study of Sb2O5. Journal of Applied Physics, 2012, 112, 104105.	2.5	8
88	Two centuries of memristors. Nature Materials, 2012, 11, 478-481.	27.5	334
89	Symmetrical Negative Differential Resistance Behavior of a Resistive Switching Device. ACS Nano, 2012, 6, 2517-2523.	14.6	103
90	On the Switching Parameter Variation of Metal-Oxide RRAM—Part I: Physical Modeling and Simulation Methodology. IEEE Transactions on Electron Devices, 2012, 59, 1172-1182.	3.0	300
91	Nanoscale patterning of complex magnetic nanostructures by reduction with low-energy protons. Nature Nanotechnology, 2012, 7, 567-571.	31.5	42
92	Highly entangled K0.5V2O5 superlong nanobelt membranes for flexible nonvolatile memory devices. Journal of Materials Chemistry, 2012, 22, 18214.	6.7	22
93	Metal oxide memories based on thermochemical and valence change mechanisms. MRS Bulletin, 2012, 37, 131-137.	3.5	114
94	A Light ontrolled Resistive Switching Memory. Advanced Materials, 2012, 24, 2496-2500.	21.0	138
95	Observation of Conductance Quantization in Oxideâ€Based Resistive Switching Memory. Advanced Materials, 2012, 24, 3941-3946	21.0	217

#	Article	IF	CITATIONS
96	Electronic structure and transport measurements of amorphous transition-metal oxides: observation of Fermi glass behavior. Applied Physics A: Materials Science and Processing, 2012, 107, 1-11.	2.3	58
97	Reversible resistance switching properties in Ti-doped polycrystalline Ta2O5 thin films. Applied Physics A: Materials Science and Processing, 2012, 108, 177-183.	2.3	6
98	Dielectric-breakdown-like forming process in the unipolar resistance switching of Ta2O5â^'x thin films. Current Applied Physics, 2012, 12, 846-848.	2.4	5
99	Operation Voltage Control in Complementary Resistive Switches Using Heterodevice. IEEE Electron Device Letters, 2012, 33, 600-602.	3.9	15
100	On the Switching Parameter Variation of Metal Oxide RRAM—Part II: Model Corroboration and Device Design Strategy. IEEE Transactions on Electron Devices, 2012, 59, 1183-1188.	3.0	196
101	Evidence for Voltage-Driven Set/Reset Processes in Bipolar Switching RRAM. IEEE Transactions on Electron Devices, 2012, 59, 2049-2056.	3.0	113
102	Unipolar resistance switching characteristics in a thick ZnO/Cu/ZnO multilayer structure. Journal of the Korean Physical Society, 2012, 60, 1087-1091.	0.7	6
103	Oxygen Ion Driftâ€Induced Complementary Resistive Switching in Homo TiO <i><sub>x</sub></i> /TiO <i><sub>y</sub></i> /TiO <i><sub>x</sub></i> and Hetero TiO <sub><i>x</i>/i&gt;</sub> /TiON/TiO <i><sub>x</sub></i> Triple Multilayer Frameworks. Advanced Functional Materials. 2012. 22. 709-716.	14.9	121
104	Multilevel Data Storage Memory Using Deterministic Polarization Control. Advanced Materials, 2012, 24, 402-406.	21.0	129
105	Realâ€Time Observation on Dynamic Growth/Dissolution of Conductive Filaments in Oxideâ€Electrolyteâ€Based ReRAM. Advanced Materials, 2012, 24, 1844-1849.	21.0	520
106	Bipolar one diode–one resistor integration for high-density resistive memory applications. Nanoscale, 2013, 5, 4785.	5.6	50
107	Highâ€Performance and Lowâ€Power Rewritable SiO <i><sub>x</sub></i> 1 kbit One Diode–One Resistor Crossbar Memory Array. Advanced Materials, 2013, 25, 4789-4793.	21.0	66
108	Investigation on the RESET switching mechanism of bipolar Cu/HfO <sub>2</sub> /Pt RRAM devices with a statistical methodology. Journal Physics D: Applied Physics, 2013, 46, 245107.	2.8	29
109	Conductance quantization in oxygen-anion-migration-based resistive switching memory devices. Applied Physics Letters, 2013, 103, .	3.3	64
110	Conductivity switching effect in MIS structures with silicon-based insulators, fabricated by low-frequency plasma-enhanced chemical vapor deposition methods. Semiconductors, 2013, 47, 641-646.	0.5	4
111	Dynamic Evolution of Conducting Nanofilament in Resistive Switching Memories. Nano Letters, 2013, 13, 3671-3677.	9.1	327
112	High-speed multibit operation of a dual vacancy-type oxide device with extended bi-polar resistive switching behaviors. Applied Physics A: Materials Science and Processing, 2013, 112, 807-815.	2.3	6
113	Effects of moisture barriers on resistive switching in Pt-dispersed SiO2 nanometallic thin films. Applied Physics A: Materials Science and Processing, 2013, 112, 235-239.	2.3	11

#	Article	IF	CITATIONS
114	Key concepts behind forming-free resistive switching incorporated with rectifying transport properties. Scientific Reports, 2013, 3, 2208.	3.3	48
115	In situ observation of filamentary conducting channels in an asymmetric Ta2O5â^'x/TaO2â^'x bilayer structure. Nature Communications, 2013, 4, 2382.	12.8	308
116	Nanoscale resistive switching devices: mechanisms and modeling. Nanoscale, 2013, 5, 10076.	5.6	232
118	Application of ion-implantation for improved non-volatile resistive random access memory (ReRAM). Nuclear Instruments & Methods in Physics Research B, 2013, 307, 98-101.	1.4	8
119	A Comparison of the Radiation Response of \${m TaO}_{m x}\$ and \${m TiO}_2\$ Memristors. IEEE Transactions on Nuclear Science, 2013, 60, 4512-4519.	2.0	37
120	Investigation on the Response of TaO\$_{m x}\$-based Resistive Random-Access Memories to Heavy-Ion Irradiation. IEEE Transactions on Nuclear Science, 2013, 60, 4520-4525.	2.0	21
121	Study of resistive random access memory based on TiN/TaOx/TiN integrated into a 65nm advanced complementary metal oxide semiconductor technology. Thin Solid Films, 2013, 533, 24-28.	1.8	22
122	Displacement Damage in TiO <formula formulatype="inline"> <tex Notation="TeX"&gt;\$_{2}\$</tex </formula> Memristor Devices. IEEE Transactions on Nuclear Science, 2013, 60, 1379-1383.	2.0	30
123	Electrical conductivity in oxygen-deficient phases of tantalum pentoxide from first-principles calculations. Journal of Applied Physics, 2013, 114, .	2.5	36
124	Superconducting Filaments Formed During Nonvolatile Resistance Switching in Electrodeposited Î-Bi <sub>2</sub> O <sub>3</sub> . ACS Nano, 2013, 7, 9940-9946.	14.6	42
125	A plasma-treated chalcogenide switch device for stackable scalable 3D nanoscale memory. Nature Communications, 2013, 4, 2629.	12.8	130
126	Total ionizing dose and displacement damage effects on TaO <inf>x</inf> memristive memories. , 2013, , .		8
127	Electrode-dependent resistive switching characteristics of Sr(Ti,Sn)O <sub>3</sub> thin films. Proceedings of SPIE, 2013, , .	0.8	1
128	Transport mechanisms of electrons and holes in dielectric films. Physics-Uspekhi, 2013, 56, 999-1012.	2.2	42
129	Highly Reliable Resistive Switching Without an Initial Forming Operation by Defect Engineering. IEEE Electron Device Letters, 2013, 34, 1515-1517.	3.9	19
130	In Situ TEM and Energy Dispersion Spectrometer Analysis of Chemical Composition Change in ZnO Nanowire Resistive Memories. Analytical Chemistry, 2013, 85, 3955-3960.	6.5	41
131	Highly uniform bipolar resistive switching characteristics in TiO2/BaTiO3/TiO2 multilayer. Applied Physics Letters, 2013, 103, .	3.3	40
132	Sericin for Resistance Switching Device with Multilevel Nonvolatile Memory. Advanced Materials, 2013, 25, 5498-5503.	21.0	219

#	Article	IF	CITATIONS
133	Resistive switching in rectifying interfaces of metal-semiconductor-metal structures. Applied Physics Letters, 2013, 103, .	3.3	15
134	Effects of sidewall etching on electrical properties of SiOx resistive random access memory. Applied Physics Letters, 2013, 103, 213505.	3.3	20
135	TaO x -based resistive switching memories: prospective and challenges. Nanoscale Research Letters, 2013, 8, 418.	5.7	170
136	Impact of electrically formed interfacial layer and improved memory characteristics of IrOx/high-Î <sup>s</sup> x/W structures containing AlOx, GdOx, HfOx, and TaOx switching materials. Nanoscale Research Letters, 2013, 8, 379.	5.7	23
137	Self-compliance-improved resistive switching using Ir/TaO x /W cross-point memory. Nanoscale Research Letters, 2013, 8, 527.	5.7	24
138	Comparison of resistive switching characteristics using copper and aluminum electrodes on GeOx/W cross-point memories. Nanoscale Research Letters, 2013, 8, 509.	5.7	10
139	Single-Step Formation of ZnO/ZnWO <sub><i>x</i></sub> Bilayer Structure via Interfacial Engineering for High Performance and Low Energy Consumption Resistive Memory with Controllable High Resistance States. ACS Applied Materials & Interfaces, 2013, 5, 7831-7837.	8.0	21
140	<i>In situ</i> control of oxygen vacancies in TiO <sub>2</sub> by atomic layer deposition for resistive switching devices. Nanotechnology, 2013, 24, 295202.	2.6	116
141	Complementary Switching in Oxide-Based Bipolar Resistive-Switching Random Memory. IEEE Transactions on Electron Devices, 2013, 60, 70-77.	3.0	145
142	Electric-field induced transition of resistive switching behaviors in BaTiO3/Co:BaTiO3/BaTiO3 trilayers. Applied Physics Letters, 2013, 103, .	3.3	8
143	Non-volatile, reversible switching of the magnetic moment in Mn-doped ZnO films. Journal of Applied Physics, 2013, 113, .	2.5	26
144	Weibull analysis of the kinetics of resistive switches based on tantalum oxide thin films. , 2013, , .		7
145	Variability and failure of set process in HfO <inf>2</inf> RRAM. , 2013, , .		3
146	Magnetism as a probe of the origin of memristive switching in <i>p</i> -type antiferromagnetic NiO. Applied Physics Letters, 2013, 103, 223508.	3.3	25
147	<pre>\$hbox{Ni/GeO}_{x}hbox{/TiO}_{y}hbox{/TaN}\$ RRAM on Flexible Substrate With Excellent Resistance Distribution. IEEE Electron Device Letters, 2013, 34, 505-507.</pre>	3.9	45
148	The Impact of n-p-n Selector-Based Bipolar RRAM Cross-Point on Array Performance. IEEE Transactions on Electron Devices, 2013, 60, 3385-3392.	3.0	18
149	Effects of electrode material and configuration on the characteristics of planar resistive switching devices. APL Materials, 2013, 1, .	5.1	25
150	Real time observation of nanoscale multiple conductive filaments in RRAM by using advanced in-situ TEM. , 2013, , .		2

ARTICLE IF CITATIONS # Logic Computation in Phase Change Materials by Threshold and Memory Switching. Advanced 151 21.0 136 Materials, 2013, 25, 5975-5980. Building Neuromorphic Circuits with Memristive Devices. IEEE Circuits and Systems Magazine, 2013, 13, 2.3 56-73. Spectroscopic investigation of the hole states in Ni-deficient NiO films. Journal of Materials 153 5.5 40 Chemistry C, 2013, 1, 4334. Atomic layer deposition of tantalum oxide and tantalum silicate from TaCl5, SiCl4, and O3: growth 154 behaviour and film characteristics. Journal of Materials Chemistry C, 2013, 1, 5981. Switching mechanism and reverse engineering of low-power Cu-based resistive switching devices. 155 5.6 32 Nanoscale, 2013, 5, 11187. Low power multi-level-cell resistive memory design with incomplete data mapping., 2013, , . Compact analytical models for the SET and RESET switching statistics of RRAM inspired in the 157 5 cell-based percolation model of gate dielectric breakdown., 2013, , . Statistical approach to the RESET switching of the HfO<inf&gt;2&lt;/inf&gt;-based solid electrolyte 158 159 Memristive devices for computing. Nature Nanotechnology, 2013, 8, 13-24. 31.5 3,019 Multiple Memory States in Resistive Switching Devices Through Controlled Size and Orientation of 21.0 144 the Conductive Filament. Advanced Materials, 2013, 25, 1474-1478. Nucleation and growth phenomena in nanosized electrochemical systems for resistive switching 161 2.5 80 memories. Journal of Solid State Electrochemistry, 2013, 17, 365-371. The strain and thermal induced tunable charging phenomenon in low power flexible memory arrays 5.6 with a gold nanoparticle monolayer. Nanoscale, 2013, 5, 1972. HfOx bipolar resistive memory with robust endurance using ZrNx as buttom electrode. Applied 163 6.1 13 Surface Science, 2013, 284, 644-650. The unexpected effects of crystallization on Ta2O5 as studied by HRTEM and C-AFM. Microelectronic 164 2.4 Engineering, 2013, 109, 318-321. Operation and stability analysis of bipolar OxRRAM-based Non-Volatile 8T2R SRAM as solution for 165 1.4 4 information back-up. Solid-State Electronics, 2013, 90, 99-106. Forming time of conducting channels in double-layer Pt/Ta2O5/TaOx/Pt and single-layer Pt/TaOx/Pt 1.8 resistance memories. Thin Solid Films, 2013, 540, 190-193. Formation and characterization of Ta2O5/TaOx films formed by O ion implantation. Nuclear 167 1.4 6 Instruments & Methods in Physics Research B, 2013, 307, 491-494. Resistance switching of copper-doped tantalum oxide prepared by oxidation of copper-doped tantalum 4.8 nitride. Surface and Coatings Technology, 2013, 231, 311-315.

#	Article	IF	CITATIONS
169	Switching Model of TaO <sub>x</sub> -Based Nonpolar Resistive Random Access Memory. Japanese Journal of Applied Physics, 2013, 52, 04CD03.	1.5	4
170	Effect of Ni3+ concentration on the resistive switching behaviors of NiO memory devices. Microelectronic Engineering, 2013, 108, 8-10.	2.4	19
171	Self-Assembled Incorporation of Modulated Block Copolymer Nanostructures in Phase-Change Memory for Switching Power Reduction. ACS Nano, 2013, 7, 2651-2658.	14.6	74
172	Memristor-based neural networks. Journal Physics D: Applied Physics, 2013, 46, 093001.	2.8	307
173	Filament observation in metal-oxide resistive switching devices. Applied Physics Letters, 2013, 102, .	3.3	88
174	The parallel approach. Nature Physics, 2013, 9, 200-202.	16.7	213
175	Stochastic memristive devices for computing and neuromorphic applications. Nanoscale, 2013, 5, 5872.	5.6	395
176	Effect of voltage polarity and amplitude on electroforming of TiO2 based memristive devices. Nanoscale, 2013, 5, 3257.	5.6	17
177	Effect of Electrode Materials on AlN-Based Bipolar and Complementary Resistive Switching. ACS Applied Materials & Interfaces, 2013, 5, 1793-1799.	8.0	56
178	Multi-level conduction in NiO resistive memory device prepared by solution route. Journal Physics D: Applied Physics, 2013, 46, 095301.	2.8	23
179	HfO <sub>x</sub> -Based Vertical Resistive Switching Random Access Memory Suitable for Bit-Cost-Effective Three-Dimensional Cross-Point Architecture. ACS Nano, 2013, 7, 2320-2325.	14.6	309
180	Nanowire-based resistive switching memories: devices, operation and scaling. Journal Physics D: Applied Physics, 2013, 46, 074006.	2.8	50
181	Band alignment between Ta2O5 and metals for resistive random access memory electrodes engineering. Applied Physics Letters, 2013, 102, .	3.3	60
182	Oxide Heterostructure Resistive Memory. Nano Letters, 2013, 13, 2908-2915.	9.1	171
183	Revelation on the Interrelated Mechanism of Polarity-Dependent and Multilevel Resistive Switching in TaO <sub><i>x</i></sub> -Based Memory Devices. Journal of Physical Chemistry C, 2013, 117, 5758-5764.	3.1	35
184	An associative capacitive network based on nanoscale complementary resistive switches for memory-intensive computing. Nanoscale, 2013, 5, 5119.	5.6	44
185	Uniform Complementary Resistive Switching in Tantalum Oxide Using Current Sweeps. IEEE Electron Device Letters, 2013, 34, 114-116.	3.9	36
186	Complementary Resistive Switching in Niobium Oxide-Based Resistive Memory Devices. IEEE Electron Device Letters, 2013, 34, 235-237.	3.9	50

#	Article	IF	CITATIONS
187	Complementary resistive switching mechanism in Ti-based triple TiOx/TiN/TiOx and TiOx/TiOxNy/TiOx matrix. Applied Surface Science, 2013, 274, 85-88.	6.1	17
188	Programmable complementary resistive switching behaviours of a plasma-oxidised titanium oxide nanolayer. Nanoscale, 2013, 5, 422-428.	5.6	66
189	Nonvolatile Memory Devices Prepared from Sol–Gel Derived Niobium Pentoxide Films. Langmuir, 2013, 29, 380-386.	3.5	26
190	Nonvolatile resistive memory devices based on Ag. Journal of Materials Chemistry C, 2013, 1, 3282.	5.5	7
191	Electrical Performance and Scalability of Pt Dispersed SiO <sub>2</sub> Nanometallic Resistance Switch. Nano Letters, 2013, 13, 3213-3217.	9.1	175
192	Bipolar resistive switching in room temperature grown disordered vanadium oxide thin-film devices. Solid-State Electronics, 2013, 87, 21-26.	1.4	13
193	Memristor structures for high scalability: Non-linear and symmetric devices utilizing fabrication friendly materials and processes. Microelectronic Engineering, 2013, 103, 66-69.	2.4	23
194	Resistive switching in zinc–tin-oxide. Solid-State Electronics, 2013, 79, 248-252.	1.4	42
195	Complementary Charge Trapping and Ionic Migration in Resistive Switching of Rare-Earth Manganite TbMnO <sub>3</sub> . ACS Applied Materials & Interfaces, 2013, 5, 1213-1217.	8.0	84
196	A Physics-Based Compact Model of Metal-Oxide-Based RRAM DC and AC Operations. IEEE Transactions on Electron Devices, 2013, 60, 4090-4097.	3.0	169
197	Submerged Liquid Plasma for the Synthesis of Unconventional Nitrogen Polymers. Scientific Reports, 2013, 3, 2414.	3.3	37
198	Real-time identification of the evolution of conducting nano-filaments in TiO2 thin film ReRAM. Scientific Reports, 2013, 3, 3443.	3.3	74
199	Design of cross-point metal-oxide ReRAM emphasizing reliability and cost. , 2013, , .		35
200	Defect Engineering Using Bilayer Structure in Filament-Type RRAM. IEEE Electron Device Letters, 2013, 34, 1250-1252.	3.9	10
201	State Dynamics and Modeling of Tantalum Oxide Memristors. IEEE Transactions on Electron Devices, 2013, 60, 2194-2202.	3.0	183
202	Thermal Modeling of Resistive Switching Devices. IEEE Transactions on Electron Devices, 2013, 60, 1938-1943.	3.0	3
203	The improved resistive switching properties of TaOx-based RRAM devices by using WNx as bottom electrode. Physica B: Condensed Matter, 2013, 410, 85-89.	2.7	20
204	Spike-timing dependent plasticity in a transistor-selected resistive switching memory. Nanotechnology, 2013, 24, 384012.	2.6	86

#	Article	IF	CITATIONS
205	Voltage and Power-Controlled Regimes in the Progressive Unipolar RESET Transition of HfO2-Based RRAM. Scientific Reports, 2013, 3, 2929.	3.3	135
206	Optical properties of uniform, porous, amorphous Ta <sub>2</sub> O <sub>5</sub> coatings on silica: temperature effects. Journal Physics D: Applied Physics, 2013, 46, 455301.	2.8	21
207	The effect of Ca substitution on the structural and electrical properties of La <sub>0.7</sub> Sr <sub>0.3â°'<i>x</i></sub> Ca <sub><i>x</i></sub> MnO <sub>3</sub> perovskite manganite films. Journal Physics D: Applied Physics, 2013, 46, 425102.	2.8	4
208	Resistive Switching: A Solid-State Electrochemical Phenomenon. ECS Journal of Solid State Science and Technology, 2013, 2, P423-P431.	1.8	2
209	Towards the Development of Flexible Nonâ€Volatile Memories. Advanced Materials, 2013, 25, 5425-5449.	21.0	471
210	Improved Switching Uniformity and Low-Voltage Operation in \${m TaO}_{x}-Based RRAM Using Ge Reactive Layer. IEEE Electron Device Letters, 2013, 34, 1130-1132.	3.9	36
211	Pattern classification by memristive crossbar circuits using ex situ and in situ training. Nature Communications, 2013, 4, 2072.	12.8	501
212	TWO CENTURIES OF MEMRISTORS. , 2013, , 508-517.		5
213	Mechanism of power consumption inhibitive multi-layer Zn:SiO2/SiO2structure resistance random access memory. Journal of Applied Physics, 2013, 114, 234501.	2.5	11
214	Memristors for neural branch prediction. , 2013, , .		18
214 215	Memristors for neural branch prediction. , 2013, , . Memory Characteristics of Filament Confined in Tiny ReRAM Structure. Materials Research Society Symposia Proceedings, 2013, 1562, 1.	0.1	18 0
	Memory Characteristics of Filament Confined in Tiny ReRAM Structure. Materials Research Society	0.1	
215	Memory Characteristics of Filament Confined in Tiny ReRAM Structure. Materials Research Society Symposia Proceedings, 2013, 1562, 1. 32 × 32 Crossbar Array Resistive Memory Composed of a Stacked Schottky Diode and Unipolar Resistive		0
215 216	<ul> <li>Memory Characteristics of Filament Confined in Tiny ReRAM Structure. Materials Research Society Symposia Proceedings, 2013, 1562, 1.</li> <li>32 Ã – 32 Crossbar Array Resistive Memory Composed of a Stacked Schottky Diode and Unipolar Resistive Memory. Advanced Functional Materials, 2013, 23, 1440-1449.</li> <li>Filament Evolution during Set and Reset Transitions in Oxide Resistive Switching Memory. Japanese</li> </ul>	14.9	0 152
215 216 217	<ul> <li>Memory Characteristics of Filament Confined in Tiny ReRAM Structure. Materials Research Society Symposia Proceedings, 2013, 1562, 1.</li> <li>32 Ã – 32 Crossbar Array Resistive Memory Composed of a Stacked Schottky Diode and Unipolar Resistive Memory. Advanced Functional Materials, 2013, 23, 1440-1449.</li> <li>Filament Evolution during Set and Reset Transitions in Oxide Resistive Switching Memory. Japanese Journal of Applied Physics, 2013, 52, 04CD10.</li> <li>Microscopic Investigation of the Electrical and Structural Properties of Conductive Filaments</li> </ul>	14.9 1.5	0 152 8
<ul><li>215</li><li>216</li><li>217</li><li>218</li></ul>	Memory Characteristics of Filament Confined in Tiny ReRAM Structure. Materials Research Society         Symposia Proceedings, 2013, 1562, 1.         32 Å- 32 Crossbar Array Resistive Memory Composed of a Stacked Schottky Diode and Unipolar Resistive         Memory. Advanced Functional Materials, 2013, 23, 1440-1449.         Filament Evolution during Set and Reset Transitions in Oxide Resistive Switching Memory. Japanese Journal of Applied Physics, 2013, 52, 04CD10.         Microscopic Investigation of the Electrical and Structural Properties of Conductive Filaments Formed in Pt/NiO/Pt Resistive Switching Cells. Japanese Journal of Applied Physics, 2013, 52, 041801.         Nonvolatile three-terminal operation based on oxygen vacancy drift in a	14.9 1.5 1.5	0 152 8 11
<ul> <li>215</li> <li>216</li> <li>217</li> <li>218</li> <li>219</li> </ul>	Memory Characteristics of Filament Confined in Tiny ReRAM Structure. Materials Research Society         Symposia Proceedings, 2013, 1562, 1.         32 Å – 32 Crossbar Array Resistive Memory Composed of a Stacked Schottky Diode and Unipolar Resistive         Memory. Advanced Functional Materials, 2013, 23, 1440-1449.         Filament Evolution during Set and Reset Transitions in Oxide Resistive Switching Memory. Japanese         Journal of Applied Physics, 2013, 52, 04CD10.         Microscopic Investigation of the Electrical and Structural Properties of Conductive Filaments         Formed in Pt/NiO/Pt Resistive Switching Cells. Japanese Journal of Applied Physics, 2013, 52, 041801.         Nonvolatile three-terminal operation based on oxygen vacancy drift in a         Pt/Ta <sub>2</sub> O <sub>5â°x         A Light Incident Angle Switchable ZnO Nanorod Memristor: Reversible Switching Behavior Between</sub>	14.9 1.5 1.5 3.3	0 152 8 11 12

#	Article	IF	CITATIONS
223	Dynamics of percolative breakdown mechanism in tantalum oxide resistive switching. Applied Physics Letters, 2013, 103, 173503.	3.3	13
224	Multi-level resistive switching observations in asymmetric Pt/Ta2O5â^'x/TiOxNy/TiN/Ta2O5â^'x/Pt multilayer configurations. Applied Physics Letters, 2013, 103, .	3.3	23
225	Effect of chemical bonding states in TaOx base layers on rectifying bipolar resistive switching characteristics. Journal of Vacuum Science and Technology B:Nanotechnology and Microelectronics, 2013, 31, 032206.	1.2	3
226	Ion implantation synthesis and conduction of tantalum oxide resistive memory layers. Journal of Vacuum Science and Technology B:Nanotechnology and Microelectronics, 2013, 31, .	1.2	2
227	Impact of Joule heating on the microstructure of nanoscale TiO2 resistive switching devices. Journal of Applied Physics, 2013, 113, .	2.5	30
228	Theoretical studies on distribution of resistances in multilevel bipolar oxide resistive memory by Monte Carlo method. Applied Physics Letters, 2013, 103, .	3.3	13
229	A physical model of switching dynamics in tantalum oxide memristive devices. Applied Physics Letters, 2013, 102, 223502.	3.3	66
230	Effect of oxygen profiles on the RS characteristics of bilayer TaO <inf>x</inf> /TaO <inf>y</inf> based RRAM. , 2013, , .		0
231	Carrier type dependence on spatial asymmetry of unipolar resistive switching of metal oxides. Applied Physics Letters, 2013, 103, .	3.3	24
232	Bipolar resistive switching in an amorphous zinc tin oxide memristive device. Journal of Vacuum Science and Technology B:Nanotechnology and Microelectronics, 2013, 31, .	1.2	17
233	A high-energy electron scattering study of the electronic structure and elemental composition of O-implanted Ta films used for the fabrication of memristor devices. Journal of Applied Physics, 2013, 114, 073508.	2.5	13
234	Dislocation impact on resistive switching in single-crystal SrTiO3. Journal of Applied Physics, 2013, 113, ·	2.5	24
235	Latch-up based bidirectional npn selector for bipolar resistance-change memory. Applied Physics Letters, 2013, 103, .	3.3	21
236	Low power W:AlOx/WOx bilayer resistive switching structure based on conductive filament formation and rupture mechanism. Applied Physics Letters, 2013, 102, .	3.3	50
237	Two opposite hysteresis curves in semiconductors with mobile dopants. Applied Physics Letters, 2013, 102, .	3.3	20
238	Multilayer-oxide-based bidirectional cell selector device for cross-point resistive memory applications. Applied Physics Letters, 2013, 103, .	3.3	13
239	Pinhole mediated electrical transport across LaTiO3/SrTiO3 and LaAlO3/SrTiO3 oxide hetero-structures. Applied Physics Letters, 2013, 103, 211601.	3.3	5
240	Random telegraph noise (RTN) in scaled RRAM devices. , 2013, , .		62

#	Article	IF	CITATIONS
241	Conduction mechanism of self-rectifying n <sup>+</sup> Si-HfO <inf>2</inf> -Ni RRAM. , 2013, , .		0
242	Improvement of resistive switching uniformity for TiO <sub>2</sub> -based memristive devices by introducing a thin HfO <sub>2</sub> layer. Journal of Vacuum Science and Technology B:Nanotechnology and Microelectronics, 2013, 31, 06FA04.	1.2	13
243	Hidden Structural Order in Orthorhombic <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"&gt;<mml:msub><mml:mi>Ta</mml:mi><mml:mn>2</mml:mn></mml:msub><mml:msub><mml:mi mathvariant="bold"&gt;Oini&gt;Ta</mml:mi </mml:msub><td>7.8</td><td>79</td></mml:math 	7.8	79
244	Letters, 2013, 110, 235502. MEMRISTOR MODELS IN A CHAOTIC NEURAL CIRCUIT. International Journal of Bifurcation and Chaos in Applied Sciences and Engineering, 2013, 23, 1350052.	1.7	23
245	Recent Advances and Future Prospects in Functional-Oxide Nanoelectronics: The Emerging Materials and Novel Functionalities that are Accelerating Semiconductor Device Research and Development. Japanese Journal of Applied Physics, 2013, 52, 100001.	1.5	37
246	Band offsets in transition-metal oxide heterostructures. Journal Physics D: Applied Physics, 2013, 46, 295303.	2.8	10
247	Migration of interfacial oxygen ions modulated resistive switching in oxide-based memory devices. Journal of Applied Physics, 2013, 114, 014502.	2.5	69
248	Nonvolatile multilevel data storage memory device from controlled ambipolar charge trapping mechanism. Scientific Reports, 2013, 3, 2319.	3.3	106
250	Resistive switching behaviour of a tantalum oxide nanolayer fabricated by plasma oxidation. Physica Status Solidi - Rapid Research Letters, 2013, 7, 282-284.	2.4	16
251	A Low Energy Oxideâ€Based Electronic Synaptic Device for Neuromorphic Visual Systems with Tolerance to Device Variation. Advanced Materials, 2013, 25, 1774-1779.	21.0	445
252	Resistive switching characteristics of Pt/TaOx/HfNx structure and its performance improvement. AIP Advances, 2013, 3, .	1.3	16
253	Formation of double ring patterns on Co2MnSi Heusler alloy thin film by anodic oxidation under scanning probe microscope. AIP Advances, 2013, 3, .	1.3	7
255	Materials selection for oxide-based resistive random access memories. Applied Physics Letters, 2014, 105, .	3.3	92
256	The Susceptibility of <formula formulatype="inline"> <tex notation="TeX">\${hbox {TaO}}_{m x}\$</tex></formula> -Based Memristors to High Dose Rate Ionizing Radiation and Total Ionizing Dose. IEEE Transactions on Nuclear Science, 2014, 61, 2997-3004.	2.0	13
257	The origin of 2.7 eV blue luminescence band in zirconium oxide. Journal of Applied Physics, 2014, 116, .	2.5	39
258	Percolation conductivity in hafnium sub-oxides. Applied Physics Letters, 2014, 105, 262903.	3.3	15
259	Comparison on TiO <inf>2</inf> and TaO <inf>2</inf> based bipolar resistive switching devices. , 2014, , .		2
260	Analysis of the Voltage–Time Dilemma of Metal Oxide-Based RRAM and Solution Exploration of High Speed and Low Voltage AC Switching. IEEE Nanotechnology Magazine, 2014, 13, 1127-1132.	2.0	24

#	Article	IF	CITATIONS
261	Memristive devices for stochastic computing. , 2014, , .		41
262	Origin of the SET Kinetics of the Resistive Switching in Tantalum Oxide Thin Films. IEEE Electron Device Letters, 2014, 35, 259-261.	3.9	47
263	Non-volatile, electric control of magnetism in Mn-substituted ZnO. Applied Physics Letters, 2014, 104, .	3.3	32
264	Nonvolatile memories: Present and future challenges. , 2014, , .		31
265	Electronic properties of tantalum pentoxide polymorphs from first-principles calculations. Applied Physics Letters, 2014, 105, 202108.	3.3	30
266	Compact Ga-Doped ZnO Nanorod Thin Film for Making High-Performance Transparent Resistive Switching Memory. IEEE Transactions on Electron Devices, 2014, 61, 3435-3441.	3.0	38
267	Complementary switching on TiN/MgZnO/ZnO/Pt bipolar memory devices for nanocrossbar arrays. Journal of Alloys and Compounds, 2014, 615, 566-568.	5.5	13
268	Memristive Devices: Switching Effects, Modeling, and Applications. , 2014, , 195-221.		4
269	Reliability characterization of a commercial TaO <inf>x</inf> -based ReRAM. , 2014, , .		2
270	Investigation of bipolar resistive switching characteristics in Si <sub align="right">3N<sub align="right"&gt;4-based RRAM with metal-insulator-silicon structure. International Journal of Nanotechnology, 2014, 11, 126.</sub </sub>	0.2	6
271	Analysis of conduction mechanism in silicon nitride-based RRAM. International Journal of Nanotechnology, 2014, 11, 167.	0.2	3
272	A tantalum oxide memristor for artificial synapse applications. , 2014, , .		2
273	Impact of vacancy clusters on characteristic resistance change of nonstoichiometric strontium titanate nano-film. Applied Physics Letters, 2014, 104, .	3.3	15
274	Analytical estimations for thermal crosstalk, retention, and scaling limits in filamentary resistive memory. Journal of Applied Physics, 2014, 115, 234507.	2.5	16
275	Role of the Ta scavenger electrode in the excellent switching control and reliability of a scalable low-current operated TiNTa <inf>2</inf> O <inf>5</inf> Ta RRAM device. , 2014, , .		19
276	Interpretation of set and reset switching in nickel oxide thin films. Applied Physics Letters, 2014, 104, .	3.3	5
277	Emerging resistive switching memory technologies: Overview and current status. , 2014, , .		7
278	Three-terminal resistive switching memory in a transparent vertical-configuration device. Applied	3.3	5

#	Article	IF	CITATIONS
279	Stabilizing resistive switching performances of TiN/MgZnO/ZnO/Pt heterostructure memory devices by programming the proper compliance current. Applied Physics Letters, 2014, 104, .	3.3	40
280	Resistive switching of a TaOx/TaON double layer via ionic control of carrier tunneling. Applied Physics Letters, 2014, 104, .	3.3	21
281	Effect of La3+ substitution with Gd3+ on the resistive switching properties of La0.7Sr0.3MnO3 thin films. Applied Physics Letters, 2014, 104, .	3.3	25
282	Effect of Hf incorporation in solution-processed NiOx based resistive random access memory. Applied Physics Letters, 2014, 104, 093508.	3.3	13
283	Filament formation and erasure in molybdenum oxide during resistive switching cycles. Applied Physics Letters, 2014, 105, .	3.3	41
284	Resistive switching characteristics of indiumâ€ŧinâ€oxide thin film devices. Physica Status Solidi (A) Applications and Materials Science, 2014, 211, 1194-1199.	1.8	3
285	Improved highâ€ŧemperature switching characteristics of Y <sub>2</sub> O <sub>3</sub> /TiO <i><sub>x</sub></i> resistive memory through carrier depletion effect. Physica Status Solidi - Rapid Research Letters, 2014, 8, 431-435.	2.4	8
286	A Native Stochastic Computing Architecture Enabled by Memristors. IEEE Nanotechnology Magazine, 2014, 13, 283-293.	2.0	85
287	Extremely small test cell structure for resistive random access memory element with removable bottom electrode. Applied Physics Letters, 2014, 104, 083518.	3.3	5
288	Redoxâ€Based Resistive Switching Memories (ReRAMs): Electrochemical Systems at the Atomic Scale. ChemElectroChem, 2014, 1, 26-36.	3.4	144
289	Oxygen vacancy defects in Ta2O5 showing long-range atomic re-arrangements. Applied Physics Letters, 2014, 104, .	3.3	42
290	Bipolar Electric-Field Enhanced Trapping and Detrapping of Mobile Donors in BiFeO <sub>3</sub> Memristors. ACS Applied Materials & Interfaces, 2014, 6, 19758-19765.	8.0	84
291	Anomalous effect due to oxygen vacancy accumulation below the electrode in bipolar resistance switching Pt/Nb:SrTiO3 cells. APL Materials, 2014, 2, .	5.1	39
292	Random telegraph noise analysis in AlOx/WOy resistive switching memories. Applied Physics Letters, 2014, 104, .	3.3	20
293	Write-once-read-many-times characteristics of Pt/Al2O3/ITO memory devices. Journal of Applied Physics, 2014, 116, .	2.5	15
294	Electronic Instabilities Leading to Electroformation of Binary Metal Oxideâ€based Resistive Switches. Advanced Functional Materials, 2014, 24, 5522-5529.	14.9	70
295	Memristive Circuits for LDPC Decoding. IEEE Journal on Emerging and Selected Topics in Circuits and Systems, 2014, 4, 412-426.	3.6	2
296	Effect of oxide/oxide interface on polarity dependent resistive switching behavior in ZnO/ZrO2 heterostructures. Applied Physics Letters, 2014, 104, .	3.3	49

CITATION REPORT

#	Article	IF	CITATIONS
297	Intrinsic SiOx-based unipolar resistive switching memory. II. Thermal effects on charge transport and characterization of multilevel programing. Journal of Applied Physics, 2014, 116, .	2.5	83
298	Resistive switching properties and physical mechanism of cobalt ferrite thin films. Applied Physics Letters, 2014, 104, .	3.3	60
299	On the bipolar resistive-switching characteristics of Al2O3- and HfO2-based memory cells operated in the soft-breakdown regime. Journal of Applied Physics, 2014, 116, 134502.	2.5	26
300	Oxide based two diodes–one resistor structure for bipolar RRAM crossbar array. Microelectronic Engineering, 2014, 130, 35-39.	2.4	1
301	Electronic structure and stability of low symmetry Ta <sub>2</sub> O <sub>5</sub> polymorphs. Physica Status Solidi - Rapid Research Letters, 2014, 8, 560-565.	2.4	26
302	Memristors and Memristive Systems. , 2014, , .		109
303	Metal-organic molecular device for non-volatile memory storage. Applied Physics Letters, 2014, 105, .	3.3	7
304	Crossbar RRAM Arrays: Selector Device Requirements During Write Operation. IEEE Transactions on Electron Devices, 2014, 61, 2820-2826.	3.0	187
305	Highly transparent bipolar resistive switching memory with In-Ga-Zn-O semiconducting electrode in In-Ga-Zn-O/Ga2O3/In-Ga-Zn-O structure. Applied Physics Letters, 2014, 105, 093502.	3.3	34
306	Study of the bipolar resistiveâ€switching behaviors in Pt/ <scp>G</scp> d <scp>O</scp> <sub><i>x</i></sub> / <scp>T</scp> a <scp>N</scp> <sub><i>x</i></sub> structure for <scp>RRAM</scp> application. Physica Status Solidi (A) Applications and Materials Science, 2014, 211, 173-179.	1.8	13
307	Resistance uniformity of TiO <inf>2</inf> memristor with different thin film thickness. , 2014, , .		1
308	Coexistence of unipolar and bipolar resistive switching in Pt/NiO/Pt. Applied Physics Letters, 2014, 104, .	3.3	33
309	Single-Event Effect Performance of a Commercial Embedded ReRAM. IEEE Transactions on Nuclear Science, 2014, 61, 3088-3094.	2.0	39
310	Voltage sweep modulated conductance quantization in oxide nanocomposites. Journal of Materials Chemistry C, 2014, 2, 10291-10297.	5.5	29
311	Simulation of TaO <inf>x</inf> -based complementary resistive switches by a physics-based memristive model. , 2014, , .		33
312	Modeling of filamentary resistive memory by concentric cylinders with variable conductivity. Applied Physics Letters, 2014, 105, 183511.	3.3	5
313	Oxide based resistive RAM: ON/OFF resistance analysis versus circuit variability. , 2014, , .		1
314	Access devices for 3D crosspoint memory. Journal of Vacuum Science and Technology B:Nanotechnology and Microelectronics, 2014, 32, .	1.2	276

