Zongwei Wang

List of Publications by Year
in descending order

49 papers	1,296 citations	471061 17 h-index	476904 29 g-index
49 all docs	49 docs citations	49 times ranked	1439 citing authors

#	Article	IF	Citations
1	Engineering incremental resistive switching in TaO_xbased memristors for brain-inspired computing. Nanoscale, 2016, 8, 14015-14022.	2.8	271
2	Memory materials and devices: From concept to application. InformaÄnÃ-MateriÃ¡ly, 2020, 2, 261-290.	8.5	181
3	Nonassociative learning implementation by a single memristor-based multi-terminal synaptic device. Nanoscale, 2016, 8, 18897-18904.	2.8	81
4	Dual-Gated MoS₂ Neuristor for Neuromorphic Computing. ACS Applied Materials & Interfaces, 2019, 11, 41482-41489.	4.0	78
5	Novel Vertical 3D Structure of TaOx-based RRAM with Self-localized Switching Region by Sidewall Electrode Oxidation. Scientific Reports, 2016, 6, 21020.	1.6	72
6	Improvement of HfO_x-Based RRAM Device Variation by Inserting ALD TiN Buffer Layer. IEEE Electron Device Letters, 2018, 39, 819-822.	2.2	57
7	Multifunctional Nanoionic Devices Enabling Simultaneous Heterosynaptic Plasticity and Efficient Inâ€Memory Boolean Logic. Advanced Electronic Materials, 2017, 3, 1700032.	2.6	56
8	Low Power Paryleneâ€Based Memristors with a Graphene Barrier Layer for Flexible Electronics Applications. Advanced Electronic Materials, 2019, 5, 1800852.	2.6	56
9	Artificial Neural Network Based on Doped HfO₂ Ferroelectric Capacitors With Multilevel Characteristics. IEEE Electron Device Letters, 2019, 40, 1309-1312.	2.2	41
10	Modulation of nonlinear resistive switching behavior of a TaO_x-based resistive device through interface engineering. Nanotechnology, 2017, 28, 055204.	1.3	35
11	Self-Selective Resistive Device With Hybrid Switching Mode for Passive Crossbar Memory Application. IEEE Electron Device Letters, 2020, 41, 1009-1012.	2.2	34
12	Artificial Shape Perception Retina Network Based on Tunable Memristive Neurons. Scientific Reports, 2018, 8, 13727.	1.6	30
13	Time-dependent variability in RRAM-based analog neuromorphic system for pattern recognition. , 2017, , .		29
14	Self-Activation Neural Network Based on Self-Selective Memory Device With Rectified Multilevel States. IEEE Transactions on Electron Devices, 2020, 67, 4166-4171.	1.6	23
15	Lattice: An ADC/DAC-less ReRAM-based Processing-In-Memory Architecture for Accelerating Deep Convolution Neural Networks. , 2020, , .		21
16	Encapsulation layer design and scalability in encapsulated vertical 3D RRAM. Nanotechnology, 2016, 27, 205202.	1.3	20
17	Homogeneous 3D Vertical Integration of Paryleneâ€C Based Organic Flexible Resistive Memory on Standard CMOS Platform. Advanced Electronic Materials, 2021, 7, 2000864.	2.6	20
18	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.	1.1	17

