Qi Liu

List of Publications by Year in Descending Order

218 papers	9,794 citations	50 h-index	92 g-index
236 ext. papers	11,796 ext. citations	6.6 avg, IF	6.25 L-index

#	Paper	IF	Citations
218	A Configurable Artificial Neuron Based on a Threshold-Tunable TiN/NbOx/Pt Memristor. *IEEE Electron Device Letters*, **2022**, 1-1	4.4	2
217	High-Yield and Uniform NbOx-Based Threshold Switching Devices for Neuron Applications. *IEEE Transactions on Electron Devices*, **2022**, 1-7	2.9	2
216	Nonvolatile MOX RRAM assisted by graphene and 2D materials **2022**, 399-443		
215	Research on flexible memristive spiking neuron for neuromorphic sensing and computing. *Wuli Xuebao/Acta Physica Sinica*, **2022**,	0.6	0
214	A neuromorphic core based on threshold switching memristor with asynchronous address event representation circuits. *Science China Information Sciences*, **2022**, 65, 1	3.4	0
213	An Artificial Spiking Nociceptor Integrating Pressure Sensors and Memristors. *IEEE Electron Device Letters*, **2022**, 1-1	4.4	1
212	A Heterogeneously Integrated Spiking Neuron Array for Multimode-Fused Perception and Object Classification.. *Advanced Materials*, **2022**, e2200481	24	12
211	Implementing in-situ self-organizing maps with memristor crossbar arrays for data mining and optimization.. *Nature Communications*, **2022**, 13, 2289	17.4	3
210	Toward memristive in-memory computing: principles and applications. *Frontiers of Optoelectronics*, **2022**, 15,	2.8	2
209	Elevated barrier height originated from electric dipole effect and improved breakdown characteristics in PtOx/Ga2O3 Schottky barrier diodes. *Journal Physics D: Applied Physics*, **2022**, 55, 304003	3	0
208	Uniform, fast, and reliable CMOS compatible resistive switching memory. *Journal of Semiconductors* , **2022**, 43, 054102	2.3	
207	FangTianSim: High-Level Cycle-Accurate Resistive Random-Access Memory-Based Multi-Core Spiking Neural Network Processor Simulator.. *Frontiers in Neuroscience*, **2021**, 15, 806325	5.1	
206	Emerging dynamic memristors for neuromorphic reservoir computing.. *Nanoscale*, **2021**,	7.7	5
205	Elemental electrical switch enabling phase segregation-free operation. *Science*, **2021**, 374, 1390-1394	33.3	18
204	Self-rectifying and forming-free resistive switching behaviors in Pt/La2Ti2O7/Pt structure. *Ceramics International*, **2021**, 48, 4693-4693	5.1	0
203	Toward emerging gallium oxide semiconductors: A roadmap. *Fundamental Research*, **2021**, 1, 697-697		8
202	One transistor one electrolyte-gated transistor for supervised learning in spiking neural networks. *IEEE Electron Device Letters*, **2021**, 1-1	4.4	0

201	Engineering Spiking Neurons Using Threshold Switching Devices for High-Efficient Neuromorphic Computing.. *Frontiers in Neuroscience*, **2021**, 15, 786694	5.1	1
200	A Flexible LIF Neuron Based on NbOx Memristors for Neural Interface Applications **2021**,		1
199	Hybrid memristor-CMOS neurons for in-situ learning in fully hardware memristive spiking neural networks. *Science Bulletin*, **2021**, 66, 1624-1624	10.6	13
198	One Transistor One Electrolyte-Gated Transistor Based Spiking Neural Network for Power-Efficient Neuromorphic Computing System. *Advanced Functional Materials*, **2021**, 31, 2100042	15.6	17
197	Realizing High-Performance □GaO□MOSFET by Using Variation of Lateral Doping: A TCAD Study. *IEEE Transactions on Electron Devices*, **2021**, 68, 1501-1506	2.9	8