		CITATION REPORT		
#	Article		IF	CITATIONS
315	Voltage switching of a VO2 memory metasurface using ionic gel. Applied Physics Lette	rs, 2014, 105, .	3.3	60
316	Retention failure analysis of metal-oxide based resistive memory. Applied Physics Letter 113510.	rs, 2014, 105,	3.3	42
317	Resistive switches in Ta <inf>2</inf> O <inf>5-α</inf> /TaO <inf>2−xTa<inf>2</inf>O<inf>5-α</inf>/TaO<inf>2−x</inf>/TaO<inf>2ȡ Structures. , 2014, , .</inf></inf>			0
318	Understanding the impact of programming pulses and electrode materials on the endu properties of scaled Ta <inf>2</inf> O <inf>5</inf> RRAM cells. , 2014, , .	irance		16
319	8-inch wafer-scale HfO <inf>x</inf> -based RRAM for 1S-1R cross-point memo 2014, , .	ry applications. ,		0
320	Electrode-material dependent switching in TaO <sub><i>x</i></sub> memristors. Semic Science and Technology, 2014, 29, 104003.	conductor	2.0	27
321	Enhanced resistive switching memory characteristics and mechanism using a Ti nanola W/TaO x interface. Nanoscale Research Letters, 2014, 9, 125.	yer at the	5.7	19
322	Using memristor state change behavior to identify faults in photovoltaic arrays. , 2014			3
325	Dual random circuit breaker network model with equivalent thermal circuit network. A Express, 2014, 7, 024203.	pplied Physics	2.4	6
326	Novel strained SiGe/TaO <inf>x</inf> /Ta RRAM device fabricated by fully CMOS compate 2014, , .	ible process. ,		0
327	A Study on the Resistive Switching of La <sub>0.7</sub> Sr <sub>0.3</sub> MnO <sub> Spectromicroscopy. Applied Mechanics and Materials, 2014, 597, 184-187.</sub>	3 Film Using	0.2	2
328	Low temperature reduction in Ta–O and Nb–O thin films. Journal Physics D: Applie 135301.	d Physics, 2014, 47,	2.8	12
329	Memristor Device Engineering and CMOS Integration for Reconfigurable Logic Applicat 327-351.	tions. , 2014, ,		3
330	Formation Energy Study of Oxygen Vacancies in Undoped, Aluminum-Doped and Nitro Tao <sub>x</sub> -Based RRAM by First Principle Simulation. ECS Transactions, 2014, 6	gen-Doped 0, 15-19.	0.5	3
331	Thermal stability investigation in highly- uniform and low-voltage tantalum oxide-based	RRAM. , 2014, ,		2
332	3-bit read scheme for single layer Ta2O5 ReRAM. , 2014, , .			3
333	(Keynote) Requirements for the Emerging Memory Era. ECS Transactions, 2014, 60, 98	33-988.	0.5	0
334	Different set processes for bipolar resistance switching in a Ta/TaO x /Pt thin film. Jourr Korean Physical Society, 2014, 65, 1073-1077.	nal of the	0.7	0

#	Article	IF	CITATIONS
335	Au doping effects in HfO2-based resistive switching memory. Journal of Alloys and Compounds, 2014, 610, 388-391.	5.5	38
336	Enhanced dielectric properties of Ti-doped Ta2O5 single crystal grown by floating zone technique. Journal of Alloys and Compounds, 2014, 588, 42-45.	5.5	9
337	FPGA-RPI: A Novel FPGA Architecture With RRAM-Based Programmable Interconnects. IEEE Transactions on Very Large Scale Integration (VLSI) Systems, 2014, 22, 864-877.	3.1	76
338	Effect of cation and anion defects on the resistive switching polarity of ZnO x thin films. Applied Physics A: Materials Science and Processing, 2014, 114, 847-852.	2.3	6
339	Enhanced resistive switching phenomena using low-positive-voltage format and self-compliance IrO x /GdO x /W cross-point memories. Nanoscale Research Letters, 2014, 9, 12.	5.7	30
340	Tailoring resistive switching characteristics in WOx films using different metal electrodes. Current Applied Physics, 2014, 14, S93-S97.	2.4	8
341	HfO2 based memory devices with rectifying capabilities. Journal of Applied Physics, 2014, 115, 024501.	2.5	12
342	Enhanced endurance reliability and low current operation for AlOx/HfOx based unipolar RRAM with Ni electrode. Solid-State Electronics, 2014, 94, 1-5.	1.4	10
343	Observation of bias-dependent noise sources in a TiOx/TiOy bipolar resistive switching frame. Applied Physics Letters, 2014, 104, 083508.	3.3	3
344	Dependence of reactive metal layer on resistive switching in a bi-layer structure Ta/HfOx filament type resistive random access memory. Applied Physics Letters, 2014, 104, 083507.	3.3	17
345	Towards forming-free resistive switching in oxygen engineered HfO2â^'x. Applied Physics Letters, 2014, 104, .	3.3	148
346	Current hysteresis by oxygen vacancy exchange between oxides in Pt/a-IGZO/TaOx/W. Applied Surface Science, 2014, 293, 220-224.	6.1	7
347	Colossal resistance switching in Pt/BiFeO3/Nb:SrTiO3 memristor. Applied Physics A: Materials Science and Processing, 2014, 116, 1741-1745.	2.3	16
348	Tunable, Ultralowâ€Power Switching in Memristive Devices Enabled by a Heterogeneous Graphene–Oxide Interface. Advanced Materials, 2014, 26, 3275-3281.	21.0	69
349	Effects of Standard Free Energy on NiO Bipolar Resistive Switching Devices. IEEE Transactions on Electron Devices, 2014, 61, 1237-1240.	3.0	7
350	Impact of the Mechanical Stress on Switching Characteristics of Electrochemical Resistive Memory. Advanced Materials, 2014, 26, 3885-3892.	21.0	97
351	Unravelling the Nature of Unipolar Resistance Switching in Organic Devices by Utilizing the Photovoltaic Effect. Advanced Materials, 2014, 26, 2508-2513.	21.0	53
352	Reactive sputtering of substoichiometric Ta2Ox for resistive memory applications. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2014, 32, .	2.1	34

#	Article	IF	CITATIONS
353	Highly Uniform Resistive Switching Properties of Amorphous InGaZnO Thin Films Prepared by a Low Temperature Photochemical Solution Deposition Method. ACS Applied Materials & Interfaces, 2014, 6, 5012-5017.	8.0	117
354	Highly Uniform, Electroformingâ€Free, and Selfâ€Rectifying Resistive Memory in the Pt/Ta <sub>2</sub> O <sub>5</sub> /HfO <sub>2â€x</sub> /TiN Structure. Advanced Functional Materials, 2014, 24, 5086-5095.	14.9	197
355	Resistive switching dependence on atomic layer deposition parameters in HfO <sub>2</sub> -based memory devices. Journal of Materials Chemistry C, 2014, 2, 3204-3211.	5.5	52
356	Conducting-Interlayer SiO <sub><i>x</i></sub> Memory Devices on Rigid and Flexible Substrates. ACS Nano, 2014, 8, 1410-1418.	14.6	27
357	Probing the switching mechanism in ZnO nanoparticle memristors. Journal of Applied Physics, 2014, 116, 114501.	2.5	23
358	Metallic to hopping conduction transition in Ta2O5â^'x/TaOy resistive switching device. Applied Physics Letters, 2014, 105, .	3.3	79
359	Device engineering and CMOS integration of nanoscale memristors. , 2014, , .		5
360	An overview of the switching parameter variation of RRAM. Science Bulletin, 2014, 59, 5324-5337.	1.7	14
361	Stack engineering for ReRAM devices performance improvement. , 2014, , .		0
362	Nonvolatile memory cells based on the effect of resistive switching in depth-graded ternary Hf x Al1 â^' x O y oxide films. Russian Microelectronics, 2014, 43, 239-245.	0.5	6
363	Charge carrier transport mechanism in high- $\hat{I}^{\circ}$ dielectrics and their based resistive memory cells. Optoelectronics, Instrumentation and Data Processing, 2014, 50, 310-314.	0.6	3
364	Recent progress in resistive random access memories: Materials, switching mechanisms, and performance. Materials Science and Engineering Reports, 2014, 83, 1-59.	31.8	1,160
365	Memristor Kinetics and Diffusion Characteristics for Mixed Anionicâ€Electronic SrTiO <sub>3â€Î</sub> Bits: The Memristorâ€Based Cottrell Analysis Connecting Material to Device Performance. Advanced Functional Materials, 2014, 24, 7448-7460.	14.9	99
366	Feasibility study of using a Zener diode as the selection device for bipolar RRAM and WORM memory arrays. Journal Physics D: Applied Physics, 2014, 47, 025103.	2.8	2
367	Study of redox reactions in resistive switching processes of AlO <inf>x</inf> /WO <inf>y</inf> based bilayer RRAM. , 2014, , .		0
368	Localized resistive switching in a ZnS–Ag/ZnS double-layer memory. Journal Physics D: Applied Physics, 2014, 47, 455101.	2.8	7
369	Inorganic–organic hybrid polymer with multiple redox for high-density data storage. Chemical Science, 2014, 5, 3404-3408.	7.4	164
370	Flexible one diode–one resistor resistive switching memory arrays on plastic substrates. RSC Advances, 2014, 4, 20017-20023.	3.6	40

#	Article	IF	CITATIONS
371	Radiation-induced resistance changes in TaO <inf>x</inf> and TiO <inf>2</inf> memristors. , 2014, , .		5
372	Tunable Multilevel Storage of Complementary Resistive Switching on Single-Step Formation of ZnO/ZnWO <sub><i>x</i></sub> Bilayer Structure via Interfacial Engineering. ACS Applied Materials & Interfaces, 2014, 6, 17686-17693.	8.0	18
373	Feasibility of Schottky diode as selector for bipolar-type resistive random access memory applications. Applied Physics Letters, 2014, 104, 132105.	3.3	7
374	Memristive switching: physical mechanisms and applications. Modern Physics Letters B, 2014, 28, 1430003.	1.9	24
375	Complementary Resistive Switching in Flexible RRAM Devices. IEEE Electron Device Letters, 2014, 35, 915-917.	3.9	20
376	Oxygen vacancy effects on an amorphous-TaO <sub><i>x</i></sub> -based resistance switch: a first principles study. Nanoscale, 2014, 6, 10169-10178.	5.6	45
377	Optimized Lightning-Rod Effect to Overcome Trade-Off Between Switching Uniformity and On/Off Ratio in ReRAM. IEEE Electron Device Letters, 2014, 35, 214-216.	3.9	6
378	Random telegraph noise and resistance switching analysis of oxide based resistive memory. Nanoscale, 2014, 6, 400-404.	5.6	129
379	Effects of ionizing radiation on TaO <inf>x</inf> -based memristive devices. , 2014, , .		5
380	Nonvolatile Resistance Switching on Two-Dimensional Electron Gas. ACS Applied Materials & Interfaces, 2014, 6, 17785-17791.	8.0	5
381	Exploiting Memristive BiFeO <sub>3</sub> Bilayer Structures for Compact Sequential Logics. Advanced Functional Materials, 2014, 24, 3357-3365.	14.9	116
382	Tuning Resistive Switching Characteristics of Tantalum Oxide Memristors through Si Doping. ACS Nano, 2014, 8, 10262-10269.	14.6	106
383	Device Size-Dependent Improved Resistive Switching Memory Performance. IEEE Nanotechnology Magazine, 2014, 13, 409-417.	2.0	21
384	Extremely small resistive random access memory test cell structure with removable and movable bottom electrode. , 2014, , .		0
385	Oxide Resistive Memory with Functionalized Graphene as Builtâ€in Selector Element. Advanced Materials, 2014, 26, 3693-3699.	21.0	69
386	A SELF-RECTIFYING BIPOLAR RRAM DEVICE BASED ON Ni/HfO2/n+-Si STRUCTURE. Modern Physics Letters B, 2014, 28, 1450030.	1.9	1
387	Detection and characterization of multi-filament evolution during resistive switching. Applied Physics Letters, 2014, 105, .	3.3	18
388	Reliable Control of Filament Formation in Resistive Memories by Self-Assembled Nanoinsulators Derived from a Block Copolymer. ACS Nano, 2014, 8, 9492-9502.	14.6	93

ARTICLE IF CITATIONS All-Printed Paper Memory. ACS Nano, 2014, 8, 7613-7619. 389 14.6 137 Direct Observation of Conversion Between Threshold Switching and Memory Switching Induced by 14.9 Conductive Filament Morphology. Advanced Functional Materials, 2014, 24, 5679-5686. Resistive Switching Performance Improvement of  ${m Ta}_{2}{m O}_{5-x}/{m TaO}_{y}$  Bilayer 391 ReRAM Devices by Inserting \${m AlO} {delta}\$ Barrier Layer. IEEE Electron Device Letters, 2014, 35, 3.9 60 39-41. Integrated One Diodeâ&"One Resistor Architecture in Nanopillar SiO<sub><i>x</i></sub> Resistive 9.1 Switching Memory by Nanosphere Lithography. Nano Letters, 2014, 14, 813-818. Bipolar Resistance Switching in Transparent ITO/LaAlO<sub>3</sub>/SrTiO<sub>3</sub> Memristors. 393 8.0 77 ACS Applied Materials & amp; Interfaces, 2014, 6, 8575-8579. Novel Electroformingâ€Free Nanoscaffold Memristor with Very High Uniformity, Tunability, and Density. Advanced Materials, 2014, 26, 6284-6289. 394 21.0 Design and Optimization of Nonvolatile Multibit 1T1R Resistive RAM. IEEE Transactions on Very Large 395 3.1 95 Scale Integration (VLSI) Systems, 2014, 22, 1815-1828. Applicability of Well-Established Memristive Models for Simulations of Resistive Switching Devices. 396 5.4 IEEE Transactions on Circuits and Systems I: Regular Papers, 2014, 61, 2402-2410. Atomic Layer Deposition of Transparent VO<sub><i>x</i>x</i>x</i>s</sub> Thin Films for Resistive Switching 397 1.3 28 Applications. Chemical Vapor Deposition, 2014, 20, 291-297. Mechanism of electrical shorting failure mode in resistive switching. Journal of Applied Physics, 2014, 2.5 116,034506. An upconverted photonic nonvolatile memory. Nature Communications, 2014, 5, 4720. 399 12.8 121 A cellular computing architecture for parallel memristive stateful logic. Microelectronics Journal, 400 2014, 45, 143'8-1449. Self-compliance RRAM characteristics using a novel W/TaO x /TiN structure. Nanoscale Research 401 5.7 38 Letters, 2014, 9, 292. Metal oxide resistive random access memory (RRAM) technology. , 2014, , 288-340. Band alignment at memristive metal-oxide interfaces investigated by hard x-ray photoemission 403 3.2 9 spectroscopy. Physical Review B, 2014, 90, . Memristive behavior of ZnO film with embedded Ti nano-layers. Applied Physics A: Materials Science 404 and Processing, 2014, 116, 1-7. Ion transport-related resistive switching in film sandwich structures. Science Bulletin, 2014, 59, 405 1.7 9 2363-2382. Ultra-Low-Energy Three-Dimensional Oxide-Based Electronic Synapses for Implementation of Robust 14.6 High-Accuracy Neuromorphic Computation Systems. ACS Nano, 2014, 8, 6998-7004.

#	ARTICLE Influence of oxygen ion drift on a negative difference behavior in a reset process of bipolar resistive	IF	CITATIONS
407	switching. Current Applied Physics, 2014, 14, 355-358.	2.4	1
408	Origin of the OFF state variability in ReRAM cells. Journal Physics D: Applied Physics, 2014, 47, 145102.	2.8	25
409	A Review of Threeâ€Dimensional Resistive Switching Crossâ€Bar Array Memories from the Integration and Materials Property Points of View. Advanced Functional Materials, 2014, 24, 5316-5339.	14.9	319
410	Nanoporous Silicon Oxide Memory. Nano Letters, 2014, 14, 4694-4699.	9.1	62
411	Large-Scale Memristive Associative Memories. IEEE Transactions on Very Large Scale Integration (VLSI) Systems, 2014, 22, 562-574.	3.1	33
412	Self-Rectifying Effect in Resistive Switching Memory Using Amorphous InGaZnO. Journal of Electronic Materials, 2014, 43, 1384-1388.	2.2	6
413	Effects of High-Pressure Hydrogen Annealing on the Formation of Conducting Filaments in Filament-Type Resistive Random-Access Memory. Journal of Electronic Materials, 2014, 43, 3635-3639.	2.2	2
414	Isothermal Switching and Detailed Filament Evolution in Memristive Systems. Advanced Materials, 2014, 26, 4486-4490.	21.0	53
415	Stabilized resistive switching behaviors of a Pt/TaO <sub> <i>x</i> </sub> /TiN RRAM under different oxygen contents. Physica Status Solidi (A) Applications and Materials Science, 2014, 211, 2189-2194.	1.8	35
416	Homogeneous barrier modulation of TaO <sub>x</sub> /TiO <sub>2</sub> bilayers for ultra-high endurance three-dimensional storage-class memory. Nanotechnology, 2014, 25, 165202.	2.6	76
417	Electrochemical dynamics of nanoscale metallic inclusions in dielectrics. Nature Communications, 2014, 5, 4232.	12.8	511
418	Resistive Switchingâ€based Electroâ€Optical Modulation. Advanced Optical Materials, 2014, 2, 1149-1154.	7.3	16
419	Mechanism of the reset process in bipolar-resistance-switching Ta/TaOx/Pt capacitors based on observation of the capacitance and resistance. Applied Physics Letters, 2014, 104, 123503.	3.3	2
420	Thermoelectric Seebeck effect in oxide-based resistive switching memory. Nature Communications, 2014, 5, 4598.	12.8	92
421	A new bipolar RRAM selector based on anti-parallel connected diodes for crossbar applications. Nanotechnology, 2014, 25, 185201.	2.6	11
422	Comprehensive Physical Model of Dynamic Resistive Switching in an Oxide Memristor. ACS Nano, 2014, 8, 2369-2376.	14.6	388
423	System-level impacts of persistent main memory using a search engine. Microelectronics Journal, 2014, 45, 211-216.	2.0	1
424	RRAM-based FPGA for "Normally Off, Instantly On―applications. Journal of Parallel and Distributed Computing, 2014, 74, 2441-2451.	4.1	13

#	Article	IF	CITATIONS
425	Polymer memristor for information storage and neuromorphic applications. Materials Horizons, 2014, 1, 489.	12.2	209
430	Low-current and high-endurance logic operations in 4F <sup>2</sup> -compatible TaO <inf>x</inf> -based complementary resistive switches. , 2014, , .		2
431	Low operation voltage transparent resistive random access memory (T-RRAM) based on ultrathin a-TiOx films and its resistive switching characteristics. , 2014, , .		0
432	TEM and EELS Study on TaOx-based Nanoscale Resistive Switching Devices. Materials Research Society Symposia Proceedings, 2015, 1805, 1.	0.1	0
433	SET and RESET Kinetics of SrTiO <sub>3</sub> -based Resistive Memory Devices. Materials Research Society Symposia Proceedings, 2015, 1790, 7-12.	0.1	5
434	Demonstration of TaO <inf>x</inf> -based ring contact Resistive Random Access Memory device. , 2015, , ·		0
435	Prospective of Semiconductor Memory Devices: from Memory System to Materials. Advanced Electronic Materials, 2015, 1, 1400056.	5.1	152
436	Fault detection and repair of DSC arrays through memristor sensing. , 2015, , .		3
437	An experimental study on the potential use of ReRAM as SSD buffer. , 2015, , .		2
438	Implementation of Complete Boolean Logic Functions in Single Complementary Resistive Switch. Scientific Reports, 2015, 5, 15467.	3.3	84
439	Atomic View of Filament Growth in Electrochemical Memristive Elements. Scientific Reports, 2015, 5, 13311.	3.3	72
440	All oxide semiconductor-based bidirectional vertical p-n-p selectors for 3D stackable crossbar-array electronics. Scientific Reports, 2015, 5, 13362.	3.3	14
441	Data Clustering using Memristor Networks. Scientific Reports, 2015, 5, 10492.	3.3	100
442	Temperature dependence of conductance in NiO-based resistive switching memory showing two modes in the forming process. Applied Physics Letters, 2015, 107, .	3.3	16
443	Self-assembly of an NbO2 interlayer and configurable resistive switching in Pt/Nb/HfO2/Pt structures. Applied Physics Letters, 2015, 107, .	3.3	21
444	Effect of dielectric stoichiometry and interface chemical state on band alignment between tantalum oxide and platinum. Applied Physics Letters, 2015, 107, .	3.3	14
445	Thickness effect of ultra-thin Ta2O5 resistance switching layer in 28 nm-diameter memory cell. Scientific Reports, 2015, 5, 15965.	3.3	51
446	Compliance current dependence of conversion between bipolar, unipolar, and threshold resistance switching in Mn3O4 films. AIP Advances, 2015, 5, .	1.3	19

#	Article	IF	CITATIONS
447	Effects of conducting defects on resistive switching characteristics of SiN <i>x</i> -based resistive random-access memory with MIS structure. Journal of Vacuum Science and Technology B:Nanotechnology and Microelectronics, 2015, 33, .	1.2	28
448	Switchable diode-effect mechanism in ferroelectric BiFeO3 thin film capacitors. Journal of Applied Physics, 2015, 118, .	2.5	44
449	A learnable parallel processing architecture towards unity of memory and computing. Scientific Reports, 2015, 5, 13330.	3.3	68
450	The observation of valence band change on resistive switching of epitaxial Pr0.7Ca0.3MnO3 film using removable liquid electrode. Applied Physics Letters, 2015, 107, 231603.	3.3	1
451	Bidirectional voltage biased implication operations using SiOx based unipolar memristors. Applied Physics Letters, 2015, 107, 183501.	3.3	22
452	Utilizing multiple state variables to improve the dynamic range of analog switching in a memristor. Applied Physics Letters, 2015, 107, .	3.3	88
453	Stacked 3D RRAM Array with Graphene/CNT as Edge Electrodes. Scientific Reports, 2015, 5, 13785.	3.3	38
454	A Monte Carlo simulation for bipolar resistive memory switching in large band-gap oxides. Applied Physics Letters, 2015, 107, .	3.3	3
455	Direct evidence on Ta-Metal Phases Igniting Resistive Switching in TaOx Thin Film. Scientific Reports, 2015, 5, 14053.	3.3	25
456	Filament Geometry Induced Bipolar, Complementary and Unipolar Resistive Switching under the Same Set Current Compliance in Pt/SiOx/TiN. Scientific Reports, 2015, 5, 15374.	3.3	18
457	Comparison of random telegraph noise, endurance and reliability in amorphous and crystalline hafnia-based ReRAM. , 2015, , .		1
458	The resistive switching characteristics in tantalum oxide-based RRAM device via combining high-temperature sputtering with plasma oxidation. , 2015, , .		2
459	Direct Observation of Conducting Nanofilaments in Grapheneâ€Oxideâ€Resistive Switching Memory. Advanced Functional Materials, 2015, 25, 6710-6715.	14.9	60
460	Performance Enhancement of Electronic and Energy Devices via Block Copolymer Selfâ€Assembly. Advanced Materials, 2015, 27, 3982-3998.	21.0	91
461	Switching Kinetic of VCMâ€Based Memristor: Evolution and Positioning of Nanofilament. Advanced Materials, 2015, 27, 5028-5033.	21.0	176
462	Physics of the Switching Kinetics in Resistive Memories. Advanced Functional Materials, 2015, 25, 6306-6325.	14.9	233
463	Grapheneâ€Modified Interface Controls Transition from VCM to ECM Switching Modes in Ta/TaO <i><sub>x</sub></i> Based Memristive Devices. Advanced Materials, 2015, 27, 6202-6207.	21.0	138
464	Realization of Boolean Logic Functionality Using Redoxâ€Based Memristive Devices. Advanced Functional Materials, 2015, 25, 6414-6423.	14.9	127

#	Article	IF	CITATIONS
465	Pt/Ta <sub>2</sub> O <sub>5</sub> /HfO <sub>2â^'</sub> <i><sub>x</sub></i> /Ti Resistive Switching Memory Competing with Multilevel NAND Flash. Advanced Materials, 2015, 27, 3811-3816.	21.0	152
466	Ultraâ€Low Voltage and Ultraâ€Low Power Consumption Nonvolatile Operation of a Threeâ€Terminal Atomic Switch. Advanced Materials, 2015, 27, 6029-6033.	21.0	15
467	Resistive Switching of Individual, Chemically Synthesized TiO <sub>2</sub> Nanoparticles. Small, 2015, 11, 6444-6456.	10.0	24
468	Lateral resistance reduction induced by light-controlled leak current in silicon-based Schottky junction. Chinese Physics B, 2015, 24, 107307.	1.4	3
469	Thicknessâ€dependent electroforming behavior of ultraâ€ŧhin Ta <sub>2</sub> O <sub>5</sub> resistance switching layer. Physica Status Solidi - Rapid Research Letters, 2015, 9, 362-365.	2.4	19
470	Integration of niobium oxide-based resistive switching cells with different select properties into nanostructured cross-bar arrays. Semiconductor Science and Technology, 2015, 30, 115014.	2.0	12
471	Conduction Mechanism of Valence Change Resistive Switching Memory: A Survey. Electronics (Switzerland), 2015, 4, 586-613.	3.1	520
472	A 2-transistor/1-resistor artificial synapse capable of communication and stochastic learning in neuromorphic systems. Frontiers in Neuroscience, 2014, 8, 438.	2.8	74
473	Tunnel junction based memristors as artificial synapses. Frontiers in Neuroscience, 2015, 9, 241.	2.8	28
474	Deposition-Parameter-Determined Resistive Switching Characteristics in TiO <sub><i>x</i></sub> /Pb(Zr <sub>0.52</sub> Ti <sub>0.48</sub> )O <sub>3</sub> Bilayers. Advances in Materials Science and Engineering, 2015, 2015, 1-7.	1.8	2
475	Giant Electroresistive Ferroelectric Diode on 2DEG. Scientific Reports, 2015, 5, 10548.	3.3	10
476	Normally-off Logic Based on Resistive Switches—Part I: Logic Gates. IEEE Transactions on Electron Devices, 2015, 62, 1831-1838.	3.0	122
477	Self-Structured Conductive Filament Nanoheater for Chalcogenide Phase Transition. ACS Nano, 2015, 9, 6587-6594.	14.6	26
478	Asymmetric resistive switching processes in W:AlO <sub> <i>x</i> </sub> /WO <sub> <i>y</i> </sub> bilayer devices. Chinese Physics B, 2015, 24, 058501.	1.4	3
479	Normally-off Logic Based on Resistive Switches—Part II: Logic Circuits. IEEE Transactions on Electron Devices, 2015, 62, 1839-1847.	3.0	19
480	H-treatment impact on conductive-filament formation and stability in Ta2O5-based resistive-switching memory cells. Journal of Applied Physics, 2015, 117, .	2.5	20
481	Resistive Switching in Oxides. Springer Series in Surface Sciences, 2015, , 401-428.	0.3	16
482	Heterogeneous integration of ReRAM crossbars in 180nm CMOS BEoL process. Microelectronic Engineering, 2015, 145, 62-65.	2.4	7

#	Article	IF	CITATIONS
483	Insights into resistive switching characteristics of TaO <inf>x</inf> -RRAM by Monte-Carlo simulation. , 2015, , .		2
484	An Investigation on Resistive Switching Characteristics Induced by HfO <sub>x </sub> and Electrode Interfaces. Key Engineering Materials, 2015, 645-646, 169-177.	0.4	0
485	Resistance controllability and variability improvement in a TaOx-based resistive memory for multilevel storage application. Applied Physics Letters, 2015, 106, .	3.3	78
486	Effect of the programming pulse width on resistive memory switching behavior. , 2015, , .		1
487	Electrical conduction mechanism in BiFeO <sub>3</sub> -based ferroelectric thin-film capacitors: Impact of Mn doping. Journal of Asian Ceramic Societies, 2015, 3, 426-431.	2.3	17
488	Investigation into the influence of interfacial changes on the resistive switching of Pr <sub>0.7</sub> Ca <sub>0.3</sub> MnO <sub>3</sub> . Journal Physics D: Applied Physics, 2015, 48, 465309.	2.8	5
489	Conducting filaments in Pt/ZrCuOy/Pt resistive switching memory cells. Materials Chemistry and Physics, 2015, 168, 95-100.	4.0	5
490	Noise-Induced Resistance Broadening in Resistive Switching Memory—Part II: Array Statistics. IEEE Transactions on Electron Devices, 2015, 62, 3812-3819.	3.0	114
491	Reliability considerations and radiation testing of memristor devices. , 2015, , .		0
492	Four-wave-mixing in the loss low submicrometer Ta_2O_5 channel waveguide. Optics Letters, 2015, 40, 4528.	3.3	26
493	Excellent nonlinearity of a selection device based on anti-series connected Zener diodes for ultrahigh-density bipolar RRAM arrays. Nanotechnology, 2015, 26, 425201.	2.6	1
494	Thermal modeling of metal oxides for highly scaled nanoscale RRAM. , 2015, , .		4
495	High Endurance and Multilevel Operation in Oxide Semiconductor-Based Resistive RAM Using Thin-Film Transistor as a Selector. ECS Solid State Letters, 2015, 4, Q41-Q43.	1.4	13
496	Programming strategies to improve energy efficiency and reliability of ReRAM memory systems. , 2015, , .		8
497	Simulation of TaO <inf>X</inf> -RRAM with Ta <inf>2</inf> O <inf>5−X</inf> /TaO <inf>2−X</inf> stack engineering. , 2015, , .		2
498	Polymer coated ZnO nanowires for memristive devices. , 2015, , .		6
499	Observation of Resistive Switching Memory by Reducing Device Size in a New Cr/CrO x /TiO x /TiN Structure. Nano-Micro Letters, 2015, 7, 392-399.	27.0	24
500	Coexistence of diode-like volatile and multilevel nonvolatile resistive switching in a ZrO <sub>2</sub> /TiO <sub>2</sub> stack structure. Nanotechnology, 2015, 26, 391001.	2.6	43

#	Article	IF	CITATIONS
501	A oxide nanowire for probing nanoscale memristive switching. , 2015, , .		0
502	Ultra-low power, highly uniform polymer memory by inserted multilayer graphene electrode. 2D Materials, 2015, 2, 044013.	4.4	21
503	Effect of Electrode Roughness on Electroforming in <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"&gt;<mml:mrow><mml:msub><mml:mrow><mml:mi>HfO</mml:mi></mml:mrow><m Defect-Induced Moderation of Electric-Field Enhancement. Physical Review Applied, 2015, 4, .</m </mml:msub></mml:mrow></mml:math 	ml:mn>2<	/m͡ml:mn>
504	Low-cost bidirectional selector based on Ti/TiO2/HfO2/TiO2/Ti stack for bipolar RRAM arrays. Modern Physics Letters B, 2015, 29, 1550244.	1.9	5
505	Optimizing latency, energy, and reliability of 1T1R ReRAM through appropriate voltage settings. , 2015, , .		16
506	Stable self-compliance resistive switching in AlO <sub><i>δ</i></sub> /Ta <sub>2</sub> O <sub>5â^'<i>x</i></sub> /TaO <sub><i>y</i></sub> triple layer devices. Nanotechnology, 2015, 26, 035203.	2.6	32
507	Advanced techniques for characterization of ion beam modified materials. Current Opinion in Solid State and Materials Science, 2015, 19, 19-28.	11.5	48
508	Vacancy Associates-Rich Ultrathin Nanosheets for High Performance and Flexible Nonvolatile Memory Device. Journal of the American Chemical Society, 2015, 137, 3102-3108.	13.7	141
509	Dynamic moderation of an electric field using a SiO <sub>2</sub> switching layer in TaO <i><sub>x</sub></i> â€based ReRAM. Physica Status Solidi - Rapid Research Letters, 2015, 9, 166-170.	2.4	9
510	Low voltage two-state-variable memristor model of vacancy-drift resistive switches. Applied Physics A: Materials Science and Processing, 2015, 119, 1-9.	2.3	22
511	Hierarchically Built Gold Nanoparticle Supercluster Arrays as Charge Storage Centers for Enhancing the Performance of Flash Memory Devices. ACS Applied Materials & Interfaces, 2015, 7, 279-286.	8.0	13
512	Design of Volatile Mixed-Ligand Tantalum(V) Compounds as Precursors to Ta <sub>2</sub> O <sub>5</sub> Films. Crystal Growth and Design, 2015, 15, 1141-1149.	3.0	9
513	Activity-Dependent Synaptic Plasticity of a Chalcogenide Electronic Synapse for Neuromorphic Systems. Scientific Reports, 2014, 4, 4906.	3.3	235
514	A novel method of identifying the carrier transport path in metal oxide resistive random access memory. Journal Physics D: Applied Physics, 2015, 48, 065101.	2.8	25
515	Phenomenological modeling of memristive devices. Applied Physics A: Materials Science and Processing, 2015, 118, 779-786.	2.3	42
516	One-dimensional memristive device based on MoO3 nanobelt. Applied Physics Letters, 2015, 106, .	3.3	21
517	Atomistic study of dynamics for metallic filament growth in conductive-bridge random access memory. Physical Chemistry Chemical Physics, 2015, 17, 8627-8632.	2.8	33
518	FPAA/Memristor Hybrid Computing Infrastructure. IEEE Transactions on Circuits and Systems I: Regular Papers, 2015, 62, 906-915.	5.4	17

$\sim$	T A T I	0.11	Repo	DT
			REDU	
<u> </u>	/		ILLI U	- C - L

#	Article	IF	CITATIONS
519	Dual Conical Conducting Filament Model in Resistance Switching TiO2 Thin Films. Scientific Reports, 2015, 5, 7844.	3.3	46
520	Selfâ€Limited Switching in Ta <sub>2</sub> O <sub>5</sub> /TaO <i><sub>x</sub></i> Memristors Exhibiting Uniform Multilevel Changes in Resistance. Advanced Functional Materials, 2015, 25, 1527-1534.	14.9	111
521	Demonstration of Low Power 3-bit Multilevel Cell Characteristics in a TaO <sub><italic>x</italic></sub> -Based RRAM by Stack Engineering. IEEE Electron Device Letters, 2015, 36, 32-34.	3.9	112
522	What are Memristor, Memcapacitor, and Meminductor?. IEEE Transactions on Circuits and Systems II: Express Briefs, 2015, 62, 402-406.	3.0	47
523	A memristive diode for neuromorphic computing. Microelectronic Engineering, 2015, 138, 7-11.	2.4	5
524	Inkjetâ€Printed Resistive Switching Memory Based on Organic Dielectric Materials: From Single Elements to Array Technology. Advanced Electronic Materials, 2015, 1, 1400003.	5.1	19
525	Forming-free and self-rectifying resistive switching of the simple Pt/TaO <sub>x</sub> /n-Si structure for access device-free high-density memory application. Nanoscale, 2015, 7, 6031-6038.	5.6	97
526	Novel design for the odd-symmetric memristor from asymmetric switches. Journal of Materials Chemistry C, 2015, 3, 2768-2772.	5.5	6
527	Nanoscale Crossâ€Point Resistive Switching Memory Comprising pâ€Type SnO Bilayers. Advanced Electronic Materials, 2015, 1, 1400035.	5.1	27
528	Experimental Demonstration of a Second-Order Memristor and Its Ability to Biorealistically Implement Synaptic Plasticity. Nano Letters, 2015, 15, 2203-2211.	9.1	473
529	Overcoming the challenges of crossbar resistive memory architectures. , 2015, , .		233
530	Memristive behavior of Al2O3 film with bottom electrode surface modified by Ag nanoparticles. Applied Physics A: Materials Science and Processing, 2015, 118, 605-612.	2.3	16
531	Manganite-based memristive heterojunction with tunable non-linear I–V characteristics. Nanoscale, 2015, 7, 6444-6450.	5.6	29
532	Comparison of oxygen vacancy defects in crystalline and amorphous Ta2O5. Microelectronic Engineering, 2015, 147, 254-259.	2.4	25
533	Dominant conduction mechanism in NiO-based resistive memories. Journal of Applied Physics, 2015, 117, 225701.	2.5	11
534	A Novel True Random Number Generator Design Leveraging Emerging Memristor Technology. , 2015, , .		34
535	Oxide nanowires for nonvolatile memory applications. , 2015, , 489-524.		2
536	An overview of materials issues in resistive random access memory. Journal of Materiomics, 2015, 1, 285-295.	5.7	106

ARTICLE IF CITATIONS # A pathway of nanocrystallite fabrication by photo-assisted growth in pure water. Scientific Reports, 537 3.3 21 2015, 5, 11429. Copper Nanofilament Formation during Unipolar Resistance Switching of Electrodeposited Cuprous 538 6.7 38 Oxide. Chemistry of Materials, 2015, 27, 5974-5981. Physical principles and current status of emerging non-volatile solid state memories. Electronic 539 2.2 56 Materials Letters, 2015, 11, 505-543. On Passive Permutation Circuits. IEEE Journal on Emerging and Selected Topics in Circuits and Systems, 540 2015, 5, 173-182. Nanoscale memristive radiofrequency switches. Nature Communications, 2015, 6, 7519. 541 12.8 106 Enhancement of resistive switching under confined current path distribution enabled by insertion of 3.3 atomically thin defective monolayer graphene. Scientific Reports, 2015, 5, 11279. 543 Overview of the radiation response of anion-based memristive devices., 2015,,. 4 Tailoring resistive switching in Pt/SrTiO3 junctions by stoichiometry control. Scientific Reports, 2015, 544 3.3 5, 11079. Electroforming free high resistance resistive switching of graphene oxide modified polar-PVDF. RSC 545 30 3.6 Advances, 2015, 5, 57406-57413. 546 Reconfigurable Memristive Device Technologies. Proceedings of the IEEE, 2015, 103, 1004-1033. 21.3 Endurance degradation mechanisms in TiNTa2O5Ta resistive random-access memory cells. Applied 547 3.3 41 Physics Letters, 2015, 106, . Improved resistive switching characteristics by introducing Ag-nanoclusters in amorphous-carbon 548 2.6 memory. Materials Letters, 2015, 154, 98-102 Low Variability Resistor–Memristor Circuit Masking the Actual Memristor States. Advanced 549 5.1 34 Electronic Materials, 2015, 1, 1500095. On the direction of the conductive filament growth in valence change memory devices during 2.7 electroforming. Solid State Ionics, 2015, 276, 9-17. Chemical expansion affected oxygen vacancy stability in different oxide structures from first 551 3.0 58 principles calculations. Computational Materials Science, 2015, 99, 298-305. Improved resistive switching phenomena and mechanism using Cu-Al alloy in a new Cu:AlOx/TaOx/TiN structure. Journal of Alloys and Compounds, 2015, 637, 517-523. Resistive property and ferromagnetism in ZnO/PAA nanoporous composite films. Journal of Alloys and 553 5.5 3 Compounds, 2015, 640, 444-448. 554 Resistance switching memory in perovskite oxides. Annals of Physics, 2015, 358, 206-224. 2.8