#	Article	IF	Citations
19	Investigation of NbOx-based volatile switching device with self-rectifying characteristics. Science China Information Sciences, 2019, 62, 1.	2.7	17
20	Early-Stage Fluctuation in Low-Power Analog Resistive Memory: Impacts on Neural Network and Mitigation Approach. IEEE Electron Device Letters, 2020, 41, 940-943.	2.2	17
21	Emulation of biphasic plasticity in retinal electrical synapses for light-adaptive pattern pre-processing. Nanoscale, 2021, 13, 3483-3492.	2.8	16
22	Flexible Polymer Device Based on Parylene-C with Memory and Temperature Sensing Functionalities. Polymers, 2017, 9, 310.	2.0	15
23	Tunable Stochastic Oscillator Based on Hybrid VOâ„/TaOâ" Device for Compressed Sensing. IEEE Electron Device Letters, 2021, 42, 102-105.	2.2	14
24	Localized metal doping effect on switching behaviors of TaO_x-based RRAM device. , 2016, , .		11
25	Technology-Array-Algorithm Co-Optimization of RRAM for Storage and Neuromorphic Computing: Device Non-idealities and Thermal Cross-talk. , 2020, , .		11
26	A TaOx-Based RRAM with Improved Uniformity and Excellent Analog Characteristics by Local Dopant Engineering. Electronics (Switzerland), 2021, 10, 2451.	1.8	9
27	Thermal effect in ultra-high density 3D vertical and horizontal RRAM array. Physica Scripta, 2019, 94, 045001.	1.2	8
28	Rotational Pattern Recognition by Spiking Correlated Neural Network Based on Dualâ€Gated MoS 2 Neuristor. Advanced Intelligent Systems, 2020, 2, 2000102.	3.3	7
29	MobiLatice. , 2020, , .		7
30	Implementation of Neuronal Intrinsic Plasticity by Oscillatory Device in Spiking Neural Network. IEEE Transactions on Electron Devices, 2022, 69, 1830-1834.	1.6	7
31	In Materia Neuron Spiking Plasticity for Sequential Event Processing Based on Dualâ€Mode Memristor. Advanced Intelligent Systems, 2022, 4, .	3.3	6
32	Integration of biocompatible organic resistive memory and photoresistor for wearable image sensing application. Science China Information Sciences, 2018, 61, 1.	2.7	5
33	A RRAM based Max-Pooling Scheme for Convolutional Neural Network. , 2021, , .		5
34	Enhance the Robustness to Time Dependent Variability of ReRAM-Based Neuromorphic Computing Systems with Regularization and 2R Synapse. , 2019, , .		4
35	Emulation of Synaptic Scaling Based on MoS₂ Neuristor for Selfâ€Adaptative Neuromorphic Computing. Advanced Electronic Materials, 2021, 7, 2001104.	2.6	3
36	Influence of selector-introduced compliance current on HfOx RRAM switching operation. , 2015, , .		2

#	Article	IF	Citations
37	Adaptive Random Number Generator Based on RRAM Intrinsic Fluctuation for Reinforcement Learning. , 2020, , .		2
38	Improvement of RRAM Uniformity and Analog Characteristics Through Localized Metal Doping. , 2021, , .		2
39	Enhancement of HfO2 Based RRAM Performance Through Hexagonal Boron Nitride Interface Layer. , 2018, , .		1
40	Margin Dependence on Array Size for Asymmetric Resistive Memory Cell. , 2018, , .		1
41	Non-Linear Resistive Switching Characteristics in HFO2-Based RRAM with Low-Dimensional Material Engineered Interface. , 2021, , .		1
42	Nonlinear Weight Quantification for Mitigating Read Disturb Effect on Multilevel RRAM-Based Neural Network. , 2021, , .		1
43	A New Insight and Modeling of Pulse-to-Pulse Variability in Analog Resistive Memory for On-Chip Training. IEEE Transactions on Electron Devices, 2022, 69, 3100-3104.	1.6	1
44	Investigation of Read Voltage Impact on Foundry BEOL RRAM for Core Integration. , 2022, , .		1
45	Inorganic-organic hybrid resistive switching memory with high uniformity and multilevel operation. , 2014, , .		0
46	A neural network circuit with associative learning and forgetting process based on memristor neuromorphic device. , 2017, , .		0
47	Hiearchical Crossbar Design for ReRAM based Write Variation Inhibition on-chip learning. , 2018, , .		0
48	Study on High-Resistance State Instability of TaOx-Based RRAM. , 2018, , .		0
49	Investigation of Non-Linear Selection Effect on RRAM based Neuromorphic Computing Array with Passive Selective Element. , 2021, , .		0