196	Scalability of Sulfur-Based Ovonic Threshold Selectors for 3D Stackable Memory Applications. *Physica Status Solidi - Rapid Research Letters*, **2021**, 15, 2100084	2.5	2
195	Resistive switching memory for high density storage and computing*. *Chinese Physics B*, **2021**, 30, 058702	2.2	3
194	Efficient and Robust Nonvolatile Computing-In-Memory Based on Voltage Division in 2T2R RRAM With Input-Dependent Sensing Control. *IEEE Transactions on Circuits and Systems II: Express Briefs*, **2021**, 68, 1640-1644	3.5	12
193	Valence Band Structure of Chalcogenide Obtained by X-Ray Photoelectron Spectroscopy and Etching Technique. *Physica Status Solidi (B): Basic Research*, **2021**, 258, 2100038	1.3	1
192	Recent Advances of Electroplating Additives Enabling Lithium Metal Anodes to Applicable Battery Techniques. *Energy and Environmental Materials*, **2021**, 4, 284-292	13	9
191	A dual-functional Ta/TaO /Ru device with both nonlinear selector and resistive switching behaviors.. *RSC Advances*, **2021**, 11, 18241-18245	3.7	0
190	High-performance flexible resistive random access memory devices based on graphene oxidized with a perpendicular oxidation gradient. *Nanoscale*, **2021**, 13, 2448-2455	7.7	5
189	A Review of Resistive Switching Devices: Performance Improvement, Characterization, and Applications. *Small Structures*, **2021**, 2, 2000109	8.7	34
188	An Energy Efficient Computing-in-Memory Accelerator With 1T2R Cell and Fully Analog Processing for Edge AI Applications. *IEEE Transactions on Circuits and Systems II: Express Briefs*, **2021**, 68, 2932-2936	3.5	4
187	A flexible nickel phthalocyanine resistive random access memory with multi-level data storage capability. *Journal of Materials Science and Technology*, **2021**, 86, 151-157	9.1	4
186	Artificial Visual Perception Nervous System Based on Low-Dimensional Material Photoelectric Memristors. *ACS Nano*, **2021**,	16.7	24
185	A 4T2R RRAM Bit Cell for Highly Parallel Ternary Content Addressable Memory. *IEEE Transactions on Electron Devices*, **2021**, 68, 4933-4937	2.9	7
184	Transparent HfO -based memristor with robust flexibility and synapse characteristics by interfacial control of oxygen vacancies movement. *Nanotechnology*, **2021**, 32, 145202	3.4	5

183	Evolution of the conductive filament system in HfO-based memristors observed by direct atomic-scale imaging.. *Nature Communications*, **2021**, 12, 7232	17.4	13
182	Impact of Ta/Ti electrodes on linearities of TaOx-based resistive random-access memories for neuromorphic computing. *Science China: Physics, Mechanics and Astronomy*, **2020**, 63, 1	3.6	5
181	A highly CMOS compatible hafnia-based ferroelectric diode. *Nature Communications*, **2020**, 11, 1391	17.4	52
180	Characteristics and mechanisms in resistive random-access memory **2020**, 13-52		
179	Two-dimensional materials for next-generation computing technologies. *Nature Nanotechnology*, **2020**, 15, 545-557	28.7	196
178	MoTe p-n Homojunctions Defined by Ferroelectric Polarization. *Advanced Materials*, **2020**, 32, e1907937	24	60
177	A Semi-Floating Memory with 535% Enhancement of Refresh Time by Local Field Modulation. *Advanced Functional Materials*, **2020**, 30, 1908089	15.6	13
176	Memory materials and devices: From concept to application. *InformaMaterily*, **2020**, 2, 261-290	23.1	93
175	Programmable transition metal dichalcogenide homojunctions controlled by nonvolatile ferroelectric domains. *Nature Electronics*, **2020**, 3, 43-50	28.4	98