#	Article	IF	CITATIONS
555	Physical and chemical mechanisms in oxide-based resistance random access memory. Nanoscale Research Letters, 2015, 10, 120.	5.7	130
556	Regulation of the forming process and the set voltage distribution of unipolar resistance switching in spin-coated CoFe2O4 thin films. Nanoscale Research Letters, 2015, 10, 168.	5.7	19
557	Endurance improvement due to rapid thermal annealing (RTA) of a TaO x thin film in an oxygen ambient. Journal of the Korean Physical Society, 2015, 66, 721-725.	0.7	5
558	Realization of a reversible switching in TaO2 polymorphs via Peierls distortion for resistance random access memory. Applied Physics Letters, 2015, 106, 091903.	3.3	19
559	Engineering of forming-free resistive switching characteristics in ZrO <sub>2</sub> films. Journal Physics D: Applied Physics, 2015, 48, 225301.	2.8	17
560	A selector device based on graphene–oxide heterostructures for memristor crossbar applications. Applied Physics A: Materials Science and Processing, 2015, 120, 403-407.	2.3	11
561	Role of ITO electrode in the resistive switching behavior of TiN/HfO <sub>2</sub> /ITO memory devices at different annealing temperatures. Japanese Journal of Applied Physics, 2015, 54, 054201.	1.5	14
562	Electric field effect dominated bipolar resistive switching through interface control in a Pt/TiO <sub>2</sub> /TiN structure. RSC Advances, 2015, 5, 221-230.	3.6	18
563	Position detection and observation of a conducting filament hidden under a top electrode in a Ta <sub>2</sub> O <sub>5</sub> -based atomic switch. Nanotechnology, 2015, 26, 145702.	2.6	19
564	Insulating-layer formation of metallic LaNiO3 on Nb-doped SrTiO3 substrate. Applied Physics Letters, 2015, 106, 121601.	3.3	10
565	Effects of stress on resistive switching property of the NiO RRAM device. Microelectronic Engineering, 2015, 139, 43-47.	2.4	14
566	Improvement in R off/R on ratio and reset current via combining compliance current with multilayer structure in tantalum oxide-based RRAM. Applied Physics A: Materials Science and Processing, 2015, 120, 67-73.	2.3	3
567	Ab initio calculations of materials selection of oxides for resistive random access memories. Microelectronic Engineering, 2015, 147, 339-343.	2.4	10
568	Memory characteristics of flexible resistive switching devices with triangular-shaped silicon nanowire bottom electrodes. Semiconductor Science and Technology, 2015, 30, 055019.	2.0	9
569	Conductive Atomic Force Microscopy Investigation of Switching Thresholds in Titanium Dioxide Thin Films. Journal of Physical Chemistry C, 2015, 119, 11958-11964.	3.1	34
570	Nano suboxide layer generated in Ta2O5 by Ar+ ion irradiation. Applied Physics Letters, 2015, 106, .	3.3	14
571	Nonvolatile Logic and <italic>In Situ</italic> Data Transfer Demonstrated in Crossbar Resistive RAM Array. IEEE Electron Device Letters, 2015, 36, 1142-1145.	3.9	21
572	Ferroelectric-field-effect-enhanced resistance performance of TiN/Si:HfO2/oxygen-deficient HfO2/TiN resistive switching memory cells. Applied Physics Letters, 2015, 107, .	3.3	23

	C	CITATION REPORT		
#	Article		IF	CITATIONS
573	Low-current operations in 4F <sup>2</sup> -compatible Ta <sub>2</sub> O <sub>5</sub> -based complementary resistive switches. Nanotechnology, 2015, 26, 415202.		2.6	20
574	Ferroelectric Tunnel Junction for Dense Cross-Point Arrays. ACS Applied Materials & amp; Interfaces, 2015, 7, 22348-22354.		8.0	18
575	Interface induced transition from bipolar resistive switching to unipolar resistive switching in Au/Ti/GaOx/NiOx/ITO structures. RSC Advances, 2015, 5, 82403-82408.		3.6	9
576	Inkjet-printing of non-volatile organic resistive devices and crossbar array structures. , 2015, , .			0
577	A multilevel memristor–CMOS memory cell as a ReRAM. Microelectronics Journal, 2015, 46, 1283-	1290.	2.0	35
578	An RRAM Biasing Parameter Optimizer. IEEE Transactions on Electron Devices, 2015, 62, 3685-3691.		3.0	27
579	Three-Dimensional Networked Nanoporous Ta <sub>2</sub> O <sub>5–<i>x</i></sub> Memory Sy for Ultrahigh Density Storage. Nano Letters, 2015, 15, 6009-6014.	stem	9.1	50
580	FOEDUS., 2015,,.			133
581	Resistive switching in a few nanometers thick tantalum oxide film formed by a metal oxidation. Appli Physics Letters, 2015, 106, .	ed	3.3	31
582	A self-compliance RRAM device for high density cross-point array applications. , 2015, , .			0
583	Single-crystalline CuO nanowires for resistive random access memory applications. Applied Physics Letters, 2015, 106, .		3.3	19
584	Resistive switching characteristics of Si3N4-based resistive-switching random-access memory cell with tunnel barrier for high density integration and low-power applications. Applied Physics Letters, 2015, 106, .		3.3	77
585	Memristor-based Willshaw network: Capacity and robustness to noise in the presence of defects. Applied Physics Letters, 2015, 106, .		3.3	12
586	Energy Loss Function of Solids Assessed by Ion Beam Energy-Loss Measurements: Practical Application to Ta <sub>2</sub> O <sub>5</sub> . Journal of Physical Chemistry C, 2015, 119, 20561-20570.	on	3.1	8
587	Mojim. , 2015, , .			103
588	A study of application performance with non-volatile main memory. , 2015, , .			79
589	High-Frequency TaO <sub><italic>x</italic></sub> -Based Compact Oscillators. I Transactions on Electron Devices, 2015, 62, 3857-3862.	EEE	3.0	23
590	Low-voltage read/write circuit design for transistorless ReRAM crossbar arrays in 180nm CMOS technology. , 2015, , .			4

#	Article	IF	CITATIONS
591	Organic memory effect from donor–acceptor polymers based on 7-perfluorophenyl-6H-[1,2,5]thiadiazole[3,4-g]benzoimidazole. RSC Advances, 2015, 5, 77122-77129.	3.6	15
592	Tuning the switching behavior of binary oxide-based resistive memory devices by inserting an ultra-thin chemically active metal nanolayer: a case study on the Ta2O5–Ta system. Physical Chemistry Chemical Physics, 2015, 17, 12849-12856.	2.8	47
593	Manganite based hetero-junction structure of La <sub>0.7</sub> Sr <sub>0.7â^'<i>x</i></sub> Ca <sub><i>x</i></sub> MnO <sub>3</sub> and CaMnO <sub>3â^'<i>Î</i></sub> for cross-point arrays. Nanotechnology, 2015, 26, 275704.	2.6	0
594	Full ALD Ta 2 O 5 -based stacks for resistive random access memory grown with in vacuo XPS monitoring. Applied Surface Science, 2015, 356, 454-459.	6.1	37
595	Multistate resistive switching in silver nanoparticle films. Science and Technology of Advanced Materials, 2015, 16, 045004.	6.1	26
596	Polarity Reversal in the Bipolar Switching of Anodic TiO <sub>2</sub> Film. Journal of the Electrochemical Society, 2015, 162, E271-E275.	2.9	13
597	Architecting energy efficient crossbar-based memristive random-access memories. , 2015, , .		12
598	Compliance current induced non-reversible transition from unipolar to bipolar resistive switching in a Cu/TaOx/Pt structure. Applied Physics Letters, 2015, 107, 073501.	3.3	16
599	Gradual bipolar resistive switching in Ni/Si3N4/n+-Si resistive-switching memory device for high-density integration and low-power applications. Solid-State Electronics, 2015, 114, 94-97.	1.4	26
600	Highly Transparent Bipolar Resistive Switching Memory in Zr0.5Hf0.5O2 Films With Amorphous Semiconducting In–Ga–Zn–O as Electrode. IEEE Transactions on Electron Devices, 2015, 62, 3244-3249.	3.0	3
601	3-D Resistive Memory Arrays: From Intrinsic Switching Behaviors to Optimization Guidelines. IEEE Transactions on Electron Devices, 2015, 62, 3160-3167.	3.0	16
602	Detection of the insulating gap and conductive filament growth direction in resistive memories. Nanoscale, 2015, 7, 15434-15441.	5.6	34
603	Resistive switching phenomena: A review of statistical physics approaches. Applied Physics Reviews, 2015, 2, .	11.3	338
604	Numerical study of read scheme in one-selector one-resistor crossbar array. Solid-State Electronics, 2015, 114, 80-86.	1.4	28
605	Power signatures and vacancy profile control in nanoscale memristive filaments. Applied Physics Letters, 2015, 107, 033507.	3.3	3
606	Mojim. Computer Architecture News, 2015, 43, 3-18.	2.5	19
607	Imaging the Three-Dimensional Conductive Channel in Filamentary-Based Oxide Resistive Switching Memory. Nano Letters, 2015, 15, 7970-7975.	9.1	165
608	Modeling of bipolar resistive switching of a nonlinear MISM memristor. Semiconductor Science and Technology, 2015, 30, 115009.	2.0	19

#	Article	IF	CITATIONS
609	Study of Multi-level Characteristics for 3D Vertical Resistive Switching Memory. Scientific Reports, 2014, 4, 5780.	3.3	98
610	Structurally Engineered Stackable and Scalable 3D Titaniumâ€Oxide Switching Devices for Highâ€Density Nanoscale Memory. Advanced Materials, 2015, 27, 59-64.	21.0	40
611	Drastic reduction of RRAM reset current via plasma oxidization of TaOx film. Applied Surface Science, 2015, 324, 275-279.	6.1	17
612	Ultra-thin resistive switching oxide layers self-assembled by field-induced oxygen migration (FIOM) technique. Scientific Reports, 2014, 4, 6871.	3.3	6
615	Versatile resistive switching in niobium oxide. , 2016, , .		10
616	Improved reset breakdown strength in a HfOx-based resistive memory by introducing RuOx oxygen diffusion barrier. AIP Advances, 2016, 6, 055114.	1.3	9
617	The Resistive Switching Characteristics in ZrO2 and Its Filamentary Conduction Behavior. Materials, 2016, 9, 551.	2.9	9
618	Development of three-dimensional synaptic device and neuromorphic computing hardware. , 2016, , .		0
619	Multilevel Cell Storage and Resistance Variability in Resistive Random Access Memory. ChemistrySelect, 2016, 1, .	1.5	22
620	A synaptic device built in one diode–one resistor (1D–1R) architecture with intrinsic SiOx-based resistive switching memory. ChemistrySelect, 2016, 1, .	1.5	0
621	Correlation and ordering of defects in the formation of conducting nanofilaments. Journal Physics D: Applied Physics, 2016, 49, 125303.	2.8	3
622	Alcoholâ€Mediated Resistanceâ€5witching Behavior in Metal–Organic Frameworkâ€Based Electronic Devices. Angewandte Chemie, 2016, 128, 9030-9034.	2.0	19
623	Amorphousâ€5iâ€Based Resistive Switching Memories with Highly Reduced Electroforming Voltage and Enlarged Memory Window. Advanced Electronic Materials, 2016, 2, 1500370.	5.1	23
624	Oxygen chemical potential profile optimization for fast low current (<10μA) resistive switching in oxide-based RRAM. , 2016, , .		0
625	An Energyâ€Efficient, BiFeO <sub>3</sub> â€Coated Capacitive Switch with Integrated Memory and Demodulation Functions. Advanced Electronic Materials, 2016, 2, 1500352.	5.1	19
626	Correlation between diode polarization and resistive switching polarity in Pt/TiO <sub>2</sub> /Pt memristive device. Physica Status Solidi - Rapid Research Letters, 2016, 10, 426-430.	2.4	8
627	Unveiling the Switching Riddle of Silver Tetracyanoquinodimethane Towards Novel Planar Singleâ€Crystalline Electrochemical Metallization Memories. Advanced Materials, 2016, 28, 7094-7100.	21.0	17
628	Alcoholâ€Mediated Resistanceâ€&witching Behavior in Metal–Organic Frameworkâ€Based Electronic Devices. Angewandte Chemie - International Edition, 2016, 55, 8884-8888.	13.8	72

#	Article	IF	CITATIONS
629	Interface engineered HfO <sub>2</sub> -based 3D vertical ReRAM. Journal Physics D: Applied Physics, 2016, 49, 215102.	2.8	26
630	Fully printed memristors for a self-sustainable recorder of mechanical energy. Flexible and Printed Electronics, 2016, 1, 025002.	2.7	19
631	Resistance switching behavior of atomic layer deposited SrTiO3 film through possible formation of Sr2Ti6O13 or Sr1Ti11O20 phases. Scientific Reports, 2016, 6, 20550.	3.3	17
632	Memristors as radiofrequency switches. , 2016, , .		10
633	Dual-functional Memory and Threshold Resistive Switching Based on the Push-Pull Mechanism of Oxygen Ions. Scientific Reports, 2016, 6, 23945.	3.3	45
634	Material insights of HfO2-based integrated 1-transistor-1-resistor resistive random access memory devices processed by batch atomic layer deposition. Scientific Reports, 2016, 6, 28155.	3.3	43
635	Enhanced metallic properties of SrRuO3 thin films via kinetically controlled pulsed laser epitaxy. Applied Physics Letters, 2016, 109, .	3.3	18
636	Engineering the switching dynamics of TiOx-based RRAM with Al doping. Journal of Applied Physics, 2016, 120, .	2.5	26
637	A nonlinear HP-type complementary resistive switch. AIP Advances, 2016, 6, 055119.	1.3	4
638	The combined effect of mechanical strain and electric field cycling on the ferroelectric performance of P(VDF-TrFE) thin films on flexible substrates and underlying mechanisms. Physical Chemistry Chemical Physics, 2016, 18, 29478-29485.	2.8	11
639	Oxide stoichiometry-controlled TaOx-based resistive switching behaviors. Applied Physics Letters, 2016, 109, .	3.3	14
640	Enhanced stability of complementary resistance switching in the TiN/HfOx/TiN resistive random access memory device via interface engineering. Applied Physics Letters, 2016, 108, .	3.3	15
641	Effect of Hf metal layer on the switching characteristic of HfOX-based Resistive Random Access Memory. , 2016, , .		5
642	Sub-10 nm low current resistive switching behavior in hafnium oxide stack. Applied Physics Letters, 2016, 108, .	3.3	28
643	Ta2O5-based redox memory formed by neutral beam oxidation. Japanese Journal of Applied Physics, 2016, 55, 06GJ01.	1.5	2
644	Interfacial versus filamentary resistive switching in TiO2 and HfO2 devices. Journal of Vacuum Science and Technology B:Nanotechnology and Microelectronics, 2016, 34, .	1.2	54
645	Atomic layer deposition of tantalum oxide with controlled oxygen deficiency for making resistive memory structures. Russian Journal of Applied Chemistry, 2016, 89, 1825-1830.	0.5	4
646	Self-electroforming and high-performance complementary memristor based on ferroelectric tunnel junctions. Applied Physics Letters, 2016, 109, .	3.3	9

#	Article	IF	CITATIONS
647	Self-selection effects and modulation of TaOx resistive switching random access memory with bottom electrode of highly doped Si. Journal of Applied Physics, 2016, 119, 195302.	2.5	17
648	Fully Si compatible SiN resistive switching memory with large self-rectification ratio. AIP Advances, 2016, 6, .	1.3	33
649	Nonvolatile Multilevel Memory and Boolean Logic Gates Based on a Single Ni/[Pb(Mg1/3Nb2/3)O3]0.7[PbTiO3]0.3/Ni Heterostructure. Physical Review Applied, 2016, 6, .	3.8	23
650	Integration scheme of nanoscale resistive switching memory using bottom-up processes at room temperature for high-density memory applications. Scientific Reports, 2016, 6, 28966.	3.3	12
651	Rectifying filamentary resistive switching in ion-exfoliated LiNbO3 thin films. Applied Physics Letters, 2016, 108, .	3.3	30
652	Multilevel resistance in ZnO nanowire memristors enabled by hydrogen annealing treatment. AIP Advances, 2016, 6, 125010.	1.3	19
653	Microscopic origin of read current noise in TaOx-based resistive switching memory by ultra-low temperature measurement. Applied Physics Letters, 2016, 108, .	3.3	8
654	Quantum point contacts and resistive switching in Ni/NiO nanowire junctions. Applied Physics Letters, 2016, 109, .	3.3	12
655	Fabrication of sub-10 nm metal nanowire arrays with sub-1 nm critical dimension control. Nanotechnology, 2016, 27, 464004.	2.6	12
656	Localized metal doping effect on switching behaviors of TaO <sub>x</sub> -based RRAM device. , 2016, , .		11
657	Reversible transition between bipolar and unipolar resistive switching in Cu2O/Ga2O3 binary oxide stacked layer. AIP Advances, 2016, 6, .	1.3	30
658	Engineering amorphous-crystalline interfaces in TiO2â^'x/TiO2â^'y-based bilayer structures for enhanced resistive switching and synaptic properties. Journal of Applied Physics, 2016, 120, .	2.5	38
659	Novel 3D horizontal RRAM architecture with isolation cell structure for sneak current depression. , 2016, , .		3
660	Enhanced oxygen vacancy diffusion in Ta2O5 resistive memory devices due to infinitely adaptive crystal structure. Journal of Applied Physics, 2016, 119, .	2.5	31
661	Impact of oxygen stoichiometry on electroforming and multiple switching modes in TiN/TaO <i>x</i> /Pt based ReRAM. Applied Physics Letters, 2016, 109, .	3.3	51
662	Modelling the generation of Joule heating in defective thin oxide films. , 2016, , .		0
663	Metal oxide resistive random access memory based synaptic devices for brain-inspired computing. Japanese Journal of Applied Physics, 2016, 55, 04EA06.	1.5	26
664	Voltage divider effect for the improvement of variability and endurance of TaOx memristor. Scientific Reports, 2016, 6, 20085.	3.3	93

#	Article	IF	Citations
665	Mimicking of pulse shape-dependent learning rules with a quantum dot memristor. Journal of Applied Physics, 2016, 120, .	2.5	6
666	Complementary resistive switching in single sandwich structure for crossbar memory arrays. Journal of Applied Physics, 2016, 120, 084502.	2.5	21
667	Sub-10 nm Ta Channel Responsible for Superior Performance of a HfO2 Memristor. Scientific Reports, 2016, 6, 28525.	3.3	177
668	Deduplication in resistive content addressable memory based solid state drive. , 2016, , .		6
669	Effect of Oxygen-deficiencies on Resistance Switching in Amorphous YFe0.5Cr0.5O3â^'d films. Scientific Reports, 2016, 6, 30335.	3.3	8
670	Complementary resistive switching of annealed Ti/Cu <sub>2</sub> O/Ti stacks. Applied Physics Express, 2016, 9, 045801.	2.4	5
671	Nanoscale Plasmonâ€Enhanced Spectroscopy in Memristive Switches. Small, 2016, 12, 1334-1341.	10.0	57
672	Progress in the Characterizations and Understanding of Conducting Filaments in Resistive Switching Devices. IEEE Nanotechnology Magazine, 2016, 15, 465-472.	2.0	32
673	Trilayer Tunnel Selectors for Memristor Memory Cells. Advanced Materials, 2016, 28, 356-362.	21.0	96
674	Resistive switching memories based on metal oxides: mechanisms, reliability and scaling. Semiconductor Science and Technology, 2016, 31, 063002.	2.0	662
675	3D Flash Memories. , 2016, , .		52
676	Optimizing Latency, Energy, and Reliability of 1T1R ReRAM Through Cross-Layer Techniques. IEEE Journal on Emerging and Selected Topics in Circuits and Systems, 2016, 6, 352-363.	3.6	15
677	Nanoionic Resistive Switching Memories: On the Physical Nature of the Dynamic Reset Process. Advanced Electronic Materials, 2016, 2, 1500233.	5.1	141
678	A low-power hybrid reconfigurable architecture for resistive random-access memories. , 2016, , .		8
679	Modeling and simulation of graphene-oxide-based RRAM. Journal of Computational Electronics, 2016, 15, 602-610.	2.5	13
680	Effects of erbium doping of indium tin oxide electrode in resistive random access memory. Applied Physics Express, 2016, 9, 034202.	2.4	11
681	Evaluation of a ferroelectric tunnel junction by ultraviolet–visible absorption using a removable liquid electrode. Nanotechnology, 2016, 27, 215704.	2.6	0
682	Forming-free resistive switching of tunable ZnO films grown by atomic layer deposition. Microelectronic Engineering, 2016, 161, 7-12.	2.4	26

#	Article	IF	CITATIONS
683	Resistive switching characteristics in hafnium oxide, tantalum oxide and bilayer devices. Microelectronic Engineering, 2016, 159, 190-197.	2.4	28
684	Self Current Limiting MgO ReRAM Devices for Low-Power Non-Volatile Memory Applications. IEEE Journal on Emerging and Selected Topics in Circuits and Systems, 2016, 6, 163-170.	3.6	13
685	GRAPHENE: FROM SYNTHESIS TO APPLICATIONS IN FLEXIBLE ELECTRONICS. , 2016, , 87-115.		0
686	Engineering incremental resistive switching in TaO <sub>x</sub> based memristors for brain-inspired computing. Nanoscale, 2016, 8, 14015-14022.	5.6	271
687	Pt/WO <sub>3</sub> /FTO memristive devices with recoverable pseudo-electroforming for time-delay switches in neuromorphic computing. Physical Chemistry Chemical Physics, 2016, 18, 9338-9343.	2.8	31
688	ZnO/Al:ZnO Transparent Resistive Switching Devices Grown by Atomic Layer Deposition for Memristor Applications. Langmuir, 2016, 32, 4983-4995.	3.5	39
689	Resistive Switching Characteristics of Self-Aligned BiMnO <sub>3</sub> Nanodots. Journal of Physical Chemistry C, 2016, 120, 11739-11743.	3.1	6
690	3D resistive RAM cell design for high-density storage class memory—a review. Science China Information Sciences, 2016, 59, 1.	4.3	54
691	Roles of oxygen and nitrogen in control of nonlinear resistive behaviors via filamentary and homogeneous switching in an oxynitride thin film memristor. RSC Advances, 2016, 6, 61221-61227.	3.6	10
692	Switchable Cu <sub>2</sub> 0/WO <sub>x</sub> p–n junction for high density crossbar arrays. RSC Advances, 2016, 6, 102603-102607.	3.6	6
693	The 2016 oxide electronic materials and oxide interfaces roadmap. Journal Physics D: Applied Physics, 2016, 49, 433001.	2.8	266
694	Multilevel programming in Cu/NiO <i><sub>y</sub></i> /NiO <i><sub>x</sub></i> /Pt unipolar resistive switching devices. Nanotechnology, 2016, 27, 435701.	2.6	45
695	Distinguishing uniform switching from filamentary switching in resistance memory using a fracture test. Nanoscale, 2016, 8, 18113-18120.	5.6	8
696	Observation of Self-Reset During Forming of the TiN/HfOx/TiN Resistive Switching Device. IEEE Electron Device Letters, 2016, , 1-1.	3.9	5
697	Impact of Etch Process on Hafnium Dioxide Based Nanoscale RRAM Devices. ECS Transactions, 2016, 75, 93-99.	0.5	3
698	Adjustable built-in resistor on oxygen-vacancy-rich electrode-capped resistance random access memory. Applied Physics Express, 2016, 9, 104201.	2.4	5
700	Novel concepts in functional resistive switching memories. Journal of Materials Chemistry C, 2016, 4, 9637-9645.	5.5	59
701	Ultrafast switching in Ta <inf>2</inf> O <inf>5</inf> -based resistive memories. , 2016, , .		9

#	Article	IF	Citations
702	Energy efficient computing by redox-based memristive oxide elements. , 2016, , .		1
703	Integration of a niobium oxide selector on a tantalum oxide memristor by local oxidation using Joule heating. Proceedings of SPIE, 2016, , .	0.8	2
704	Reconfigurable Nonvolatile Logic Operations in Resistance Switching Crossbar Array for Large‣cale Circuits. Advanced Materials, 2016, 28, 9758-9764.	21.0	172
705	Analytical Modeling of Current Overshoot in Oxide-Based Resistive Switching Memory (RRAM). IEEE Electron Device Letters, 2016, 37, 1268-1271.	3.9	21
706	Low-Power, Self-Rectifying, and Forming-Free Memristor with an Asymmetric Programing Voltage for a High-Density Crossbar Application. Nano Letters, 2016, 16, 6724-6732.	9.1	171
707	Synaptic electronics and neuromorphic computing. Science China Information Sciences, 2016, 59, 1.	4.3	76
708	Proton exchange reactions in SiOx-based resistive switching memory: Review and insights from impedance spectroscopy. Progress in Solid State Chemistry, 2016, 44, 75-85.	7.2	45
709	Research on feasibility of using a Transient Voltage Suppressor as the selection device for bipolar RRAM. Microelectronic Engineering, 2016, 164, 20-22.	2.4	0
710	Resistive switching behavior in single crystal SrTiO3 annealed by laser. Applied Surface Science, 2016, 389, 1104-1107.	6.1	28
711	X-ray spectromicroscopy investigation of soft and hard breakdown in RRAM devices. Nanotechnology, 2016, 27, 345705.	2.6	11
712	Multilevel resistive switching nonvolatile memory based on MoS <sub>2</sub> nanosheet-embedded graphene oxide. 2D Materials, 2016, 3, 034002.	4.4	69
713	Reduced distributions of the set current and the voltage of unipolar resistance switching in a current-biased set process. Journal of the Korean Physical Society, 2016, 68, 1467-1471.	0.7	2
714	Conductive Graphitic Channel in Graphene Oxideâ€Based Memristive Devices. Advanced Functional Materials, 2016, 26, 7406-7414.	14.9	54
715	Towards low voltage resistive switch in sol-gel derived TiO2/Ta2O5 stack thin films. Materials and Design, 2016, 105, 359-365.	7.0	13
716	Notice of Violation of IEEE Publication Principles: Overview of Selector Devices for 3-D Stackable Cross Point RRAM Arrays. IEEE Journal of the Electron Devices Society, 2016, 4, 294-306.	2.1	106
717	Re-NUCA: A Practical NUCA Architecture for ReRAM Based Last-Level Caches. , 2016, , .		22
718	A SPICE Model of the <inline-formula> <tex-math notation="LaTeX"&gt;\$extrm{Ta}_{2}extrm{O}_{5}/extrm{TaO}_extrm{x}\$ </tex-math </inline-formula> Bi-Layered RRAM. IEEE Transactions on Circuits and Systems I: Regular Papers, 2016, 63, 1487-1498.	5.4	17
719	Memristors for Energyâ€Efficient New Computing Paradigms. Advanced Electronic Materials, 2016, 2, 1600090.	5.1	272

#	Article	IF	CITATIONS
720	Highly-Ordered 3D Vertical Resistive Switching Memory Arrays with Ultralow Power Consumption and Ultrahigh Density. ACS Applied Materials & amp; Interfaces, 2016, 8, 23348-23355.	8.0	27
721	Power- and Low-Resistance-State-Dependent, Bipolar Reset-Switching Transitions in SiN-Based Resistive Random-Access Memory. Nanoscale Research Letters, 2016, 11, 360.	5.7	16
722	Impact of oxygen exchange reaction at the ohmic interface in Ta <sub>2</sub> O <sub>5</sub> -based ReRAM devices. Nanoscale, 2016, 8, 17774-17781.	5.6	116
723	Memristor-Based Volistor Gates Compute Logic with Low Power Consumption. BioNanoScience, 2016, 6, 214-234.	3.5	5
724	Realization of Functional Complete Stateful Boolean Logic in Memristive Crossbar. ACS Applied Materials & Interfaces, 2016, 8, 34559-34567.	8.0	56
725	Novel Vertical 3D Structure of TaOx-based RRAM with Self-localized Switching Region by Sidewall Electrode Oxidation. Scientific Reports, 2016, 6, 21020.	3.3	72
726	Switching Power Universality in Unipolar Resistive Switching Memories. Scientific Reports, 2016, 6, 23930.	3.3	16
727	Comparison between Pt/TiO <sub>2</sub> /Pt and Pt/TaO <sub><i>X</i></sub> /TaO <sub><i>Y</i></sub> /Pt based bipolar resistive switching devices. Journal of Semiconductors, 2016, 37, 064001.	3.7	14
728	Investigation of the properties and manufacturing features of nonvolatile FRAM memory based on atomic layer deposition. Russian Microelectronics, 2016, 45, 262-269.	0.5	8
731	Microstructural transitions in resistive random access memory composed of molybdenum oxide with copper during switching cycles. Nanoscale, 2016, 8, 14754-14766.	5.6	17
732	EU COST action IC1401 $\hat{a} \in$ "Pushing the frontiers of memristive devices to systems. , 2016, , .		0
733	Investigation of the Switching Mechanism in TiO <sub>2</sub> -Based RRAM: A Two-Dimensional EDX Approach. ACS Applied Materials & Interfaces, 2016, 8, 19605-19611.	8.0	69
735	Super non-linear RRAM with ultra-low power for 3D vertical nano-crossbar arrays. Nanoscale, 2016, 8, 15629-15636.	5.6	90
736	Unipolar resistive switching and tunneling oscillations in isolated Si–SiO <i><sub>x</sub></i> core–shell nanostructure. Nanotechnology, 2016, 27, 455702.	2.6	9
737	Design of Electrodeposited Bilayer Structures for Reliable Resistive Switching with Self-Compliance. ACS Applied Materials & Interfaces, 2016, 8, 32918-32924.	8.0	19
738	Memory window engineering of Ta2O5â <sup>~</sup> 'x oxide-based resistive switches via incorporation of various insulating frames. Scientific Reports, 2016, 6, 30333.	3.3	11
739	Microstructure and dynamics of vacancy-induced nanofilamentary switching network in donor doped SrTiO <sub>3â^'<i>x</i></sub> memristors. Nanotechnology, 2016, 27, 505210.	2.6	39
740	Point contact resistive switching memory based on self-formed interface of Al/ITO. Scientific Reports, 2016, 6, 29347.	3.3	24

#	Article	IF	CITATIONS
741	Quantized conductance coincides with state instability and excess noise in tantalum oxide memristors. Nature Communications, 2016, 7, 11142.	12.8	95
742	Demonstration of Synaptic Behaviors and Resistive Switching Characterizations by Proton Exchange Reactions in Silicon Oxide. Scientific Reports, 2016, 6, 21268.	3.3	84
743	Multistate Memristive Tantalum Oxide Devices for Ternary Arithmetic. Scientific Reports, 2016, 6, 36652.	3.3	58
744	Spatially resolved TiOx phases in switched RRAM devices using soft X-ray spectromicroscopy. Scientific Reports, 2016, 6, 21525.	3.3	27
745	Selector-free resistive switching memory cell based on BiFeO3 nano-island showing high resistance ratio and nonlinearity factor. Scientific Reports, 2016, 6, 23299.	3.3	45
746	Lowering forming voltage and forming-free behavior of Ta <inf>2</inf> 0 <inf>5</inf> ReRAM devices. , 2016, , .		2
747	Self-assembled oxide films with tailored nanoscale ionic and electronic channels for controlled resistive switching. Nature Communications, 2016, 7, 12373.	12.8	81
748	Bipolar switching in chalcogenide phase change memory. Scientific Reports, 2016, 6, 29162.	3.3	59
749	Electrothermal Characterization in 3-D Resistive Random Access Memory Arrays. IEEE Transactions on Electron Devices, 2016, 63, 4720-4728.	3.0	28
750	High Density Crossbar Arrays with Sub- 15 nm Single Cells via Liftoff Process Only. Scientific Reports, 2016, 6, 32614.	3.3	32
751	Electrothermal numerical modeling of multifilamentary conduction in Ta <sub>2</sub> O <sub>5â^'x</sub> /WO <sub>3â^'x</sub> bilayer oxides based RRAM. Ferroelectrics, 2016, 500, 229-240.	0.6	3
752	PRIME: A Novel Processing-in-Memory Architecture for Neural Network Computation in ReRAM-Based Main Memory. , 2016, , .		238
753	Mellow Writes: Extending Lifetime in Resistive Memories through Selective Slow Write Backs. , 2016, , .		26
754	Multilevel Cell Storage and Resistance Variability in Resistive Random Access Memory. , 2016, , 49-72.		15
755	CMOS compatible electrode materials selection in oxide-based memory devices. Journal of Applied Physics, 2016, 120, .	2.5	11
756	High uniformity, low-power HfOx-based RRAM enable by a heterogeneous CeO2-Nb:SrTiO3 interface. , 2016, , .		1
757	Studies on resistive hysteresis characteristics of metal organic decomposition-derived BaTiO3thin films prepared under various annealing conditions and related switching endurance properties. Japanese Journal of Applied Physics, 2016, 55, 10TA09.	1.5	1
758	Highâ€Speed and Lowâ€Energy Nitride Memristors. Advanced Functional Materials, 2016, 26, 5290-5296.	14.9	264

ARTICLE IF CITATIONS # Memristive properties of In2O3/LaNiO3 heterostructures grown by pulsed laser deposition. Journal of 759 2.2 8 Materials Science: Materials in Electronics, 2016, 27, 1812-1816. Filamentary-Based Resistive Switching. Springer Theses, 2016, , 11-45. 0.1 Tunneling Electroresistance Effect with Diode Characteristic for Cross-Point Memory. ACS Applied 761 8.0 12 Materials & amp; Interfaces, 2016, 8, 15476-15481. RRAM Cross-Point Arrays., 2016, , 223-260. First-principles study of carbon impurity effects in the pseudo-hexagonal Ta2O5. Current Applied 763 2.4 11 Physics, 2016, 16, 638-643. Bipolar resistive switching and its temperature dependence in the composite structure of BiFeO3 bilayer. Applied Physics A: Materials Science and Processing, 2016, 122, 1. 764 2.3 Identification and roles of nonstoichiometric oxygen in amorphous Ta2O5 thin films deposited by 765 6.1 27 electron beam and sputtering processes. Applied Surface Science, 2016, 385, 426-435. Main degradation mechanism in AsTeGeSiN threshold switching devices. Microelectronics Reliability, 1.7 766 2016, 56, 61-65. High speed and multi-level resistive switching capability of Ta2O5 thin films for nonvolatile memory 767 5.5 25 application. Journal of Alloys and Compounds, 2016, 676, 356-360. Resistive switching characteristics in manganese oxide and tantalum oxide devices. Microelectronic 768 2.4 Engineering, 2016, 160, 49-53. Memristive Boltzmann machine: A hardware accelerator for combinatorial optimization and deep 769 142 learning., 2016,,. Encapsulation layer design and scalability in encapsulated vertical 3D RRAM. Nanotechnology, 2016, 27, 770 205202. Memristive nanodevices: CMOS compatibility and novel applications., 2016,,. 771 4 Electrode-induced digital-to-analog resistive switching in TaO<sub><i>x</i></sub>-based RRAM devices. Nanotechnology, 2016, 27, 305201. 2.6 Organolead Halide Perovskites for Low Operating Voltage Multilevel Resistive Switching. Advanced 773 21.0 285 Materials, 2016, 28, 6562-6567. Intrinsic threshold switching responses in AsTeSi thin film. Journal of Alloys and Compounds, 2016, 774 24 667, 91-95. Identifying and Engineering the Electronic Properties of the Resistive Switching Interface. Journal of 775 2.27 Electronic Materials, 2016, 45, 1142-1153. Synergistic Resistive Switching Mechanism of Oxygen Vacancies and Metal Interstitials in 776 3.1 34 Ta<sub>2</sub>O<sub>5</sub>. Journal of Physical Chemistry C, 2016, 120, 2456-2463.

