

Hua-Qiang Wu

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228
papers

7,955
citations

43
h-index

84
g-index

269
ext. papers

10,738
ext. citations

9.1
avg, IF

6.46
L-index

#	Paper	IF	Citations
228	Fully hardware-implemented memristor convolutional neural network. <i>Nature</i> , 2020 , 577, 641-646	50.4	529
227	Fully memristive neural networks for pattern classification with unsupervised learning. <i>Nature Electronics</i> , 2018 , 1, 137-145	28.4	511
226	Face classification using electronic synapses. <i>Nature Communications</i> , 2017 , 8, 15199	17.4	502
225	Resistive switching materials for information processing. <i>Nature Reviews Materials</i> , 2020 , 5, 173-195	73.3	318
224	Recommended Methods to Study Resistive Switching Devices. <i>Advanced Electronic Materials</i> , 2019 , 5, 1800143	6.4	297
223	Bridging Biological and Artificial Neural Networks with Emerging Neuromorphic Devices: Fundamentals, Progress, and Challenges. <i>Advanced Materials</i> , 2019 , 31, e1902761	24	220
222	Towards artificial general intelligence with hybrid Tianjic chip architecture. <i>Nature</i> , 2019 , 572, 106-111	50.4	215
221	An artificial nociceptor based on a diffusive memristor. <i>Nature Communications</i> , 2018 , 9, 417	17.4	183
220	Threshold Switching of Ag or Cu in Dielectrics: Materials, Mechanism, and Applications. <i>Advanced Functional Materials</i> , 2018 , 28, 1704862	15.6	168
219	Graphene Oxide Quantum Dots Based Memristors with Progressive Conduction Tuning for Artificial Synaptic Learning. <i>Advanced Functional Materials</i> , 2018 , 28, 1803728	15.6	156
218	Synthesis and characterization of vertically standing MoS ₂ nanosheets. <i>Scientific Reports</i> , 2016 , 6, 211714.9	14.9	141
217	Neuro-inspired computing chips. <i>Nature Electronics</i> , 2020 , 3, 371-382	28.4	139
216	Understanding memristive switching via in situ characterization and device modeling. <i>Nature Communications</i> , 2019 , 10, 3453	17.4	138
215	Improving Analog Switching in HfO _x -Based Resistive Memory With a Thermal Enhanced Layer. <i>IEEE Electron Device Letters</i> , 2017 , 38, 1019-1022	4.4	136
214	Capacitive neural network with neuro-transistors. <i>Nature Communications</i> , 2018 , 9, 3208	17.4	132
213	2016 ,		116
212	Scaling-up resistive synaptic arrays for neuro-inspired architecture: Challenges and prospect 2015 ,		98

211	Reliability of analog resistive switching memory for neuromorphic computing. <i>Applied Physics Reviews</i> , 2020 , 7, 011301	17.3	94
210	In situ training of feed-forward and recurrent convolutional memristor networks. <i>Nature Machine Intelligence</i> , 2019 , 1, 434-442	22.5	93
209	Memory materials and devices: From concept to application. <i>Information Materials</i> , 2020 , 2, 261-290	23.1	93
208	Experimental Characterization of Physical Unclonable Function Based on 1 kb Resistive Random Access Memory Arrays. <i>IEEE Electron Device Letters</i> , 2015 , 36, 1380-1383	4.4	92
207	Neurohybrid Memristive CMOS-Integrated Systems for Biosensors and Neuroprosthetics. <i>Frontiers in Neuroscience</i> , 2020 , 14, 358	5.1	85
206	Study of multi-level characteristics for 3D vertical resistive switching memory. <i>Scientific Reports</i> , 2014 , 4, 5780	4.9	82
205	Study of conduction and switching mechanisms in Al/AlO _x /WO _x /W resistive switching memory for multilevel applications. <i>Applied Physics Letters</i> , 2013 , 102, 233502	3.4	78
204	Alloying conducting channels for reliable neuromorphic computing. <i>Nature Nanotechnology</i> , 2020 , 15, 574-579	28.7	74
203	A Methodology to Improve Linearity of Analog RRAM for Neuromorphic Computing 2018 ,		71
202	Competition between Metallic and Vacancy Defect Conductive Filaments in a CH ₃ NH ₃ PbI ₃ -Based Memory Device. <i>Journal of Physical Chemistry C</i> , 2018 , 122, 6431-6436	3.8	69
201	Magnetoelectric Coupling Induced by Interfacial Orbital Reconstruction. <i>Advanced Materials</i> , 2015 , 27, 6651-6	24	69
200	Metallic to hopping conduction transition in Ta ₂ O ₅ /TaO _y resistive switching device. <i>Applied Physics Letters</i> , 2014 , 105, 063508	3.4	67
199	A Threshold Switching Selector Based on Highly Ordered Ag Nanodots for X-Point Memory Applications. <i>Advanced Science</i> , 2019 , 6, 1900024	13.6	65
198	Large-scale neuromorphic optoelectronic computing with a reconfigurable diffractive processing unit. <i>Nature Photonics</i> , 2021 , 15, 367-373	33.9	65
197	Probing the Photovoltage and Photocurrent in Perovskite Solar Cells with Nanoscale Resolution. <i>Advanced Functional Materials</i> , 2016 , 26, 3048-3058	15.6	64
196	Device and materials requirements for neuromorphic computing. <i>Journal Physics D: Applied Physics</i> , 2019 , 52, 113001	3	64
195	Resistive Random Access Memory for Future Information Processing System. <i>Proceedings of the IEEE</i> , 2017 , 105, 1770-1789	14.3	62
194	Dynamic memristor-based reservoir computing for high-efficiency temporal signal processing. <i>Nature Communications</i> , 2021 , 12, 408	17.4	60

