Wei Wang

List of Publications by Year in descending order

		331259	276539
51	2,871	21	41
papers	citations	h-index	g-index

52	52	52	2924
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Efficient Training of the Memristive Deep Belief Net Immune to Nonâ€Idealities of the Synaptic Devices. Advanced Intelligent Systems, 2022, 4, .	3.3	8
2	Neuromorphic Motion Detection and Orientation Selectivity by Volatile Resistive Switching Memories. Advanced Intelligent Systems, 2021, 3, 2000224.	3.3	45
3	Adaptive Extreme Edge Computing for Wearable Devices. Frontiers in Neuroscience, 2021, 15, 611300.	1.4	67
4	Memristive Crossbar Arrays for Storage and Computing Applications. Advanced Intelligent Systems, 2021, 3, 2100017.	3.3	80
5	Switching Dynamics of Ag-Based Filamentary Volatile Resistive Switching Devicesâ€”Part I: Experimental Characterization. IEEE Transactions on Electron Devices, 2021, 68, 4335-4341.	1.6	28
6	Switching Dynamics of Ag-Based Filamentary Volatile Resistive Switching Devicesâ€”Part II: Mechanism and Modeling. IEEE Transactions on Electron Devices, 2021, 68, 4342-4349.	1.6	22
7	Physical based compact model of Y-Flash memristor for neuromorphic computation. Applied Physics Letters, 2021, 119, 263504.	1.5	8
8	Integration and Co-design of Memristive Devices and Algorithms for Artificial Intelligence. IScience, 2020, 23, 101809.	1.9	49
9	Recent Progress in Synaptic Devices Based on 2D Materials. Advanced Intelligent Systems, 2020, 2, 1900167.	3.3	55
10	Computing of temporal information in spiking neural networks with ReRAM synapses. Faraday Discussions, 2019, 213, 453-469.	1.6	29
11	Volatile Resistive Switching Memory Based on Ag Ion Drift/Diffusion Part I: Numerical Modeling. IEEE Transactions on Electron Devices, 2019, 66, 3795-3801.	1.6	45
12	Volatile Resistive Switching Memory Based on Ag Ion Drift/Diffusionâ€”Part II: Compact Modeling. IEEE Transactions on Electron Devices, 2019, 66, 3802-3808.	1.6	34
13	Synaptic and neuromorphic functions: general discussion. Faraday Discussions, 2019, 213, 553-578.	1.6	2
14	Valence change ReRAMs (VCM) - Experiments and modelling: general discussion. Faraday Discussions, 2019, 213, 259-286.	1.6	2
15	Phase-change memories (PCM) â€“ Experiments and modelling: general discussion. Faraday Discussions, 2019, 213, 393-420.	1.6	7
16	A physical model for dual gate a-InGaZnO thin film transistors based on multiple trapping and release mechanism. Microelectronics Journal, 2019, 86, 1-6.	1.1	1
17	Solving matrix equations in one step with cross-point resistive arrays. Proceedings of the National Academy of Sciences of the United States of America, 2019, 116, 4123-4128.	3.3	169
18	A Volatile RRAM Synapse for Neuromorphic Computing. , 2019, , .		10