#	Article	IF	CITATIONS
777	Multifunctional resistive switching behaviors employing various electroforming steps. Journal of Materials Chemistry C, 2016, 4, 823-830.	5.5	22
778	Electronic properties of hafnium oxide: A contribution from defects and traps. Physics Reports, 2016, 613, 1-20.	25.6	134
779	Physical Mechanism and Performance Factors of Metal Oxide Based Resistive Switching Memory: A Review. Journal of Materials Science and Technology, 2016, 32, 1-11.	10.7	94
780	3-Bit Multilevel Switching by Deep Reset Phenomenon in Pt/W/TaO <sub>X</sub> /Pt-ReRAM Devices. IEEE Electron Device Letters, 2016, 37, 564-567.	3.9	58
781	Modeling and Optimization of Bilayered TaO <sub>x</sub> RRAM Based on Defect Evolution and Phase Transition Effects. IEEE Transactions on Electron Devices, 2016, 63, 1524-1532.	3.0	28
782	Rational Design of Small Molecules to Implement Organic Quaternary Memory Devices. Advanced Functional Materials, 2016, 26, 146-154.	14.9	102
783	Role and Optimization of the Active Oxide Layer in TiO <sub>2</sub> â€Based RRAM. Advanced Functional Materials, 2016, 26, 507-513.	14.9	49
784	Memristive Switching in Bi1–xSbx Nanowires. ACS Applied Materials & Interfaces, 2016, 8, 9224-9230.	8.0	8
785	Characteristics of chloride memristors based on nanothick metal films. Russian Microelectronics, 2016, 45, 26-32.	0.5	1
786	Reliable resistive switching memory based on oxygen-vacancy-controlled bilayer structures. RSC Advances, 2016, 6, 21736-21741.	3.6	58
787	Niobium oxides and niobates physical properties: Review and prospects. Progress in Materials Science, 2016, 80, 1-37.	32.8	373
788	A 250 mV Cu/SiO <sub>2</sub> /W Memristor with Half-Integer Quantum Conductance States. Nano Letters, 2016, 16, 1602-1608.	9.1	92
789	Nonlinearity analysis of TaOX redox-based RRAM. Microelectronic Engineering, 2016, 154, 38-41.	2.4	14
790	Influence of carrier concentration on the resistive switching characteristics of a ZnO-based memristor. Nano Research, 2016, 9, 1116-1124.	10.4	35
791	A New Theoretical Insight Into ZnO NWs Memristive Behavior. Nano Letters, 2016, 16, 2543-2547.	9.1	43
792	Tuning Ionic Transport in Memristive Devices by Graphene with Engineered Nanopores. ACS Nano, 2016, 10, 3571-3579.	14.6	139
793	Effect of oxygen deficiency on electronic properties and local structure of amorphous tantalum oxide thin films. Materials Research Bulletin, 2016, 82, 1-6.	5.2	34
794	Resistive Switching Mechanisms on TaO <sub><i>x</i></sub> and SrRuO <sub>3</sub> Thin-Film Surfaces Probed by Scanning Tunneling Microscopy. ACS Nano, 2016, 10, 1481-1492.	14.6	100

#	Article	IF	CITATIONS
795	Resistance random access memory. Materials Today, 2016, 19, 254-264.	14.2	391
796	A search for the ground state structure and the phase stability of tantalum pentoxide. Journal of Physics Condensed Matter, 2016, 28, 035801.	1.8	27
797	Memristive Crossbar-Based Nonvolatile Memory. Emergence, Complexity and Computation, 2016, , 101-147.	0.3	7
798	A Hybrid Non-Volatile Cache Design for Solid-State Drives Using Comprehensive I/O Characterization. IEEE Transactions on Computers, 2016, 65, 1678-1691.	3.4	26
799	Memristor-Based Nanoelectronic Computing Circuits and Architectures. Emergence, Complexity and Computation, 2016, , .	0.3	51
800	Microstructure evolution characteristics induced by oxygen vacancy generation in anatase TiO <sub>2</sub> based resistive switching devices. Semiconductor Science and Technology, 2017, 32, 035018.	2.0	3
801	Surface profile gradient in amorphous Ta2O5 semi conductive layers regulates nanoscale electric current stability. Applied Surface Science, 2017, 396, 1000-1019.	6.1	13
802	The Nature of Defects Responsible for Transport in a Hafnia-Based Resistive Random Access Memory Element. , 2017, , 493-504.		1
803	A historical survey of algorithms and hardware architectures for neural-inspired and neuromorphic computing applications. Biologically Inspired Cognitive Architectures, 2017, 19, 49-64.	0.9	54
804	Impact of non-metal dopants on band-gap engineering and photocatalytic ability of λ-Ta2O5 from a hybrid density functional study. Journal of Alloys and Compounds, 2017, 700, 1-11.	5.5	7
805	Direct Observations of Nanofilament Evolution in Switching Processes in HfO <sub>2</sub> â€Based Resistive Random Access Memory by In Situ TEM Studies. Advanced Materials, 2017, 29, 1602976.	21.0	137
806	Coexistence of Grainâ€Boundariesâ€Assisted Bipolar and Threshold Resistive Switching in Multilayer Hexagonal Boron Nitride. Advanced Functional Materials, 2017, 27, 1604811.	14.9	229
807	Thin TiO <sub>x</sub> layer as a voltage divider layer located at the quasi-Ohmic junction in the Pt/Ta <sub>2</sub> O <sub>5</sub> /Ta resistance switching memory. Nanoscale, 2017, 9, 2358-2368.	5.6	23
808	Memristor-Based Low-Power High-Speed Nonvolatile Hybrid Memory Array Design. Circuits, Systems, and Signal Processing, 2017, 36, 3585-3597.	2.0	12
809	An efficient analog Hamming distance comparator realized with a unipolar memristor array: a showcase of physical computing. Scientific Reports, 2017, 7, 40135.	3.3	27
810	MPIM: Multi-purpose in-memory processing using configurable resistive memory. , 2017, , .		49
811	Nano-cone resistive memory for ultralow power operation. Nanotechnology, 2017, 28, 125207.	2.6	27
812	Fabrication of resistive switching memory structure using double-sided-anodized porous alumina. Solid-State Electronics 2017, 131, 30-33	1.4	2

#	Article	IF	CITATIONS
813	Cross-Point Resistive Switching Memory and Urea Sensing by Using Annealed GdO <sub>x</sub> Film in IrO <sub>x</sub> /GdO <sub>x</sub> /W Structure for Biomedical Applications. Journal of the Electrochemical Society, 2017, 164, B127-B135.	2.9	19
814	Atomic layer deposition and properties of mixed Ta2O5 and ZrO2 films. AIP Advances, 2017, 7, .	1.3	26
815	Attachable and flexible aluminum oxide resistive non-volatile memory arrays fabricated on tape as the substrate. Nanotechnology, 2017, 28, 135201.	2.6	5
816	3-bit Resistive RAM Write-Read Scheme Based on Complementary Switching Mechanism. IEEE Electron Device Letters, 2017, 38, 449-452.	3.9	20
817	In-situ TEM observation of Multilevel Storage Behavior in low power FeRAM device. Nano Energy, 2017, 34, 103-110.	16.0	33
818	Role of CMOS Back-End Metals as Active Electrodes for Resistive Switching in ReRAM Cells. ECS Journal of Solid State Science and Technology, 2017, 6, N1-N9.	1.8	14
819	Direct Probing of the Dielectric Scavenging-Layer Interface in Oxide Filamentary-Based Valence Change Memory. ACS Applied Materials & Interfaces, 2017, 9, 10820-10824.	8.0	50
820	Graphdiyne for multilevel flexible organic resistive random access memory devices. Materials Chemistry Frontiers, 2017, 1, 1338-1341.	5.9	26
821	Maximizing stoichiometry control in reactive sputter deposition of TiO2. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2017, 35, .	2.1	9
822	Direct Observation of Dualâ€Filament Switching Behaviors in Ta <sub>2</sub> O <sub>5</sub> â€Based Memristors. Small, 2017, 13, 1603116.	10.0	85
823	Impulse voltage control of continuously tunable bipolar resistive switching in Pt/Bi0.9Eu0.1FeO3/Nb-doped SrTiO3 heterostructures. Applied Physics A: Materials Science and Processing, 2017, 123, 1.	2.3	3
824	Fluorine-Induced Highly Reproducible Resistive Switching Performance: Facile Morphology Control through the Transition between J- and H-Aggregation. ACS Applied Materials & Interfaces, 2017, 9, 9926-9934.	8.0	30
825	Gate-tunable, normally-on to normally-off memristance transition in patterned LaAlO3/SrTiO3 interfaces. Applied Physics Letters, 2017, 110, .	3.3	7
826	The effect of oxygen vacancy on switching mechanism of ZnO resistive switching memory. Applied Physics Letters, 2017, 110, .	3.3	79
827	The Role of Ti Buffer Layer Thickness on the Resistive Switching Properties of Hafnium Oxide-Based Resistive Switching Memories. Langmuir, 2017, 33, 4654-4665.	3.5	51
828	Multiâ€Nonvolatile State Resistive Switching Arising from Ferroelectricity and Oxygen Vacancy Migration. Advanced Materials, 2017, 29, 1606165.	21.0	84
829	A niobium oxide-tantalum oxide selector-memristor self-aligned nanostack. Applied Physics Letters, 2017, 110, .	3.3	25
830	Resistive Switching Performance Improvement via Modulating Nanoscale Conductive Filament, Involving the Application of Twoâ€Dimensional Layered Materials. Small, 2017, 13, 1604306.	10.0	139

#	Article	IF	CITATIONS
831	Time-decay Memristive Behavior and diffusive dynamics in one forget process operated by a 3D vertical Pt/Ta2O5â^'x/W device. Scientific Reports, 2017, 7, 822.	3.3	12
832	Observation of the Ni <sub>2</sub> O <sub>3</sub> phase in a NiO thinâ€film resistive switching system. Physica Status Solidi - Rapid Research Letters, 2017, 11, 1700048.	2.4	9
833	PipeLayer: A Pipelined ReRAM-Based Accelerator for Deep Learning. , 2017, , .		525
834	Nanoionicsâ€Enabled Memristive Devices: Strategies and Materials for Neuromorphic Applications. Advanced Electronic Materials, 2017, 3, 1600510.	5.1	167
835	Design and Simulation of a 128 kb Embedded Nonvolatile Memory Based on a Hybrid RRAM (HfO2 )/28 nm FDSOI CMOS Technology. IEEE Nanotechnology Magazine, 2017, 16, 677-686.	2.0	23
836	Doubleâ€Layerâ€Stacked One Diodeâ€One Resistive Switching Memory Crossbar Array with an Extremely High Rectification Ratio of 10 <sup>9</sup> . Advanced Electronic Materials, 2017, 3, 1700152.	5.1	42
837	Effect of O2- migration in Pt/HfO2/Ti/Pt structure. Journal of Electroceramics, 2017, 39, 137-142.	2.0	6
838	Nanoscale characterization of resistive switching using advanced conductive atomic force microscopy based setups. Journal of Electroceramics, 2017, 39, 94-108.	2.0	33
839	Electron holography on HfO <sub>2</sub> /HfO <sub>2â^²<i>x</i></sub> bilayer structures with multilevel resistive switching properties. Nanotechnology, 2017, 28, 215702.	2.6	31
840	Single crystalline SrTiO3 as memristive model system: From materials science to neurological and psychological functions. Journal of Electroceramics, 2017, 39, 210-222.	2.0	14
841	Resistive switching in MIM structure based on overstoichiometric tantalum oxide. Microelectronic Engineering, 2017, 178, 150-153.	2.4	7
842	A four-state capacitance molecular switch based on a redox active tetrathiafulvalene self-assembled monolayer. RSC Advances, 2017, 7, 5636-5641.	3.6	20
843	Understanding rectifying and nonlinear bipolar resistive switching characteristics in Ni/SiN <sub>x</sub> /p-Si memory devices. RSC Advances, 2017, 7, 17882-17888.	3.6	49
844	Memory and Energy Storage Dual Operation in Chalcogenide-Based CBRAM. IEEE Journal of the Electron Devices Society, 2017, 5, 283-287.	2.1	13
845	Experimental Demonstration of Feature Extraction and Dimensionality Reduction Using Memristor Networks. Nano Letters, 2017, 17, 3113-3118.	9.1	158
846	Using Dopants to Tune Oxygen Vacancy Formation in Transition Metal Oxide Resistive Memory. ACS Applied Materials & Interfaces, 2017, 9, 16296-16304.	8.0	46
847	Characteristics and transport mechanisms of triple switching regimes of TaOx memristor. Applied Physics Letters, 2017, 110, .	3.3	35
848	Resistive RAM-Centric Computing: Design and Modeling Methodology. IEEE Transactions on Circuits and Systems I: Regular Papers, 2017, 64, 2263-2273.	5.4	61

#	Article	IF	CITATIONS
849	Multifilamentary Conduction Modeling in Transition Metal Oxide-Based RRAM. IEEE Transactions on Electron Devices, 2017, 64, 3145-3150.	3.0	19
850	Giant tunnelling electroresistance in metal/ferroelectric/semiconductor tunnel junctions by engineering the Schottky barrier. Nature Communications, 2017, 8, 15217.	12.8	165
851	Interface-type resistive switching in perovskite materials. Journal of Electroceramics, 2017, 39, 157-184.	2.0	102
852	Crystal that remembers: several ways to utilize nanocrystals in resistive switching memory. Journal Physics D: Applied Physics, 2017, 50, 303002.	2.8	34
853	Reset switching statistics of TaOx-based Memristor. Journal of Electroceramics, 2017, 39, 132-136.	2.0	8
854	Three-dimensional crossbar arrays of self-rectifying Si/SiO2/Si memristors. Nature Communications, 2017, 8, 15666.	12.8	153
855	Interfacial memristors in Al–LaNiO <sub>3</sub> heterostructures. Physical Chemistry Chemical Physics, 2017, 19, 16960-16968.	2.8	6
856	p-NiO/n+-Si single heterostructure for one diode-one resistor memory applications. Journal of Alloys and Compounds, 2017, 721, 520-524.	5.5	11
857	Oxide-based RRAM models for circuit designers: A comparative analysis. , 2017, , .		17
858	Enhanced stability of filament-type resistive switching by interface engineering. Scientific Reports, 2017, 7, 43664.	3.3	56
859	Mechanism of Nonvolatile Resistive Switching in ZnO/α-Fe <sub>2</sub> O <sub>3</sub> Core–Shell Heterojunction Nanorod Arrays. Journal of Physical Chemistry C, 2017, 121, 12953-12958.	3.1	17
860	Self-Selecting Resistive Switching Scheme Using TiO2 Nanorod Arrays. Scientific Reports, 2017, 7, 2066.	3.3	40
861	Graphene and Related Materials for Resistive Random Access Memories. Advanced Electronic Materials, 2017, 3, 1600195.	5.1	175
862	Unipolar resistive switching properties of Pr-doped ZnO thin films. Ceramics International, 2017, 43, S474-S480.	4.8	15
863	Nanometerâ€Scale Phase Transformation Determines Threshold and Memory Switching Mechanism. Advanced Materials, 2017, 29, 1701752.	21.0	59
864	Selection by current compliance of negative and positive bipolar resistive switching behaviour in ZrO <sub>2â^'<i>x</i></sub> /ZrO <sub>2</sub> bilayer memory. Journal Physics D: Applied Physics, 2017, 50, 175101.	2.8	21
865	Learning through ferroelectric domain dynamics in solid-state synapses. Nature Communications, 2017, 8, 14736.	12.8	437
866	Chemical Strain Engineering of Magnetism in Oxide Thin Films. Advanced Materials, 2017, 29, 1604112.	21.0	27

	CITATION	LPORT	
#	Article	IF	CITATIONS
867	SiO2 based conductive bridging random access memory. Journal of Electroceramics, 2017, 39, 109-131.	2.0	32
868	Study on morphology evolution of anodic tantalum oxide films in different using stages of H 2 SO 4 /HF electrolyte. Electrochimica Acta, 2017, 236, 140-153.	5.2	20
869	Temperature and field-dependent transport measurements in continuously tunable tantalum oxide memristors expose the dominant state variable. Applied Physics Letters, 2017, 110, .	3.3	38
870	Research Update: Fast and tunable nanoionics in vertically aligned nanostructured films. APL Materials, 2017, 5, .	5.1	35
871	In Situ Control of Oxygen Vacancies in TaO <sub><i>x</i></sub> Thin Films via Plasma-Enhanced Atomic Layer Deposition for Resistive Switching Memory Applications. ACS Applied Materials & Interfaces, 2017, 9, 13286-13292.	8.0	49
872	Resistive switching mechanism in the one diode-one resistor memory based on p+-Si/n-ZnO heterostructure revealed by in-situ TEM. Scientific Reports, 2017, 7, 45143.	3.3	35
873	The role of nitrogen doping in ALD Ta2O5 and its influence on multilevel cell switching in RRAM. Applied Physics Letters, 2017, 110, .	3.3	54
874	Atomic crystals resistive switching memory. Chinese Physics B, 2017, 26, 033201.	1.4	1
875	Graphene resistive random memory — the promising memory device in next generation. Chinese Physics B, 2017, 26, 038501.	1.4	12
876	Modulation of nonlinear resistive switching behavior of a TaO <sub>x</sub> -based resistive device through interface engineering. Nanotechnology, 2017, 28, 055204.	2.6	35
877	Resistive switching of Pt/TiO <i><sub>x</sub></i> /Pt devices fabricated on flexible Parylene-C substrates. Nanotechnology, 2017, 28, 025303.	2.6	18
878	Electronic and optical properties of oxygen vacancies in amorphous Ta <sub>2</sub> O <sub>5</sub> from first principles. Nanoscale, 2017, 9, 1120-1127.	5.6	45
879	Comparison of the Atomic Layer Deposition of Tantalum Oxide Thin Films Using Ta(N <sup><i>t</i></sup> Bu)(NEt <sub>2</sub> ) <sub>3</sub> , Ta(N <sup><i>t</i></sup> Bu)(NEt <sub>2</sub> ) <sub>2</sub> Cp, and H <sub>2</sub> O. ACS Applied Materials & Interfaces, 2017, 9, 537-547.	8.0	23
880	A Novel Operation Scheme Enabling Easy Integration of Selector and Memory. IEEE Electron Device Letters, 2017, 38, 172-174.	3.9	16
881	Ferroelectric self-assembled molecular materials showing both rectifying and switchable conductivity. Science Advances, 2017, 3, e1701017.	10.3	57
882	Wafer-scale reliable switching memory based on 2-dimensional layered organic–inorganic halide perovskite. Nanoscale, 2017, 9, 15278-15285.	5.6	113
883	Electrochemical Tantalum Oxide for Resistive Switching Memories. Advanced Materials, 2017, 29, 1703357.	21.0	69
884	High-Performance Single-Active-Layer Memristor Based on an Ultrananocrystalline Oxygen-Deficient TiO <sub><i>x</i> </sub> Film. ACS Applied Materials & Interfaces, 2017, 9, 36989-36996.	8.0	22

#	Article	IF	CITATIONS
885	Ag-NPs doping enhanced resistive switching performance and induced changes in magnetic properties of NiFe <sub>2</sub> O <sub>4</sub> thin films. RSC Advances, 2017, 7, 46665-46677.	3.6	45
886	Stochastic dynamics of resistive switching: fluctuations lead to optimal particle number. New Journal of Physics, 2017, 19, 093007.	2.9	3
887	A novel true random number generator based on a stochastic diffusive memristor. Nature Communications, 2017, 8, 882.	12.8	287
888	One bipolar transistor selector - One resistive random access memory device for cross bar memory array. AIP Advances, 2017, 7, .	1.3	29
889	Influence of metal electrode on the performance of ZnO based resistance switching memories. Journal of Applied Physics, 2017, 122, .	2.5	30
890	Robust resistive memory devices using solution-processable metal-coordinated azoÂaromatics. Nature Materials, 2017, 16, 1216-1224.	27.5	244
891	The effect of reactive ion etch (RIE) process conditions on ReRAM device performance. Semiconductor Science and Technology, 2017, 32, 095013.	2.0	7
892	Narrowing the band gap to enhance the resistive switching properties of Pr <sup>3+</sup> -doped ZnO thin films by Cd-ion doping. RSC Advances, 2017, 7, 38757-38764.	3.6	7
894	Development of ferroelectric oxides based resistive switching materials. Materials Science and Technology, 2017, 33, 2010-2023.	1.6	5
895	Cubic-phase zirconia nano-island growth using atomic layer deposition and application in low-power charge-trapping nonvolatile-memory devices. Nanotechnology, 2017, 28, 445201.	2.6	17
896	Fourâ€Bitsâ€Per ell Operation in an HfO <sub>2</sub> â€Based Resistive Switching Device. Small, 2017, 13, 1701781.	10.0	37
897	Volatile HRS asymmetry and subloops in resistive switching oxides. Nanoscale, 2017, 9, 14414-14422.	5.6	11
898	Ultralow-Temperature Solution-Processed Aluminum Oxide Dielectrics via Local Structure Control of Nanoclusters. ACS Applied Materials & amp; Interfaces, 2017, 9, 35114-35124.	8.0	44
899	Transparent amorphous strontium titanate resistive memories with transient photo-response. Nanoscale, 2017, 9, 14690-14702.	5.6	18
900	The role of oxygen vacancies in resistive switching behavior of organic-TiO2 hybrid composite. Applied Physics A: Materials Science and Processing, 2017, 123, 1.	2.3	1
901	A carrier transport model in the high-resistance state of lead-methylamine iodide-based resistive memory devices. AIP Advances, 2017, 7, 085207.	1.3	5
902	Memristive computing devices and applications. Journal of Electroceramics, 2017, 39, 4-20.	2.0	47
903	Comprehensive modeling of electrochemical metallization memory cells. Journal of Computational Electronics, 2017, 16, 1017-1037.	2.5	26

#	Article	IF	CITATIONS
904	Tuning analog resistive switching and plasticity in bilayer transition metal oxide based memristive synapses. RSC Advances, 2017, 7, 43132-43140.	3.6	25
905	High-speed true random number generation based on paired memristors for security electronics. Nanotechnology, 2017, 28, 455202.	2.6	44
906	Structurally Engineered Nanoporous Ta <sub>2</sub> O <sub>5–<i>x</i></sub> Selector-Less Memristor for High Uniformity and Low Power Consumption. ACS Applied Materials & Interfaces, 2017, 9, 34015-34023.	8.0	18
907	Te-based chalcogenide materials for selector applications. Scientific Reports, 2017, 7, 8103.	3.3	126
908	Forming-less and Non-Volatile Resistive Switching in WOX by Oxygen Vacancy Control at Interfaces. Scientific Reports, 2017, 7, 10186.	3.3	55
909	Graphene/h-BN Heterostructures for Vertical Architecture of RRAM Design. Scientific Reports, 2017, 7, 9679.	3.3	29
910	Ultralow power switching in a silicon-rich SiN <sub>y</sub> /SiN <sub>x</sub> double-layer resistive memory device. Physical Chemistry Chemical Physics, 2017, 19, 18988-18995.	2.8	27
911	Controllable Organic Resistive Switching Achieved by Oneâ€Step Integration of Coneâ€Shaped Contact. Advanced Materials, 2017, 29, 1701333.	21.0	129
912	Enlarged read window in the asymmetric ITO/HfOx/TiN complementary resistive switch. Applied Physics Letters, 2017, 111, .	3.3	10
913	Multi-level switching in TiO <sub><i>x</i></sub> F <sub><i>y</i></sub> film with nanoparticles. Journal Physics D: Applied Physics, 2017, 50, 385106.	2.8	0
914	Comparison of resistive switching characteristics by using e-gun/sputter deposited SiOx film in W/SiOx/TiN structure and pH/creatinine sensing through iridium electrode. Journal of Alloys and Compounds, 2017, 726, 30-40.	5.5	15
915	Scalability of voltage-controlled filamentary and nanometallic resistance memory devices. Nanoscale, 2017, 9, 12690-12697.	5.6	30
916	Thermal stability and data retention of resistive random access memory with HfO <sub> <i>x</i> </sub> /ZnO double layers. Chinese Physics B, 2017, 26, 087305.	1.4	5
917	Comparative study of Al <sub>2</sub> O <sub>3</sub> , HfO <sub>2</sub> , and HfAlO <sub><i>x</i></sub> for improved selfâ€compliance bipolar resistive switching. Journal of the American Ceramic Society, 2017, 100, 5638-5648.	3.8	40
918	Truly Electroformingâ€Free and Lowâ€Energy Memristors with Preconditioned Conductive Tunneling Paths. Advanced Functional Materials, 2017, 27, 1702010.	14.9	75
919	Switchable diode effect in oxygen vacancy-modulated SrTiO3 single crystal. Applied Physics A: Materials Science and Processing, 2017, 123, 1.	2.3	20
920	A Versatile and Accurate Compact Model of Memristor With Equivalent Resistor Topology. IEEE Electron Device Letters, 2017, 38, 1367-1370.	3.9	14
921	Self-rectifying bipolar resistive switching memory based on an iron oxide and graphene oxide hybrid. Nanoscale, 2017, 9, 15314-15322.	5.6	37

ARTICLE IF CITATIONS Scalability and reliability issues of Ti/HfO<i>x</i>based 1T1R bipolar RRAM: Occurrence, mitigation, and 922 3.3 19 solution. Applied Physics Letters, 2017, 110, . Multibit memory operation of metal-oxide bi-layer memristors. Scientific Reports, 2017, 7, 17532. 3.3 228 Improved performance of Ta2O5â<sup>^</sup> x resistive switching memory by Gd-doping: Ultralow power 924 3.3 41 operation, good data retention, and multilevel storage. Applied Physics Letters, 2017, 111, . Extremely Low Operating Current Resistive Memory Based on Exfoliated 2D Perovskite Single Crystals 14.6 286 for Neurómorphic Computing. ACS Nano, 2017, 11, 12247-12256. Controllable Switching Filaments Prepared via Tunable and Well-Defined Single Truncated Conical Nanopore Structures for Fast and Scalable SiO<sub><i>x</i></sub> Memory. Nano Letters, 2017, 17, 926 9.1 21 7462-7470. Bioinspired Tribotronic Resistive Switching Memory for Self-Powered Memorizing Mechanical Stimuli. ACS Applied Materials & amp; Interfaces, 2017, 9, 43822-43829. 8.0 Investigation of the Impact of High Temperatures on the Switching Kinetics of Redoxâ€Based Resistive 928 5.1 41 Switching Cells using a Highâ€Speed Nanoheater. Advanced Electronic Materials, 2017, 3, 1700294. Combination of conductive filaments and Schottky behavior in multifunctional Sn1â°xCuxO2â°î 929 3.3 10 memristor. Applied Physics Letters, 2017, 111, . Parasitic resistive switching uncovered from complementary resistive switching in single active-layer 930 2.0 3 oxide memory device. Semiconductor Science and Technology, 2017, 32, 125018. Distributed shared persistent memory., 2017,,. Ag 8 SnSe 6 argyrodite synthesis and optical properties. Opto-electronics Review, 2017, 25, 37-40. 932 20 2.4 Zero temperature coefficient of resistance of the electrical-breakdown path in ultrathin hafnia. 2.8 Journal Physics D: Applied Physics, 2017, 50, 385102. Phased antenna arrays based on nonâ€volatile resistive switches. IET Microwaves, Antennas and 934 1.4 9 Propagation, 2017, 11, 1169-1173. A novel ternary memory property achieved through rational introduction of end-capping 5.5 26 naphthalimide acceptors. Journal of Materials Chemistry C, 2017, 5, 7961-7968. 936 Effect of Displacement Damage on Tantalum Oxide Resistive Memory. MRS Advances, 2017, 2, 3011-3017. 0.9 3 Resistive Switching Characteristics of Al2O3 Film for Transparent Nonvolatile Memory. IEEE 2.0 Nanotechnology Magazine, 2017, 16, 1129-1131. Review of radiation effects on ReRAM devices and technology. Semiconductor Science and 938 2.039 Technology, 2017, 32, 083002. Negative voltage modulated multi-level resistive switching by using a Cr/BaTiOx/TiN structure and 939 3.3 quantum conductance through evidence of H2O2 sensing mechanism. Scientific Reports, 2017, 7, 4735.

#	Article	IF	CITATIONS
940	Brownmillerite thin films as fast ion conductors for ultimate-performance resistance switching memory. Nanoscale, 2017, 9, 10502-10510.	5.6	37
941	Charge transport in thin hafnium and zirconium oxide films. Optoelectronics, Instrumentation and Data Processing, 2017, 53, 184-189.	0.6	18
942	Resistive random access memory (RRAM) technology: From material, device, selector, 3D integration to bottom-up fabrication. Journal of Electroceramics, 2017, 39, 21-38.	2.0	79
943	Electrochemical-reaction-induced synaptic plasticity in MoO <sub>x</sub> -based solid state electrochemical cells. Physical Chemistry Chemical Physics, 2017, 19, 4190-4198.	2.8	62
944	Effect of carrier screening on ZnO-based resistive switching memory devices. Nano Research, 2017, 10, 77-86.	10.4	23
945	Ultra-high ON/OFF ratio and multi-storage on NiO resistive switching device. Journal of Materials Science, 2017, 52, 238-246.	3.7	35
946	Resistive switching behaviors of Ti nano-layer embedded TaO x -based devices. Current Applied Physics, 2017, 17, 230-234.	2.4	2
947	Resistive Switching Memory of TiO2 Nanowire Networks Grown on Ti Foil by a Single Hydrothermal Method. Nano-Micro Letters, 2017, 9, 15.	27.0	58
948	Improving Detection Accuracy of Memristor-Based Bio-Signal Sensing Platform. IEEE Transactions on Biomedical Circuits and Systems, 2017, 11, 203-211.	4.0	6
949	Energy efficient memory technologies. , 2017, , .		2
950	Device and Circuit Interaction Analysis of Stochastic Behaviors in Cross-Point RRAM Arrays. IEEE Transactions on Electron Devices, 2017, 64, 4928-4936.	3.0	22
951	3D ReRAM arrays and crossbars: Fabrication, characterization and applications. , 2017, , .		8
952	Transforming the short-term sensing stimuli to long-term e-skin memory. , 2017, , .		1
953	Fully Coupled Multiphysics Simulation of Crosstalk Effect in Bipolar Resistive Random Access Memory. IEEE Transactions on Electron Devices, 2017, 64, 3647-3653.	3.0	29
954	Physics-based modeling approaches of resistive switching devices for memory and in-memory computing applications. Journal of Computational Electronics, 2017, 16, 1121-1143.	2.5	54
955	Characterization and modeling of SET/RESET cycling induced read-disturb failure time degradation in a resistive switching memory. Journal of Applied Physics, 2017, 122, 215702.	2.5	6
956	Excellent selector performance in engineered Ag/ZrO2:Ag/Pt structure for high-density bipolar RRAM applications. AIP Advances, 2017, 7, .	1.3	15
957	Capacitor-less RRAM-based stochastic neuron for event-based unsupervised learning. , 2017, , .		

#	Article	IF	CITATIONS
958	Filament-to-dielectric band alignments in \$\$hbox {TiO}_{2}\$\$ TiO 2 and \$\$hbox {HfO}_{2}\$\$ HfO. Journal of Computational Electronics, 2017, 16, 1057-1065.	2.5	7
959	Advances in the understanding of microscopic switching mechanisms in ReRAM devices (Invited paper). , 2017, , .		3
960	Evolution of oxygen vacancies under electrical characterization for HfO <inf>x</inf> -based ReRAMs. , 2017, , .		0
961	Advanced performance improvement algorithms for emerging resistive memory: CBRAM case study. , 2017, , .		2
962	Thermal effects on the I-V characteristics of filamentary VCM based ReRAM-cells using a nanometer-sized heater. , 2017, , .		2
963	Self-Compliant Bipolar Resistive Switching in SiN-Based Resistive Switching Memory. Materials, 2017, 10, 459.	2.9	15
964	Flexible Polymer Device Based on Parylene-C with Memory and Temperature Sensing Functionalities. Polymers, 2017, 9, 310.	4.5	15
965	Copper atomic-scale transistors. Beilstein Journal of Nanotechnology, 2017, 8, 530-538.	2.8	9
966	Temperature Effects on the Total Ionizing Dose Response of TaOx-based Memristive Bit Cells. , 2017, , .		0
967	Stress-Induced Resistive Switching in Pt/HfO2/Ti Devices. Journal of Electronic Materials, 2018, 47, 1505-1511.	2.2	2
968	Ultralow Power Consumption Flexible Biomemristors. ACS Applied Materials & Interfaces, 2018, 10, 10280-10286.	8.0	39
969	High-Performance Resistance Switching Memory Devices Using Spin-On Silicon Oxide. IEEE Nanotechnology Magazine, 2018, 17, 884-888.	2.0	11
970	Current-induced magnetization switching using an electrically insulating spin-torque generator. Science Advances, 2018, 4, eaar2250.	10.3	66
971	Electrically-controlled nonlinear switching and multi-level storage characteristics in WO film-based memory cells. Journal of Physics and Chemistry of Solids, 2018, 116, 148-152.	4.0	6
972	Modeling of Mean Barrier Height Levying Various Image Forces of Metal–Insulator–Metal Structure to Enhance the Performance of Conductive Filament Based Memristor Model. IEEE Nanotechnology Magazine, 2018, 17, 268-275.	2.0	23
973	Solidâ€State Diffusional Behaviors of Functional Metal Oxides at Atomic Scale. Small, 2018, 14, 1702877.	10.0	4
974	Photonic Potentiation and Electric Habituation in Ultrathin Memristive Synapses Based on Monolayer MoS <sub>2</sub> . Small, 2018, 14, e1800079.	10.0	224
975	Resistive RAMs as analog trimming elements. Solid-State Electronics, 2018, 142, 52-55.	1.4	9

#	Article	IF	Citations
976	Nonvolatile Memory Materials for Neuromorphic Intelligent Machines. Advanced Materials, 2018, 30, e1704729.	21.0	187
977	Postâ€Annealing Effect on Resistive Switching Performance of a Ta/Mn <sub>2</sub> O <sub>3</sub> /Pt/Ti Stacked Device. Physica Status Solidi - Rapid Research Letters, 2018, 12, 1800031.	2.4	10
978	Solving the integration problem of one transistor one memristor architecture with a Bi-layer IGZO film through synchronous process. Applied Physics Letters, 2018, 112, .	3.3	29
979	Electrochemically prepared oxides for resistive switching devices. Electrochimica Acta, 2018, 274, 103-111.	5.2	25
980	Scaling Effect on Silicon Nitride Memristor with Highly Doped Si Substrate. Small, 2018, 14, e1704062.	10.0	74
981	Electronic structure and charge transport in nonstoichiometric tantalum oxide. Nanotechnology, 2018, 29, 264001.	2.6	16
982	GraphR: Accelerating Graph Processing Using ReRAM. , 2018, , .		169
983	Characterization of HfO 2 -based devices with indication of second order memristor effects. Microelectronic Engineering, 2018, 195, 101-106.	2.4	18
984	Enhancement of resistive switching properties in Al <sub>2</sub> O <sub>3</sub> bilayer-based atomic switches: multilevel resistive switching. Nanotechnology, 2018, 29, 235202.	2.6	46
985	Plausible carrier transport model in organic-inorganic hybrid perovskite resistive memory devices. AIP Advances, 2018, 8, .	1.3	3
986	Robust memristors based on layered two-dimensional materials. Nature Electronics, 2018, 1, 130-136.	26.0	539
987	Optically reversible electrical soft-breakdown in wide-bandgap oxides—A factorial study. Journal of Applied Physics, 2018, 123, .	2.5	13
988	Resistive switching mechanism of ZnO/ZrO <sub>2</sub> -stacked resistive random access memory device annealed at 300 °C by sol–gel method with forming-free operation. Japanese Journal of Applied Physics, 2018, 57, 011501.	1.5	9
989	Solid-State Synapse Based on Magnetoelectrically Coupled Memristor. ACS Applied Materials & Interfaces, 2018, 10, 5649-5656.	8.0	55
990	Ion beam synthesis of indium-oxide nanocrystals for improvement of oxide resistive random-access memories. Materials Research Express, 2018, 5, 015027.	1.6	2
991	Current Optimized Coset Coding for Efficient RRAM Programming. IEEE Transactions on Very Large Scale Integration (VLSI) Systems, 2018, 26, 1000-1004.	3.1	1
992	Asymmetric Resistive Switching Effect in Au/Nb:SrTiO <sub>3</sub> Schottky Junctions. Physica Status Solidi (A) Applications and Materials Science, 2018, 215, 1700912.	1.8	6
993	An artificial nociceptor based on a diffusive memristor. Nature Communications, 2018, 9, 417.	12.8	295

#	Article	IF	CITATIONS
994	Polypyridyl chromium( <scp>iii</scp> ) complexes for non-volatile memory application: impact of the coordination sphere on memory device performance. Journal of Materials Chemistry C, 2018, 6, 1445-1450.	5.5	17
995	Asymmetric resistive switching effect in ZnO/Nb:SrTiO3 heterojunctions. Applied Physics A: Materials Science and Processing, 2018, 124, 1.	2.3	3
996	SiGe epitaxial memory for neuromorphic computing with reproducible high performance based on engineered dislocations. Nature Materials, 2018, 17, 335-340.	27.5	518
997	Compliance-Free, Digital SET and Analog RESET Synaptic Characteristics of Sub-Tantalum Oxide Based Neuromorphic Device. Scientific Reports, 2018, 8, 1228.	3.3	91
998	Electric field-triggered metal-insulator transition resistive switching of bilayered multiphasic VOx. Electronic Materials Letters, 2018, 14, 14-22.	2.2	19
999	A study on the resistance switching of Ag2Se and Ta2O5heterojunctions using structural engineering. Nanotechnology, 2018, 29, 035202.	2.6	5
1000	Role of the Electrode Material on the RESET Limitation in Oxide ReRAM Devices. Advanced Electronic Materials, 2018, 4, 1700243.	5.1	20
1001	The effect of different oxygen exchange layers on TaO <i><sub>x</sub></i> based RRAM devices. Semiconductor Science and Technology, 2018, 33, 015014.	2.0	8
1002	Multi-valued and Fuzzy Logic Realization using TaOx Memristive Devices. Scientific Reports, 2018, 8, 8.	3.3	135
1003	Charge Transport and the Nature of Traps in Oxygen Deficient Tantalum Oxide. ACS Applied Materials & Interfaces, 2018, 10, 3769-3775.	8.0	45
1004	Influence of argon and oxygen pressure ratio on bipolar-resistive switching characteristics of CeO2â^'x thin films deposited at room temperature. Applied Physics A: Materials Science and Processing, 2018, 124, 1.	2.3	12
1005	Forming-free resistive switching characteristics in tantalum oxide and manganese oxide based crossbar array structure. Microelectronic Engineering, 2018, 190, 7-10.	2.4	19
1006	Resistive switching characteristics of manganese oxide thin film and nanoparticle assembly hybrid devices. Japanese Journal of Applied Physics, 2018, 57, 06HC03.	1.5	20
1007	Logic synthesis and defect tolerance for memristive crossbar arrays. , 2018, , .		6
1008	Lowâ€Temperatureâ€Processed SiO <i><sub>x</sub></i> One Diode–One Resistor Crossbar Array and Its Flexible Memory Application. Advanced Electronic Materials, 2018, 4, 1700665.	5.1	19
1009	Quantitative Observation of Threshold Defect Behavior in Memristive Devices with <i>Operando</i> X-ray Microscopy. ACS Nano, 2018, 12, 4938-4945.	14.6	12
1010	Multiscale Co-Design Analysis of Energy, Latency, Area, and Accuracy of a ReRAM Analog Neural Training Accelerator. IEEE Journal on Emerging and Selected Topics in Circuits and Systems, 2018, 8, 86-101.	3.6	119
1011	Origin of negative resistance in anion migration controlled resistive memory. Applied Physics Letters, 2018, 112, .	3.3	5

ARTICLE IF CITATIONS 3D multilevel spin transfer torque devices. Applied Physics Letters, 2018, 112, . 1012 3.3 15 Liquid Silicon., 2018,,. Unified computational model of transport in metal-insulating oxide-metal systems. Applied Physics A: 1014 2.3 1 Materials Science and Processing, 2018, 124, 1. A Collective Study on Modeling and Simulation of Resistive Random Access Memory. Nanoscale 93 Research Letters, 2018, 13, 8. Stateful Memristor-Based Search Architecture. IEEE Transactions on Very Large Scale Integration 1016 3.1 11 (VLSI) Systems, 2018, 26, 2773-2780. Transient Resistive Switching Memory of CsPbBr<sub>3</sub> Thin Films. Advanced Electronic 5.1 Materials, 2018, 4, 1700596 A Mapping Methodology of Boolean Logic Circuits on Memristor Crossbar. IEEE Transactions on 1018 2.7 26 Computer-Aided Design of Integrated Circuits and Systems, 2018, 37, 311-323. Field-Programmable Crossbar Array (FPCA) for Reconfigurable Computing. IEEE Transactions on 1019 2.4 28 Multi-Scale Computing Systems, 2018, 4, 698-710. Improved unipolar resistive switching characteristics of Au-doped nickel ferrite magnetic thin films 1020 5.5 44 for nonvolatile memory applications. Journal of Alloys and Compounds, 2018, 732, 573-584. Evolution of resistive switching mechanism through H 2 O 2 sensing by using TaO x -based material in 6.1 W/Al 2 O 3 /TaO x /TiN structure. Applied Surface Science, 2018, 433, 51-59 Onâ€Demand Reconfiguration of Nanomaterials: When Electronics Meets Ionics. Advanced Materials, 1022 21.0 152 2018, 30, 1702770. A Time-Efficient CMOS-Memristive Programmable Circuit Realizing Logic Functions in Generalized 3.1 AND–XOR Structures. IEEE Transactions on Very Large Scale Integration (VLSI) Systems, 2018, 26, 23-36. Resistive Switching of Ta2O5-Based Self-Rectifying Vertical-Type Resistive Switching Memory. Journal 1024 2.2 7 of Electronic Materials, 2018, 47, 162-166. Memristive Logicâ€inâ€Memory Integrated Circuits for Energyâ€Efficient Flexible Electronics. Advanced Functional Materials, 2018, 28, 1704725. 14.9 Improvement of multi-level resistive switching characteristics in solution-processed 1026 AlO<sub><i>x</i></sub>-based non-volatile resistive memory using microwave irradiation. 2.016 Semiconductor Science and Technology, 2018, 33, 015009. Improved resistive switching characteristics of a Pt/HfO2/Pt resistor by controlling anode interface 1027 6.1 with forming and switching polarity. Applied Surface Science, 2018, 435, 117-121 Conduction mechanisms, dynamics and stability in ReRAMs. Microelectronic Engineering, 2018, 187-188, 1028 2.4 59 121-133. Low-power, high-uniform, and forming-free resistive memory based on Mg-deficient amorphous MgO 6.1 19 film with rough surface. Applied Surface Science, 2018, 434, 1074-1078.