174	Engineering of defects in resistive random access memory devices. *Journal of Applied Physics*, **2020**, 127, 051101	2.5	32
173	Improved Uniformity of TaOx-Based Resistive Random Access Memory with Ultralow Operating Voltage by Electrodes Engineering. *ECS Journal of Solid State Science and Technology*, **2020**, 9, 041005	2	2
172	Scaling MoS2 NCFET to 83 nm with Record-low Ratio of SSave/SSRef.=0.177 and Minimum 20 mV Hysteresis **2020**,		2
171	Fully Memristive SNNs with Temporal Coding for Fast and Low-power Edge Computing **2020**,		12
170	Ultrasensitive negative capacitance phototransistors. *Nature Communications*, **2020**, 11, 101	17.4	63
169	An artificial spiking afferent nerve based on Mott memristors for neurorobotics. *Nature Communications*, **2020**, 11, 51	17.4	105
168	Modulating the filament rupture degree of threshold switching device for self-selective and low-current nonvolatile memory application. *Nanotechnology*, **2020**, 31, 144002	3.4	2
167	Ion-Gated Transistor: An Enabler for Sensing and Computing Integration. *Advanced Intelligent Systems*, **2020**, 2, 2000156	6	11
166	Oxide-Based Electrolyte-Gated Transistors for Spatiotemporal Information Processing. *Advanced Materials*, **2020**, 32, e2003018	24	48

165	A Habituation Sensory Nervous System with Memristors. *Advanced Materials*, **2020**, 32, e2004398	24	37
164	Ultrahigh drive current and large selectivity in GeS selector. *Nature Communications*, **2020**, 11, 4636	17.4	36
163	Quantitatively Evaluating the Effect of Read Noise in Memristive Hopfield Network on Solving Traveling Salesman Problem. *IEEE Electron Device Letters*, **2020**, 41, 1688-1691	4.4	6
162	**2020**,		37
161	Amorphous Gallium Oxide-Based Gate-Tunable High-Performance Thin Film Phototransistor for Solar-Blind Imaging. *Advanced Electronic Materials*, **2019**, 5, 1900389	6.4	50
160	. *IEEE Electron Device Letters*, **2019**, 40, 718-721	4.4	14
159	Vacancy-Induced Synaptic Behavior in 2D WS Nanosheet-Based Memristor for Low-Power Neuromorphic Computing. *Small*, **2019**, 15, e1901423	11	142
158	Composition-Dependent Ferroelectric Properties in Sputtered HfXZr1□XO2 Thin Films. *IEEE Electron Device Letters*, **2019**, 40, 570-573	4.4	19
157	Review of deep ultraviolet photodetector based on gallium oxide. *Chinese Physics B*, **2019**, 28, 018501	1.2	42
156	Enhancement-Mode $beta$ -Ga2O3 Metal□Oxide□Semiconductor Field-Effect Solar-Blind Phototransistor With Ultrahigh Detectivity and Photo-to-Dark Current Ratio. *IEEE Electron Device Letters*, **2019**, 40, 742-745	4.4	40
155	Interface Engineering via MoS2 Insertion Layer for Improving Resistive Switching of Conductive-Bridging Random Access Memory. *Advanced Electronic Materials*, **2019**, 5, 1800747	6.4	16
154	Transformation of threshold volatile switching to quantum point contact originated nonvolatile switching in graphene interface controlled memory devices. *Nanoscale Advances*, **2019**, 1, 3753-3760	5.1	26
153	Fast Switching $beta$ -Ga2O3 Power MOSFET With a Trench-Gate Structure. *IEEE Electron Device Letters*, **2019**, 40, 1385-1388	4.4	17
152	High-Performance Metal-Organic Chemical Vapor Deposition Grown $varepsilon$ -Ga2O3 Solar-Blind Photodetector With Asymmetric Schottky Electrodes. *IEEE Electron Device Letters*, **2019**, 40, 1475-1478	4.4	59
