Wei Dong Zhang

List of Publications by Year in Descending Order

58 papers	1,022 citations	17 h-index	30 g-index
75 ext. papers	1,325 ext. citations	3.2 avg, IF	4.03 L-index

#	Paper	IF	Citations
58	Tailoring the synaptic properties of a-IGZO memristors for artificial deep neural networks. *APL Materials*, **2022**, 10, 011113	5.7	6
57	Impact of relaxation on the performance of GeSe true random number generator based on Ovonic threshold switching. *IEEE Electron Device Letters*, **2022**, 1-1	4.4	0
56	An Integral Methodology for Predicting Long-Term RTN. *IEEE Transactions on Electron Devices*, **2022**, 1-7	2.9	2
55	General type-2 fuzzy multi-switching synchronization of fractional-order chaotic systems. *Engineering Applications of Artificial Intelligence*, **2021**, 100, 104163	7.2	5
54	On the Accuracy in Modeling the Statistical Distribution of Random Telegraph Noise Amplitude. *IEEE Access*, **2021**, 9, 43551-43561	3.5	4
53	A Comparative Study of AC Positive Bias Temperature Instability of Germanium nMOSFETs With GeO$_2$/Ge and Si-cap/Ge Gate Stack. *IEEE Journal of the Electron Devices Society*, **2021**, 9, 539-544	2.3	
52	Cycling Induced Metastable Degradation in GeSe Ovonic Threshold Switching Selector. *IEEE Electron Device Letters*, **2021**, 42, 1448-1451	4.4	2
51	A robust control of a class of induction motors using rough type-2 fuzzy neural networks. *Soft Computing*, **2020**, 24, 9809-9819	3.5	5
50	GeSe-Based Ovonic Threshold Switching Volatile True Random Number Generator. *IEEE Electron Device Letters*, **2020**, 41, 228-231	4.4	7
49	Stochastic Computing Based on Volatile GeSe Ovonic Threshold Switching Selectors. *IEEE Electron Device Letters*, **2020**, 41, 1496-1499	4.4	2
48	An Assessment of the Statistical Distribution of Random Telegraph Noise Time Constants. *IEEE Access*, **2020**, 8, 182273-182282	3.5	7
47	A Fast Extraction Method of Energy Distribution of Border Traps in AlGaN/GaN MIS-HEMT. *IEEE Journal of the Electron Devices Society*, **2020**, 8, 905-910	2.3	2
46	Committee machines-a universal method to deal with non-idealities in memristor-based neural networks. *Nature Communications*, **2020**, 11, 4273	17.4	20
45	. *IEEE Transactions on Electron Devices*, **2020**, 67, 1924-1930	2.9	4
44	Robust fuzzy control for fractional-order systems with estimated fraction-order. *Nonlinear Dynamics*, **2019**, 98, 2375-2385	5	24
43	RTN in GexSe1-x OTS selector devices. *Microelectronic Engineering*, **2019**, 215, 110990	2.5	3
42	Trigger-When-Charged: A Technique for Directly Measuring RTN and BTI-Induced Threshold Voltage Fluctuation Under Use- ${V}_{dd}$. *IEEE Transactions on Electron Devices*, **2019**, 66, 1482-1488	2.9	7

41	Dependence of Switching Probability on Operation Conditions in GexSe1− Ovonic Threshold Switching Selectors. *IEEE Electron Device Letters*, **2019**, 40, 1269-1272	4.4	15
40	Structural changes during the switching transition of chalcogenide selector devices. *Applied Physics Letters*, **2019**, 115, 163503	3.4	6
39	Dynamic programming strategy based on a type-2 fuzzy wavelet neural network. *Nonlinear Dynamics*, **2019**, 95, 1661-1672	5	24
38	TDDB Mechanism in a-Si/TiO2 Nonfilamentary RRAM Device. *IEEE Transactions on Electron Devices*, **2019**, 66, 777-784	2.9	9
37	Recommended Methods to Study Resistive Switching Devices. *Advanced Electronic Materials*, **2019**, 5, 1800143	6.4	297
36	The Over-Reset Phenomenon in Ta2O5 RRAM Device Investigated by the RTN-Based Defect Probing Technique. *IEEE Electron Device Letters*, **2018**, 39, 955-958	4.4	15
35	Investigation of Preexisting and Generated Defects in Nonfilamentary a-Si/TiO2 RRAM and Their Impacts on RTN Amplitude Distribution. *IEEE Transactions on Electron Devices*, **2018**, 65, 970-977	2.9	11
34	As-grown-Generation Model for Positive Bias Temperature Instability. *IEEE Transactions on Electron Devices*, **2018**, 65, 3662-3668	2.9	12
33	A low-power and high-speed True Random Number Generator using generated RTN **2018**,		13
32	Impact of RTN on Pattern Recognition Accuracy of RRAM-Based Synaptic Neural Network. *IEEE Electron Device Letters*, **2018**, 39, 1652-1655	4.4	25
31	Key Issues and Solutions for Characterizing Hot Carrier Aging of Nanometer Scale nMOSFETs. *IEEE Transactions on Electron Devices*, **2017**, 64, 2478-2484	2.9	14
30	Reliable Time Exponents for Long Term Prediction of Negative Bias Temperature Instability by Extrapolation. *IEEE Transactions on Electron Devices*, **2017**, 64, 1467-1473	2.9	24
29	The role of nitrogen doping in ALD Ta2O5 and its influence on multilevel cell switching in RRAM. *Applied Physics Letters*, **2017**, 110, 102902	3.4	36
28	Enhanced switching stability in Ta2O5 resistive RAM by fluorine doping. *Applied Physics Letters*, **2017**, 111, 092904	3.4	17
27	. *IEEE Transactions on Electron Devices*, **2017**, 64, 4011-4017	2.9	11
26	. *IEEE Access*, **2017**, 5, 20946-20952	3.5	12
25	Probing the Critical Region of Conductive Filament in Nanoscale HfO2 Resistive-Switching Device by Random Telegraph Signals. *IEEE Transactions on Electron Devices*, **2017**, 64, 4099-4105	2.9	9
24	Insight Into Electron Traps and Their Energy Distribution Under Positive Bias Temperature Stress and Hot Carrier Aging. *IEEE Transactions on Electron Devices*, **2016**, 63, 3642-3648	2.9	14