193	Truly Electroforming-Free and Low-Energy Memristors with Preconditioned Conductive Tunneling Paths. <i>Advanced Functional Materials</i> , 2017 , 27, 1702010	15.6	56
192	Power-efficient neural network with artificial dendrites. <i>Nature Nanotechnology</i> , 2020 , 15, 776-782	28.7	55
191	Fabrication and characterization of pre-aligned gallium nitride nanowire field-effect transistors. <i>Nanotechnology</i> , 2006 , 17, 1264-1271	3.4	54
190	Synaptic silicon-nanocrystal phototransistors for neuromorphic computing. <i>Nano Energy</i> , 2019 , 63, 103859	59.1	51
189	Graphene applications in electronic and optoelectronic devices and circuits. <i>Chinese Physics B</i> , 2013 , 22, 098106	1.2	50
188	Analog-Type Resistive Switching Devices for Neuromorphic Computing. <i>Physica Status Solidi - Rapid Research Letters</i> , 2019 , 13, 1900204	2.5	48
187	Resistive Switching Performance Improvement of $\text{Ta}_2\text{O}_{5-x}/\text{TaO}_y$ Bilayer ReRAM Devices by Inserting AlO_Δ Barrier Layer. <i>IEEE Electron Device Letters</i> , 2014 , 35, 39-41	4.4	47
186	Three-Dimensional nand Flash for Vector Matrix Multiplication. <i>IEEE Transactions on Very Large Scale Integration (VLSI) Systems</i> , 2019 , 27, 988-991	2.6	46
185	Artificial Synapse Based on van der Waals Heterostructures with Tunable Synaptic Functions for Neuromorphic Computing. <i>ACS Applied Materials & Interfaces</i> , 2020 , 12, 11945-11954	9.5	43
184	Low power W:AlOx/WOx bilayer resistive switching structure based on conductive filament formation and rupture mechanism. <i>Applied Physics Letters</i> , 2013 , 102, 173503	3.4	42
183	33.1 A 74 TMACS/W CMOS-RRAM Neurosynaptic Core with Dynamically Reconfigurable Dataflow and In-situ Transposable Weights for Probabilistic Graphical Models 2020 ,		40
182	Investigation of statistical retention of filamentary analog RRAM for neuromorphic computing 2017 ,		40
181	Performance-Enhancing Selector via Symmetrical Multilayer Design. <i>Advanced Functional Materials</i> , 2019 , 29, 1808376	15.6	38
180	Ultrafast RESET Analysis of HfOx-Based RRAM by Sub-Nanosecond Pulses. <i>Advanced Electronic Materials</i> , 2017 , 3, 1700263	6.4	37
179	Associative Memory for Image Recovery with a High-Performance Memristor Array. <i>Advanced Functional Materials</i> , 2019 , 29, 1900155	15.6	37
178	Fabrication and characterization of thermoelectric power generators with segmented legs synthesized by one-step spark plasma sintering. <i>Energy</i> , 2016 , 113, 35-43	7.9	37
177	2020 ,		37
176	In-memory Learning with Analog Resistive Switching Memory: A Review and Perspective. <i>Proceedings of the IEEE</i> , 2021 , 109, 14-42	14.3	37