151	A Self-Rectification and Quasi-Linear Analogue Memristor for Artificial Neural Networks. *IEEE Electron Device Letters*, **2019**, 40, 1407-1410	4.4	26
150	Improvement of Endurance in HZO-Based Ferroelectric Capacitor Using Ru Electrode. *IEEE Electron Device Letters*, **2019**, 40, 1744-1747	4.4	41
149	Voltage-control oscillator based on Pt/C/NbOx/TiN device with highly improved threshold switching performances. *Science China: Physics, Mechanics and Astronomy*, **2019**, 62, 1	3.6	4
148	High on/off ratio black phosphorus based memristor with ultra-thin phosphorus oxide layer. *Applied Physics Letters*, **2019**, 115, 193503	3.4	22

147	Resistive Switching Devices: Mechanism, Performance and Integration **2019**, 843-911		
146	. *IEEE Electron Device Letters*, **2019**, 40, 554-557	4.4	15
145	Experimental Demonstration of Conversion-Based SNNs with 1T1R Mott Neurons for Neuromorphic Inference **2019**,		10
144	Self-Assembled Networked PbS Distribution Quantum Dots for Resistive Switching and Artificial Synapse Performance Boost of Memristors. *Advanced Materials*, **2019**, 31, e1805284	24	142
143	A Few-Step and Low-Cost Memristor Logic Based on MIG Logic for Frequent-Off Instant-On Circuits in IoT Applications. *IEEE Transactions on Circuits and Systems II: Express Briefs*, **2019**, 66, 662-666	3.5	8
142	Performance-Enhancing Selector via Symmetrical Multilayer Design. *Advanced Functional Materials*, **2019**, 29, 1808376	15.6	38
141	Recommended Methods to Study Resistive Switching Devices. *Advanced Electronic Materials*, **2019**, 5, 1800143	6.4	297
140	Investigation of Retention Behavior of TiOx/Al2O3 Resistive Memory and Its Failure Mechanism Based on Meyer□Neldel Rule. *IEEE Transactions on Electron Devices*, **2018**, 65, 957-962	2.9	8
139	Full imitation of synaptic metaplasticity based on memristor devices. *Nanoscale*, **2018**, 10, 5875-5881	7.7	75
138	Short-Term and Long-Term Plasticity Mimicked in Low-Voltage Ag/GeSe/TiN Electronic Synapse. *IEEE Electron Device Letters*, **2018**, 39, 492-495	4.4	46
137	Atomic Scale Modulation of Self-Rectifying Resistive Switching by Interfacial Defects. *Advanced Science*, **2018**, 5, 1800096	13.6	24
136	Breaking the Current-Retention Dilemma in Cation-Based Resistive Switching Devices Utilizing Graphene with Controlled Defects. *Advanced Materials*, **2018**, 30, e1705193	24	157
135	Characterization of the inhomogeneous barrier distribution in a Pt/(100)□Ga2O3 Schottky diode via its temperature-dependent electrical properties. *AIP Advances*, **2018**, 8, 015316	1.5	39
134	An Artificial Neuron Based on a Threshold Switching Memristor. *IEEE Electron Device Letters*, **2018**, 39, 308-311	4.4	146
133	Light-Emitting Devices Modulated by Multilevel Resistive Memories. *ACS Photonics*, **2018**, 5, 1006-1011	6.3	12
132	Design of CMOS Compatible, High-Speed, Highly-Stable Complementary Switching with Multilevel Operation in 3D Vertically Stacked Novel HfO2/Al2O3/TiOx (HAT) RRAM. *Advanced Electronic Materials*, **2018**, 4, 1700561	6.4	45
131	Origin of negative resistance in anion migration controlled resistive memory. *Applied Physics Letters* , **2018**, 112, 133108	3.4	5
130	Self-Rectifying and Forming-Free Resistive-Switching Device for Embedded Memory Application. *IEEE Electron Device Letters*, **2018**, 39, 664-667	4.4	45

129	Schottky Barrier Rectifier Based on (100) $beta$ -Ga2O3 and its DC and AC Characteristics. *IEEE Electron Device Letters*, **2018**, 1-1	4.4	40