#	Article	IF	Citations
19	Modeling of switching speed and retention time in volatile resistive switching memory by ionic drift and diffusion. , 2019, , .		6
20	In-memory solution of linear systems with crosspoint arrays without iterations. , 2019, , .		3
21	Surface diffusion-limited lifetime of silver and copper nanofilaments in resistive switching devices. Nature Communications, 2019, 10, 81.	5.8	204
22	Bulkâ€Like Electrical Properties Induced by Contactâ€Limited Charge Transport in Organic Diodes: Revised Space Charge Limited Current. Advanced Electronic Materials, 2018, 4, 1700493.	2.6	15
23	Breaking the Currentâ€Retention Dilemma in Cationâ€Based Resistive Switching Devices Utilizing Graphene with Controlled Defects. Advanced Materials, 2018, 30, e1705193.	11.1	190
24	An Artificial Neuron Based on a Threshold Switching Memristor. IEEE Electron Device Letters, 2018, 39, 308-311.	2.2	248
25	Physics-based modeling of volatile resistive switching memory (RRAM) for crosspoint selector and neuromorphic computing. , 2018, , .		16
26	Electric field modified Arrhenius description of charge transport in amorphous oxide semiconductor thin film transistors. Physical Review B, 2018, 98, .	1.1	19
27	Learning of spatiotemporal patterns in a spiking neural network with resistive switching synapses. Science Advances, 2018, 4, eaat4752.	4.7	213
28	Enhancing the Matrix Addressing of Flexible Sensory Arrays by a Highly Nonlinear Threshold Switch. Advanced Materials, 2018, 30, e1802516.	11.1	70
29	Resistive Switching: Breaking the Current-Retention Dilemma in Cation-Based Resistive Switching Devices Utilizing Graphene with Controlled Defects (Adv. Mater. 14/2018). Advanced Materials, 2018, 30, 1870100.	11.1	4
30	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.	2.2	131
31	Understanding mobility degeneration mechanism in organic thin-film transistors (OTFT). Chemical Physics Letters, 2017, 681, 36-39.	1.2	5
32	Progress in flexible organic thin-film transistors and integrated circuits. Science Bulletin, 2016, 61, 1081-1096.	4.3	31
33	Flexible Metal Oxide/Graphene Oxide Hybrid Neuromorphic Transistors on Flexible Conducting Graphene Substrates. Advanced Materials, 2016, 28, 5878-5885.	11.1	144
34	Analytical carrier density and quantum capacitance for graphene. Applied Physics Letters, 2016, 108, 013503.	1.5	21
35	Surface-potential-based physical compact model for graphene field effect transistor. Journal of Applied Physics, 2016, 120, .	1.1	13
36	Surface potential measurement on contact resistance of amorphous-InGaZnO thin film transistors by Kelvin probe force microscopy. Applied Physics Letters, 2016, 109, 023509.	1.5	9

#	Article	IF	Citations
37	A hardware neural network for handwritten digits recognition using binary RRAM as synaptic weight element. , 2016, , .		8
38	A new surface potential based physical compact model for GFET in RF applications. , 2015, , .		5
39	Analysis of the contact resistance in amorphous InGaZnO thin film transistors. Applied Physics Letters, 2015, 107, .	1.5	43
40	Contact Length Scaling in Staggered Organic Thin-Film Transistors. IEEE Electron Device Letters, 2015, 36, 609-611.	2.2	6
41	Combining Bottom-Up and Top-Down Segmentation: A Way to Realize High-Performance Organic Circuit. IEEE Electron Device Letters, 2015, 36, 684-686.	2.2	6
42	Universal description of exciton diffusion length in organic photovoltaic cell. Organic Electronics, 2015, 23, 53-56.	1.4	12
43	Analysis of the temperature dependent contact resistance in amorphous InGaZnO thin film transistors. , 2015, , .		3
44	A Surface Potential-Based Gate-Leakage Current Model for Organic Thin-Film Transistors. IEEE Transactions on Electron Devices, 2015, 62, 4225-4230.	1.6	2
45	Monte Carlo simulation of the dynamic charge hopping transport in organic thin film transistors. , 2015, , .		1
46	An Improved Cut-Off Frequency Model With a Modified Small-Signal Equivalent Circuit in Graphene Field-Effect Transistors. IEEE Electron Device Letters, 2015, 36, 1351-1354.	2.2	5
47	Origin of mobility degeneration at high gate bias in organic thin film transistors based on carriers' freeze to surface charges. , 2015, , .		0
48	An organic rectifier diode based on poly-pyrrole (PPy) electrode. , 2014, , .		2
49	Modified Transmission Line Model for Bottom-Contact Organic Transistors. IEEE Electron Device Letters, 2013, 34, 1301-1303.	2.2	19
50	Controllable Growth of Nanoscale Conductive Filaments in Solid-Electrolyte-Based ReRAM by Using a Metal Nanocrystal Covered Bottom Electrode. ACS Nano, 2010, 4, 6162-6168.	7.3	426
51	A Continuous, Analytic Drain-Current Model for DG MOSFETs. IEEE Electron Device Letters, 2004, 25, 107-109.	2.2	330