175	Device and circuit optimization of RRAM for neuromorphic computing 2017 ,		35
174	Conduction mechanisms, dynamics and stability in ReRAMs. <i>Microelectronic Engineering</i> , 2018 , 187-188, 121-133	2.5	34
173	Electrode-induced digital-to-analog resistive switching in TaO _x -based RRAM devices. <i>Nanotechnology</i> , 2016 , 27, 305201	3.4	33
172	In situ optical backpropagation training of diffractive optical neural networks. <i>Photonics Research</i> , 2020 , 8, 940	6	33
171	Thermal generation, manipulation and thermoelectric detection of skyrmions. <i>Nature Electronics</i> , 2020 , 3, 672-679	28.4	33
170	Observation of the antiferromagnetic spin Hall effect. <i>Nature Materials</i> , 2021 , 20, 800-804	27	33
169	Characterizing Endurance Degradation of Incremental Switching in Analog RRAM for Neuromorphic Systems 2018 ,		33
168	Double-Balanced Graphene Integrated Mixer with Outstanding Linearity. <i>Nano Letters</i> , 2015 , 15, 6677-821.5	1.5	32
167	Optimization of RRAM-Based Physical Unclonable Function With a Novel Differential Read-Out Method. <i>IEEE Electron Device Letters</i> , 2017 , 38, 168-171	4.4	31
166	Conduction Mechanism and Improved Endurance in HfO-Based RRAM with Nitridation Treatment. <i>Nanoscale Research Letters</i> , 2017 , 12, 574	5	31
165	Photoluminescence and cathodoluminescence analyses of GaN powder doped with Eu. <i>Applied Physics Letters</i> , 2006 , 88, 011921	3.4	31
164	Distributions of conduction electrons as manifested in MAS NMR of gallium nitride. <i>Journal of the American Chemical Society</i> , 2006 , 128, 4952-3	16.4	31
163	Unsupervised Learning on Resistive Memory Array Based Spiking Neural Networks. <i>Frontiers in Neuroscience</i> , 2019 , 13, 812	5.1	30
162	HfO ₂ /Al ₂ O ₃ multilayer for RRAM arrays: a technique to improve tail-bit retention. <i>Nanotechnology</i> , 2016 , 27, 395201	3.4	30
161	Gallium nitride nanowire nonvolatile memory device. <i>Journal of Applied Physics</i> , 2006 , 100, 024307	2.5	29
160	Reconfigurable Magnetic Logic Combined with Nonvolatile Memory Writing. <i>Advanced Materials</i> , 2017 , 29, 1605027	24	28
159	Stacked 3D RRAM Array with Graphene/CNT as Edge Electrodes. <i>Scientific Reports</i> , 2015 , 5, 13785	4.9	28
158	Green emission from Er-doped GaN powder. <i>Applied Physics Letters</i> , 2005 , 86, 191918	3.4	28