128	Flexible memristors as electronic synapses for neuro-inspired computation based on scotch tape-exfoliated mica substrates. *Nano Research*, **2018**, 11, 1183-1192	10	69
127	A Ti/AlOx/TaOx/Pt Analog Synapse for Memristive Neural Network. *IEEE Electron Device Letters*, **2018**, 39, 1298-1301	4.4	27
126	Classification of Three-Level Random Telegraph Noise and Its Application in Accurate Extraction of Trap Profiles in Oxide-Based Resistive Switching Memory. *IEEE Electron Device Letters*, **2018**, 39, 1302-1305	4.4	5
125	Flexible cation-based threshold selector for resistive switching memory integration. *Science China Information Sciences*, **2018**, 61, 1	3.4	9
124	Graphene Oxide Quantum Dots Based Memristors with Progressive Conduction Tuning for Artificial Synaptic Learning. *Advanced Functional Materials*, **2018**, 28, 1803728	15.6	156
123	Advances in Understanding Materials for Rechargeable Lithium Batteries by Atomic Force Microscopy. *Energy and Environmental Materials*, **2018**, 1, 28-40	13	53
122	Modulating 3D memristor synapse by analog spiking pulses for bioinspired neuromorphic computing. *Science China: Physics, Mechanics and Astronomy*, **2018**, 61, 1	3.6	9
121	Proton Radiation Effects on Y-Doped HfO2-Based Ferroelectric Memory. *IEEE Electron Device Letters*, **2018**, 39, 823-826	4.4	14
120	Effects of Capping Electrode on Ferroelectric Properties of Hf0.5Zr0.5O2 Thin Films. *IEEE Electron Device Letters*, **2018**, 39, 1207-1210	4.4	70
119	C-V and J-V investigation of HfO2/Al2O3 bilayer dielectrics MOSCAPs on (100) Ga2O3. *AIP Advances*, **2018**, 8, 065215	1.5	30
118	Memristor with Ag-Cluster-Doped TiO2 Films as Artificial Synapse for Neuroinspired Computing. *Advanced Functional Materials*, **2018**, 28, 1705320	15.6	221
117	**2018**,		17
116	Two-Step Synthesis of Laminar Vanadate via a Facile Hydrothermal Route and Enhancing the Photocatalytic Reduction of CO2 into Solar Fuel through Tuning of the Oxygen Vacancies by in Situ Vacuum Illumination Treatment. *ACS Applied Energy Materials*, **2018**, 1, 6857-6864	6.1	3
115	Bipolar Analog Memristors as Artificial Synapses for Neuromorphic Computing. *Materials*, **2018**, 11,	3.5	32
114	A Compact Model for Drift and Diffusion Memristor Applied in Neuron Circuits Design. *IEEE Transactions on Electron Devices*, **2018**, 65, 4290-4296	2.9	14
113	Unveiling the Switching Mechanism of a TaOx/HfO2 Self-Selective Cell by Probing the Trap Profiles With RTN Measurements. *IEEE Electron Device Letters*, **2018**, 39, 1152-1155	4.4	6
112	Integration of nanosized ZIF-8 particles onto mesoporous TiO2 nanobeads for enhanced photocatalytic activity. *RSC Advances*, **2017**, 7, 8004-8010	3.7	36

111	HfO2-Based Highly Stable Radiation-Immune Ferroelectric Memory. *IEEE Electron Device Letters*, **2017**, 38, 330-333	4.4	25
110	Confining Cation Injection to Enhance CBRAM Performance by Nanopore Graphene Layer. *Small*, **2017**, 13, 1603948	11	113
109	Schottky barrier diode based on Ga2O3 (100) single crystal substrate and its temperature-dependent electrical characteristics. *Applied Physics Letters*, **2017**, 110, 093503	3.4	96
108	Unique Zinc Germanium Oxynitride Hyperbranched Nanostructures with Enhanced Visible-Light Photocatalytic Activity for CO2 Reduction. *European Journal of Inorganic Chemistry*, **2017**, 2017, 2195-2200	2.3	18