#	Article	IF	CITATIONS
1030	Electrical evidence of multiple-filament formation in tantalum oxide-based resistive switching memory via a novel device structure. Japanese Journal of Applied Physics, 2018, 57, 124201.	1.5	0
1031	Overview of Current Compliance Effect on Reliability of Nano Scaled Metal Oxide Resistive Random Access Memory Device. , 2018, , .		4
1032	Magnetically-Programmable Cylindrical Microparticles by Facile Reaping Method. Macromolecular Research, 2018, 26, 1108-1114.	2.4	3
1033	Dual Functions of V/SiOx/AlOy/p++Si Device as Selector and Memory. Nanoscale Research Letters, 2018, 13, 252.	5.7	14
1034	Synaptic Behavior of Nanoscale ReRAM Devices for the Implementation in a Dynamic Neural Network Array. , 2018, , .		0
1035	Resistive Switching Behavior of RF Sputtered Calcium Copper Titanate Thin Films with Various Annealing Approach. , 2018, , .		1
1036	Promising Materials of Nonvolatile Memory Based on HfOÑ and Achievement of Device Parameters in the TiN/Hf <sub>0.5</sub> Zr <sub>0.5</sub> O <sub>2</sub> / TiN/SiO <sub>2</sub> /Si and TiN/Hf <sub>X</sub> Al <sub>1-X</sub> O <sub>Y</sub> /Pt/SiO <sub>2</sub> /Si Test Structures Obtained on the National Technological Basis. Defect and Diffusion Forum, 2018, 386, 172-177.	0.4	0
1037	Effect of Interface Layer Engineering on Resistive Switching Characteristics of ZrO <sub>2</sub> -Based Resistive Switching Devices. IEEE Transactions on Electron Devices, 2018, 65, 5390-5394.	3.0	30
1038	Write-rationing garbage collection for hybrid memories. , 2018, , .		26
1039	Analog high resistance bilayer RRAM device for hardware acceleration of neuromorphic computation. Journal of Applied Physics, 2018, 124, .	2.5	12
1040	Oxygen vacancy drift controlled three-terminal ReRAM with a reduction in operating gate bias and gate leakage current. Solid State Ionics, 2018, 328, 30-34.	2.7	3
1041	Multifunctional Optoelectronic Device Based on Resistive Switching Effects. , 0, , .		4
1042	Transparent Conducting Oxides for Optoelectronics and Biosensing Applications. , 2018, , .		3
1043	A self-rectifying TaOy/nanoporous TaOx memristor synaptic array for learning and energy-efficient neuromorphic systems. NPG Asia Materials, 2018, 10, 1097-1106.	7.9	92
1044	LerGAN: A Zero-Free, Low Data Movement and PIM-Based GAN Architecture. , 2018, , .		22
1045	Resistance-switching properties of Bi-doped \$\$hbox {SrTiO}_{3}\$\$ SrTiO 3 films for non-volatile memory applications with different device structures. Bulletin of Materials Science, 2018, 41, 1.	1.7	3
1046	Modeling of Current Conduction during RESET Phase of Pt/Ta2O5/TaOx/Pt Bipolar Resistive RAM Devices. , 2018, , .		9
1047	Perspective: Uniform switching of artificial synapses for large-scale neuromorphic arrays. APL Materials, 2018, 6, .	5.1	26

#	Article	IF	Citations
1048	Synaptic Behavior in Metal Oxide-Based Memristors. , 2018, , .		2
1049	Tutorial: Fabrication and three-dimensional integration of nanoscale memristive devices and arrays. Journal of Applied Physics, 2018, 124, .	2.5	7
1050	Physical Issues and Applications of Resistive Switching Phenomena. Journal of the Korean Physical Society, 2018, 73, 852-857.	0.7	0
1051	Bipolar to unipolar mode transition and imitation of metaplasticity in oxide based memristors with enhanced ionic conductivity. Journal of Applied Physics, 2018, 124, .	2.5	19
1052	Comprehensive Sensing Current Analysis and Its Guideline for the Worst-Case Scenario of RRAM Read Operation. Electronics (Switzerland), 2018, 7, 224.	3.1	8
1053	Conduction Mechanisms on High Retention Annealed MgO-based Resistive Switching Memory Devices. Scientific Reports, 2018, 8, 14774.	3.3	28
1054	A bioinspired multilegged soft millirobot that functions in both dry and wet conditions. Nature Communications, 2018, 9, 3944.	12.8	385
1055	Learning mechanisms in memristor networks based on GaN nanomembranes. Journal of Applied Physics, 2018, 124, 152110.	2.5	6
1056	Memristive Anodic Oxides: Production, Properties and Applications in Neuromorphic Computing. , 2018, , .		0
1057	A provable key destruction scheme based on memristive crossbar arrays. Nature Electronics, 2018, 1, 548-554.	26.0	61
1058	Electronic Structure of Amorphous SiOx with Variable Composition. JETP Letters, 2018, 108, 127-131.	1.4	2
1059	Optimization of non-linear conductance modulation based on metal oxide memristors. Nanotechnology Reviews, 2018, 7, 443-468.	5.8	44
1060	<i>(Invited) </i> Resistive Memories (RRAM) Variability: Challenges and Solutions. ECS Transactions, 2018, 86, 35-47.	0.5	22
1061	Performance enhancement of TaOx resistive switching memory using graded oxygen content. Applied Physics Letters, 2018, 113, .	3.3	31
1062	Information Leakage Attacks on Emerging Non-Volatile Memory and Countermeasures. , 2018, , .		11
1063	Atomic Layer Deposited Oxygenâ€Deficient TaO <sub>x</sub> Layers for Electroformingâ€Free and Reliable Resistance Switching Memory. Physica Status Solidi - Rapid Research Letters, 2018, 12, 1800429.	2.4	18
1064	Configurable ultra-low operating voltage resistive switching between bipolar and threshold behaviors for Ag/TaOx/Pt structures. Applied Physics Letters, 2018, 113, .	3.3	27
1065	Efficient Implementation of Boolean and Full-Adder Functions With 1T1R RRAMs for Beyond Von Neumann In-Memory Computing. IEEE Transactions on Electron Devices, 2018, 65, 4659-4666.	3.0	57

#	Article	IF	CITATIONS
1066	Atomic and Electronic Structures of Intrinsic Defects in Ta2O5: Ab Initio Simulation. JETP Letters, 2018, 107, 761-765.	1.4	7
1067	Role of GO and r-GO in resistance switching behavior of bilayer TiO <sub>2</sub> based RRAM. Nanotechnology, 2018, 29, 505702.	2.6	17
1068	Electroforming-free TaOx memristors using focused ion beam irradiations. Applied Physics A: Materials Science and Processing, 2018, 124, 1.	2.3	6
1069	Revealing conducting filament evolution in low power and high reliability Fe3O4/Ta2O5 bilayer RRAM. Nano Energy, 2018, 53, 871-879.	16.0	44
1070	Solution processed flexible resistive switching memory based on Al-In-O self-mixing layer. Journal of Applied Physics, 2018, 124, .	2.5	14
1071	Improved Distribution of Resistance Switching Through Localized Ti-Doped NiO Layer With InZnO <sub>x</sub> /CuO <sub>x</sub> Oxide Diode. IEEE Journal of the Electron Devices Society, 2018, 6, 905-909.	2.1	5
1072	Metal-substitution strategy to control the conductive path in titanium dioxide: ab initio calculations. European Physical Journal B, 2018, 91, 1.	1.5	4
1073	Structural engineering of tantalum oxide based memristor and its electrical switching responses using rapid thermal annealing. Journal of Alloys and Compounds, 2018, 759, 44-51.	5.5	33
1074	Correlation between the transport mechanisms in conductive filaments inside Ta2O5-based resistive switching devices and in substoichiometric TaOx thin films. Applied Physics Letters, 2018, 112, .	3.3	19
1075	Neuromorphic computing with memristive devices. Science China Information Sciences, 2018, 61, 1.	4.3	35
1076	Adaptive Crystallite Kinetics in Homogenous Bilayer Oxide Memristor for Emulating Diverse Synaptic Plasticity. Advanced Functional Materials, 2018, 28, 1706927.	14.9	140
1077	Organic–Inorganic Hybrid Halide Perovskites for Memories, Transistors, and Artificial Synapses. Advanced Materials, 2018, 30, e1704002.	21.0	205
1078	Probing memristive switching in nanoionic devices. Nature Electronics, 2018, 1, 274-287.	26.0	128
1079	Silicon Oxide (SiO <i><sub>x</sub></i> ): A Promising Material for Resistance Switching?. Advanced Materials, 2018, 30, e1801187.	21.0	156
1080	All-Inorganic Bismuth Halide Perovskite-Like Materials A <sub>3</sub> Bi <sub>2</sub> I <sub>9</sub> and A <sub>3</sub> Bi <sub>1.8</sub> Na <sub>0.2</sub> I <sub>8.6</sub> (A = Rb and Cs) for Low-Voltage Switching Resistive Memory. ACS Applied Materials & Interfaces, 2018, 10, 29741-29749.	8.0	88
1081	Artificial electronic synapse characteristics of a Ta/Ta2O5-x/Al2O3/InGaZnO4 memristor device on flexible stainless steel substrate. Applied Physics Letters, 2018, 113, .	3.3	51
1082	Boolean and Sequential Logic in a Oneâ€Memristorâ€Oneâ€Resistor (1M1R) Structure for Inâ€Memory Computing. Advanced Electronic Materials, 2018, 4, 1800229.	5.1	17
1083	Influence of Nitrogen Concentration on Self ompliance Resistive Switching in Ta/SiN <sub>x</sub> /Pt RRAM Devices. Physica Status Solidi (A) Applications and Materials Science, 2018, 215, 1800201.	1.8	9

$\sim$		<u>_</u>	
		Repo	DT
$\sim$	IIAI	<b>KLPU</b>	ALC L

#	Article	IF	CITATIONS
1084	Investigation on the optical phase change properties of intrinsic GeSb and Ti-doped GeSb. Optical Materials Express, 2018, 8, 936.	3.0	6
1085	Fault tolerant adaptive write schemes for improving endurance and reliability of memristor memories. AEU - International Journal of Electronics and Communications, 2018, 94, 392-406.	2.9	12
1086	Enhancement of resistive switching ratio induced by competing interfacial oxygen diffusion in tantalum oxide based memories with metal nitride electrode. Applied Physics Letters, 2018, 113, .	3.3	8
1087	Novel IrO <inf>x</inf> /SiO <inf>2</inf> /W cross-point memory for lysyl-oxidase-like-2 (LOXL2) breast cancer biomarker detection. , 2018, , .		1
1088	Fundamentals of Metal-Oxide Resistive Random Access Memory (RRAM). Nanostructure Science and Technology, 2018, , 71-92.	0.1	7
1089	Reliable Multivalued Conductance States in TaO <sub><i>x</i></sub> Memristors through Oxygen Plasma-Assisted Electrode Deposition with in Situ-Biased Conductance State Transmission Electron Microscopy Analysis. ACS Applied Materials & Interfaces, 2018, 10, 29757-29765.	8.0	26
1090	Enhanced magnetic modulation in HfO2-based resistive memory with an Hf top electrode. Applied Physics Letters, 2018, 113, 043502.	3.3	7
1091	X-ray reflectometry and grazing-incidence X-ray fluorescence characterization of innovative electrodes for tantalum-based resistive random access memories. Spectrochimica Acta, Part B: Atomic Spectroscopy, 2018, 149, 71-75.	2.9	4
1092	Oxygen Distribution around Filament in Ta-O Resistive RAM Fabricated Using 40 nm CMOS Technology. , 2018, , .		2
1093	Optical Properties of Nonstoichiometric Tantalum Oxide TaOx ( $x < 5/2$ ) According to Spectral-Ellipsometry and Raman-Scattering Data. Optics and Spectroscopy (English Translation of) Tj ETQq1 1 (	).7 <b>84</b> 314	rgBIT4/Overloc
1093 1094	Optical Properties of Nonstoichiometric Tantalum Oxide TaOx (x < 5/2) According to Spectral-Ellipsometry and Raman-Scattering Data. Optics and Spectroscopy (English Translation of) Tj ETQq1 1 ( Graphite Microislands Prepared for Reliability Improvement of Amorphous Carbon Based Resistive Switching Memory. Physica Status Solidi - Rapid Research Letters, 2018, 12, 1800285.	).7 <b>8</b> 4814 2.4	rgBī14/Overloc 12
	Spectral-Ellipsometry and Raman-Scattering Data. Optics and Spectroscopy (English Translation of) Tj ETQq1 1 ( Graphite Microislands Prepared for Reliability Improvement of Amorphous Carbon Based Resistive		
1094	Spectral-Ellipsometry and Raman-Scattering Data. Optics and Spectroscopy (English Translation of) Tj ETQq1 1 ( Graphite Microislands Prepared for Reliability Improvement of Amorphous Carbon Based Resistive Switching Memory. Physica Status Solidi - Rapid Research Letters, 2018, 12, 1800285.	2.4	12
1094 1095	Spectral-Ellipsometry and Raman-Scattering Data. Optics and Spectroscopy (English Translation of) Tj ETQq110 Graphite Microislands Prepared for Reliability Improvement of Amorphous Carbon Based Resistive Switching Memory. Physica Status Solidi - Rapid Research Letters, 2018, 12, 1800285. Improvement of durability and switching speed by incorporating nanocrystals in the HfOx based resistive random access memory devices. Applied Physics Letters, 2018, 113, . Resistive switching study in HfO2 based resistive memories by conductive atomic force microscopy in	2.4 3.3	12 72
1094 1095 1096	Spectral-Ellipsometry and Raman-Scattering Data. Optics and Spectroscopy (English Translation of) Tj ETQq110 Graphite Microislands Prepared for Reliability Improvement of Amorphous Carbon Based Resistive Switching Memory. Physica Status Solidi - Rapid Research Letters, 2018, 12, 1800285. Improvement of durability and switching speed by incorporating nanocrystals in the HfOx based resistive random access memory devices. Applied Physics Letters, 2018, 113, . Resistive switching study in HfO2 based resistive memories by conductive atomic force microscopy in vacuum. Journal of Applied Physics, 2018, 124, . Improved Switching Stability and the Effect of an Internal Series Resistor in HfO <sub>2</sub> /TiO <sub>&lt;italic&gt;x&lt;/italic&gt;</sub> Bilayer ReRAM Cells. IEEE Transactions	2.4 3.3 2.5	12 72 19
1094 1095 1096 1097	Spectral-Ellipsometry and Raman-Scattering Data. Optics and Spectroscopy (English Translation of) Tj ETQq110 Graphite Microislands Prepared for Reliability Improvement of Amorphous Carbon Based Resistive Switching Memory. Physica Status Solidi - Rapid Research Letters, 2018, 12, 1800285. Improvement of durability and switching speed by incorporating nanocrystals in the HfOx based resistive random access memory devices. Applied Physics Letters, 2018, 113, . Resistive switching study in HfO2 based resistive memories by conductive atomic force microscopy in vacuum. Journal of Applied Physics, 2018, 124, . Improved Switching Stability and the Effect of an Internal Series Resistor in HfO <sub>2</sub> /TiO <sub>&lt;italic&gt;x&lt;/italic&gt;</sub> Bilayer ReRAM Cells. IEEE Transactions on Electron Devices, 2018, 65, 3229-3236. Comparative analysis of memristor models and memories design. Journal of Semiconductors, 2018, 39,	2.4 3.3 2.5 3.0	12 72 19 95
1094 1095 1096 1097 1098	Spectral-Ellipsometry and Raman-Scattering Data. Optics and Spectroscopy (English Translation of) Tj ETQq1 1 ( Graphite Microislands Prepared for Reliability Improvement of Amorphous Carbon Based Resistive Switching Memory. Physica Status Solidi - Rapid Research Letters, 2018, 12, 1800285. Improvement of durability and switching speed by incorporating nanocrystals in the HfOx based resistive random access memory devices. Applied Physics Letters, 2018, 113, . Resistive switching study in HfO2 based resistive memories by conductive atomic force microscopy in vacuum. Journal of Applied Physics, 2018, 124, . Improved Switching Stability and the Effect of an Internal Series Resistor in HfO <sub>2</sub> /TiO <sub>&lt;italic&gt;x&lt;/italic&gt;</sub> Bilayer ReRAM Cells. IEEE Transactions on Electron Devices, 2018, 65, 3229-3236. Comparative analysis of memristor models and memories design. Journal of Semiconductors, 2018, 39, 074006.	2.4 3.3 2.5 3.0 3.7	12 72 19 95 26

#	Article	IF	Citations
1102	Analysis and Simulation of Capacitor-Less ReRAM-Based Stochastic Neurons for the in-Memory Spiking Neural Network. IEEE Transactions on Biomedical Circuits and Systems, 2018, 12, 1004-1017.	4.0	18
1103	Nanoscale Potential Fluctuations in Zirconium Oxide and the Flash Memory Based on Electron and Hole Localization. Advanced Electronic Materials, 2018, 4, 1700592.	5.1	3
1104	<i>In Situ</i> Observation of Resistive Switching in an Asymmetric Graphene Oxide Bilayer Structure. ACS Nano, 2018, 12, 7335-7342.	14.6	36
1105	Memory improvement with high-k buffer layer in metal/ SrBi2Nb2O9/Al2O3/silicon gate stack for non-volatile memory applications. Superlattices and Microstructures, 2018, 121, 55-63.	3.1	22
1106	Metal Ions Redox Induced Repeatable Nonvolatile Resistive Switching Memory Behavior in Biomaterials. ACS Applied Bio Materials, 2018, 1, 496-501.	4.6	47
1107	Liquid Silicon-Monona. , 2018, , .		3
1108	Inducing tunable switching behavior in a single memristor. Applied Materials Today, 2018, 11, 280-290.	4.3	21
1109	Highly-stable write-once-read-many-times switching behaviors of 1D–1R memristive devices based on graphene quantum dot nanocomposites. Scientific Reports, 2018, 8, 12081.	3.3	9
1110	Review of Recently Progress on Neural Electronics and Memcomputing Applications in Intrinsic SiOx-Based Resistive Switching Memory. , 2018, , .		2
1111	Nanoscale potential fluctuations in nonstoichiometrics tantalum oxide. Nanotechnology, 2018, 29, 425202.	2.6	9
1112	Investigating unipolar switching in Niobium oxide resistive switches: Correlating quantized conductance and mechanism. AIP Advances, 2018, 8, 085014.	1.3	13
1113	Controlling the thin interfacial buffer layer for improving the reliability of the Ta/Ta2O5/Pt resistive switching memory. Applied Physics Letters, 2018, 113, .	3.3	20
1114	Electric-field-controlled interface dipole modulation for Si-based memory devices. Scientific Reports, 2018, 8, 8486.	3.3	18
1115	Redox-based memristive metal-oxide devices. , 2018, , 489-522.		5
1116	Critical role of a double-layer configuration in solution-based unipolar resistive switching memories. Nanotechnology, 2018, 29, 345206.	2.6	21
1117	Balancing the Source and Sink of Oxygen Vacancies for the Resistive Switching Memory. ACS Applied Materials & Interfaces, 2018, 10, 21445-21450.	8.0	21
1118	Fault injection attacks on emerging non-volatile memory and countermeasures. , 2018, , .		16
1119	Resistive switching and synaptic plasticity in HfO <inf>2</inf> -based memristors with single-layer and bilayer structures. , 2018, , .		2

		15	<b>C</b>
#	ARTICLE Novel Computing Method for Short Programming Time and Low Energy Consumption in	IF	CITATIONS
1120	HfO <sub>2</sub> Based RRAM Arrays. IEEE Journal of the Electron Devices Society, 2018, 6, 696-702.	2.1	10
1121	In-memory computing with resistive switching devices. Nature Electronics, 2018, 1, 333-343.	26.0	1,316
1122	Formation of the Conducting Filament in TaO <sub><i>x</i></sub> -Resistive Switching Devices by Thermal-Gradient-Induced Cation Accumulation. ACS Applied Materials & Interfaces, 2018, 10, 23187-23197.	8.0	35
1123	Effect of dysprosium and lutetium metal buffer layers on the resistive switching characteristics of Cu–Sn alloy-based conductive-bridge random access memory. Nanotechnology, 2018, 29, 385207.	2.6	5
1124	Nonvolatile memories. , 2018, , 275-282.		1
1125	Non-volatile resistive switching in CuBi-based conductive bridge random access memory device. Applied Physics Letters, 2018, 112, 253503.	3.3	6
1126	Resistivity control by the electrochemical removal of dopant atoms from a nanodot. Faraday Discussions, 2019, 213, 29-40.	3.2	8
1127	Electrochemically prepared oxides for resistive switching memories. Faraday Discussions, 2019, 213, 165-181.	3.2	29
1128	Architectural Exploration to Address the Reliability Challenges for ReRAM-Based Buffer in SSD. IEEE Transactions on Circuits and Systems I: Regular Papers, 2019, 66, 226-238.	5.4	5
1129	Resistive Memoryâ€Based Inâ€Memory Computing: From Device and Largeâ€Scale Integration System Perspectives. Advanced Intelligent Systems, 2019, 1, 1900068.	6.1	54
1130	Memristive Synapses and Neurons for Bioinspired Computing. Advanced Electronic Materials, 2019, 5, 1900287.	5.1	135
1131	Formingâ€Free Grain Boundary Engineered Hafnium Oxide Resistive Random Access Memory Devices. Advanced Electronic Materials, 2019, 5, 1900484.	5.1	57
1132	Electrical AFM for the Analysis of Resistive Switching. Nanoscience and Technology, 2019, , 205-229.	1.5	2
1133	Effects of Mg Doping Concentration on Resistive Switching Behavior and Properties of SrTi1â^'yMgyO3 Films. Journal Wuhan University of Technology, Materials Science Edition, 2019, 34, 888-892.	1.0	1
1134	Dominant conduction mechanism in TaO <sub> <i>x</i> </sub> -based resistive switching devices. Japanese Journal of Applied Physics, 2019, 58, 090914.	1.5	6
1135	Effect of Functional Group on Electrical Switching Behaviour of an Imidazole Derivative in Langmuirâ€Blodgett Film. ChemistrySelect, 2019, 4, 9065-9073.	1.5	4
1136	Resistance Switching Behaviour and Properties of Ag/La0.5Mg0.5MnO3/p+-Si with Different Thicknesses of Resistance Films Fabricated through Sol—Gel Method. Journal Wuhan University of Technology, Materials Science Edition, 2019, 34, 568-571.	1.0	0
1137	Self-selective van der Waals heterostructures for large scale memory array. Nature Communications, 2019, 10, 3161.	12.8	139

#	Article	IF	CITATIONS
1138	Investigation on resistive switching characteristics of SiC and HfO <sub>x</sub> stacked nonvolatile memory by microwave irradiation. Semiconductor Science and Technology, 2019, 34, 095006.	2.0	2
1139	Nanoscale filaments in Ta-O resistive RAM bit array: microscopy analysis and switching property. , 2019, , .		1
1140	Bipolar resistive switching and synaptic characteristics modulation at sub-μA current level using novel Ni/SiOx/W cross-point structure. Journal of Alloys and Compounds, 2019, 805, 915-923.	5.5	13
1141	Conductance quantization in oxide-based resistive switching devices. , 2019, , .		0
1142	Air-Stable Lead-Free Perovskite Thin Film Based on CsBi <sub>3</sub> 1 <sub>10</sub> and Its Application in Resistive Switching Devices. ACS Applied Materials & Interfaces, 2019, 11, 30037-30044.	8.0	59
1143	Memristor crossbar array for binarized neural networks. AIP Advances, 2019, 9, .	1.3	21
1144	Model for resistive switching in bipolar Hafnium-based memories. AIP Conference Proceedings, 2019, , .	0.4	0
1146	Switching failure behaviors and doping enhanced performances of Ni/Al2O3/p+Si resistive switching devices. Journal of Applied Physics, 2019, 125, .	2.5	7
1147	Fabrication and evaluation of repairable resistive switching memory for a synaptic device. Japanese Journal of Applied Physics, 2019, 58, 086503.	1.5	0
1148	A Memristor-Based In-Memory Computing Network for Hamming Code Error Correction. IEEE Electron Device Letters, 2019, 40, 1080-1083.	3.9	17
1149	Advances in resistive switching based memory devices. Journal Physics D: Applied Physics, 2019, 52, 433002.	2.8	69
1150	Mechanism of memristive switching in OxRAM. , 2019, , 137-170.		7
1151	Magnetic field controlled hybrid semiconductor and resistive switching device for non-volatile memory applications. AIP Advances, 2019, 9, .	1.3	6
1152	Electrical model of multi-level bipolar Ta2O5/TaOx Bi-layered ReRAM. Microelectronics Journal, 2019, 93, 104616.	2.0	9
1153	Realization of Self-Compliance Resistive Switching Memory via Tailoring Interfacial Oxygen. ACS Applied Materials & Interfaces, 2019, 11, 41490-41496.	8.0	14
1154	A Boolean OR gate implemented with an optoelectronic switching memristor. Applied Physics Letters, 2019, 115, .	3.3	20
1155	Switching Characteristics of a Locally-Active Memristor with Binary Memories. International Journal of Bifurcation and Chaos in Applied Sciences and Engineering, 2019, 29, 1930030.	1.7	22
1156	Detection of bovine serum albumin using hybrid TiO2 + graphene oxide based Bio – resistive random access memory device. Scientific Reports, 2019, 9, 16141.	3.3	29

#	Article	IF	CITATIONS
1157	The MoSeS dynamic omnigami paradigm for smart shape and composition programmable 2D materials. Nature Communications, 2019, 10, 5210.	12.8	15
1158	Self-compliance characteristics and switching degradation in TaO <sub> <i>x</i> </sub> -based memristors. Applied Physics Express, 2019, 12, 104003.	2.4	1
1159	Electrical model of Ta <sub>2</sub> O <sub>5</sub> /TaO <sub>x</sub> RRAM device with current conduction beyond RESET phase. , 2019, , .		4
1160	Nanoscale Topotactic Phase Transformation in SrFeO <i><sub>x</sub></i> Epitaxial Thin Films for Highâ€Density Resistive Switching Memory. Advanced Materials, 2019, 31, e1903679.	21.0	58
1161	Effects of Gibbs free energy difference and oxygen vacancies distribution in a bilayer ZnO/ZrO2 structure for applications to bipolar resistive switching. Applied Surface Science, 2019, 498, 143833.	6.1	42
1162	Resistance Switching Statistics and Mechanisms of Pt Dispersed Silicon Oxide-Based Memristors. Micromachines, 2019, 10, 369.	2.9	7
1163	Wafer-Scale TaO <sub>x</sub> Device Variability and Implications for Neuromorphic Computing Applications. , 2019, , .		5
1164	Enhanced stability of guanidinium-based organic-inorganic hybrid lead triiodides in resistance switching. APL Materials, 2019, 7, .	5.1	12
1165	Metallic filamentary conduction in valence change-based resistive switching devices: the case of TaO <sub>x</sub> thin film with <i>x</i> â <sup>1</sup> /4 1. Nanoscale, 2019, 11, 16978-16990.	5.6	16
1166	Multi-spectral gate-triggered heterogeneous photonic neuro-transistors for power-efficient brain-inspired neuromorphic computing. Nano Energy, 2019, 66, 104097.	16.0	48
1167	Theoretical studies on oxygen vacancy migration energy barrier in the orthorhombic λ phase Ta2O5. Computational Materials Science, 2019, 169, 109148.	3.0	16
1168	Programmable, electroforming-free TiO <sub>x</sub> /TaO <sub>x</sub> heterojunction-based non-volatile memory devices. Nanoscale, 2019, 11, 18159-18168.	5.6	19
1169	Direct Observation of Structural Deformation Immunity for Understanding Oxygen Plasma Treatment-Enhanced Resistive Switching in HfOx-Based Memristive Devices. Nanomaterials, 2019, 9, 1355.	4.1	3
1170	Any-polar resistive switching behavior in LATP films. Applied Physics Letters, 2019, 115, 143506.	3.3	2
1171	Analyzing the Monolithic Integration of a ReRAM-Based Main Memory Into a CPU's Die. IEEE Micro, 2019, 39, 64-72.	1.8	3
1172	Memristive Electronic Synapses Made by Anodic Oxidation. Chemistry of Materials, 2019, 31, 8394-8401.	6.7	26
1173	A solution processed metal–oxo cluster for rewritable resistive memory devices. Journal of Materials Chemistry C, 2019, 7, 843-852.	5.5	18
1174	Lead-Free All-Inorganic Cesium Tin lodide Perovskite for Filamentary and Interface-Type Resistive Switching toward Environment-Friendly and Temperature-Tolerant Nonvolatile Memories. ACS Applied Materials & Interfaces, 2019, 11, 8155-8163.	8.0	133

#	Article	IF	CITATIONS
1175	A study on mechanism of resistance distribution characteristics of oxide-based resistive memory. Scientific Reports, 2019, 9, 302.	3.3	11
1176	Fully "Erase-free―Multi-Bit Operation in HfO <sub>2</sub> -Based Resistive Switching Device. ACS Applied Materials & Interfaces, 2019, 11, 8234-8241.	8.0	13
1177	Recent Advances of Quantum Conductance in Memristors. Advanced Electronic Materials, 2019, 5, 1800854.	5.1	44
1178	Compliance-current-modulated resistive switching with multi-level resistance states in single-crystalline LiNbO3 thin film. Solid State Ionics, 2019, 334, 1-4.	2.7	4
1179	Confining vertical conducting filament for reliable resistive switching by using a Au-probe tip as the top electrode for epitaxial brownmillerite oxide memristive device. Scientific Reports, 2019, 9, 1188.	3.3	23
1180	Halide perovskites for resistive random-access memories. Journal of Materials Chemistry C, 2019, 7, 5226-5234.	5.5	90
1181	Core-shell copper nanowire-TiO2 nanotube arrays with excellent bipolar resistive switching properties. Electrochimica Acta, 2019, 316, 133-142.	5.2	28
1182	Tailored nanoplateau and nanochannel structures using solution-processed rutile TiO <sub>2</sub> thin films for complementary and bipolar switching characteristics. Nanoscale, 2019, 11, 13815-13823.	5.6	30
1183	Laser-Fabricated Reduced Graphene Oxide Memristors. Nanomaterials, 2019, 9, 897.	4.1	52
1184	RRAM/memristor for computing. , 2019, , 539-583.		4
1184 1185	RRAM/memristor for computing. , 2019, , 539-583. Metal-oxide resistive random access memory (RRAM) technology: Material and operation details and ramifications. , 2019, , 35-102.		4
	Metal-oxide resistive random access memory (RRAM) technology: Material and operation details and	8.0	
1185	Metal-oxide resistive random access memory (RRAM) technology: Material and operation details and ramifications. , 2019, , 35-102. Study of in Situ Silver Migration in Amorphous Boron Nitride CBRAM Device. ACS Applied Materials	8.0	21
1185 1186	Metal-oxide resistive random access memory (RRAM) technology: Material and operation details and ramifications. , 2019, , 35-102. Study of in Situ Silver Migration in Amorphous Boron Nitride CBRAM Device. ACS Applied Materials & amp; Interfaces, 2019, 11, 23329-23336. Stochastic Memory Devices for Security and Computing. Advanced Electronic Materials, 2019, 5,		21 52
1185 1186 1187	<ul> <li>Metal-oxide resistive random access memory (RRAM) technology: Material and operation details and ramifications. , 2019, , 35-102.</li> <li>Study of in Situ Silver Migration in Amorphous Boron Nitride CBRAM Device. ACS Applied Materials &amp; amp; Interfaces, 2019, 11, 23329-23336.</li> <li>Stochastic Memory Devices for Security and Computing. Advanced Electronic Materials, 2019, 5, 1900198.</li> <li>Low-Power, High-Performance, Non-volatile Inkjet-Printed HfO<sub>2</sub>-Based Resistive Random Access Memory: From Device to Nanoscale Characterization. ACS Applied Materials &amp; amp; Interfaces,</li> </ul>	5.1	21 52 87
1185 1186 1187 1188	Metal-oxide resistive random access memory (RRAM) technology: Material and operation details and ramifications., 2019, , 35-102.         Study of in Situ Silver Migration in Amorphous Boron Nitride CBRAM Device. ACS Applied Materials & amp; Interfaces, 2019, 11, 23329-23336.         Stochastic Memory Devices for Security and Computing. Advanced Electronic Materials, 2019, 5, 1900198.         Low-Power, High-Performance, Non-volatile Inkjet-Printed HfO <sub>2</sub> -Based Resistive Random Access Memory: From Device to Nanoscale Characterization. ACS Applied Materials & amp; Interfaces, 2019, 11, 23659-23666.         Percolation Threshold Enables Optical Resistiveâ€Memory Switching and Lightâ€Tuneable Synaptic	5.1 8.0	21 52 87 14
1185 1186 1187 1188 1189	Metal-oxide resistive random access memory (RRAM) technology: Material and operation details and ramifications., 2019, , 35-102.         Study of in Situ Silver Migration in Amorphous Boron Nitride CBRAM Device. ACS Applied Materials & amp; Interfaces, 2019, 11, 23329-23336.         Stochastic Memory Devices for Security and Computing. Advanced Electronic Materials, 2019, 5, 1900198.         Low-Power, High-Performance, Non-volatile Inkjet-Printed HfO <sub>2</sub> -Based Resistive Random Access Memory: From Device to Nanoscale Characterization. ACS Applied Materials & amp; Interfaces, 2019, 11, 23659-23666.         Percolation Threshold Enables Optical Resistiveâ€Memory Switching and Lightâ€Tuneable Synaptic Learning in Segregated Nanocomposites. Advanced Electronic Materials, 2019, 5, 1900197.         Low-Power Resistive Switching Characteristic in HfO2/TiOX Bi-Layer Resistive Random-Access Memory.	5.1 8.0 5.1	<ul> <li>21</li> <li>52</li> <li>87</li> <li>14</li> <li>24</li> </ul>

		CITATION RE	EPORT	
# 1193	ARTICLE Optically accessible memristive devices. Nanophotonics, 2019, 8, 1579-1589.		IF 6.0	Citations
1194	Nanoionic Resistiveâ€Switching Devices. Advanced Electronic Materials, 2019, 5, 1900	0184.	5.1	41
1195	Overview of Resistive Random Access Memory (RRAM): Materials, Filament Mechanisn Optimization, and Prospects. Physica Status Solidi - Rapid Research Letters, 2019, 13,		2.4	109
1196	SiO2 layer effect on atomic layer deposition Al2O3-based resistive switching memory. Letters, 2019, 114, 182102.	Applied Physics	3.3	14
1197	Compact Modeling of Complementary Resistive Switching Devices Using Memdiodes. on Electron Devices, 2019, 66, 2831-2836.	IEEE Transactions	3.0	11
1198	Nanoscale resistive switching memory devices: a review. Nanotechnology, 2019, 30, 3	52003.	2.6	151
1199	Memristors for Hardware Security Applications. Advanced Electronic Materials, 2019, 5	5, 1800872.	5.1	35
1200	Set transition statistics of different switching regimes of TaOx memristor. Journal of Electroceramics, 2019, 42, 118-123.		2.0	5
1201	Towards Oxide Electronics: a Roadmap. Applied Surface Science, 2019, 482, 1-93.		6.1	236
1202	Resistive switching behaviour of multi-stacked PVA/graphene oxide + PVA composite/F layer-based RRAM devices. Semiconductor Science and Technology, 2019, 34, 065006	VA insulating	2.0	22
1203	3D Stackable and Scalable Binary Ovonic Threshold Switch Devices with Excellent Ther and Low Leakage Current for Highâ€Density Crossâ€Point Memory Applications. Adva Materials, 2019, 5, 1900196.		5.1	27
1204	Ab Initio Simulation of Ta <sub>2</sub> O <sub>5</sub> : A High Symmetry Ground Sta Application to Interface Calculation. Annalen Der Physik, 2019, 531, 1800524.	te Phase with	2.4	12
1205	Observations of the initial stages on reactive gas-timing sputtered TaO thin films by dy spectroscopic ellipsometery. Optical Materials, 2019, 92, 223-232.	namic in situ	3.6	9
1206	Ni structural doping induced spin polarization effects on the optical and electric prope nano-SiC film. Applied Surface Science, 2019, 483, 626-632.	rties of	6.1	5
1207	Study on synthesis, characterization, and nonvolatile memory behavior of ferrocene-co metallopolymers. Journal of Organometallic Chemistry, 2019, 892, 34-40.	ontaining	1.8	13
1208	Low-temperature coexistence of memory and threshold switchings in Pt/TiO <i>x</i> /P arrays. Applied Physics Letters, 2019, 114, .	t crossbar	3.3	10
1209	The observation of resistive switching characteristics using transparent and biocompa Cu <sup>2+</sup> -doped salmon DNA composite thin film. Nanotechnology, 2019, 30		2.6	35
1210	Al <i>x</i> Telâ^' <i>x</i> selector with high ovonic threshold switching performance fo crossbar arrays. Applied Physics Letters, 2019, 114, .	r memory	3.3	15

#	Article	IF	CITATIONS
1211	Magneto-Mechanical Actuators with Reversible Stretching and Torsional Actuation Capabilities. MRS Advances, 2019, 4, 1057-1065.	0.9	1
1212	Solid-State Electrochemical Process and Performance Optimization of Memristive Materials and Devices. Chemistry, 2019, 1, 44-68.	2.2	4
1213	Resistive switching effects in fluorinated graphene films with graphene quantum dots enhanced by polyvinyl alcohol. Nanotechnology, 2019, 30, 255701.	2.6	14
1214	Study on High-Density Integration Resistive Random Access Memory Array From Multiphysics Perspective by Parallel Computing. IEEE Transactions on Electron Devices, 2019, 66, 1747-1753.	3.0	21
1215	Ternary content-addressable memory with MoS2 transistors for massively parallel data search. Nature Electronics, 2019, 2, 108-114.	26.0	83
1216	Thermal stability of resistive switching effect in ZnO/BiFeO3 bilayer structure. AIP Advances, 2019, 9, 035121.	1.3	1
1217	The modification of ultraviolet illumination to resistive switching behaviors in Ga2O3 memory device. Journal of Materials Science: Materials in Electronics, 2019, 30, 8629-8635.	2.2	8
1218	Processing Halide Perovskite Materials with Semiconductor Technology. Advanced Materials Technologies, 2019, 4, 1800729.	5.8	27
1219	Electronic synapses based on ultrathin quasi-two-dimensional gallium oxide memristor. Chinese Physics B, 2019, 28, 017304.	1.4	16
1220	First principles study of the strain effect on band gap of λ phase Ta2O5. Computational Materials Science, 2019, 164, 17-21.	3.0	11
1221	Electric field control of resistive switching and magnetization in epitaxial LaBaCo <sub>2</sub> O <sub>5+δ</sub> thin films. Physical Chemistry Chemical Physics, 2019, 21, 8843-8848.	2.8	9
1222	Suppression of Filament Overgrowth in Conductive Bridge Random Access Memory by Ta2O5/TaOx Bi-Layer Structure. Nanoscale Research Letters, 2019, 14, 111.	5.7	14
1223	Modular soft robotic microdevices for dexterous biomanipulation. Lab on A Chip, 2019, 19, 778-788.	6.0	27
1224	Scalable 3D Ta:SiO x Memristive Devices. Advanced Electronic Materials, 2019, 5, 1800958.	5.1	2
1225	Charge Transition of Oxygen Vacancies during Resistive Switching in Oxide-Based RRAM. ACS Applied Materials & Interfaces, 2019, 11, 11579-11586.	8.0	82
1226	Synaptic plasticity of room-temperature fabricated amorphous MoO film based memristor. Applied Surface Science, 2019, 479, 469-474.	6.1	28
1227	RRAM Solutions for Stochastic Computing. , 2019, , 153-164.		5
1228	Low Power Paryleneâ€Based Memristors with a Graphene Barrier Layer for Flexible Electronics Applications. Advanced Electronic Materials, 2019, 5, 1800852.	5.1	56