157	A highly reliable and tamper-resistant RRAM PUF: Design and experimental validation 2016 ,		28
156	Sign backpropagation: An on-chip learning algorithm for analog RRAM neuromorphic computing systems. <i>Neural Networks</i> , 2018 , 108, 217-223	9.1	28
155	Stateful Logic Operations in One-Transistor-One- Resistor Resistive Random Access Memory Array. <i>IEEE Electron Device Letters</i> , 2019 , 40, 1538-1541	4.4	27
154	Stable self-compliance resistive switching in $\text{AlO}_x/\text{Ta}_2\text{O}_{(5-x)}/\text{TaO}_y$ triple layer devices. <i>Nanotechnology</i> , 2015 , 26, 035203	3.4	27
153	Neural signal analysis with memristor arrays towards high-efficiency brain-machine interfaces. <i>Nature Communications</i> , 2020 , 11, 4234	17.4	27
152	Impacts of State Instability and Retention Failure of Filamentary Analog RRAM on the Performance of Deep Neural Network. <i>IEEE Transactions on Electron Devices</i> , 2019 , 66, 4517-4522	2.9	25
151	Modulating metallic conductive filaments via bilayer oxides in resistive switching memory. <i>Applied Physics Letters</i> , 2019 , 114, 193502	3.4	25
150	High-yield GaN nanowire synthesis and field-effect transistor fabrication. <i>Journal of Electronic Materials</i> , 2006 , 35, 670-674	1.9	25
149	Electrochemical control of the phase transition of ultrathin FeRh films. <i>Applied Physics Letters</i> , 2016 , 108, 202404	3.4	25
148	Rapid synthesis of gallium nitride powder. <i>Journal of Crystal Growth</i> , 2005 , 279, 303-310	1.6	24
147	Modeling disorder effect of the oxygen vacancy distribution in filamentary analog RRAM for neuromorphic computing 2017 ,		23
146	Atomistic study of dynamics for metallic filament growth in conductive-bridge random access memory. <i>Physical Chemistry Chemical Physics</i> , 2015 , 17, 8627-32	3.6	23
145	The study of the effects of cooling conditions on high quality graphene growth by the APCVD method. <i>Nanoscale</i> , 2013 , 5, 5524-9	7.7	23
144	High-Uniformity Threshold Switching HfO ₂ -Based Selectors with Patterned Ag Nanodots. <i>Advanced Science</i> , 2020 , 7, 2002251	13.6	23
143	Resistance Switching Characteristics Induced by O Plasma Treatment of an Indium Tin Oxide Film for Use as an Insulator in Resistive Random Access Memory. <i>ACS Applied Materials & Interfaces</i> , 2017 , 9, 3149-3155	9.5	22
142	Memristor: Real memristor found. <i>Journal of Applied Physics</i> , 2019 , 125, 054504	2.5	22
141	Low-Voltage Oscillatory Neurons for Memristor-Based Neuromorphic Systems. <i>Global Challenges</i> , 2019 , 3, 1900015	4.3	22
140	Deep-submicron Graphene Field-Effect Transistors with State-of-Art f. <i>Scientific Reports</i> , 2016 , 6, 35717	4.9	21

139	Relaxation Effect in RRAM Arrays: Demonstration and Characteristics. <i>IEEE Electron Device Letters</i> , 2016 , 37, 182-185	4.4	21
138	Atomic threshold-switching enabled MoS transistors towards ultralow-power electronics. <i>Nature Communications</i> , 2020 , 11, 6207	17.4	21
137	Residual DNN: training diffractive deep neural networks via learnable light shortcuts. <i>Optics Letters</i> , 2020 , 45, 2688-2691	3	19
136	. <i>IEEE Transactions on Electron Devices</i> , 2020 , 67, 2213-2217	2.9	18
135	Design Guidelines of RRAM based Neural-Processing-Unit 2019 ,		17
134	Memristors for Hardware Security Applications. <i>Advanced Electronic Materials</i> , 2019 , 5, 1800872	6.4	17
133	Quantitative, Dynamic TaOx Memristor/Resistive Random Access Memory Model. <i>ACS Applied Electronic Materials</i> , 2020 , 2, 701-709	4	17
132	Boosting the performance of resistive switching memory with a transparent ITO electrode using supercritical fluid nitridation. <i>RSC Advances</i> , 2017 , 7, 11585-11590	3.7	16
131	Random telegraph noise analysis in AlOx/WOy resistive switching memories. <i>Applied Physics Letters</i> , 2014 , 104, 103507	3.4	16
130	Short Time High-Resistance State Instability of TaOx-Based RRAM Devices. <i>IEEE Electron Device Letters</i> , 2017 , 38, 32-35	4.4	15
129	High carrier mobility in suspended-channel graphene field effect transistors. <i>Applied Physics Letters</i> , 2013 , 103, 193102	3.4	14
128	Recent progress of integrated circuits and optoelectronic chips. <i>Science China Information Sciences</i> , 2021 , 64, 1	3.4	14
127	Engineering interface-type resistance switching based on forming current compliance in ITO/Ga2O3:ITO/TiN resistance random access memory: Conduction mechanisms, temperature effects, and electrode influence. <i>Applied Physics Letters</i> , 2016 , 109, 183509	3.4	14
126	Oxide-based analog synapse: Physical modeling, experimental characterization, and optimization 2016 ,		14
125	Conductive metallic filaments dominate in hybrid perovskite-based memory devices. <i>Science China Materials</i> , 2019 , 62, 1323-1331	7.1	13
124	Optimization of TiN/TaOx/HfO2/TiN RRAM Arrays for Improved Switching and Data Retention 2015 ,		13
123	A Compact Model of Analog RRAM With Device and Array Nonideal Effects for Neuromorphic Systems. <i>IEEE Transactions on Electron Devices</i> , 2020 , 67, 1593-1599	2.9	13
122	A drain leakage phenomenon in poly silicon channel 3D NAND flash caused by conductive paths along grain boundaries. <i>Microelectronic Engineering</i> , 2018 , 192, 66-69	2.5	13