107	Resistive Switching Performance Improvement via Modulating Nanoscale Conductive Filament, Involving the Application of Two-Dimensional Layered Materials. *Small*, **2017**, 13, 1604306	11	105
106	Formation mechanism and morphology-dependent luminescence of NdF3 nanoplates with cavities. *CrystEngComm*, **2017**, 19, 2487-2493	3.3	3
105	Crystal that remembers: several ways to utilize nanocrystals in resistive switching memory. *Journal Physics D: Applied Physics*, **2017**, 50, 303002	3	31
104	Graphene and Related Materials for Resistive Random Access Memories. *Advanced Electronic Materials*, **2017**, 3, 1600195	6.4	137
103	Highly improved performance in Zr0.5Hf0.5O2 films inserted with graphene oxide quantum dots layer for resistive switching non-volatile memory. *Journal of Materials Chemistry C*, **2017**, 5, 11046-11052	7.1	48
102	Complementary Switching in 3D Resistive Memory Array. *Advanced Electronic Materials*, **2017**, 3, 1700287	6.4	28
101	Variability Improvement of TiO /AlO Bilayer Nonvolatile Resistive Switching Devices by Interfacial Band Engineering with an Ultrathin AlO Dielectric Material. *ACS Omega*, **2017**, 2, 6888-6895	3.9	34
100	Improvement of Device Reliability by Introducing a BEOL-Compatible TiN Barrier Layer in CBRAM. *IEEE Electron Device Letters*, **2017**, 38, 1371-1374	4.4	21
99	Electronic imitation of behavioral and psychological synaptic activities using TiO/AlO-based memristor devices. *Nanoscale*, **2017**, 9, 14442-14450	7.7	76
98	Investigation on the Conductive Filament Growth Dynamics in Resistive Switching Memory via a Universal Monte Carlo Simulator. *Scientific Reports*, **2017**, 7, 11204	4.9	14
97	Uniformity and Retention Improvement of TaOx-Based Conductive Bridge Random Access Memory by CuSiN Interfacial Layer Engineering. *IEEE Electron Device Letters*, **2017**, 38, 1232-1235	4.4	11
96	Intrinsic anionic rearrangement by extrinsic control: transition of RS and CRS in thermally elevated TiN/HfO/Pt RRAM. *Nanoscale*, **2017**, 9, 18908-18917	7.7	30
95	Emulating Short-Term and Long-Term Plasticity of Bio-Synapse Based on Cu/a-Si/Pt Memristor. *IEEE Electron Device Letters*, **2017**, 38, 1208-1211	4.4	89
94	Highly uniform and nonlinear selection device based on trapezoidal band structure for high density nano-crossbar memory array. *Nano Research*, **2017**, 10, 3295-3302	10	8

93	Fatigue mechanism of yttrium-doped hafnium oxide ferroelectric thin films fabricated by pulsed laser deposition. *Physical Chemistry Chemical Physics*, **2017**, 19, 3486-3497	3.6	56
92	**2017**,		22
91	Oxalic Acid-Assisted Hydrothermal Synthesis and Luminescent of Hexagonal NaYF4:Ln3+ (Ln = Sm, Eu, Yb/Er) Micro/Nanoplates. *Journal of Nanomaterials*, **2017**, 2017, 1-10	3.2	4
90	Super non-linear RRAM with ultra-low power for 3D vertical nano-crossbar arrays. *Nanoscale*, **2016**, 8, 15629-36	7.7	72
89	Highly improved resistive switching performances of the self-doped Pt/HfO2:Cu/Cu devices by atomic layer deposition. *Science China: Physics, Mechanics and Astronomy*, **2016**, 59, 1	3.6	12
88	Eliminating Negative-SET Behavior by Suppressing Nanofilament Overgrowth in Cation-Based Memory. *Advanced Materials*, **2016**, 28, 10623-10629	24	161
87	Controlled synthesis of pyrochlore Pr2Sn2O7 nanospheres with enhanced gas sensing performance. *RSC Advances*, **2016**, 6, 21564-21570	3.7	6
86	Design of high-performance memristor cell using W-implanted SiO2 films. *Applied Physics Letters*, **2016**, 108, 153501	3.4	19