#	ARTICLE	IF	CITATIONS
1229	Nano-Resolved Current-Induced Insulator-Metal Transition in the Mott Insulator <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"&gt;<mml:mrow><mml:msub><mml:mrow><mml:mi>Ca</mml:mi></mml:mrow><mml:mrow><mm Physical Review X, 2019, 9, .</mm </mml:mrow></mml:msub></mml:mrow></mml:math 	l:mn>2 <td>nml:mn&gt;</td>	nml:mn>
1230	Nano Resistive Memory (Re-RAM) Devices and their Applications. Reviews on Advanced Materials Science, 2019, 58, 248-270.	3.3	21
1231	Configurable Operational Amplifier Architectures Based on Oxide Resistive RAMs. Journal of Circuits, Systems and Computers, 2019, 28, 1950216.	1.5	0
1232	Low-power, High Speed and High Uniform Switching in AIO <sub>x</sub> -based Memristor using Homogeneous Bilayer Structure for Memcomputing. , 2019, , .		2
1233	Improvement of read disturb on TaOx-based RRAM cells with optimized pulse programming method. , 2019, , .		0
1234	Memristor Synapses for Neuromorphic Computing. , 0, , .		7
1235	The origin of the exceptionally low activation energy of oxygen vacancy in tantalum pentoxide based resistive memory. Scientific Reports, 2019, 9, 17019.	3.3	15
1236	Space Charge Effect and Resistance Switching in Doped Monocrystalline Silicones. Applied Sciences (Switzerland), 2019, 9, 434.	2.5	1
1237	Defect-Engineered Electroforming-Free Analog HfO <sub><i>x</i></sub> Memristor and Its Application to the Neural Network. ACS Applied Materials & amp; Interfaces, 2019, 11, 47063-47072.	8.0	33
1238	Compliance current and temperature effects on non-volatile memory switching and volatile switching dynamics in a Cu/SiO <i>x</i> /p <b>++</b> -Si device. Applied Physics Letters, 2019, 115, .	3.3	21
1239	Light-activated electroforming in ITO/ZnO/ <i>p</i> -Si resistive switching devices. Applied Physics Letters, 2019, 115, .	3.3	10
1240	Positive effects of a Schottky-type diode on unidirectional resistive switching devices. Applied Physics Letters, 2019, 115, .	3.3	8
1241	RRAM Device Models: A Comparative Analysis With Experimental Validation. IEEE Access, 2019, 7, 168963-168980.	4.2	36
1242	A high performance electroformed single-crystallite VO2 threshold switch. Nanoscale, 2019, 11, 22070-22078.	5.6	26
1243	Next-Generation Ultrahigh-Density 3-D Vertical Resistive Switching Memory (VRSM)—Part I: Accurate and Computationally Efficient Modeling. IEEE Transactions on Electron Devices, 2019, 66, 5139-5146.	3.0	18
1244	Charge transport mechanism in SiNx-based memristor. Applied Physics Letters, 2019, 115, 253502.	3.3	21
1245	Laser formation of thin-film memristor structures based on vanadium dioxide. Journal of Physics: Conference Series, 2019, 1347, 012016.	0.4	0
1246	Redox-based memristive devices for new computing paradigm. APL Materials, 2019, 7, 110903.	5.1	55

#	Article	IF	CITATIONS
1247	Conduction mechanisms in memristors based on nanotubular arrays of zirconium oxide. AIP Conference Proceedings, 2019, , .	0.4	4
1248	Electrothermal Effects on Reliability of Vertical Resistive Random Access Memory Array by Parallel Computing. , 2019, , .		0
1249	Self-Modulating Interfacial Cation Migration Induced Threshold Switching in Bilayer Oxide Memristive Device. Journal of Physical Chemistry C, 2019, 123, 878-885.	3.1	14
1250	The N3XT Approach to Energy-Efficient Abundant-Data Computing. Proceedings of the IEEE, 2019, 107, 19-48.	21.3	71
1251	Energyâ€Efficient Organic Ferroelectric Tunnel Junction Memristors for Neuromorphic Computing. Advanced Electronic Materials, 2019, 5, 1800795.	5.1	144
1252	2D Metal–Organic Framework Nanosheets with Timeâ€Dependent and Multilevel Memristive Switching. Advanced Functional Materials, 2019, 29, 1806637.	14.9	101
1253	Hybridâ€RRAM toward Next Generation of Nonvolatile Memory: Coupling of Oxygen Vacancies and Metal Ions. Advanced Electronic Materials, 2019, 5, 1800658.	5.1	37
1254	Tuning the stoichiometry and electrical properties of tantalum oxide thin films. Applied Surface Science, 2019, 470, 1071-1074.	6.1	19
1255	Ultrafast Multilevel Switching in Au/YIG/n‧i RRAM. Advanced Electronic Materials, 2019, 5, 1800418.	5.1	18
1256	High performance and mechanism of the resistive switching device based on lead halide thin films. Journal Physics D: Applied Physics, 2019, 52, 135103.	2.8	4
1257	Mechanism of resistance distribution properties in oxide-based resistance switching nanodevice. Physics Letters, Section A: General, Atomic and Solid State Physics, 2019, 383, 1182-1186.	2.1	5
1258	Synthetic Cells: Colloidal-sized state machines. , 2019, , 361-386.		2
1259	Role of Nanocomposites in Future Nanoelectronic Information Storage Devices. , 2019, , 399-431.		4
1260	Device and materials requirements for neuromorphic computing. Journal Physics D: Applied Physics, 2019, 52, 113001.	2.8	105
1261	Multiphonon trap ionization transport in nonstoichiometric SiN x. Materials Research Express, 2019, 6, 036304.	1.6	3
1262	Organic and hybrid resistive switching materials and devices. Chemical Society Reviews, 2019, 48, 1531-1565.	38.1	291
1263	In-Gap States and Band-Like Transport in Memristive Devices. Nano Letters, 2019, 19, 54-60.	9.1	22
1264	Designing of low temperature-grown Al x In y O self-mixing layer for flexible RRAM. Materials Research Express, 2019, 6, 016413.	1.6	2

#	Article	IF	CITATIONS
1265	Recommended Methods to Study Resistive Switching Devices. Advanced Electronic Materials, 2019, 5, 1800143.	5.1	452
1266	TIME: A Training-in-Memory Architecture for RRAM-Based Deep Neural Networks. IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems, 2019, 38, 834-847.	2.7	44
1267	Skeleton-Based Synthesis Flow for Computation-in-Memory Architectures. IEEE Transactions on Emerging Topics in Computing, 2020, 8, 545-558.	4.6	6
1268	Resistive Random Access Memory: A Review of Device Challenges. IETE Technical Review (Institution of) Tj ETQq1	1_0.78431 3.2	l4rgBT /Ov
1269	Nanoparticle Dynamics in Oxideâ€Based Memristive Devices. Physica Status Solidi (A) Applications and Materials Science, 2020, 217, 1900587.	1.8	3
1270	Emerging neuromorphic devices. Nanotechnology, 2020, 31, 092001.	2.6	177
1271	Electro and photon double-driven non-volatile and non-destructive readout memory in Pt/Bi0.9Eu0.1FeO3/Nb:SrTiO3 heterostructures. Ceramics International, 2020, 46, 5126-5131.	4.8	12
1272	Nanorods Versus Nanoparticles: A Comparison Study of Au/ZnO-PMMA/Au Non-Volatile Memory Devices Showing the Importance of Nanostructure Geometry on Conduction Mechanisms and Switching Properties. IEEE Nanotechnology Magazine, 2020, 19, 236-246.	2.0	16
1273	Ar ion plasma surface modification on the heterostructured TaOx/InGaZnO thin films for flexible memristor synapse. Journal of Alloys and Compounds, 2020, 822, 153625.	5.5	39
1274	A Memristor Neural Network Using Synaptic Plasticity and Its Associative Memory. Circuits, Systems, and Signal Processing, 2020, 39, 3496-3511.	2.0	30
1275	Artificial Perception Built on Memristive System: Visual, Auditory, and Tactile Sensations. Advanced Intelligent Systems, 2020, 2, 1900118.	6.1	53
1276	Memristive and CMOS Devices for Neuromorphic Computing. Materials, 2020, 13, 166.	2.9	83
1277	Electrostatic Redox Reactions and Charge Storage in Molecular Electronic Junctions. Journal of Physical Chemistry C, 2020, 124, 1739-1748.	3.1	9
1278	Selective activation of memristive interfaces in TaO <sub> <i>x</i> </sub> -based devices by controlling oxygen vacancies dynamics at the nanoscale. Nanotechnology, 2020, 31, 155204.	2.6	9
1279	Uncovering the Indium Filament Revolution in Transparent Bipolar ITO/SiO <sub><i>x</i></sub> /ITO Resistive Switching Memories. ACS Applied Materials & Interfaces, 2020, 12, 4579-4585.	8.0	17
1280	Electrical Control of Perpendicular Magnetic Anisotropy and Spinâ€Orbit Torqueâ€Induced Magnetization Switching. Advanced Electronic Materials, 2020, 6, 1900782.	5.1	8
1281	Design of a two-layer structure to significantly improve the performance of zinc oxide resistive memory. Nanotechnology, 2020, 31, 115209.	2.6	6
1282	Test Methodologies and Test-Time Compression for Emerging Non-Volatile Memory. IEEE Transactions on Reliability, 2020, 69, 1387-1397.	4.6	2

#	Article	IF	CITATIONS
1283	Reliability of analog resistive switching memory for neuromorphic computing. Applied Physics Reviews, 2020, 7, .	11.3	199
1284	Crossbar-Constrained Technology Mapping for ReRAM Based In-Memory Computing. IEEE Transactions on Computers, 2020, 69, 734-748.	3.4	11
1285	Synaptic plasticity and preliminary-spike-enhanced plasticity in a CMOS-compatible Ta2O5 memristor. Materials and Design, 2020, 187, 108400.	7.0	34
1286	Implementation of Simple but Powerful Trilayer Oxide-Based Artificial Synapses with a Tailored Bio-Synapse-Like Structure. ACS Applied Materials & Interfaces, 2020, 12, 1036-1045.	8.0	27
1287	Analytical modeling of electrochemical metallization memory device with dual-layer structure of Ag/AgInSbTe/amorphous C/Pt. Semiconductor Science and Technology, 2020, 35, 02LT01.	2.0	2
1288	Soft Crawling Robots: Design, Actuation, and Locomotion. Advanced Materials Technologies, 2020, 5, 1900837.	5.8	136
1289	Roadmap on halide perovskite and related devices. Nanotechnology, 2020, 31, 152001.	2.6	24
1290	Role of an Interfacial Layer in Ta 2 O 5 â€Based Resistive Switching Devices for Improved Endurance and Reliable Multibit Operation. Physica Status Solidi - Rapid Research Letters, 2020, 14, 1900646.	2.4	5
1291	Analytical Modeling of Read-Induced SET-State Conductance Change in a Hafnium-Oxide Resistive Switching Device. IEEE Transactions on Electron Devices, 2020, 67, 113-117.	3.0	2
1292	A Model for \$R(t)\$ Elements and \$R(t)\$ -Based Spike-Timing-Dependent Plasticity With Basic Circuit Examples. IEEE Transactions on Neural Networks and Learning Systems, 2020, 31, 4206-4216.	11.3	2
1293	Enhancing Short-Term Plasticity by Inserting a Thin TiO2 Layer in WOx-Based Resistive Switching Memory. Coatings, 2020, 10, 908.	2.6	11
1294	Memristors Based on 2D Materials as an Artificial Synapse for Neuromorphic Electronics. Advanced Materials, 2020, 32, e2002092.	21.0	241
1295	Ionâ€Gated Transistor: An Enabler for Sensing and Computing Integration. Advanced Intelligent Systems, 2020, 2, 2000156.	6.1	27
1296	Design of a Controllable Redoxâ€Diffusive Threshold Switching Memristor. Advanced Electronic Materials, 2020, 6, 2000695.	5.1	43
1297	Memristive Devices for Neuromorphic Applications: Comparative Analysis. BioNanoScience, 2020, 10, 834-847.	3.5	24
1298	Emerging Memristive Artificial Synapses and Neurons for Energyâ€Efficient Neuromorphic Computing. Advanced Materials, 2020, 32, e2004659.	21.0	175
1299	Polydopamine Film Selfâ€Assembled at Air/Water Interface for Organic Electronic Memory Devices. Advanced Materials Interfaces, 2020, 7, 2000979.	3.7	13
1300	Charge transport mechanism in dielectrics: drift and diffusion of trapped charge carriers. Scientific Reports, 2020, 10, 15759.	3.3	10

#	Article	IF	CITATIONS
1301	Picosecond multilevel resistive switching in tantalum oxide thin films. Scientific Reports, 2020, 10, 16391.	3.3	41
1302	Phase separation in amorphous tantalum oxide from first principles. APL Materials, 2020, 8, .	5.1	12
1303	Charge transport mechanism in La:HfO2. Applied Physics Letters, 2020, 117, .	3.3	11
1304	Defects in complex oxide thin films for electronics and energy applications: challenges and opportunities. Materials Horizons, 2020, 7, 2832-2859.	12.2	83
1305	Temperature overshoot as the cause of physical changes in resistive switching devices during electro-formation. Journal of Applied Physics, 2020, 127, .	2.5	12
1306	Atomic layer deposition based nano-island growth. , 2020, , 67-106.		0
1307	Evolution of the conductive filament with cycling in TaOx-based resistive switching devices. Journal of Applied Physics, 2020, 128, .	2.5	13
1308	From Memristive Materials to Neural Networks. ACS Applied Materials & Interfaces, 2020, 12, 54243-54265.	8.0	56
1309	The strategies of filament control for improving the resistive switching performance. Journal of Materials Chemistry C, 2020, 8, 16295-16317.	5.5	53
1310	150Ânm × 200Ânm Crossâ€Point Hexagonal Boron Nitrideâ€Based Memristors. Advanced Electronic Materials, 2020, 6, 1900115.	5.1	22
1311	Universal Memory Characteristics and Degradation Features of ZrO 2 â€Based Bipolar Resistive Memory. Advanced Electronic Materials, 2020, 6, 2000368.	5.1	3
1312	Comprehensive model for the electronic transport in <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"&gt;<mml:mrow><mml:mtext>Pt/SrTi</mml:mtext><mml:msul mathvariant="normal"&gt;O<mml:mn>3</mml:mn></mml:msul </mml:mrow> analog memristive devices. Physical Review B. 2020. 102</mml:math 	oչ∢mml:n 3.2	<sup>1i</sup> 20
1313	Inkâ€Based Additive Nanomanufacturing of Functional Materials for Humanâ€Integrated Smart Wearables. Advanced Intelligent Systems, 2020, 2, 2000117.	6.1	17
1314	Couplings of Polarization with Interfacial Deep Trap and Schottky Interface Controlled Ferroelectric Memristive Switching. Advanced Functional Materials, 2020, 30, 2000664.	14.9	50
1315	Redoxâ€Active Vanadiumâ€Based Polyoxometalate as an Active Element in Resistive Switching Based Nonvolatile Molecular Memory. Physica Status Solidi (A) Applications and Materials Science, 2020, 217, 2000306.	1.8	10
1316	Resistive memory based on single-crystalline black phosphorus flake/HfOx structure. AIP Advances, 2020, 10, .	1.3	6
1317	Allâ€Inorganic Ionic Polymerâ€Based Memristor for Highâ€Performance and Flexible Artificial Synapse. Advanced Functional Materials, 2020, 30, 2004245.	14.9	36
1318	Effect of film thickness and temperature on the resistive switching characteristics of the Pt/HfO2/Al2O3/TiN structure. Solid-State Electronics, 2020, 173, 107880.	1.4	10

#	Article	IF	CITATIONS
1319	Comparative study of electron-beam crystallization of amorphous hafnium oxides HfO2 and HfOx (x = 1.82). SN Applied Sciences, 2020, 2, 1.	2.9	3
1320	Fast, Highly Flexible, and Transparent TaO <sub><i>x</i></sub> -Based Environmentally Robust Memristors for Wearable and Aerospace Applications. ACS Applied Electronic Materials, 2020, 2, 3131-3140.	4.3	30
1321	A comparative study on the performance of 1S-1R and Complementary resistive switching models. , 2020, , .		5
1322	Adaptive Random Number Generator Based on RRAM Intrinsic Fluctuation for Reinforcement Learning. , 2020, , .		2
1323	Voltage Amplitude-Controlled Synaptic Plasticity from Complementary Resistive Switching in Alloying HfOx with AlOx-Based RRAM. Metals, 2020, 10, 1410.	2.3	24
1324	Magnetism modulation and conductance quantization in a gadolinium oxide memristor. Physical Chemistry Chemical Physics, 2020, 22, 26322-26329.	2.8	6
1325	Recent Progress on Memristive Convolutional Neural Networks for Edge Intelligence. Advanced Intelligent Systems, 2020, 2, 2000114.	6.1	19
1326	Oxygen Vacancy Density Dependence with a Hopping Conduction Mechanism in Multilevel Switching Behavior of HfO <sub>2</sub> -Based Resistive Random Access Memory Devices. ACS Applied Electronic Materials, 2020, 2, 3160-3170.	4.3	21
1327	Antiphase Boundaries Constitute Fast Cation Diffusion Paths in SrTiO <sub>3</sub> Memristive Devices. Advanced Functional Materials, 2020, 30, 2004118.	14.9	19
1328	Leadâ€Free Dualâ€Phase Halide Perovskites for Preconditioned Conductingâ€Bridge Memory. Small, 2020, 16, e2003225.	10.0	27
1329	Short-Term Memory Dynamics of TiN/Ti/TiO2/SiOx/Si Resistive Random Access Memory. Nanomaterials, 2020, 10, 1821.	4.1	28
1330	Truly Electroformingâ€Free Memristor Based on TiO <sub>2</sub> â€CoO Phaseâ€Separated Oxides with Extremely High Uniformity and Low Power Consumption. Advanced Functional Materials, 2020, 30, 2007101.	14.9	26
1331	Dualâ€Gated MoS <sub>2</sub> Memtransistor Crossbar Array. Advanced Functional Materials, 2020, 30, 2003683.	14.9	73
1332	Recent Advances on Neuromorphic Devices Based on Chalcogenide Phase hange Materials. Advanced Functional Materials, 2020, 30, 2003419.	14.9	144
1333	In-Memory Logic Operations and Neuromorphic Computing in Non-Volatile Random Access Memory. Materials, 2020, 13, 3532.	2.9	31
1334	In situ observations of topotactic phase transitions in a ferrite memristor. Journal of Applied Physics, 2020, 128, 074501.	2.5	14
1335	Resistive Switching in Non-Stoichiometric Germanosilicate Glass Films Containing Ge Nanoclusters. Electronics (Switzerland), 2020, 9, 2103.	3.1	15
1336	Carbon Nitride Supported Ultrafine Manganese Sulfide Based Nonvolatile Resistive Switching Device for Nibble-Sized Memory Application. ACS Applied Electronic Materials, 2020, 2, 3987-3993.	4.3	9

#	Article	IF	CITATIONS
1337	Spin–orbit torques. Handbook of Magnetic Materials, 2020, 29, 1-55.	0.6	3
1338	Self-Rectifying Resistive Switching and Short-Term Memory Characteristics in Pt/HfO2/TaOx/TiN Artificial Synaptic Device. Nanomaterials, 2020, 10, 2159.	4.1	49
1339	Chemical Nature of Electrode and the Switching Response of RF-Sputtered NbOx Films. Nanomaterials, 2020, 10, 2164.	4.1	28
1340	Memory technology—a primer for material scientists. Reports on Progress in Physics, 2020, 83, 086501.	20.1	64
1341	Two-Dimensional Unipolar Memristors with Logic and Memory Functions. Nano Letters, 2020, 20, 4144-4152.	9.1	50
1342	Effect of Joule Heating on Resistive Switching Characteristic in AlOx Cells Made by Thermal Oxidation Formation. Nanoscale Research Letters, 2020, 15, 11.	5.7	61
1343	Memristive Device Characteristics Engineering by Controlling the Crystallinity of Switching Layer Materials. ACS Applied Electronic Materials, 2020, 2, 1529-1537.	4.3	7
1344	Ti-doped alumina based reliable resistive switching in sub- <b> <i>μ</i> </b> A regime. Applied Physics Letters, 2020, 116, .	3.3	3
1345	Improvement in Threshold Switching Performance Using Alâ,,Oâ,ƒ Interfacial Layer in Ag/Alâ,,Oâ,ƒ/SiOâ,"/W Cross-Point Platform. IEEE Electron Device Letters, 2020, 41, 924-927.	3.9	12
1346	Impact of metal silicide nanocrystals on the resistance ratio in resistive switching of epitaxial Fe3O4 films on Si substrates. Applied Physics Letters, 2020, 116, .	3.3	9
1347	Realization of fast switching speed and electronic synapse in Ta/TaOx/AlN/Pt bipolar resistive memory. AIP Advances, 2020, 10, 055312.	1.3	8
1348	Resistive random access memory based on gallium oxide thin films for self-powered pressure sensor systems. Ceramics International, 2020, 46, 21141-21148.	4.8	14
1349	Study of the SET switching event of VCM-based memories on a picosecond timescale. Journal of Applied Physics, 2020, 127, .	2.5	20
1350	Uncovering the Indium Filament Formation and Dissolution in Transparent ITO/SiN <i><sub>x</sub></i> /ITO Resistive Random Access Memory. ACS Applied Electronic Materials, 2020, 2, 1603-1608.	4.3	9
1351	Reliable operation of a molecular-gap atomic switch in a vacuum achieved by covering with an ionic liquid. Japanese Journal of Applied Physics, 2020, 59, SIIF04.	1.5	0
1352	Change in trap characteristics during fatigue of Au/BiFeO3/SrRuO3. Microelectronics Reliability, 2020, 108, 113638.	1.7	4
1353	Understanding of the Abrupt Resistive Transition in Different Types of Threshold Switching Devices From Materials Perspective. IEEE Transactions on Electron Devices, 2020, 67, 2878-2883.	3.0	14
1354	Duality characteristics of bipolar and unipolar resistive switching in a Pt/SrZrO3/TiOx/Pt stack. AIP Advances, 2020, 10, 065221.	1.3	3

#	Article	IF	CITATIONS
1355	Resistive Random Access Memory (RRAM): an Overview of Materials, Switching Mechanism, Performance, Multilevel Cell (mlc) Storage, Modeling, and Applications. Nanoscale Research Letters, 2020, 15, 90.	5.7	451
1356	Improved uniformity in resistive switching behaviors by embedding Cu nanodots. Nanotechnology, 2020, 31, 405301.	2.6	8
1357	Tailored 2D/3D Halide Perovskite Heterointerface for Substantially Enhanced Endurance in Conducting Bridge Resistive Switching Memory. ACS Applied Materials & Interfaces, 2020, 12, 17039-17045.	8.0	55
1358	On-Chip TaOx-Based Non-volatile Resistive Memory for in vitro Neurointerfaces. Frontiers in Neuroscience, 2020, 14, 94.	2.8	10
1359	Highly stable, solution-processed quaternary oxide thin film-based resistive switching random access memory devices via global and local stoichiometric manipulation strategy. Nanotechnology, 2020, 31, 245202.	2.6	11
1360	Forming-Free, Fast, Uniform, and High Endurance Resistive Switching From Cryogenic to High Temperatures in W/AlO <sub>x</sub> /Al <sub>2</sub> O <sub>3</sub> /Pt Bilayer Memristor. IEEE Electron Device Letters, 2020, 41, 549-552.	3.9	73
1361	Initial states and analog switching behaviors of two major tantalum oxide resistive memories. Japanese Journal of Applied Physics, 2020, 59, 044004.	1.5	4
1362	Charge disproportionate molecular redox for discrete memristive and memcapacitive switching. Nature Nanotechnology, 2020, 15, 380-389.	31.5	69
1363	Semiconductor Quantum Dots for Memories and Neuromorphic Computing Systems. Chemical Reviews, 2020, 120, 3941-4006.	47.7	203
1364	A Memristor with Low Switching Current and Voltage for 1S1R Integration and Array Operation. Advanced Electronic Materials, 2020, 6, 1901411.	5.1	51
1365	Highlighting the Au/TiO2 role in the memory effect of Au/TiO2/ITO/ZnO:Al/p-Si heterostructure. Journal of Materials Science: Materials in Electronics, 2020, 31, 7084-7092.	2.2	4
1366	Studying the switching variability in redox-based resistive switching devices. Journal of Computational Electronics, 2020, 19, 1426-1432.	2.5	10
1367	Challenges and Applications of Emerging Nonvolatile Memory Devices. Electronics (Switzerland), 2020, 9, 1029.	3.1	163
1368	Resistive switching memories. , 2020, , 17-61.		5
1369	Recent Advances of Volatile Memristors: Devices, Mechanisms, and Applications. Advanced Intelligent Systems, 2020, 2, 2000055.	6.1	108
1370	A ZrO <sub>2</sub> /TaO <sub><i>x</i></sub> Bilayer Oxide Resistive Memory Exhibiting Near All-Around Performances. Journal of Physical Chemistry C, 2020, 124, 16624-16628.	3.1	4
1371	Reversible switching mode change in Ta2O5-based resistive switching memory (ReRAM). Scientific Reports, 2020, 10, 11247.	3.3	20
1372	Grain-boundary structures and their impact on the electrical properties of NiO films deposited by reactive sputtering. Thin Solid Films, 2020, 709, 138203.	1.8	5

#	Article	IF	CITATIONS
1373	Resistance Switching Peculiarities in Nonfilamentary Selfâ€Rectified TiN/Ta <sub>2</sub> O <sub>5</sub> /Ta and TiN/HfO <sub>2</sub> /Ta <sub>2</sub> O <sub>5</sub> /Ta Stacks. Physica Status Solidi (A) Applications and Materials Science, 2020, 217, 1900952.	1.8	18
1374	Analog Switching and Artificial Synaptic Behavior of Ag/SiOx:Ag/TiOx/p++-Si Memristor Device. Nanoscale Research Letters, 2020, 15, 30.	5.7	65
1375	Experimental Demonstration of Memristor-Aided Logic (MAGIC) Using Valence Change Memory (VCM). IEEE Transactions on Electron Devices, 2020, 67, 3115-3122.	3.0	58
1376	Tip-enhanced electric field-driven efficient charge injection and transport in organic material-based resistive memories. Applied Materials Today, 2020, 20, 100746.	4.3	4
1377	SiO <sub>2</sub> /Ta <sub>2</sub> O <sub>5</sub> heterojunction ECM memristors: physical nature of their low voltage operation with high stability and uniformity. Nanoscale, 2020, 12, 4320-4327.	5.6	24
1378	Quantitative, Dynamic TaO <sub><i>x</i></sub> Memristor/Resistive Random Access Memory Model. ACS Applied Electronic Materials, 2020, 2, 701-709.	4.3	38
1379	A method of generating random bits by using electronic bipolar memristor*. Chinese Physics B, 2020, 29, 048505.	1.4	7
1380	Low Power and Ultrafast Multi-State Switching in nc-Al Induced Al2O3/AlxOy Bilayer Thin Film RRAM Device. IEEE Access, 2020, 8, 16310-16315.	4.2	1
1381	Performance Degradation of Nanofilament Switching Due to Joule Heat Dissipation. Electronics (Switzerland), 2020, 9, 127.	3.1	6
1382	Improved Resistive Memory Switching of NiOx/MnOx Double Stack. Journal of the Korean Physical Society, 2020, 76, 190-193.	0.7	1
1383	A comprehensive review on emerging artificial neuromorphic devices. Applied Physics Reviews, 2020, 7,	11.3	417
1385	LAO-NCS: Laser Assisted Spin Torque Nano Oscillator-Based Neuromorphic Computing System. Frontiers in Neuroscience, 2019, 13, 1429.	2.8	20
1386	Electroforming-Free, Flexible, and Reliable Resistive Random-Access Memory Based on an Ultrathin TaO <i><sub>x</sub></i> Film. ACS Applied Materials & Interfaces, 2020, 12, 10681-10688.	8.0	26
1387	Resistive switching materials forÂinformation processing. Nature Reviews Materials, 2020, 5, 173-195.	48.7	668
1388	Memory materials and devices: From concept to application. InformaÄnÃ-Materiály, 2020, 2, 261-290.	17.3	181
1389	Electrode-controlled confinement of conductive filaments in a nanocolumn embedded symmetric–asymmetric RRAM structure. Journal of Materials Chemistry C, 2020, 8, 1577-1582.	5.5	16
1390	A Lowâ€Current and Analog Memristor with Ru as Mobile Species. Advanced Materials, 2020, 32, e1904599.	21.0	59
1391	Threshold switching of non-stoichiometric CuO nanowire for selector application. Applied Physics Letters, 2020, 116, .	3.3	22

#	Article	IF	CITATIONS
1392	Threshold switching electrical responses in AlTe-based selector device. Applied Physics A: Materials Science and Processing, 2020, 126, 1.	2.3	0
1393	A bistable nonvolatile locally-active memristor and its complex dynamics. Communications in Nonlinear Science and Numerical Simulation, 2020, 84, 105203.	3.3	45
1394	Ferroelectric polymers for nonâ€volatile memory devices: a review. Polymer International, 2020, 69, 533-544.	3.1	62
1395	Forming-ready resistance random access memory using randomly pre-grown conducting filaments via pre-forming. Materials Science in Semiconductor Processing, 2020, 110, 104951.	4.0	4
1396	Brain-inspired computing with memristors: Challenges in devices, circuits, and systems. Applied Physics Reviews, 2020, 7, .	11.3	217
1397	Lithiumâ€Battery Anode Gains Additional Functionality for Neuromorphic Computing through Metal–Insulator Phase Separation. Advanced Materials, 2020, 32, e1907465.	21.0	43
1398	Nanoscale resistive switching devices for memory and computing applications. Nano Research, 2020, 13, 1228-1243.	10.4	91
1399	One-step regression and classification with cross-point resistive memory arrays. Science Advances, 2020, 6, eaay2378.	10.3	68
1400	Stateful Inâ€Memory Logic System and Its Practical Implementation in a TaO <sub><i>x</i></sub> â€Based Bipolarâ€Type Memristive Crossbar Array. Advanced Intelligent Systems, 2020, 2, 1900156.	6.1	24
1401	Optimized Resistive Switching in TiO <sub>2</sub> Nanotubes by Modulation of Oxygen Vacancy Through Chemical Reduction. IEEE Transactions on Electron Devices, 2020, 67, 2197-2204.	3.0	11
1402	Stabilized and RESET-voltage controlled multi-level switching characteristics in ZrO2-based memristors by inserting a-ZTO interface layer. Journal of Alloys and Compounds, 2020, 835, 155256.	5.5	44
1403	<sup>17</sup> O Solid-State NMR Studies of Ta <sub>2</sub> O <sub>5</sub> Nanorods. ACS Omega, 2020, 5, 8355-8361.	3.5	7
1404	Enhancement of DC/AC resistive switching performance in AlOx memristor by two-technique bilayer approach. Applied Physics Letters, 2020, 116, 173504.	3.3	18
1405	Improved Uniformity of TaO <sub>x</sub> -Based Resistive Random Access Memory with Ultralow Operating Voltage by Electrodes Engineering. ECS Journal of Solid State Science and Technology, 2020, 9, 041005.	1.8	5
1406	Colossal current and voltage tunability in an organic memristor via electrode engineering. Applied Materials Today, 2020, 19, 100626.	4.3	18
1407	Compliance Current-Controlled Conducting Filament Formation in Tantalum Oxide-Based RRAM Devices with Different Top Electrodes. ACS Applied Electronic Materials, 2020, 2, 1154-1161.	4.3	55
1408	First principles study of oxygen vacancy activation energy barrier in zirconia-based resistive memory. Scientific Reports, 2020, 10, 5405.	3.3	13
1409	Improving the Recognition Accuracy of Memristive Neural Networks via Homogenized Analog Type Conductance Quantization. Micromachines, 2020, 11, 427.	2.9	8

#	Article	IF	CITATIONS
1410	Ultralow power switching of Ta <sub>2</sub> O <sub>5</sub> /AlO <sub>X</sub> bilayer synergistic resistive random access memory. Journal Physics D: Applied Physics, 2020, 53, 335104.	2.8	9
1411	An organic approach to low energy memory and brain inspired electronics. Applied Physics Reviews, 2020, 7, .	11.3	39
1412	Resistive switching memory performance in oxide hetero-nanocrystals with well-controlled interfaces. Science and Technology of Advanced Materials, 2020, 21, 195-204.	6.1	27
1413	Radiofrequency Switches Based on Emerging Resistive Memory Technologies - A Survey. Proceedings of the IEEE, 2021, 109, 77-95.	21.3	30
1414	LrGAN: A Compact and Energy Efficient PIM-Based Architecture for GAN Training. IEEE Transactions on Computers, 2021, 70, 1427-1442.	3.4	1
1415	Modified resistive switching performance by increasing Al concentration in HfO2 on transparent indium tin oxide electrode. Ceramics International, 2021, 47, 1199-1207.	4.8	40
1416	Dynamical analysis and image encryption application of a novel memristive hyperchaotic system. Optics and Laser Technology, 2021, 133, 106553.	4.6	66
1417	Building Light Stimulated Synaptic Memory Devices for Visual Memory Simulation. Advanced Electronic Materials, 2021, 7, .	5.1	12
1418	Recent advances in resistive random access memory based on lead halide perovskite. InformaÄnÃ- Materiály, 2021, 3, 293-315.	17.3	70
1419	Effect of controlled humidity on resistive switching of multilayer VO2 devices. Materials Science and Engineering B: Solid-State Materials for Advanced Technology, 2021, 264, 114968.	3.5	14
1420	The Future of Memristors: Materials Engineering and Neural Networks. Advanced Functional Materials, 2021, 31, 2006773.	14.9	187
1421	Bottomâ€Electrode Nanoasperities as a Root of the Highâ€Performance Resistiveâ€Switching Effect. Physica Status Solidi - Rapid Research Letters, 2021, 15, 2000461.	2.4	3
1422	Carbon nanotube field effect transistor ( <scp>CNTFET</scp> ) operational transconductance amplifier ( <scp>OTA</scp> ) based design of high frequency memristor emulator. International Journal of Numerical Modelling: Electronic Networks, Devices and Fields, 2021, 34, e2827.	1.9	10
1423	Facile Approach for Improving Synaptic Modulation of Analog Resistive Characteristics by Embedding Oxygen Vacanciesâ€Rich Subâ€TaO x in Pt/Ta 2 O 5 /Ti Device Stacks. Physica Status Solidi (A) Applications and Materials Science, 2021, 218, 2000534.	1.8	0
1424	Charge Transport Mechanism in Atomic Layer Deposited Oxygenâ€Đeficient TaO x Films. Physica Status Solidi (B): Basic Research, 2021, 258, 2000432.	1.5	4
1425	Memristive device with highly continuous conduction modulation and its underlying physical mechanism for electronic synapse application. Science China Materials, 2021, 64, 179-188.	6.3	5
1426	A dual-functional Ta/TaO <sub>x</sub> /Ru device with both nonlinear selector and resistive switching behaviors. RSC Advances, 2021, 11, 18241-18245.	3.6	4
1427	Nonlinear Weight Quantification for Mitigating Stress Induced Disturb Effect on Multilevel RRAM-Based Neural Network Accelerator. IEEE Journal of the Electron Devices Society, 2021, , 1-1.	2.1	1

#	Article	IF	Citations
1428	High Yield Transfer of Clean Large-Area Epitaxial Oxide Thin Films. Nano-Micro Letters, 2021, 13, 39.	27.0	23
1429	Towards peptide-based tunable multistate memristive materials. Physical Chemistry Chemical Physics, 2021, 23, 1802-1810.	2.8	7
1430	Resistive Random Access Memory Device Physics and Array Architectures. , 2021, , 319-343.		1
1431	Resistive memory device with piezoelectric and ferroelectric thin films by solution synthesis. , 2021, , 679-695.		1
1432	Bifunctional Device with Highâ€Energy Storage Density and Ultralow Current Analog Resistive Switching. Advanced Electronic Materials, 2021, 7, 2000902.	5.1	11
1433	HfO2 thin film formed by solution-coating method and application to resistive switching device. Japanese Journal of Applied Physics, 2021, 60, 014002.	1.5	1
1434	Enhancement of ovonic threshold switching characteristics using nanometer-scale virtual electrode formed within ultrathin hafnium dioxide interlayer. Applied Physics Letters, 2021, 118, .	3.3	3
1435	Ultra-Scaled AlO <sub>x</sub> Diffusion Barriers for Multibit HfO <sub>x</sub> RRAM Operation. IEEE Journal of the Electron Devices Society, 2021, 9, 564-569.	2.1	10
1436	7-Alkoxy-appended coumarin derivatives: synthesis, photo-physical properties, aggregation behaviours and current–voltage ( <i>I</i> – <i>V</i> ) characteristic studies on thin films. RSC Advances, 2021, 11, 10212-10223.	3.6	3
1437	RRAM Device Characterizations and Modelling. , 2021, , 345-381.		0
1438	Progress of lead-free perovskite and its resistance switching performance. Wuli Xuebao/Acta Physica Sinica, 2021, 70, 157301-157301.	0.5	2
1439	Statistical analysis of current–voltage characteristics in Au/Ta2O5/n-GaN Schottky barrier heterojunction using different methods. Applied Physics A: Materials Science and Processing, 2021, 127, 1.	2.3	6
1440	Electron-beam-irradiated rhenium disulfide memristors with low variability for neuromorphic computing. Npj 2D Materials and Applications, 2021, 5, .	7.9	69
1441	HfZrO <sub> <i>x</i> </sub> -Based Switchable Diode for Logic-in-Memory Applications. IEEE Transactions on Electron Devices, 2021, 68, 545-549.	3.0	8
1442	Smart Design of Resistive Switching Memory by an In Situ Currentâ€Induced Oxidization Process on a Single Crystalline Metallic Nanowire. Advanced Electronic Materials, 2021, 7, 2000252.	5.1	2
1443	Multilevel memristive structures based on bismuth selenide microcrystals. Chaos, Solitons and Fractals, 2021, 143, 110542.	5.1	7
1444	A Write-Friendly and Fast-Recovery Scheme for Security Metadata in Non-Volatile Memories. , 2021, , .		7
1445	A Review of Resistive Switching Devices: Performance Improvement, Characterization, and Applications. Small Structures, 2021, 2, 2000109.	12.0	94

ARTICLE IF CITATIONS Electrocatalytic Hydrolysisâ€Modulated Multistate Resistive Switching Behaviors in Memristors. 1.8 5 1446 Physica Status Solidi (Á) Applications and Materials Science, 2021, 218, 2000655. Verticalâ€organicâ€nanocrystalâ€arrays for crossbar memristors with tuning switching dynamics toward 1447 neuromorphic computing. ŚmartMat, 2021, 2, 99-108. Electric conductivity of remotely heated Cu nanofilaments in Cu/TaO<sub>x</sub>/Pt ReRAM cells. 1448 2.5 4 Journal of Applied Physics, 2021, 129, 055107. Theory and experimental verification of configurable computing with stochastic memristors. 1449 Scientific Reports, 2021, 11, 4218. Noise Tailoring in Memristive Filaments. ACS Applied Materials & amp; Interfaces, 2021, 13, 7453-7460. 8.0 1450 16 Suppressed Stochastic Switching Behavior and Improved Synaptic Functions in an Atomic Switch Embedded with a 2D NbSe<sub>2</sub> Material. ACS Applied Materials & amp; Interfaces, 2021, 13, 8.0 10161-10170. Transformation of digital to analog switching in TaOx-based memristor device for neuromorphic 1452 3.3 37 applications. Applied Physics Letters, 2021, 118, . Initial electrical properties of tantalum oxide resistive memories influenced by oxygen defect 1453 1.5 concentrations. Japanese Journal of Applied Physics, 2021, 60, SCCE03. Optical Tuning of Resistance Switching in Polycrystalline Gallium Phosphide Thin Films. Journal of 1454 4.6 8 Physical Chemistry Letters, 2021, 12, 2327-2333. Changes in the temperature dependence of Ag/Ta<sub>2</sub>O<sub>5</sub>/Pt gapless-type atomic 1455 switches caused by desorption/adsorption of water molecules from/into the 1.5 Ta<sub>2</sub>O<sub>5</sub> matrix. Japanese Journal of Applied Physics, 2021, 60, SCCF05. Improvement of RRAM Uniformity and Analog Characteristics Through Localized Metal Doping., 2021,, 1456 2 Impact of the Ohmic Electrode on the Endurance of Oxide-Based Resistive Switching Memory. IEEE 3.0 26 Transactions on Electron Devices, 2021, 68, 1024-1030. Spinâ€Torque Memristors Based on Perpendicular Magnetic Tunnel Junctions for Neuromorphic 1458 11.2 34 Computing. Advanced Science, 2021, 8, 2004645. Any-polar resistive switching behavior in Ti-intercalated Pt/Ti/HfO<sub>2</sub>/Ti/Pt device\*. Chinese Physics B, 2021, 30, 118701. 1459 1.4 Memristorâ€transistor hybrid ternary content addressable memory using ternary memristive memory 1460 1.4 4 cell. IET Circuits, Devices and Systems, 2021, 15, 619-629. Resistive and synaptic properties modulation by electroforming polarity in CMOS-compatible 1461 5.1 19 Cu/HfO2/Si device. Chaos, Solitons and Fractals, 2021, 145, 110783. Synaptic Device With High Rectification Ratio Resistive Switching and Its Impact on Spiking Neural 1462 3.03 Network. IEEE Transactions on Electron Devices, 2021, 68, 1610-1615. Controllable High-Performance Memristors Based on 2D Fe2GeTe3 Oxide for Biological Synapse 1463 Imitation. Nanotechnology, 2021, 32, .