121	Inverted process for graphene integrated circuits fabrication. <i>Nanoscale</i> , 2014 , 6, 5826-30	7.7	13
120	Circuit design for beyond von Neumann applications using emerging memory: From nonvolatile logics to neuromorphic computing 2017 ,		12
119	Graphene mobility enhancement by organosilane interface engineering. <i>Applied Physics Letters</i> , 2013 , 102, 183107	3.4	12
118	Fractional memristor. <i>Applied Physics Letters</i> , 2017 , 111, 243502	3.4	12
117	Multichannel parallel processing of neural signals in memristor arrays. <i>Science Advances</i> , 2020 , 6,	14.3	12
116	Analog memristive synapse based on topotactic phase transition for high-performance neuromorphic computing and neural network pruning. <i>Science Advances</i> , 2021 , 7,	14.3	12
115	25.2 A Reconfigurable RRAM Physically Unclonable Function Utilizing Post-Process Randomness Source With 2019 ,		11
114	R2D2: Runtime reassurance and detection of A2 Trojan 2018 ,		11
113	A High-Speed and High-Reliability TRNG Based on Analog RRAM for IoT Security Application 2019 ,		11
112	Suppress variations of analog resistive memory for neuromorphic computing by localizing Vo formation. <i>Journal of Applied Physics</i> , 2018 , 124, 152108	2.5	11
111	Memristor-based analogue computing for brain-inspired sound localization with in situ training.. <i>Nature Communications</i> , 2022 , 13, 2026	17.4	11
110	. <i>IEEE Transactions on Electron Devices</i> , 2016 , 63, 4737-4743	2.9	10
109	Endurance and Retention Degradation of Intermediate Levels in Filamentary Analog RRAM. <i>IEEE Journal of the Electron Devices Society</i> , 2019 , 7, 1239-1247	2.3	10
108	Theory study and implementation of configurable ECC on RRAM memory 2015 ,		10
107	Novel In-Memory Matrix-Matrix Multiplication with Resistive Cross-Point Arrays 2018 ,		10
106	A nondestructive approach to study resistive switching mechanism in metal oxide based on defect photoluminescence mapping. <i>Nanoscale</i> , 2017 , 9, 13449-13456	7.7	9
105	Weighted Synapses Without Carry Operations for RRAM-Based Neuromorphic Systems. <i>Frontiers in Neuroscience</i> , 2018 , 12, 167	5.1	9
104	A Highly Reliable RRAM Physically Unclonable Function Utilizing Post-Process Randomness Source. <i>IEEE Journal of Solid-State Circuits</i> , 2021 , 56, 1641-1650	5.5	9