23	Impact of Hot Carrier Aging on Random Telegraph Noise and Within a Device Fluctuation. *IEEE Journal of the Electron Devices Society*, **2016**, 4, 15-21	2.3	5
22	. *IEEE Transactions on Electron Devices*, **2016**, 63, 3830-3836	2.9	5
21	An Investigation on Border Traps in III-V MOSFETs With an In0.53Ga0.47As Channel. *IEEE Transactions on Electron Devices*, **2015**, 62, 3633-3639	2.9	30
20	A Discharge-Based Pulse Technique for Probing the Energy Distribution of Positive Charges in Gate Dielectric. *IEEE Transactions on Semiconductor Manufacturing*, **2015**, 28, 221-226	2.6	2
19	Energy Distribution of Positive Charges in ${rm Al}_{2}{rm O}_{3}{rm GeO}_{2}/{rm Ge}$ pMOSFETs. *IEEE Electron Device Letters*, **2014**, 35, 160-162	4.4	11
18	Evaluation and Solutions for P/E Window Instability Induced by Electron Trapping in High- $kappa$ Intergate Dielectrics of Flash Memory Cells. *IEEE Transactions on Electron Devices*, **2014**, 61, 1299-1306	2.9	0
17	Experimental Evidence Toward Understanding Charge Pumping Signals in 3-D Devices With Poly-Si Channel. *IEEE Transactions on Electron Devices*, **2014**, 61, 1501-1507	2.9	3
16	Development of a Technique for Characterizing Bias Temperature Instability-Induced Device-to-Device Variation at SRAM-Relevant Conditions. *IEEE Transactions on Electron Devices*, **2014**, 61, 3081-3089	2.9	15
15	. *IEEE Transactions on Electron Devices*, **2014**, 61, 1307-1315	2.9	8
14	New Insights Into Defect Loss, Slowdown, and Device Lifetime Enhancement. *IEEE Transactions on Electron Devices*, **2013**, 60, 413-419	2.9	12
13	Energy Distribution of Positive Charges in Gate Dielectric: Probing Technique and Impacts of Different Defects. *IEEE Transactions on Electron Devices*, **2013**, 60, 1745-1753	2.9	31
12	Read and Pass Disturbance in the Programmed States of Floating Gate Flash Memory Cells With High-$kappa$ Interpoly Gate Dielectric Stacks. *IEEE Transactions on Electron Devices*, **2013**, 60, 2261-2267	2.9	3
11	New Analysis Method for Time-Dependent Device-To-Device Variation Accounting for Within-Device Fluctuation. *IEEE Transactions on Electron Devices*, **2013**, 60, 2505-2511	2.9	21
10	. *IEEE Transactions on Electron Devices*, **2012**, 59, 783-790	2.9	5
9	Investigation of Abnormal $V_{rm TH}/V_{rm FB}$ Shifts Under Operating Conditions in Flash Memory Cells With $ hbox{Al}_{2}hbox{O}_{3}$ High-$kappa$ Gate Stacks. *IEEE Transactions on Electron Devices*, **2012**, 59, 1870-1877	2.9	8
8	. *IEEE Transactions on Electron Devices*, **2011**, 58, 1344-1351	2.9	11
7	A Single Pulse Charge Pumping Technique for Fast Measurements of Interface States. *IEEE Transactions on Electron Devices*, **2011**, 58, 1490-1498	2.9	33
6	Energy and Spatial Distributions of Electron Traps Throughout $hbox{SiO}_{2}/hbox{Al}_{2}hbox{O}_{3}$ Stacks as the IPD in Flash Memory Application. *IEEE Transactions on Electron Devices*, **2010**, 57, 288-296	2.9	25

5	A New Multipulse Technique for Probing Electron Trap Energy Distribution in High- $kappa$ Materials for Flash Memory Application. *IEEE Transactions on Electron Devices*, **2010**, 57, 2484-2492	2.9	20
4	Two-Pulse CV$: A New Method for Characterizing Electron Traps in the Bulk of $ hbox{SiO}_{2}/hbox{high-}kappa$ Dielectric Stacks. *IEEE Electron Device Letters*, **2008**, 29, 1043-1046	4.4	46
3	Effects of detrapping on electron traps generated in gate oxides. *Semiconductor Science and Technology*, **2003**, 18, 174-182	1.8	13
2	Two types of neutral electron traps generated in the gate silicon dioxide. *IEEE Transactions on Electron Devices*, **2002**, 49, 1868-1875	2.9	28
1	On the interface states generated under different stress conditions. *Applied Physics Letters*, **2001**, 79, 3092-3094	3.4	20