#	Article	IF	CITATIONS
1464	High-performance resistive switching memory with embedded molybdenum disulfide quantum dots. Applied Physics Letters, 2021, 118, .	3.3	23
1465	Memristors Based on (Zr, Hf, Nb, Ta, Mo, W) Highâ€Entropy Oxides. Advanced Electronic Materials, 2021, 7, 2001258.	5.1	22
1466	Modeling-Based Design of Memristive Devices for Brain-Inspired Computing. Frontiers in Nanotechnology, 2021, 3, .	4.8	5
1467	12.7 MA/cm <sup>2</sup> On-Current Density and High Uniformity Realized in AgGeSe/Al <sub>2</sub> O <sub>3</sub> Selectors. IEEE Electron Device Letters, 2021, 42, 613-616.	3.9	4
1468	Room temperature memristive switching in nano-patterned LaAlO3/SrTiO3 wires with laterally defined gates. Applied Physics Letters, 2021, 118, .	3.3	5
1469	Working Capital Management Policies in Indian Listed Firms: A State-Wise Analysis. Sustainability, 2021, 13, 4516.	3.2	7
1470	Tantala Kerr nonlinear integrated photonics. Optica, 2021, 8, 811.	9.3	68
1471	Graph processing and machine learning architectures with emerging memory technologies: a survey. Science China Information Sciences, 2021, 64, 1.	4.3	12
1472	Neural Functional Connectivity Reconstruction with Secondâ€Order Memristor Network. Advanced Intelligent Systems, 2021, 3, 2000276.	6.1	9
1473	Lowâ€Power Memristive Logic Device Enabled by Controllable Oxidation of 2D HfSe <sub>2</sub> for Inâ€Memory Computing. Advanced Science, 2021, 8, e2005038.	11.2	47
1474	Adaptive Extreme Edge Computing for Wearable Devices. Frontiers in Neuroscience, 2021, 15, 611300.	2.8	67
1475	Tuning the Memory Window of TaOx ReRAM Using the RF Sputtering Power. , 2021, , .		2
1476	Graphene-based 3D XNOR-VRRAM with ternary precision for neuromorphic computing. Npj 2D Materials and Applications, 2021, 5, .	7.9	8
1477	Theoretical Investigation of CsBX <sub>3</sub> (BÂ=ÂPb, Sn; X = I, Br, Cl) Using Tran–Blaha Modified Becke–Johnson Approximation for Flexible Photoresponsive Memristors. Advanced Theory and Simulations, 2021, 4, 2100011.	2.8	11
1478	Effect of Threshold Switching Selectors on One-Selector One-Resistor Crossbar Arrays. Journal of Physics: Conference Series, 2021, 1907, 012006.	0.4	0
1479	Graphene quantum dots as shallow traps in a high-k polymer matrix for bipolar resistive switching. Materials Research Express, 2021, 8, 056304.	1.6	0
1480	Role of sweep direction and substrate work function on resistive switching of titanium-di-oxide [TiO2] nanoparticles. Current Applied Physics, 2021, 25, 75-81.	2.4	10
1481	The transformation of digital to analog resistance switching behavior in Bi <sub>2</sub> FeCrO <sub>6</sub> thin films. Journal of Asian Ceramic Societies, 2021, 9, 851-857.	2.3	2

#	Article	IF	CITATIONS
1482	Spinodal Decomposition-Driven Endurable Resistive Switching in Perovskite Oxides. ACS Applied Materials & Interfaces, 2021, 13, 31001-31009.	8.0	3
1483	Low-power emerging memristive designs towards secure hardware systems for applications in internet of things. Nano Materials Science, 2021, 3, 186-204.	8.8	22
1484	Emerging 2D Memory Devices for Inâ€Memory Computing. Advanced Materials, 2021, 33, e2007081.	21.0	92
1485	Resistive Switching Effects of Crystalâ€lonâ€6licing Fabricated LiNbO <sub>3</sub> Single Crystalline Thin Film on Flexible Polyimide Substrate. Advanced Electronic Materials, 2021, 7, 2100301.	5.1	10
1486	Modulation of resistive switching properties of non-stoichiometric WO3â^'x based asymmetric MIM structure by interface barrier modification. Journal of Applied Physics, 2021, 129, .	2.5	4
1487	Low power and stable resistive switching in graphene oxide-based RRAM embedded with ZnO nanoparticles for nonvolatile memory applications. Journal of Materials Science: Materials in Electronics, 2021, 32, 17545-17557.	2.2	6
1488	Improvement of Resistive Switching Performance in Sulfur-Doped HfOx-Based RRAM. Materials, 2021, 14, 3330.	2.9	18
1489	Locally active memristor based oscillators: The dynamic route from period to chaos and hyperchaos. Chaos, 2021, 31, 063114.	2.5	13
1490	Conduction and switching behavior of e-beam deposited polycrystalline Nb2O5 based nano-ionic memristor for non-volatile memory applications. Journal of Alloys and Compounds, 2021, 866, 158394.	5.5	31
1491	High-Throughput, Area-Efficient, and Variation-Tolerant 3-D In-Memory Compute System for Deep Convolutional Neural Networks. IEEE Internet of Things Journal, 2021, 8, 9219-9232.	8.7	12
1492	Memristive Crossbar Arrays for Storage and Computing Applications. Advanced Intelligent Systems, 2021, 3, 2100017.	6.1	80
1493	High-performance VOx-based memristors with ultralow switching voltages prepared at room temperature. , 2021, , .		0
1494	Oxygen vacancy engineering of TaO <sub>x</sub> -based resistive memories by Zr doping for improved variability and synaptic behavior. Nanotechnology, 2021, 32, 405202.	2.6	6
1496	Volatile Resistive Switching Characteristics of Pt/HfO2/TaOx/TiN Short-Term Memory Device. Metals, 2021, 11, 1207.	2.3	9
1497	Ultrafast non-thermal and thermal switching in charge configuration memory devices based on 1T-TaS2. Applied Physics Letters, 2021, 119, .	3.3	10
1498	Gradually Modified Conductance in the Self-Compliance Region of an Atomic-Layer-Deposited Pt/TiO2/HfAlOx/TiN RRAM Device. Metals, 2021, 11, 1199.	2.3	6
1499	Recent Progress in Selector and Selfâ€Rectifying Devices for Resistive Randomâ€Access Memory Application. Physica Status Solidi - Rapid Research Letters, 2021, 15, 2100199.	2.4	26
1500	Effects of Oxygen Precursor on Resistive Switching Properties of CMOS Compatible HfO2-Based RRAM. Metals, 2021, 11, 1350.	2.3	6

#	Article	IF	CITATIONS
1501	Structural Analysis and Performance in a Dualâ€Mechanism Conductive Filament Memristor. Advanced Electronic Materials, 2021, 7, 2100605.	5.1	19
1502	First-principles study of bipolar resistive memories based on monolayer α-GeTe. Nanotechnology, 2021, 32, 475701.	2.6	2
1503	Improvement of appearance probability of conductance quantization by hydrogen thermal treatment in Pt/NiO/Pt-resistive switching cells. MRS Advances, 2021, 6, 554-557.	0.9	1
1504	Induced Complementary Resistive Switching in Forming-Free TiO <sub><i>x</i></sub> /TiO <sub>2</sub> /TiO <sub><i>x</i></sub> Memristors. ACS Applied Materials & Interfaces, 2021, 13, 43022-43029.	8.0	14
1505	Neuromorphic Systems. , 2022, , 123-183.		0
1506	Stimuli-responsive switchable halide perovskites: Taking advantage of instability. Joule, 2021, 5, 2027-2046.	24.0	56
1507	Coexistence of volatile and non-volatile resistive switching in Ni/SiO <sub>2</sub> /Pt memristor device controlled from different current compliances. Semiconductor Science and Technology, 2021, 36, 095031.	2.0	8
1508	In Memory Energy Application for Resistive Random Access Memory. Advanced Electronic Materials, 0, , 2100297.	5.1	7
1509	Application of Resistive Random Access Memory in Hardware Security: A Review. Advanced Electronic Materials, 2021, 7, 2100536.	5.1	20
1510	An integrated approach to construct tantalum derivatives for electrocatalysis beyond the triiodide reduction reaction. Ceramics International, 2021, 47, 23066-23077.	4.8	4
1511	Artificial Astrocyte Memristor with Recoverable Linearity for Neuromorphic Computing. Advanced Electronic Materials, 2022, 8, 2100669.	5.1	10
1512	Towards Highâ€Performance Resistive Switching Behavior through Embedding D‒A System into 2D Imineâ€Linked Covalent Organic Frameworks. Angewandte Chemie, 0, , .	2.0	7
1513	Nonlinearity in Memristors for Neuromorphic Dynamic Systems. Small Science, 2022, 2, 2100049.	9.9	46
1514	Implementation of a reservoir computing system using the short-term effects of Pt/HfO2/TaOx/TiN memristors with self-rectification. Chaos, Solitons and Fractals, 2021, 150, 111223.	5.1	34
1515	To the Issue of the Memristor's HRS and LRS States Degradation and Data Retention Time. Russian Microelectronics, 2021, 50, 311-325.	0.5	23
1516	Comprehensive Model of Electron Conduction in Oxide-Based Memristive Devices. ACS Applied Electronic Materials, 2021, 3, 3674-3692.	4.3	48
1517	Bias Polarity Dependent Threshold Switching and Bipolar Resistive Switching of TiN/TaOx/ITO Device. Metals, 2021, 11, 1531.	2.3	0
1518	Towards Highâ€Performance Resistive Switching Behavior through Embedding a Dâ€A System into 2D Imineâ€Linked Covalent Organic Frameworks. Angewandte Chemie - International Edition, 2021, 60, 27135-27143.	13.8	35

#	Article	IF	CITATIONS
1519	Role and optimization of thermal rapid annealing in Ta/TaOx/Ru based resistive switching memory. Vacuum, 2021, 191, 110392.	3.5	14
1520	Signal Filtering Enabled by Spike Voltageâ€Dependent Plasticity in Metalloporphyrinâ€Based Memristors. Advanced Materials, 2021, 33, e2104370.	21.0	30
1521	Impact of O2 plasma treatment on novel amorphous oxide InWZnO on conductive bridge random access memory. Surface and Coatings Technology, 2021, 422, 127539.	4.8	4
1522	Oxide Passivation of Halide Perovskite Resistive Memory Device: A Strategy for Overcoming Endurance Problem. ACS Applied Materials & Interfaces, 2021, 13, 44577-44584.	8.0	5
1523	Halide Perovskites for Memristive Data Storage and Artificial Synapses. Journal of Physical Chemistry Letters, 2021, 12, 8999-9010.	4.6	46
1524	Oxygen vacancy formation and uniformity of conductive filaments in Si-doped Ta2O5 RRAM. Applied Surface Science, 2021, 560, 149960.	6.1	18
1525	Neuromorphic electronics based on copying and pasting the brain. Nature Electronics, 2021, 4, 635-644.	26.0	94
1526	Discrete memristive levels and logic gate applications of Nb2O5 devices. Journal of Alloys and Compounds, 2021, 879, 160385.	5.5	22
1527	Optimum resistive switching characteristics of NiFe2O4 by controlling film thickness. Applied Surface Science, 2021, 564, 150091.	6.1	10
1528	Rescuing RRAM-Based Computing From Static and Dynamic Faults. IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems, 2021, 40, 2049-2062.	2.7	8
1529	Resistive switching characteristics and theoretical simulation of a Pt/a-Ta2O5/TiN synaptic device for neuromorphic applications. Journal of Alloys and Compounds, 2021, 877, 160204.	5.5	20
1530	Compact Modeling of the Switching Dynamics and Temperature Dependencies in TiO <i>â,"</i> -Based Memristors—Part I: Behavioral Model. IEEE Transactions on Electron Devices, 2021, 68, 4877-4884.	3.0	4
1531	Influence of electrolyte selection on performance of tantalum anodic oxide memristors. Applied Surface Science, 2021, 565, 150608.	6.1	14
1532	Coexistence of nonvolatile unipolar and volatile threshold resistive switching in the Pt/LaMnO3/Pt heterostructures. Current Applied Physics, 2021, 31, 22-28.	2.4	5
1533	Tellurium vacancy in two-dimensional Si2Te3 for resistive random-access memory. Journal of Solid State Chemistry, 2021, 303, 122448.	2.9	2
1534	Optimizing linearity of weight updating in TaO -based memristors by depression pulse scheme for neuromorphic computing. Solid State Ionics, 2021, 370, 115746.	2.7	12
1535	Short-term and long-term synaptic plasticity in Ag/HfO2/SiO2/Si stack by controlling conducting filament strength. Applied Surface Science, 2021, 565, 150563.	6.1	22
1536	Tunable multiferroic and forming-free bipolar resistive switching properties in multifunctional BiFeO3 film by doping engineering. Journal of Alloys and Compounds, 2021, 887, 161336.	5.5	13

#	Article	IF	CITATIONS
1537	Controlled multilevel switching and artificial synapse characteristics in transparent HfAlO-alloy based memristor with embedded TaN nanoparticles. Journal of Materials Science and Technology, 2021, 95, 203-212.	10.7	23
1538	Incorporating a redox active entity to attain electrical bistability in a polymer semiconductor. Nanoscale, 2021, 13, 6759-6763.	5.6	2
1539	A 3-D Crossbar Architecture for Both Pipeline and Parallel Computations. IEEE Transactions on Circuits and Systems I: Regular Papers, 2021, 68, 4456-4469.	5.4	1
1540	Bipolar and Complementary Resistive Switching Characteristics and Neuromorphic System Simulation in a Pt/ZnO/TiN Synaptic Device. Nanomaterials, 2021, 11, 315.	4.1	26
1541	Towards engineering in memristors for emerging memory and neuromorphic computing: A review. Journal of Semiconductors, 2021, 42, 013101.	3.7	56
1542	Effects of electrode materials and bias polarities on breakdown behaviors of oxide dielectrics and their mechanisms. Wuli Xuebao/Acta Physica Sinica, 2021, 70, 087302.	0.5	0
1543	RRAM-Based Neuromorphic Computing Systems. , 2021, , 383-414.		1
1544	TiO2 in memristors and resistive random access memory devices. , 2021, , 507-526.		2
1545	The role of oxygen vacancies in the high cycling endurance and quantum conductance in BiVO <sub>4</sub> â€based resistive switching memory. InformaÄnÃ-Materiály, 2020, 2, 960-967.	17.3	21
1546	Bio-inspired Neural Networks. , 2014, , 151-172.		1
1547	Anodic tantalum oxide: synthesis and energy-related applications. , 2020, , 305-319.		3
1548	Improvement in conductance modulation linearity of artificial synapses based on NaNbO3 memristor. Applied Materials Today, 2020, 19, 100582.	4.3	11
1549	Enhancing the synaptic properties of low-power and forming-free HfOx/TaOy/HfOx resistive switching devices. Microelectronic Engineering, 2020, 229, 111358.	2.4	22
1550	Exchange of Ions across the TiN/TaO <i><sub>x</sub></i> Interface during Electroformation of TaO <i><sub>x</sub></i> Based Resistive Switching Devices. ACS Applied Materials & Interfaces, 2020, 12, 27378-27385.	8.0	12
1551	Prediction of crystalline Ta4O9 phase using first principles-based cluster expansion calculations. APL Materials, 2020, 8, .	5.1	2
1552	Temperature dependence of resistive switching characteristics in NiO(111) films on metal layer. Journal Physics D: Applied Physics, 2021, 54, 015101.	2.8	6
1553	Oxide-based filamentary RRAM for deep learning. Journal Physics D: Applied Physics, 2021, 54, 083002.	2.8	20
1554	Electronic structure and charge transport mechanism in a forming-free SiO <i> <sub>x</sub> </i> -based memristor. Nanotechnology, 2020, 31, 505704.	2.6	12

#	ARTICLE Review of resistive switching mechanisms for memristive neuromorphic devices*. Chinese Physics B,	IF	CITATIONS
1555	2020, 29, 097305.	1.4	18
1556	Diffusion of oxygen in amorphous tantalum oxide. Physical Review Materials, 2019, 3, .	2.4	11
1557	Thin ZnO layer for RRAM Applications. , 2020, , .		2
1558	Resistive Random Access Memory for Future Information Processing System. Proceedings of the IEEE, 2017, 105, 1770-1789.	21.3	88
1559	Mojim. ACM SIGPLAN Notices, 2015, 50, 3-18.	0.2	5
1560	PRIME. Computer Architecture News, 2016, 44, 27-39.	2.5	823
1561	Mellow writes. Computer Architecture News, 2016, 44, 519-531.	2.5	32
1562	Write-rationing garbage collection for hybrid memories. ACM SIGPLAN Notices, 2018, 53, 62-77.	0.2	9
1563	Crystal Gazer. Proceedings of the ACM on Measurement and Analysis of Computing Systems, 2019, 3, 1-27.	1.8	6
1564	SuperMem. , 2019, , .		30
1565	Effect of Ag Concentration Dispersed in HfOx Thin Films on Threshold Switching. Nanoscale Research Letters, 2020, 15, 27.	5.7	15
1566	Single-Molecule Nanoelectronics. , 2015, , 196-219.		1
1567	Nonlinear and low-loss tantalum pentoxide based micro-ring resonator by ion-assisted electron-beam deposition. OSA Continuum, 2020, 3, 3433.	1.8	3
1568	Memristor and its Applications: A Comprehensive Review. Nanoscience and Nanotechnology - Asia, 2020, 10, 558-576.	0.7	2
1570	STDP and STDP variations with memristors for spiking neuromorphic learning systems. Frontiers in Neuroscience, 2013, 7, 2.	2.8	368
1572	A Finite Element Model for Bipolar Resistive Random Access Memory. Journal of Semiconductor Technology and Science, 2014, 14, 268-273.	0.4	7
1573	Oxide-based memristive neuromorphic synaptic devices. Wuli Xuebao/Acta Physica Sinica, 2019, 68, 168504.	0.5	11
1574	Switching Properties of Titanium Dioxide Nanowire Memristor. Japanese Journal of Applied Physics, 2012, 51, 11PE09.	1.5	13

#	Article	IF	CITATIONS
1575	Eight-Level/Cell Storage by Tuning the Spatial Distribution of Dielectrics in a Tri-Layer ReRAM Cell: Electrical Characteristics and Reliability. IEEE Transactions on Device and Materials Reliability, 2021, 21, 587-593.	2.0	1
1576	Oxide-based resistive switching-based devices: fabrication, influence parameters and applications. Journal of Materials Chemistry C, 2021, 9, 15755-15788.	5.5	38
1577	Influence of Silver Content in Glassy Matrix on Resistive Switching Behavior. , 2021, , .		0
1578	Design of Materials Configuration for Optimizing Redoxâ€Based Resistive Switching Memories. Advanced Materials, 2022, 34, e2105022.	21.0	28
1579	SiO2-Based Conductive-Bridging Random Access Memory. Kluwer International Series in Electronic Materials: Science and Technology, 2022, , 147-186.	0.5	0
1580	Single-Crystalline SrTiO3 as Memristive Model System: From Materials Science to Neurological and Psychological Functions. Kluwer International Series in Electronic Materials: Science and Technology, 2022, , 333-354.	0.5	0
1581	Complementary resistive switching in core–shell nanowires. Journal of Applied Physics, 2021, 130, 155104.	2.5	0
1582	Lowâ€Energy Oxygen Plasma Injection of 2D Bi <sub>2</sub> Se <sub>3</sub> Realizes Highly Controllable Resistive Random Access Memory. Advanced Functional Materials, 2022, 32, 2108455.	14.9	27
1583	Nanoscale Characterization of Resistive Switching Using Advanced Conductive Atomic Force Microscopy–Based Setups. Kluwer International Series in Electronic Materials: Science and Technology, 2022, , 121-145.	0.5	1
1584	Resistive Random Access Memory (RRAM) Technology: From Material, Device, Selector, 3D Integration to Bottom-Up Fabrication. Kluwer International Series in Electronic Materials: Science and Technology, 2022, , 33-64.	0.5	1
1586	Unconventional Resistive Switching Behavior in Fibroinâ€Based Memristor. Advanced Electronic Materials, 2022, 8, 2100843.	5.1	21
1587	Embedding Azobenzol-Decorated Tetraphenylethylene into the Polymer Matrix to Implement a Ternary Memory Device with High Working Temperature/Humidity. ACS Applied Materials & Interfaces, 2021, 13, 50350-50357.	8.0	23
1588	Interface-Type Resistive Switching in Perovskite Materials. Kluwer International Series in Electronic Materials: Science and Technology, 2022, , 235-287.	0.5	3
1589	Memristive Computing Devices and Applications. Kluwer International Series in Electronic Materials: Science and Technology, 2022, , 5-32.	0.5	0
1590	Reset Switching Statistics of TaOx-Based Memristor. Kluwer International Series in Electronic Materials: Science and Technology, 2022, , 187-195.	0.5	0
1591	A TaOx-Based RRAM with Improved Uniformity and Excellent Analog Characteristics by Local Dopant Engineering. Electronics (Switzerland), 2021, 10, 2451.	3.1	9
1592	Resistive Switching Models by Ion Migration in Metal Oxides. Nanostructure Science and Technology, 2013, , 169-202.	0.1	0
1593	Fernziele der Nanoelektronik. Acatech-Diskussion, 2013, , 149-223.	0.2	Ο

# 1598	ARTICLE Improved Distribution of Threshold Switching Device by Reactive Nitrogen and Plasma Treatment. Journal of the Institute of Electronics and Information Engineers, 2014, 51, 172-177.	IF 0.0	CITATIONS 0
1600	Liquid Silicon-Monona. ACM SIGPLAN Notices, 2018, 53, 214-228.	0.2	3
1601	Bio-inspired Neural Networks. , 2019, , 595-617.		0
1602	Neuromorphic Devices and Networks Based on Memristors with Ionic Dynamics. , 2019, , 527-554.		0
1603	Brain-Inspired Memristive Neural Networks for Unsupervised Learning. , 2019, , 495-525.		1
1604	Development of Heterojunction Electric Shock Protector Device by Co-firing. Korean Journal of Materials Research, 2019, 29, 106-115.	0.2	0
1605	Science and Technological Understanding of Nano-ionic Resistive Memories (RRAM). Nanoscience and Nanotechnology - Asia, 2019, 9, 444-461.	0.7	0
1607	Role of an oxide interface in a resistive switch. Current Applied Physics, 2022, 35, 16-23.	2.4	7
1608	Artificial Synapse Based on a 2D-SnO <sub>2</sub> Memtransistor with Dynamically Tunable Analog Switching for Neuromorphic Computing. ACS Applied Materials & Interfaces, 2021, 13, 52822-52832.	8.0	47
1609	Grain boundary effect on the resistive switching characteristics of SrTi1-xFexO3 directly patterned via photochemical organic-metal deposition. Applied Surface Science, 2022, 575, 151754.	6.1	6
1610	Operando Direct Observation of Filament Formation in Resistive Switching Devices Enabled by a Topological Transformation Molecule. Nano Letters, 2021, 21, 9262-9269.	9.1	4
1611	Logic-in-memory application of CMOS compatible silicon nitride memristor. Chaos, Solitons and Fractals, 2021, 153, 111540.	5.1	16
1612	High-throughput phase-field simulations and machine learning of resistive switching in resistive random-access memory. Npj Computational Materials, 2020, 6, .	8.7	24
1613	Modeling and Simulation of an Improved Resistive Random Access Memory Array. , 2020, , .		0
1614	Parallel Simulation of Resistive Random Access Memory with Hexahedral Elements. , 2020, , .		1
1615	Magnetism and optical properties of (Fe, Ni) co-doped 3C-SiC from first principles calculation. Physica Scripta, 2021, 96, 015813.	2.5	1
1617	A comprehensive understanding of conductive mechanism of RRAM: from electron conduction to ionic dynamics. , 2020, , .		1
1618	Grain boundary assisted bipolar resistive switching in solution-processed NiO films. AIP Conference Proceedings, 2020, , .	0.4	0

		LPORT	
#	Article	IF	CITATIONS
1619	Resistive Crossbar-Aware Neural Network Design and Optimization. IEEE Access, 2020, 8, 229066-229085.	4.2	6
1620	Atomistic Simulations for Understanding Microscopic Mechanism of Resistive Switches. Advances in Atom and Single Molecule Machines, 2020, , 95-125.	0.0	0
1621	Resistive Switching in HfO <sub>2–<i>x</i></sub> /La <sub>0.67</sub> Sr <sub>0.33</sub> MnO <sub>3</sub> Heterostructures: An Intriguing Case of Low H-Field Susceptibility of an E-Field Controlled Active Interface. ACS Applied Materials & Interfaces, 2021, 13, 54133-54142.	8.0	6
1622	Standards for the Characterization of Endurance in Resistive Switching Devices. ACS Nano, 2021, 15, 17214-17231.	14.6	128
1623	Memristively programmable transistors. Nanotechnology, 2022, 33, 045203.	2.6	1
1624	Nonvolatile Resistive Switching of Mn3O4 Thin Films for Flexible Electronics Applications. Nanoscience and Nanotechnology - Asia, 2020, 10, 622-630.	0.7	1
1625	Thermal and Chemical Integrity of Ru Electrode in Cu/TaO <sub>x</sub> /Ru ReRAM Memory Cell. ECS Journal of Solid State Science and Technology, 2019, 8, N220-N233.	1.8	8
1626	Memristive applications of metal oxide nanofibers. , 2022, , 247-275.		1
1627	A nanoscale analysis method to reveal oxygen exchange between environment, oxide, and electrodes in ReRAM devices. APL Materials, 2021, 9, .	5.1	6
1628	Electrodeposition of GeSbTe-Based Resistive Switching Memory in Crossbar Arrays. Journal of Physical Chemistry C, 2021, 125, 26247-26255.	3.1	9
1629	Generation and manipulation of current-induced spin-orbit torques. Proceedings of the Japan Academy Series B: Physical and Biological Sciences, 2021, 97, 499-519.	3.8	6
1630	Multi-Level Resistive Switching of Pt/HfO2/TaN Memory Device. Metals, 2021, 11, 1885.	2.3	1
1631	Effect of the coexistence of active metals and boron vacancies on the performance of 2D hexagonal boron nitride resistance memory. Vacuum, 2022, 196, 110747.	3.5	4
1632	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
1633	Bipolar Resistive Switching Behavior of PVP-GQD/HfOx/ITO/Graphene Hybrid Flexible Resistive Random Access Memory. Molecules, 2021, 26, 6758.	3.8	5
1634	Recent Advances in Halide Perovskite-Based Nonvolatile Resistive Random-Access Memory. Journal of Electronic Materials, 2022, 51, 434-446.	2.2	5
1635	A Compact and Continuous Reformulation of the Strachan TaO <sub>x</sub> Memristor Model With Improved Numerical Stability. IEEE Transactions on Circuits and Systems I: Regular Papers, 2022, 69, 1266-1277.	5.4	8
1636	Electronic and Photoelectronic Memristors Based on 2D Materials. Advanced Electronic Materials, 2022, 8, 2101099.	5.1	28

#	Article	IF	CITATIONS
1637	All-oxide-based and metallic electrode-free artificial synapses for transparent neuromorphic computing. Materials Today Chemistry, 2022, 23, 100681.	3.5	12
1638	Thermodynamic modeling of the Ta-O system. Calphad: Computer Coupling of Phase Diagrams and Thermochemistry, 2022, 76, 102391.	1.6	4
1639	Impact of Lateral SnO <sub>2</sub> Nanofilm Channel Geometry on a 1024 Crossbar Chemical Sensor Array. ACS Sensors, 2022, 7, 460-468.	7.8	6
1640	Ultrafast and stable phase transition realized in MoTe <sub>2</sub> -based memristive devices. Materials Horizons, 2022, 9, 1036-1044.	12.2	9
1641	Multifunctional n-ZnO/MoO3/PEDOT:PSS-based hybrid device for high-speed UV light detection and ReRAM applications. Journal of Materials Science: Materials in Electronics, 2022, 33, 2090.	2.2	2
1642	Space-charge polarisation dielectric behaviour of precursor derived monoclinic HfO2. Ceramics International, 2022, 48, 13063-13070.	4.8	4
1643	Double-Gate and Body-Contacted Nonvolatile Oxide Memory Thin-Film Transistors for Fast Erase Programming. IEEE Transactions on Electron Devices, 2022, 69, 120-126.	3.0	0
1644	Performance Improvement in E-Gun Deposited SiOx- Based RRAM Device by Switching Material Thickness Reduction. Journal of Physics: Conference Series, 2022, 2161, 012040.	0.4	1
1645	Facile Achievement of Complementary Resistive Switching in Block Copolymer Micelleâ€Based Resistive Memories. Macromolecular Rapid Communications, 2022, 43, e2100686.	3.9	2
1646	Engineering synaptic plasticity through the control of oxygen vacancy concentration for the improvement of learning accuracy in a Ta2O5 memristor. Journal of Alloys and Compounds, 2022, 902, 163764.	5.5	14
1647	Level Scaling and Pulse Regulating to Mitigate the Impact of the Cycle-to-Cycle Variation in Memristor-Based Edge Al System. IEEE Transactions on Electron Devices, 2022, 69, 1752-1762.	3.0	9
1648	Prospect and challenges of analog switching for neuromorphic hardware. Applied Physics Letters, 2022, 120, .	3.3	22
1649	Mapping Transformation Enabled High-Performance and Low-Energy Memristor-Based DNNs. Journal of Low Power Electronics and Applications, 2022, 12, 10.	2.0	5
1650	To Be or Not to Be – Review of Electrical Bistability Mechanisms in Polymer Memory Devices. Small, 2022, 18, e2106442.	10.0	26
1651	Coexistence of non-volatile and volatile characteristics of the Pt/TaOx/TiN device. Results in Physics, 2022, 34, 105307.	4.1	5
1652	Materials Characterization and Electrical Performance of Bilayer Structures for Enhanced Electrodeposition in Programmable Metallization Cells. Advanced Electronic Materials, 0, , 2100897.	5.1	0
1653	Novel charm of 2D materials engineering in memristor: when electronics encounter layered morphology. Nanoscale Horizons, 2022, 7, 480-507.	8.0	40
1654	Research Progress on Memristor: From Synapses to Computing Systems. IEEE Transactions on Circuits and Systems I: Regular Papers, 2022, 69, 1845-1857.	5.4	44

# ARTICLE IF CITATIONS

1655	Introduction to non-volatile memory. , 2022, , 1-32.		4
1656	MOx materials by ALD method. , 2022, , 169-199.		0
1657	Chemical Structure of Conductive Filaments in Tantalum Oxide Memristive Devices and Its Implications for the Formation Mechanism. Advanced Electronic Materials, 2022, 8, .	5.1	20
1658	Oxygen Vacancy Transition in HfO <i><sub>x</sub></i> â€Based Flexible, Robust, and Synaptic Biâ€Layer Memristor for Neuromorphic and Wearable Applications. Advanced Materials Technologies, 2022, 7, .	5.8	29
1659	Review on role of nanoscale HfO2 switching material in resistive random access memory device. Emergent Materials, 2022, 5, 489-508.	5.7	5
1660	Role of Defects and Power Dissipation on Ferroelectric Memristive Switching. Advanced Electronic Materials, 2022, 8, .	5.1	10
1661	Ferroelectric memory based on two-dimensional materials for neuromorphic computing. Neuromorphic Computing and Engineering, 2022, 2, 022001.	5.9	20
1662	Quad-Level Cell Switching with Excellent Reliability in TiN/AlOx:Ti/TaOx/TiN Memory Device. Materials, 2022, 15, 2402.	2.9	1
1663	Resistive switching properties for fluorine doped titania fabricated using atomic layer deposition. APL Materials, 2022, 10, .	5.1	9
1664	In-Memory Computation Based Mapping of Keccak-f Hash Function. Frontiers in Nanotechnology, 2022, 4, .	4.8	0
1665	Ferroelectric artificial synapse for neuromorphic computing and flexible applications. Fundamental Research, 2022, Quantum-Point-Contact Formalism to Model the Filamentary Conduction in	3.3	1
1666	<pre><mml:math display="inline&lt;br" xmlns:mml="http://www.w3.org/1998/Math/Math/Math/ML">overflow="scroll"&gt;<mml:mi>Ta</mml:mi></mml:math> <mml:math xmlns:mml="http://www.w3.org/1998/Math/Math/ML" display="inline" overflow="scroll"&gt;<mml:msub><mml:mi>2</mml:mi></mml:msub> <mml:math< pre=""></mml:math<></mml:math </pre>	3.8	5
1667	Catalytic activity of semiconductors under the influence of electric fields. Applied Catalysis A: General, 2022, 635, 118541.	4.3	3
1668	CoMIC: Complementary Memristor based in-memory computing in 3D architecture. Journal of Systems Architecture, 2022, 126, 102480.	4.3	3
1669	Energy-efficient synaptic devices based on planar structured h-BN memristor. Journal of Alloys and Compounds, 2022, 909, 164775.	5.5	9
1670	Metal nanoparticles layer boosted resistive switching property in NiFe2O4-based memory devices. Journal of Alloys and Compounds, 2022, 908, 164569.	5.5	9
1671	A facile fabrication of lead-free Cs2NaBil6 double perovskite films for memory device application. Journal of Alloys and Compounds, 2022, 909, 164613.	5.5	26
1672	Dynamic resistive switching devices for neuromorphic computing. Semiconductor Science and Technology, 2022, 37, 024003.	2.0	12

#	Article	IF	CITATIONS
1673	High-density logic-in-memory devices using vertical indium arsenide nanowires on silicon. Nature Electronics, 2021, 4, 914-920.	26.0	22
1674	Ternary Logic with Stateful Neural Networks Using a Bilayered TaO <i><sub>X</sub></i> â€Based Memristor Exhibiting Ternary States. Advanced Science, 2022, 9, e2104107.	11.2	13
1675	Mechanism and Application of Capacitive-Coupled Memristive Behavior Based on a Biomaterial Developed Memristive Device. ACS Applied Electronic Materials, 2021, 3, 5537-5547.	4.3	7
1676	Optoelectronic Modulation of Interfacial Defects in Leadâ€Free Perovskite Films for Resistive Switching. Advanced Electronic Materials, 2022, 8, .	5.1	11
1677	Intrinsic RESET Speed Limit of Valence Change Memories. ACS Applied Electronic Materials, 2021, 3, 5563-5572.	4.3	15
1679	An Analytical Model of Read-Disturb Failure Time in a Post-Cycling Resistive Switching Memory. IEEE Transactions on Device and Materials Reliability, 2021, 21, 603-607.	2.0	2
1680	Interface Engineering for 3-Bit per Cell Multilevel Resistive Switching in AlN Based Memristor. IEEE Electron Device Letters, 2021, 42, 1770-1773.	3.9	10
1681	Synaptic Transistors Exhibiting Gate-Pulse-Driven, Metal-Semiconductor Transition of Conduction. Materials, 2021, 14, 7508.	2.9	2
1682	Scalable Data Management on Hybrid Memory System for Deep Neural Network Applications. , 2021, , .		0
1683	Electrochemically driven dual bipolar resistive switching in LaNiO <sub>3</sub> /SmNiO <sub>3</sub> /Nb:SrTiO <sub>3</sub> heterostructures fabricated through selective area epitaxy. Journal of Materials Chemistry C, 2022, 10, 7707-7716.	5.5	8
1684	Neuron Based Driving Circuit for Flat Panel Display. IEEE Electron Device Letters, 2022, 43, 914-917.	3.9	5
1685	Reconfigurable Synaptic and Neuronal Functions in a V/VO <i><sub>x</sub></i> /HfWO <i><sub>x</sub></i> /Pt Memristor for Nonpolar Spiking Convolutional Neural Network. Advanced Functional Materials, 2022, 32, .	14.9	25
1686	Thickness dependent resistive switching behaviors in Ta2O5 layer at low temperature: Towards flexible, invisible, cryo-electronic applications in aerospace. Materials Letters, 2022, 319, 132272.	2.6	1
1688	Impact of Zr top electrode on tantalum oxide-based electrochemical metallization resistive switching memory: towards synaptic functionalities. RSC Advances, 2022, 12, 14235-14245.	3.6	4
1689	Reliable resistive switching and synaptic plasticity in Ar+-irradiated single-crystalline LiNbO3 memristor. Applied Surface Science, 2022, 596, 153653.	6.1	15
1690	Hafnium Oxide (HfO <sub>2</sub> ) – A Multifunctional Oxide: A Review on the Prospect and Challenges of Hafnium Oxide in Resistive Switching and Ferroelectric Memories. Small, 2022, 18, e2107575.	10.0	78
1691	Water-soluble polyethylene-oxide polymer based memristive devices. Microelectronic Engineering, 2022, 260, 111806.	2.4	3
1692	Exploring the crucial influence on the electrical rectification of ZnO films. Surfaces and Interfaces, 2022, 31, 102014.	3.0	О