103	Demonstration of Generative Adversarial Network by Intrinsic Random Noises of Analog RRAM Devices 2018 ,		9
102	Graphene Distributed Amplifiers: Generating Desirable Gain for Graphene Field-Effect Transistors. <i>Scientific Reports</i> , 2015 , 5, 17649	4.9	8
101	Geometry Optimization of Planar Hall Devices Under Voltage Biasing. <i>IEEE Transactions on Electron Devices</i> , 2014 , 61, 4216-4223	2.9	8
100	Luminescence dynamics and waveguide applications of europium doped gallium nitride powder. <i>Applied Physics Letters</i> , 2006 , 89, 111912	3.4	8
99	Computed depth profile method of X-ray diffraction and its application to Ni/Pd films. <i>Surface and Coatings Technology</i> , 2002 , 149, 198-205	4.4	8
98	Bulk GaN growth by Gallium Vapor Transport technique. <i>Physica Status Solidi C: Current Topics in Solid State Physics</i> , 2005 , 2, 2032-2035		8
97	A Voltage-Mode Sensing Scheme with Differential-Row Weight Mapping for Energy-Efficient RRAM-Based In-Memory Computing 2020 ,		8
96	An Improved RRAM-Based Binarized Neural Network With High Variation-Tolerated Forward/Backward Propagation Module. <i>IEEE Transactions on Electron Devices</i> , 2020 , 67, 469-473	2.9	8
95	Thermal Stability of HfOx-Based Resistive Memory Array: A Temperature Coefficient Study. <i>IEEE Electron Device Letters</i> , 2018 , 39, 192-195	4.4	7
94	Threshold Switching: Threshold Switching of Ag or Cu in Dielectrics: Materials, Mechanism, and Applications (Adv. Funct. Mater. 6/2018). <i>Advanced Functional Materials</i> , 2018 , 28, 1870036	15.6	7
93	Electrochemical simulation of filament growth and dissolution in conductive-bridging RAM (CBRAM) with cylindrical coordinates 2012 ,		7
92	Oxide-based filamentary RRAM for deep learning. <i>Journal Physics D: Applied Physics</i> , 2021 , 54, 083002	3	7
91	Electrically Reconfigurable 3D Spin-Orbitronics. <i>Advanced Functional Materials</i> , 2021 , 31, 2007485	15.6	7
90	Controlling the Degree of Forming Soft-Breakdown and Producing Superior Endurance Performance by Inserting BN-Based Layers in Resistive Random Access Memory. <i>IEEE Electron Device Letters</i> , 2017 , 38, 445-448	4.4	6
89	Reliability Perspective on Neuromorphic Computing Based on Analog RRAM 2019 ,		6
88	Current-Induced In-Plane Magnetization Switching in a Biaxial Ferrimagnetic Insulator. <i>Physical Review Applied</i> , 2020 , 13,	4.3	6
87	On-Chip Analog Trojan Detection Framework for Microprocessor Trustworthiness. <i>IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems</i> , 2019 , 38, 1820-1830	2.5	6
86	New structure with SiO ₂ -gate-dielectric select gates in vertical-channel three-dimensional (3D) NAND flash memory. <i>Microelectronics Reliability</i> , 2017 , 78, 80-84	1.2	6

85	Rapid synthesis of high purity GaN powder. <i>Physica Status Solidi C: Current Topics in Solid State Physics</i> , 2005 , 2, 2074-2078		6
84	Triple-Cation Perovskite Resistive Switching Memory with Enhanced Endurance and Retention. <i>ACS Applied Electronic Materials</i> , 2020 , 2, 3695-3703	4	6
83	An efficient method for evaluating RRAM crossbar array performance. <i>Solid-State Electronics</i> , 2016 , 120, 32-40	1.7	5
82	Improving electrical performance in GeBi core-shell nanowire transistor with a new stripped structure. <i>Semiconductor Science and Technology</i> , 2018 , 33, 095004	1.8	5
81	Graphene nonvolatile memory prototype based on charge-transfer mechanism. <i>Applied Physics Express</i> , 2014 , 7, 045101	2.4	5
80	Diagonal Matrix Regression Layer: Training Neural Networks on Resistive Crossbars With Interconnect Resistance Effect. <i>IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems</i> , 2021 , 40, 1662-1671	2.5	5
79	Cryogenic HfOx-Based Resistive Memory With a Thermal Enhancement Capping Layer. <i>IEEE Electron Device Letters</i> , 2021 , 42, 1276-1279	4.4	5
78	Neuromorphic Computing based on Resistive RAM 2017 ,		4
77	Monolithic integration of flexible lithium-ion battery on a plastic substrate by printing methods. <i>Nano Research</i> , 2019 , 12, 2477-2484	10	4
76	A novel PUF against machine learning attack: Implementation on a 16 Mb RRAM chip 2017 ,		4
75	A Unified PUF and TRNG Design Based on 40-nm RRAM With High Entropy and Robustness for IoT Security. <i>IEEE Transactions on Electron Devices</i> , 2022 , 69, 536-542	2.9	4
74	. <i>Tsinghua Science and Technology</i> , 2022 , 27, 455-471	3.4	4
73	A Unified Memory and Hardware Security Module Based on the Adjustable Switching Window of Resistive Memory. <i>IEEE Journal of the Electron Devices Society</i> , 2020 , 8, 1257-1265	2.3	4
72	Uniformity improvements of low current 1T1R RRAM arrays through optimized verification strategy 2017 ,		3
71	Threshold Switching Selectors: A Threshold Switching Selector Based on Highly Ordered Ag Nanodots for X-Point Memory Applications (Adv. Sci. 10/2019). <i>Advanced Science</i> , 2019 , 6, 1970058	13.6	3
70	Redistribution of carbon atoms in Pt substrate for high quality monolayer graphene synthesis. <i>Journal of Semiconductors</i> , 2015 , 36, 013005	2.3	3
69	Parasitic Resistance Effect Analysis in RRAM-based TCAM for Memory Augmented Neural Networks 2020 ,		3
68	Extending 1kb RRAM array from weak PUF to strong PUF by employment of SHA module 2017 ,		3