85	Analysis of the Negative-SET Behaviors in Cu/ZrO/Pt Devices. *Nanoscale Research Letters*, **2016**, 11, 542	5	14
84	Analysis on the Filament Structure Evolution in Reset Transition of Cu/HfO2/Pt RRAM Device. *Nanoscale Research Letters*, **2016**, 11, 269	5	8
83	Occurrence of Resistive Switching and Threshold Switching in Atomic Layer Deposited Ultrathin (2 nm) Aluminium Oxide Crossbar Resistive Random Access Memory. *IEEE Electron Device Letters*, **2015**, 36, 333-335	4.4	36
82	Investigation of LRS dependence on the retention of HRS in CBRAM. *Nanoscale Research Letters*, **2015**, 10, 61	5	23
81	Coordination-driven self-assembly: construction of a Fe3O4graphene hybrid 3D framework and its long cycle lifetime for lithium-ion batteries. *RSC Advances*, **2015**, 5, 40249-40257	3.7	15
80	Improving the resistive switching reliability via controlling the resistance states of RRAM **2015**,		1
79	Dynamic observation of oxygen vacancies in hafnia layer by in situ transmission electron microscopy. *Nano Research*, **2015**, 8, 3571-3579	10	27
78	A Physical Model for the Statistics of the Set Switching Time of Resistive RAM Measured With the Width-Adjusting Pulse Operation Method. *IEEE Electron Device Letters*, **2015**, 36, 1303-1306	4.4	11
77	Atomic View of Filament Growth in Electrochemical Memristive Elements. *Scientific Reports*, **2015**, 5, 13311	4.9	65
76	Resistance-switching mechanism of SiO2:Pt-based Mott memory. *Journal of Applied Physics*, **2015**, 118, 245701	2.5	2

75	Carrier-transport-path-induced switching parameter fluctuation in oxide-based resistive switching memory. *Materials Research Express*, **2015**, 2, 046304	1.7	9
74	**2015**,		30
73	Cu BEOL compatible selector with high selectivity (>107), extremely low off-current (~pA) and high endurance (>1010) **2015**,		31
72	Conductance Quantization in Resistive Random Access Memory. *Nanoscale Research Letters*, **2015**, 10, 420	5	65
71	Effect of Pulse and dc Formation on the Performance of One-Transistor and One-Resistor Resistance Random Access Memory Devices. *Chinese Physics Letters*, **2015**, 32, 028502	1.8	1
70	Evolution of conductive filament and its impact on reliability issues in oxide-electrolyte based resistive random access memory. *Scientific Reports*, **2015**, 5, 7764	4.9	99
69	Superior Retention of Low-Resistance State in Conductive Bridge Random Access Memory With Single Filament Formation. *IEEE Electron Device Letters*, **2015**, 36, 129-131	4.4	44
68	Controlled Synthesis of Monodispersed Sub-50 nm Nanoporous In2O3 Spheres and Their Photoelectrochemical Performance. *European Journal of Inorganic Chemistry*, **2015**, 2015, 845-851	2.3	8
67	A novel method of identifying the carrier transport path in metal oxide resistive random access memory. *Journal Physics D: Applied Physics*, **2015**, 48, 065101	3	21
66	An overview of the switching parameter variation of RRAM. *Science Bulletin*, **2014**, 59, 5324-5337		13
65	Direct Observation of Conversion Between Threshold Switching and Memory Switching Induced by Conductive Filament Morphology. *Advanced Functional Materials*, **2014**, 24, 5679-5686	15.6	218
64	Solution-chemical route to generalized synthesis of metal germanate nanowires with room-temperature, light-driven hydrogenation activity of CO2 into renewable hydrocarbon fuels. *Inorganic Chemistry*, **2014**, 53, 359-64	5.1	19