#	Article	IF	CITATIONS
1693	Highly Efficient Invisible TaO <sub><i>x</i></sub> /ZTO Bilayer Memristor for Neuromorphic Computing and Image Sensing. ACS Applied Electronic Materials, 2022, 4, 2180-2190.	4.3	20
1694	Interaction of a Phospholipid and a Coagulating Protein: Potential Candidate for Bioelectronic Applications. ACS Omega, 2022, 7, 17583-17592.	3.5	3
1695	Memristive brain-like computing. Wuli Xuebao/Acta Physica Sinica, 2022, 71, 140501.	0.5	1
1696	HfO2-based memristor-CMOS hybrid implementation of artificial neuron model. Applied Physics Letters, 2022, 120, .	3.3	10
1697	Memristive structure of Nb/HfOx/Pd with controllable switching mechanisms to perform featured actions in neuromorphic networks. Nano Research, 0, , .	10.4	2
1698	ZnO based RRAM performance enhancement by 100 MeV Ag9+ irradiation. Applied Surface Science Advances, 2022, 9, 100260.	6.8	1
1699	Enhanced ternary memory performances with high-temperature tolerance in AIE@PBI composites by tuning the azobenzol substituents on tetraphenylethylene. Materials Today Chemistry, 2022, 25, 100941.	3.5	6
1700	xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline" overflow="scroll"> <mml:mrow><mml:mi>Ti</mml:mi><mml:mi mathvariant="normal"&gt;N</mml:mi </mml:mrow> <mml:mo>/</mml:mo> <mml:msub><mml:mi>Ta</mml:mi><mr mathvariant="normal"&gt;O<mml:mrow><mml:mn>1</mml:mn><mr< td=""><td>11:mi&gt;x<td>näl:mi&gt;</td></td></mr<></mml:mrow></mr </mml:msub>	11:mi>x <td>näl:mi&gt;</td>	näl:mi>
1701	Physical Review Applied, 2022, 17, . Multimode Synaptic Operation of a HfAlO <i><sub>x</sub></i> Based Memristor as a Metaplastic Device for Neuromorphic Applications. ACS Applied Electronic Materials, 0, , .	4.3	3
1702	Variance-aware weight quantization of multi-level resistive switching devices based on Pt/LaAlO3/SrTiO3 heterostructures. Scientific Reports, 2022, 12, .	3.3	6
1703	Combinatorial Physical Vapor Deposition : A New Methodology for Exploring Ecoâ€friendly Composition for Halideâ€based Resistive Switching Memory. Advanced Materials Interfaces, 2022, 9, .	3.7	1
1704	A complementary resistive switching neuron. Nanotechnology, 2022, 33, 355201.	2.6	6
1705	Engineering Silicon Oxide by Argon Ion Implantation for High Performance Resistance Switching. Frontiers in Materials, 2022, 9, .	2.4	1
1706	Experimental demonstration of highly reliable dynamic memristor for artificial neuron and neuromorphic computing. Nature Communications, 2022, 13, .	12.8	77
1708	Multitasking Memristor for High Performance and Ultralow Power Artificial Synaptic Device Application. ACS Applied Electronic Materials, 2022, 4, 3154-3165.	4.3	9
1709	Finite Temperature Ultraviolet-Visible Dielectric Functions of Tantalum Pentoxide: A Combined Spectroscopic Ellipsometry and First-Principles Study. Photonics, 2022, 9, 440.	2.0	2
1710	Hexagonal Boron Nitride for Nextâ€Generation Photonics and Electronics. Advanced Materials, 2023, 35,	21.0	43
1711	Formingâ€Free, Selfâ€Compliance, Bipolar Multi‣evel Resistive Switching in WO <sub>3–x</sub> Based MIM Device. Advanced Electronic Materials, 2022, 8, .	5.1	8

#	Article	IF	CITATIONS
1712	Electroforming-Free Y <sub>2</sub> O <sub>3</sub> Memristive Crossbar Array with Low Variability. ACS Applied Electronic Materials, 2022, 4, 3080-3087.	4.3	12
1713	Metal Halide Perovskite-Based Memristors for Emerging Memory Applications. Journal of Physical Chemistry Letters, 2022, 13, 5638-5647.	4.6	38
1714	Effect of Electrode Nanopatterning on the Functional Properties of Ta/TaO <sub><i>x</i></sub> /Pt Resistive Memory Devices. ACS Applied Nano Materials, 2022, 5, 8594-8601.	5.0	6
1715	Other emerging memories. , 2022, , 277-304.		1
1716	Bipolar interface-type resistive switching effect in the MoS2–xOx film. Applied Physics A: Materials Science and Processing, 2022, 128, .	2.3	1
1717	Model and simulation of bilayered tantalum-oxide (Pt/Ta <sub>2</sub> O <sub>5</sub> /TaO <sub>x</sub> /Pt) memristor. Journal of Physics: Conference Series, 2022, 2295, 012005.	0.4	0
1718	Dynamic Switching and Energy Storage Unified by Electrochemical Ion Intercalation. Advanced Materials Technologies, 2023, 8, .	5.8	1
1719	Simulation of analog resistance change characteristics in Pt/TaO <sub> x </sub> /Ta <sub>2</sub> O <sub>5</sub> /Pt cells. Japanese Journal of Applied Physics, 2022, 61, SM1012.	1.5	1
1720	Ultralowâ€Power Atomicâ€Scale Tin Transistor with Gate Potential in Millivolt. Advanced Electronic Materials, 0, , 2200225.	5.1	2
1721	Electrochemical-tunable and mesostructure-dependent abrupt-to-progressive conversion in fibroin-based transient memristor. Applied Physics Letters, 2022, 121, .	3.3	7
1722	Charge transfer and metal-insulator transition in (CrO <sub>2</sub> ) <sub>m</sub> /(TaO <sub>2</sub> ) <sub>n</sub> superlattices. Journal of Physics Condensed Matter, 0, , .	1.8	1
1724	Nonvolatile Logicâ€inâ€Memory Computing based on Solutionâ€Processed Cul Memristor. Advanced Electronic Materials, 2022, 8, .	5.1	4
1725	Memristive, Spintronic, and 2Dâ€Materialsâ€Based Devices to Improve and Complement Computing Hardware. Advanced Intelligent Systems, 2022, 4, .	6.1	13
1726	Highly-packed Self-assembled Graphene Oxide Film-Integrated Resistive Random-Access Memory on a Silicon Substrate for Neuromorphic Application. Nanotechnology, 0, , .	2.6	1
1727	Nanomicelles Array for Ultrahighâ€Đensity Data Storage. Small, 2022, 18, .	10.0	6
1728	Analytical Modelling of Y <sub>2</sub> O <sub>3</sub> -based Memristive System for Artificial Synapses. , 2020, , .		0
1729	Beyond CMOS. , 2021, , .		2
1730	On the Reliability of Computing-in-Memory Accelerators for Deep Neural Networks. Springer Series in Reliability Engineering, 2023, , 167-190.	0.5	1

#	Article	IF	CITATIONS
1731	Nanoionic memristive phenomena in metal oxides: the valence change mechanism. Advances in Physics, 2021, 70, 155-349.	14.4	60
1732	Electrical bistability based on metal–organic frameworks. Chemical Communications, 2022, 58, 9971-9978.	4.1	6
1733	Structural Defects Improve the Memristive Characteristics of Epitaxial La <sub>0.8</sub> Sr <sub>0.2</sub> MnO <sub>3</sub> â€Based Devices. Advanced Materials Interfaces, 2022, 9, .	3.7	2
1734	Modified Dynamic Physical Model of Valence Change Mechanism Memristors. ACS Applied Materials & Interfaces, 2022, 14, 35949-35958.	8.0	4
1735	Controllable volatile-to-nonvolatile memristive switching in single-crystal lead-free double perovskite with ultralow switching electric field. Science China Materials, 2023, 66, 241-248.	6.3	7
1736	High-Performance Flexible Polymer Memristor Based on Stable Filamentary Switching. Nano Letters, 2022, 22, 7246-7253.	9.1	20
1737	2D materials and van der Waals heterojunctions for neuromorphic computing. Neuromorphic Computing and Engineering, 2022, 2, 032004.	5.9	14
1738	A chemically mediated artificial neuron. Nature Electronics, 2022, 5, 586-595.	26.0	48
1739	Atomic Layer Deposited SiOX-Based Resistive Switching Memory for Multi-Level Cell Storage. Metals, 2022, 12, 1370.	2.3	2
1740	Anodic Sb2S3 electrodeposition from a single source precursor for resistive random-access memory devices. Electrochimica Acta, 2022, 432, 141162.	5.2	4
1741	Digital and Analog Resistive Switching in Rare-Earth Doped Piezoelectric BiFeO3 Film. SSRN Electronic Journal, 0, , .	0.4	0
1742	A Reliable and Energy-Efficient Nonvolatile Ternary Memory Based on Hybrid FinFET/RRAM Technology. IEEE Access, 2022, 10, 105040-105051.	4.2	9
1743	Memristor-Based Spectral Decomposition of Matrices and Its Applications. IEEE Transactions on Computers, 2023, 72, 1460-1472.	3.4	0
1745	Unraveling the Atomic Redox Process in Quantum Conductance and Synaptic Events for Neuromorphic Computing. Advanced Electronic Materials, 2022, 8, .	5.1	1
1746	Resistive Switching Crossbar Arrays Based on Layered Materials. Advanced Materials, 2023, 35, .	21.0	14
1747	Filamentary and Interface-Type Memristors Based on Tantalum Oxide for Energy-Efficient Neuromorphic Hardware. ACS Applied Materials & Interfaces, 2022, 14, 44561-44571.	8.0	24
1748	The manipulations of surface anisotropy and interfacial Dzyaloshinskii–Moriya interaction by an amorphized oxide Ta capping layer. Journal Physics D: Applied Physics, 2022, 55, 435008.	2.8	3
1749	Role of defects in resistive switching dynamics of memristors. MRS Communications, 2022, 12, 531-542.	1.8	2

#	Article	IF	Citations
# 1750	Review on data-centric brain-inspired computing paradigms exploiting emerging memory devices. Frontiers in Electronic Materials, 0, 2, .	3.1	0
1751	Visible-light irradiation improved resistive switching characteristics of a 2D Cs2Pb(SCN)2I2-Based memristor device. Ceramics International, 2023, 49, 4909-4918.	4.8	1
1752	Emerging Devices for Sensing-Memory-Computing Applications. , 2022, , 143-197.		0
1753	Oxide Dissolution Mediated Formation of Conducting Filament in ReRAM Devices: A Phase Field Study. Materials Transactions, 2022, , .	1.2	0
1754	Neuromorphic Computing Based on Memristor Dynamics. , 2022, , 1-31.		0
1755	A Singlet-Diradical Co(III)-Dimer as a Nonvolatile Resistive Switching Device: Synthesis, Redox-Induced Interconversion, and Current–Voltage Characteristics. Journal of the American Chemical Society, 2022, 144, 20442-20451.	13.7	5
1756	Atomic-scale tuning of ultrathin memristors. Communications Physics, 2022, 5, .	5.3	3
1757	Essential Characteristics of Memristors for Neuromorphic Computing. Advanced Electronic Materials, 2023, 9, .	5.1	21
1758	Filament Formation in TaO <i><sub>x</sub></i> Thin Films for Memristor Device Application: Modeling Electron Energy Loss Spectra and Electron Transport. Advanced Electronic Materials, 2023, 9, .	5.1	4
1759	Neutron radiation-resistant aluminum nitride memristor. Applied Physics Letters, 2022, 121, 163502.	3.3	0
1760	Thermal Nanostructuring for Rectifying Resistive Switching Behaviors of Cobalt Oxide Neuromorphic Devices. ACS Applied Electronic Materials, 2022, 4, 5573-5581.	4.3	3
1761	Impact of Surface Roughness and Material Properties of Inert Electrodes on the Threshold Voltages and Their Distributions of ReRAM Memory Cells. ECS Journal of Solid State Science and Technology, 2022, 11, 104007.	1.8	2
1762	Multilayer redox-based HfOx/Al2O3/TiO2 memristive structures for neuromorphic computing. Scientific Reports, 2022, 12, .	3.3	4
1763	Recent Advances in Synaptic Nonvolatile Memory Devices and Compensating Architectural and Algorithmic Methods Toward Fully Integrated Neuromorphic Chips. Advanced Materials Technologies, 2023, 8, .	5.8	15
1764	Impact of interfacial engineering on MgO-based resistive switching devices for low-power applications. Applied Surface Science, 2023, 608, 155233.	6.1	6
1765	Self-rectifying and artificial synaptic characteristics of amorphous Ta2O5 thin film grown on two-dimensional metal-oxide nanosheet. Applied Surface Science, 2023, 609, 155353.	6.1	4
1766	ESSENCE: Exploiting Structured Stochastic Gradient Pruning for Endurance-Aware ReRAM-Based In-Memory Training Systems. IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems, 2023, 42, 2187-2199.	2.7	2
1767	Nonvolatile memory based on functional materials. Shenzhen Daxue Xuebao (Ligong Ban)/Journal of Shenzhen University Science and Engineering, 2019, 36, 221-229.	0.2	0

#	Article	IF	CITATIONS
1768	Physical Transient Photoresistive Variable Memory Based on Graphene Quantum Dots. Nanomaterials, 2022, 12, 3976.	4.1	3
1769	Redox memristors with volatile threshold switching behavior for neuromorphic computing. Journal of Electronic Science and Technology, 2022, 20, 100177.	3.6	4
1770	Graphene oxide-based random access memory: from mechanism, optimization to application. Journal Physics D: Applied Physics, 2023, 56, 033001.	2.8	1
1771	Simulation of read-disturb-induced inference accuracy degradation in an RRAM-based neuromorphic circuit. Journal of Computational Electronics, 0, , .	2.5	0
1772	Memristive/CMOS Devices for Neuromorphic Applications. Springer Handbooks, 2023, , 1167-1199.	0.6	0
1773	ReaLPrune: ReRAM Crossbar-Aware Lottery Ticket Pruning for CNNs. IEEE Transactions on Emerging Topics in Computing, 2023, 11, 303-317.	4.6	2
1774	Tunable resistive switching in shales. Results in Physics, 2023, 44, 106183.	4.1	0
1775	Atomic electronics. , 2022, , .		0
1776	Efficient SPICE Modeling of Ta <sub>2</sub> O <sub>5</sub> -Based Bipolar RRAM Device Including Monte Carlo Simulation. , 2022, , .		0
1777	Investigation on High Resistance Variation of Bi-layer TaO <sub>x</sub> /HfO <sub>2</sub> RRAM Devices. , 2022, , .		0
1778	Lightâ€Mediated Multiâ€Level Flexible Copper Iodide Resistive Random Access Memory for Formingâ€Free, Ultraâ€Low Power Data Storage Application. Advanced Functional Materials, 2023, 33, .	14.9	6
1779	Artificial Intelligence and Advanced Materials. Advanced Materials, 2023, 35, .	21.0	10
1780	High On/Off Ratio Carbon Quantum Dot–Chitosan Biomemristors with Coplanar Nanogap Electrodes. ACS Applied Electronic Materials, 2023, 5, 138-145.	4.3	3
1781	Multi-State Memristors and Their Applications: An Overview. IEEE Journal on Emerging and Selected Topics in Circuits and Systems, 2022, 12, 723-734.	3.6	15
1783	Dielectric-Engineered High-Speed, Low-Power, Highly Reliable Charge Trap Flash-Based Synaptic Device for Neuromorphic Computing beyond Inference. Nano Letters, 2023, 23, 451-461.	9.1	8
1784	A perovskite-phase interfacial intercalated layer-induced performance enhancement in SrFeO <sub><em>x</em></sub> -based memristors. Wuli Xuebao/Acta Physica Sinica, 2023, .	0.5	0
1785	A review of memristor: material and structure design, device performance, applications and prospects. Science and Technology of Advanced Materials, 2023, 24, .	6.1	24
1786	Filamentary Resistive Switching in an SrTiO <sub>3</sub> /TiO <sub>2</sub> Heterostructured Nanotube Array. ACS Applied Electronic Materials, 2023, 5, 265-274.	4.3	3

#	Article	IF	CITATIONS
1787	Roomâ€Temperatureâ€Processable Highly Reliable Resistive Switching Memory with Reconfigurability for Neuromorphic Computing and Ultrasonic Tissue Classification. Advanced Functional Materials, 2023, 33, .	14.9	9
1788	Binary metal oxide-based resistive switching memory devices: A status review. Materials Today Communications, 2023, 34, 105356.	1.9	12
1789	Tunable electrical field-induced metal-insulator phase separation in LiCoO2 synaptic transistor operating in post-percolation region. Nano Energy, 2023, 108, 108199.	16.0	2
1790	Charge Transport Mechanism in the Forming-Free Memristor Based on PECVD Silicon Oxynitride. Electronics (Switzerland), 2023, 12, 598.	3.1	0
1791	Oxide Memristors for Brain-inspired Computing. Wuji Cailiao Xuebao/Journal of Inorganic Materials, 2023, 38, 1149.	1.3	1
1792	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
1793	Recent progress in transparent memristors. Journal Physics D: Applied Physics, 2023, 56, 313001.	2.8	0
1794	Uniform resistive switching and highly stable synaptic characteristics of HfOx sandwiched TaOx-based memristor for neuromorphic system. Ceramics International, 2023, 49, 16909-16917.	4.8	6
1795	Enhanced resistive switching performance of spinel MnCo2O4 resistive random access memory devices: Effects of annealing temperatures and annealing atmospheres. Current Applied Physics, 2023, 48, 123-133.	2.4	3
1796	Multilevel resistive switching with negative differential resistance in Al/NiO/ZnFe2O4/ITO ReRAM device. Physica B: Condensed Matter, 2023, 654, 414742.	2.7	9
1797	Amorphous ITZO-Based Selector Device for Memristor Crossbar Array. Micromachines, 2023, 14, 506.	2.9	3
1798	Tuning resistive switching properties of WO <sub>3â^'</sub> <sub>x</sub> -memristors by oxygen vacancy engineering for neuromorphic and memory storage applications. Journal Physics D: Applied Physics, 2023, 56, 205302.	2.8	2
1799	Emerging memristive neurons for neuromorphic computing and sensing. Science and Technology of Advanced Materials, 2023, 24, .	6.1	9
1800	Resistive random access memory: introduction to device mechanism, materials and application to neuromorphic computing. , 2023, 18, .		9
1801	Low-Frequency Noise-Based Mechanism Analysis of Endurance Degradation in Al/αTiOx/Al Resistive Random Access Memory Devices. Materials, 2023, 16, 2317.	2.9	0
1802	Variability in Resistive Memories. Advanced Intelligent Systems, 2023, 5, .	6.1	25
1803	Revealing the effect of substitutional cation doping in the A-site of nanoscale APbI <sub>3</sub> perovskite layers for enhanced retention and endurance in optoelectronic resistive switching for non-volatile bipolar memory devices. Nanoscale, 2023, 15, 6960-6975.	5.6	2
1804	Investigations of endurance and retention in tantalum oxide based memristor. Materials Today: Proceedings, 2023, , .	1.8	1

#	Article	IF	CITATIONS
1805	Direct Imaging of Ion Migration in Amorphous Oxide Electronic Synapses with Intrinsic Analog Switching Characteristics. ACS Applied Materials & Interfaces, 2023, 15, 16842-16852.	8.0	1
1806	Root Crash Consistency of SGX-style Integrity Trees in Secure Non-Volatile Memory Systems. , 2023, , .		1
1807	Research Process of Carbon Dots in Memristors. Advanced Electronic Materials, 2023, 9, .	5.1	6
1808	Chemical Influence of Carbon Interface Layers in Metal/Oxide Resistive Switches. ACS Applied Materials & Interfaces, 2023, 15, 18528-18536.	8.0	3
1809	Enhancing memristor fundamentals through instrumental characterization and understanding reliability issues. Materials Advances, 2023, 4, 1850-1875.	5.4	3
1810	Versatile memristor implemented in van der Waals CulnP2S6. Nano Research, 2023, 16, 10191-10197.	10.4	7
1811	In Situ Growth of Metalâ€Organic Framework Film for Flexible Artificial Synapse. Advanced Materials Technologies, 2023, 8, .	5.8	3
1812	Temperature Distribution in TaO <sub><i>x</i></sub> Resistive Switching Devices Assessed In Operando by Scanning Thermal Microscopy. ACS Applied Electronic Materials, 2023, 5, 2414-2421.	4.3	2
1813	Reliability Improvement and Effective Switching Layer Model of Thinâ€Film MoS <sub>2</sub> Memristors. Advanced Functional Materials, 2024, 34, .	14.9	7
1814	Picosecond Timeâ€Scale Resistive Switching Monitored in Realâ€Time. Advanced Electronic Materials, 2023, 9, .	5.1	6
1815	High dielectric response of TaOX thin film and its modification by controlling oxygen vacancy concentration. Journal of Materials Science: Materials in Electronics, 2023, 34, .	2.2	0
1816	Integrated Memristor Network for Physiological Signal Processing. Advanced Electronic Materials, 2023, 9, .	5.1	6
1817	Highly Reliable Textileâ€Type Memristor by Designing Aligned Nanochannels. Advanced Materials, 2023, 35, .	21.0	3
1818	A novel multiscale simulation framework for low-dimensional memristors. Science China: Physics, Mechanics and Astronomy, 2023, 66, .	5.1	0
1819	GeS conducting-bridge resistive memory device with IGZO buffer layer for highly uniform and repeatable switching. Applied Physics Letters, 2023, 122, .	3.3	3
1820	Planar CBRAM devices using non-cleanroom techniques as RF switches. Applied Physics A: Materials Science and Processing, 2023, 129, .	2.3	1
1821	Digital and analog resistive switching in Lu-doped piezoelectric <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" altimg="si6.svg" display="inline" id="d1e321"&gt;<mml:mrow><mml:mi>B</mml:mi><mml:mi>i</mml:mi><mml:mi>F</mml:mi><mml:mi>efilm. Materials Science and Engineering B: Solid-State Materials for Advanced Technology, 2023, 294,</mml:mi></mml:mrow></mml:math 	ni>3.5ml:m	າຣ <b>ưb</b> > <mml:n< td=""></mml:n<>
1822	116535. Neuromorphic functionality of ferroelectric domain walls. Neuromorphic Computing and Engineering, 2023, 3, 022001.	5.9	7

ARTICLE IF CITATIONS Neural-inspired artificial synapses based on low-voltage operated organic electrochemical 1823 5.5 5 transistors. Journal of Materials Chemistry C, 2023, 11, 7485-7509. Nano <i>t</i>-Se Peninsulas Embedded in Natively Oxidized 2D TiSe<sub>2</sub> Enable Uniform and 1824 8.0 Fast Memristive Switching. ACS Applied Materials & amp; Interfaces, 2023, 15, 23371-23379. Collective Control of Potentialâ€Constrained Oxygen Vacancies in Oxide Heterostructures for Gradual 1825 10.0 3 Resistive Switching. Small, 2023, 19, . Self-healing solid tantalum electrolytic capacitors with low ESR, high-frequency performance, and 2.2 simple fabrication. Journal of Materials Science: Materials in Electronics, 2023, 34, . Al2O3 interfacial layer derived hybrid conductive filament for the reliability enhancement of 1827 5.5 1 Ta2O5-based resistive random access memory. Journal of Alloys and Compounds, 2023, 960, 170902. Highly uniform resistive switching characteristics of Ti/TaOx/ITO memristor devices for neuromorphic system. Journal of Alloys and Compounds, 2023, 961, 170920. 5.5 One step hydrothermal synthesis of MoS2–SnO2 nanocomposite for resistive switching memory 1829 2.2 1 application. Journal of Materials Science: Materials in Electronics, 2023, 34, . Polarization-field tuning and stable performance of the resistance switching in a ferroelectric/amorphous PbZr0.2Ti0.8O3/La2Zr2O7 heterostructure. Journal of Materials Science: 1830 Materials in Electronics, 2023, 34, . Review of Electrochemically Synthesized Resistive Switching Devices: Memory Storage, Neuromorphic 1831 4.1 4 Computing, and Sensing Applications. Nanomaterials, 2023, 13, 1879. Oxide Memristors for ReRAM: Approaches, Characteristics, and Structures. Russian Microelectronics, 2023, 52, 74-98. Theoretical insight of confinement of filament in SrMoO3 electrode by compositional control for 1833 0 3.0memory devices. Computational Materials Science, 2023, 228, 112348. Superior artificial synaptic properties applicable to neuromorphic computing system in HfOx-based 1834 resistive memory with high recognition rates. , 2023, 18, . Functional Materials for Memristorâ€Based Reservoir Computing: Dynamics and Applications. Advanced 1835 14.9 7 Functional Materials, 2023, 33, . True Random Number Generator Based on the Variability of the High Resistance State of RRAMs. IEEE 4.2 Access, 2023, 11, 66682-66693. Spintronics intelligent devices. Science China: Physics, Mechanics and Astronomy, 2023, 66, . 1837 5.15 Material instabilities in the T<sub>a</sub>O<sub>x</sub>-based resistive switching devices (Invited)., 2023,,. Electrochemicalâ€Memristorâ€Based Artificial Neurons and Synapsesâ€"Fundamentals, Applications, and 1839 21.0 11 Challenges. Advanced Materials, 2023, 35, . Recent progress of layered memristors based on two-dimensional MoS2. Science China Information 1840 4.3 Sciences, 2023, 66, .

#	Article	IF	CITATIONS
1841	Computational Study on Filament Growth Dynamics in Microstructure-Controlled Storage Media of Resistive Switching Memories. ACS Nano, 2023, 17, 10511-10520.	14.6	0
1842	Trade-off between Gradual Set and On/Off Ratio in HfO <sub><i>x</i></sub> -Based Analog Memory with a Thin SiO <sub><i>x</i></sub> Barrier Layer. ACS Applied Electronic Materials, 2023, 5, 3048-3058.	4.3	4
1843	Interfacial Switching-Based, Bioinspired, Highly Stable, and Reliable Synapse for Neuromorphic Applications. ACS Applied Electronic Materials, 2023, 5, 3733-3740.	4.3	1
1844	Electrical conductivity of TaOx as function of composition and temperature. Journal of Non-Crystalline Solids, 2023, 617, 122495.	3.1	1
1845	Resistive Switching Behavior Employing the <i>Ipomoea carnea</i> Plant for Biodegradable Rewritable Read-Only Memory Applications. ACS Applied Electronic Materials, 2023, 5, 3685-3697.	4.3	1
1846	Unravelling the Data Retention Mechanisms under Thermal Stress on 2D Memristors. ACS Omega, 2023, 8, 27543-27552.	3.5	1
1847	Analysis and test of influence of memristor non-ideal characteristics on facial expression recognition accuracy. Expert Systems With Applications, 2023, , 121028.	7.6	0
1848	High-performance Ta2O5-based resistive random-access memory with embedded graphene quantum dots and Pt–Ag composite active layer. Applied Physics Letters, 2023, 123, .	3.3	2
1850	Mechanisms of conductive filament formation in hafnium oxide multilayer structures. Thin Solid Films, 2023, , 139993.	1.8	1
1851	Self-aligned patterning of tantalum oxide on Cu/SiO2 through redox-coupled inherently selective atomic layer deposition. Nature Communications, 2023, 14, .	12.8	2
1852	Short-range order in amorphous oxygen-deficient TaOx thin films and its relation to electrical conductivity. Applied Physics Letters, 2023, 123, .	3.3	0
1853	Selfâ€repairable, highâ€uniform conductiveâ€bridge random access memory based on amorphous NbSe <sub>2</sub> . SmartMat, 0, , .	10.7	2
1854	Solution-based <i>in situ</i> deposition of Sb <sub>2</sub> S <sub>3</sub> from a single source precursor for resistive random-access memory devices. Materials Advances, 2023, 4, 4119-4128.	5.4	1
1855	A Physical Description of the Variability in Singleâ€ReRAM Devices and Hardwareâ€Based Neuronal Networks. Advanced Intelligent Systems, 2023, 5, .	6.1	0
1856	Emergent superconductivity in TaO <sub>3</sub> at high pressures. Physical Chemistry Chemical Physics, 2023, 25, 23502-23509.	2.8	0
1857	Improved resistive switching performance and realized electric control of exchange bias in a NiO/HfO <sub>2</sub> bilayer structure. Physical Chemistry Chemical Physics, 2023, 25, 24436-24447.	2.8	1
1858	Low operating voltage memtransistors based on ion bombarded pâ€type <scp>GeSe</scp> nanosheets for artificial synapse applications. InformaÄnÃ-Materiály, 2023, 5, .	17.3	3
1859	A review on device requirements of resistive random access memory (RRAM)-based neuromorphic computing. APL Materials, 2023, 11, .	5.1	2

#	Article	IF	CITATIONS
1860	Double-Forming Mechanism of TaOx-Based Resistive Memory Device and Its Synaptic Applications. Materials, 2023, 16, 6184.	2.9	0
1861	Bio-inspired artificial heterosynapse based on carbon nanotubes memtransistor with dynamically tunable analog switching behavior. Materials Today Nano, 2023, 24, 100398.	4.6	2
1862	Digital image processing realized by memristor-based technologies. , 2023, 18, .		0
1863	A Review of Grapheneâ€Based Memristive Neuromorphic Devices and Circuits. Advanced Intelligent Systems, 2023, 5, .	6.1	4
1864	Effects of stacking sequence and top electrode configuration on switching behaviors in ZnO-HfO2 hybrid resistive memories. Ceramics International, 2023, 49, 35973-35981.	4.8	3
1865	Improved Uniformity of TaOx-Based Resistive Switching Memory Device by Inserting Thin SiO2 Layer for Neuromorphic System. Materials, 2023, 16, 6136.	2.9	Ο
1866	Bulkâ€5witching Memristorâ€Based Computeâ€Inâ€Memory Module for Deep Neural Network Training. Advanced Materials, 2023, 35, .	21.0	4
1867	Effect of oxygen vacancy and Si doping on the electrical properties of Ta2O5 in memristor characteristics. Scientific Reports, 2023, 13, .	3.3	0
1868	Nanoscale imaging of He-ion irradiation effects on amorphous TaOx toward electroforming-free neuromorphic functions. Applied Physics Letters, 2023, 123, .	3.3	0
1869	Indium–Gallium–Zinc Oxide (IGZO)-based ReRAM: Material Overview, Latest Development and Technology Perspective. , 2023, , 270-289.		1
1870	Physical model simulations of Hf oxide resistive random access memory device with a spike electrode structure. Modelling and Simulation in Materials Science and Engineering, 0, , .	2.0	0
1871	Implementation of Physical Reservoir Computing in a TaOx/FTO-Based Memristor Device. Mathematics, 2023, 11, 4325.	2.2	1
1872	Highly Stable HfO <sub>2</sub> Memristors through van der Waals Electrode Lamination and Delamination. Nano Letters, 0, , .	9.1	0
1873	Eightwise switching mechanism in memristive SrTiO <sub>3</sub> devices and its implications on the device performance. Physica Status Solidi (A) Applications and Materials Science, 0, , .	1.8	0
1874	Resistive Memory with Functional Duality-Non Volatile Emerging Memory & Nano Biosensors. , 0, , .		0
1875	Research Progress on the Application of Topological Phase Transition Materials in the Field of Memristor and Neuromorphic Computing. Sensors, 2023, 23, 8838.	3.8	0
1876	Ag-dispersive chalcogenide media for readily activated electronic memristor. Applied Surface Science, 2024, 644, 158747.	6.1	0
1877	Bi2O2Se-based CBRAM integrated artificial synapse. Heliyon, 2023, 9, e22512.	3.2	0

#	Article	IF	CITATIONS
1878	Strain engineering of vertical molybdenum ditelluride phase-change memristors. Nature Electronics, 2024, 7, 8-16.	26.0	1
1879	Novel 2D MXene-based materials in memristors: Fundamentals, resistive switching properties and applications. Surfaces and Interfaces, 2024, 44, 103678.	3.0	0
1880	Programmable mixed-signal circuits. SN Applied Sciences, 2023, 5, .	2.9	0
1881	Emerging memristors and applications in reservoir computing. Frontiers of Physics, 2024, 19, .	5.0	0
1882	Quantum Transport Properties of Nanosized Ta <sub>2</sub> O <sub>5</sub> Resistive Switches: Variable Transmission Atomic Synapses for Neuromorphic Electronics. ACS Applied Nano Materials, 2023, 6, 21340-21349.	5.0	0
1883	Programming Techniques of Resistive Random-Access Memory Devices for Neuromorphic Computing. Electronics (Switzerland), 2023, 12, 4803.	3.1	0
1884	Role of oxygen vacancies in ferroelectric or resistive switching hafnium oxide. Nano Convergence, 2023, 10, .	12.1	2
1885	A high-speed true random number generator based on Ag/SiNx/n-Si memristor. Frontiers of Physics, 2024, 19, .	5.0	0
1886	Ionic Liquid Crystal Thin Film as Switching Layer in Nonvolatile Resistive Memory. ACS Applied Materials & Interfaces, 0, , .	8.0	1
1887	Direct Visualization of Charge Migration in Bilayer Tantalum Oxide Films by Multimodal Imaging. Advanced Electronic Materials, 0, , .	5.1	0
1888	Improved Resistive Switching Behaviors of Al/Ag-Doped Fe2O3 Film/ITO Devices Fabricated with a Radio-Frequency Co-Sputtering System. ECS Journal of Solid State Science and Technology, 0, , .	1.8	0
1890	Memristor-induced hyperchaos, multiscroll and extreme multistability in fractional-order HNN: Image encryption and FPGA implementation. Neural Networks, 2024, 171, 85-103.	5.9	12
1891	Investigation of Vacancies Transport in the Bilayer of the Cu <sub>2</sub> O <sub>1–<i>x</i></sub> /CuO <sub>1–<i>y</i></sub> Resistive Switching Device and Effect of Growth Temperature on Memristive Switching. ACS Applied Electronic Materials, 0, , .	4.3	0
1893	Memristive devices. , 2023, , .		0
1894	Filament-free memristors for computing. Nano Convergence, 2023, 10, .	12.1	1
1895	Atomic and electronic origin of robust off-state insulation properties in Al-rich Al <i>x</i> Te <i>y</i> glass for ovonic threshold switching applications. Journal of Applied Physics, 2023, 134, .	2.5	0
1896	The rise of metal halide perovskite memristors for edge computing. , 2023, 1, 100221.		0
1897	Improved resistive switching performance of amorphous InGaZnO-based memristor with the TiO2 insertion layer. Ceramics International, 2023, , .	4.8	0

		CITATION REPORT		
#	Article		IF	CITATIONS
1898	First-principles study of the conduction mechanism in tantala-based resistive memory	devices. , 2023, , .		0
1899	Functional integration of handwritten digit recognition and encryption/decryption bas Pt/GaOx/TiN memristor array for a new data security system. Ceramics International, 2 8981-8986.		4.8	0
1900	Ultrathin quasi-2D amorphous carbon dielectric prepared from solution precursor for nanoelectronics. , 2023, 2, .			0
1902	Multibit, Leadâ€Free Cs <sub>2</sub> Snl <sub>6</sub> Resistive Random Access Men Selfâ€Compliance for Improved Accuracy in Binary Neural Network Application. Advan Materials, 0, , .	nory with ced Functional	14.9	1
1903	Resistive Switching Properties in Memristors for Optoelectronic Synaptic Memristors: Techniques, Key Performance Parameters, and Applications. ACS Applied Electronic Ma		4.3	0
1904	High-speed and energy-efficient non-volatile silicon photonic memory based on hetero integrated memresonator. Nature Communications, 2024, 15, .	geneously	12.8	3
1905	Nonvolatile Memristive Materials and Physical Modeling for Inâ€Memory and Inâ€Sens Science, 2024, 4, .	sor Computing. Small	9.9	0
1906	Excellent Reliability Characteristics of Ovonic Threshold Switch Device with Higherâ€T Forming Technique. Physica Status Solidi - Rapid Research Letters, 0, , .	emperature	2.4	0
1907	Exploring the Bifunctionality of YSZ Thin Films in MOS Structures: Bridging the Gap be and Super-Pseudocapacitor Technologies. ACS Applied Electronic Materials, 2024, 6, 4	etween RRAM 147-456.	4.3	0
1908	In Operando Nearâ€Field Optical Investigation of Memristive Ta <sub>2</sub> O <sub> Devices with a Graphene Top Electrode. Advanced Functional Materials, 2024, 34, .</sub>	5 Thin Film	14.9	0
1909	A jerk chaotic system with bistable locally active memristor and its analysis of multi-sc mechanism. European Physical Journal Plus, 2024, 139, .	roll formation	2.6	0
1910	Emerging memory electronics for non-volatile radiofrequency switching technologies.	, 2024, 1, 10-23.		0
1911	Memristor materials, fabrication, and sensing applications. , 2024, , 209-227.			0
1912	220ÂV/50ÂHz Compatible Bipolar Quantumâ€Dot Lightâ€Emitting Diodes. Advanced	Materials, 2024, 36, .	21.0	0
1913	Bioresorbable Resistive Switching Device Based on Organic/Inorganic Hybrid Structure Memory Applications. Advanced Electronic Materials, 0, , .	e for Transient	5.1	0
1914	Nanoscale memristor devices: materials, fabrication, and artificial intelligence. Journal o Chemistry C, 2024, 12, 3770-3810.	of Materials	5.5	1
1915	Multilevel and Low-Power Resistive Switching Based on pn Heterojunction Memory. Jo Electronic Materials, 2024, 53, 2162-2167.	urnal of	2.2	0
1916	Memristor effect in an amorphous garnet ferrite film Y <sub>1.8</sub> Bi <sub>1.2</sub> Fe <sub>3.5</sub> Ga <sub>1.5</sub> O <sub>12&lt;, Physics: Conference Series, 2024, 2697, 012057.</sub>	/sub>. Journal of	0.4	0

#	Article	IF	CITATIONS
1917	MAX Phase Ti <sub>2</sub> AlN for HfO <sub>2</sub> Memristors with Ultra‣ow Reset Current Density and Large On/Off Ratio. Advanced Functional Materials, 0, , .	14.9	0
1918	High-Reliability and Self-Rectifying Alkali Ion Memristor through Bottom Electrode Design and Dopant Incorporation. ACS Nano, 2024, 18, 6373-6386.	14.6	Ο
1919	Towards on-receptor computing: Electronic nociceptor embedded neuromorphic functionalities at nanoscale. Applied Materials Today, 2024, 37, 102103.	4.3	0
1920	Highly reliable bipolar resistive switching of tantalum oxide-based memory using Al2O3 diffusion barrier layers. Current Applied Physics, 2024, 61, 75-79.	2.4	0
1921	Exploration of structural and dielectric properties of orthorhombic Ta2O5 nanoplatelets towards the potential optoelectronic devices. Materials Today Communications, 2024, 38, 108468.	1.9	0
1922	A nanosecond-scale Cul synaptic memristor prepared by a solution-based process. Microelectronics Journal, 2024, 146, 106141.	2.0	0
1923	<i>In Situ</i> Unveiling of the Resistive Switching Mechanism of Halide Perovskite-Based Memristors. Journal of Physical Chemistry Letters, 2024, 15, 2453-2461.	4.6	0
1924	Reliability effects of lateral filament confinement by nano-scaling the oxide in memristive devices. Nanoscale Horizons, 2024, 9, 764-774.	8.0	0
1925	Carrier-doping-driven insulator-metal transition in disordered materials for memristive switching with high uniformity. Applied Physics Reviews, 2024, 11, .	11.3	0
1926	Atomicâ€Scale Phase Transformation in Perovskite LaCoO <sub><i>x</i></sub> Resistive Switching Memristive Devices. Small Structures, 0, , .	12.0	0
1927	The degradation mechanism and stability enhancement of GaSe lateral memristors. Applied Physics Letters, 2024, 124, .	3.3	0
1928	Multiphase Reset Induced Reliable Dual-Mode Resistance Switching of the Ta/HfO <sub>2</sub> /RuO <sub>2</sub> Memristor. ACS Applied Materials & Interfaces, 2024, 16, 16462-16473.	8.0	0
1929	Modeling and Analysis of a Radiative Thermal Memristor. Applied Sciences (Switzerland), 2024, 14, 2633.	2.5	0
1930	Study on the Sodium-Doped Titania Interface-Type Memristor. ACS Applied Materials & Interfaces, 2024 16 16453-16461	8.0	0