67	Enhanced performance of Ag-filament threshold switching selector by rapid thermal processing 2018,		3
66	Synaptic learning behaviors achieved by metal ion migration in a Cu/PEDOT:PSS/Ta memristor 2015		3
65	Bayesian Neural Network Realization by Exploiting Inherent Stochastic Characteristics of Analog RRAM 2019,		3
64	Ratio-based multi-level resistive memory cells. <i>Scientific Reports</i> , 2021 , 11, 1351	4.9	3
63	Rotating neurons for all-analog implementation of cyclic reservoir computing.. <i>Nature Communications</i> , 2022 , 13, 1549	17.4	3
62	Design and optimization of strong Physical Unclonable Function (PUF) based on RRAM array 2017,		2
61	A Novel RRAM Based Watermark Technique Utilizing the Impact of Forming Conditions on Reset Distribution 2019,		2
60	Impact of Switching Window on Endurance Degradation in Analog RRAM 2019,		2
59	Dipole-induced modulation of effective work function of metal gate in junctionless FETs. <i>AIP Advances</i> , 2020 , 10, 055203	1.5	2
58	A Novel Capacitor-based Stateful Logic Operation Scheme for In-memory Computing in 1T1R RRAM Array 2020,		2
57	Monolithic graphene frequency multiplier working at 10GHz range 2014,		2
56	Graphene oxide and TiO ₂ nano-particle composite based nonvolatile memory 2015,		2
55	Online training on RRAM based neuromorphic network: Experimental demonstration and operation scheme optimization 2017,		2
54	Performance Improvements by SL-Current Limiter and Novel Programming Methods on 16MB RRAM Chip 2017,		2
53	Optimization of writing scheme on 1T1R RRAM to achieve both high speed and good uniformity 2017,		2
52	The effect of variation on neuromorphic network based on 1T1R memristor array 2015,		2
51	Asymmetric resistive switching processes in W:AlO _x /WO ₃ bilayer devices. <i>Chinese Physics B</i> , 2015 , 24, 058501	1.2	2
50	Non-Volatile Threshold Adaptive Transistors with Embedded RRAM. <i>Chinese Physics Letters</i> , 2014 , 31, 108504	1.8	2

49	Luminescence and lifetime properties of europium doped gallium nitride compatible with CMOS technology. <i>Materials Research Society Symposia Proceedings</i> , 2005 , 866, 71		2
48	Rapid growth of bulk GaN crystal using GaN powder as source material. <i>Materials Research Society Symposia Proceedings</i> , 2005 , 892, 684		2
47	A Novel Bi-functional Memory-PUF Module Utilizing Adjustable Switching Window of RRAM 2020 ,		2
46	Vertical TSV-Like Diode ESD Protection 2021 ,		2
45	Array-level boosting method with spatial extended allocation to improve the accuracy of memristor based computing-in-memory chips. <i>Science China Information Sciences</i> , 2021 , 64, 1	3-4	2
44	Nonvolatile magnetic half adder combined with memory writing. <i>Applied Physics Letters</i> , 2021 , 118, 182402	4	2
43	A compact model for the SET parameter variations of oxide RRAM array 2016 ,		2
42	Bipolar resistive switching in Al/GO-PEDOT:PSS/Pt memory devices 2016 ,		2
41	The Statistical Evaluation of Correlations between LRS and HRS Relaxations in RRAM Array 2016 ,		2
40	Preface to the Special Issue on Beyond Moore: Resistive Switching Devices for Emerging Memory and Neuromorphic Computing. <i>Journal of Semiconductors</i> , 2021 , 42, 010101	2-3	2
39	Impact of variations of threshold voltage and hold voltage of threshold switching selectors in 1S1R crossbar array. <i>Chinese Physics B</i> , 2018 , 27, 118502	1.2	2
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