63	Thermoelectric Seebeck effect in oxide-based resistive switching memory. *Nature Communications*, **2014**, 5, 4598	17.4	75
62	Operation methods of resistive random access memory. *Science China Technological Sciences*, **2014**, 57, 2295-2304	3.5	9
61	Set statistics in conductive bridge random access memory device with Cu/HfO2/Pt structure. *Applied Physics Letters*, **2014**, 105, 193501	3.4	39
60	Metal dopants in HfO2-based RRAM: first principle study. *Journal of Semiconductors*, **2014**, 35, 042002	2.3	21
59	Uniformity Improvement in 1T1R RRAM With Gate Voltage Ramp Programming. *IEEE Electron Device Letters*, **2014**, 35, 1224-1226	4.4	54
58	Optimal migration route of Cu in HfO2. *Journal of Semiconductors*, **2014**, 35, 013001	2.3	3

57	Multilevel unipolar resistive switching with negative differential resistance effect in Ag/SiO2/Pt device. *Journal of Applied Physics*, **2014**, 116, 154509	2.5	34
56	Statistical characteristics of reset switching in Cu/HfO2/Pt resistive switching memory. *Nanoscale Research Letters*, **2014**, 9, 2500	5	13
55	Bipolar one diode-one resistor integration for high-density resistive memory applications. *Nanoscale*, **2013**, 5, 4785-9	7.7	45
54	Investigation on the RESET switching mechanism of bipolar Cu/HfO2/Pt RRAM devices with a statistical methodology. *Journal Physics D: Applied Physics*, **2013**, 46, 245107	3	23
53	In situ observation of nickel as an oxidizable electrode material for the solid-electrolyte-based resistive random access memory. *Applied Physics Letters*, **2013**, 102, 053502	3.4	54
52	Overcoming the Dilemma Between RESET Current and Data Retention of RRAM by Lateral Dissolution of Conducting Filament. *IEEE Electron Device Letters*, **2013**, 34, 873-875	4.4	26
51	Self-Rectifying Resistive-Switching Device With $ hbox{a-Si/WO}_{3}$ Bilayer. *IEEE Electron Device Letters*, **2013**, 34, 229-231	4.4	44
50	Effects of interaction between defects on the uniformity of doping HfO2-based RRAM: a first principle study. *Journal of Semiconductors*, **2013**, 34, 032001	2.3	20
49	Response to "comment on real-time observation on dynamic growth/dissolution of conductive filaments in oxide-electrolyte-based ReRAM". *Advanced Materials*, **2013**, 25, 165-7	24	13
48	Real-time observation on dynamic growth/dissolution of conductive filaments in oxide-electrolyte-based ReRAM. *Advanced Materials*, **2012**, 24, 1844-9	24	443
47	. *IEEE Electron Device Letters*, **2012**, 33, 1556-1558	4.4	20
46	Nitrogen-induced improvement of resistive switching uniformity in a HfO2-based RRAM device. *Semiconductor Science and Technology*, **2012**, 27, 125008	1.8	50
45	Effect of low constant current stress treatment on the performance of the Cu/ZrO2/Pt resistive switching device. *Semiconductor Science and Technology*, **2012**, 27, 105007	1.8	11
44	Identifying multiple configurations of complex molecules on metal surfaces. *Small*, **2012**, 8, 796-806, 795	11	4
43	Surfaces: Identifying Multiple Configurations of Complex Molecules on Metal Surfaces (Small 6/2012). *Small*, **2012**, 8, 795-795	11	1
42	Improving the electrical performance of resistive switching memory using doping technology. *Science Bulletin*, **2012**, 57, 1235-1240		22
41	The conductive path in HfO2: first principles study. *Journal of Semiconductors*, **2012**, 33, 072002	2.3	10
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