

Enrique A Miranda

List of Publications by Year in descending order

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271
papers

5,150
citations

136740

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62
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all docs

275
docs citations

275
times ranked

3623
citing authors

#	ARTICLE	IF	CITATIONS
1	Recommended Methods to Study Resistive Switching Devices. <i>Advanced Electronic Materials</i> , 2019, 5, 1800143.	2.6	452
2	Coexistence of Grain Boundaries-Assisted Bipolar and Threshold Resistive Switching in Multilayer Hexagonal Boron Nitride. <i>Advanced Functional Materials</i> , 2017, 27, 1604811.	7.8	229
3	Impact of Temperature on the Resistive Switching Behavior of Embedded HfO_2 -Based RRAM Devices. <i>IEEE Transactions on Electron Devices</i> , 2011, 58, 3124-3131.	1.6	201
4	Model for the Resistive Switching Effect in HfO_2 MIM Structures Based on the Transmission Properties of Narrow Constrictions. <i>IEEE Electron Device Letters</i> , 2010, 31, 609-611.	2.2	166
5	Silicon Oxide (SiO_x): A Promising Material for Resistance Switching?. <i>Advanced Materials</i> , 2018, 30, e1801187.	11.1	156
6	Resistive switching in hafnium dioxide layers: Local phenomenon at grain boundaries. <i>Applied Physics Letters</i> , 2012, 101, .	1.5	152
7	Quantum-size effects in hafnium-oxide resistive switching. <i>Applied Physics Letters</i> , 2013, 102, 183505.	1.5	151
8	Voltage and Power-Controlled Regimes in the Progressive Unipolar RESET Transition of HfO_2 -Based RRAM. <i>Scientific Reports</i> , 2013, 3, 2929.	1.6	135
9	Analytic Model for the Surface Potential and Drain Current in Negative Capacitance Field-Effect Transistors. <i>IEEE Transactions on Electron Devices</i> , 2010, 57, 2405-2409.	1.6	128
10	Standards for the Characterization of Endurance in Resistive Switching Devices. <i>ACS Nano</i> , 2021, 15, 17214-17231.	7.3	128
11	A Model for the Set Statistics of RRAM Inspired in the Percolation Model of Oxide Breakdown. <i>IEEE Electron Device Letters</i> , 2013, 34, 999-1001.	2.2	122
12	Electron transport through broken down ultra-thin SiO_2 layers in MOS devices. <i>Microelectronics Reliability</i> , 2004, 44, 1-23.	0.9	108
13	Soft breakdown conduction in ultrathin (3-5 nm) gate dielectrics. <i>IEEE Transactions on Electron Devices</i> , 2000, 47, 82-89.	1.6	103
14	Cycle-to-Cycle Intrinsic RESET Statistics in HfO_2 -Based Unipolar RRAM Devices. <i>IEEE Electron Device Letters</i> , 2013, 34, 623-625.	2.2	101
15	A function-fit model for the soft breakdown failure mode. <i>IEEE Electron Device Letters</i> , 1999, 20, 265-267.	2.2	76
16	Are soft breakdown and hard breakdown of ultrathin gate oxides actually different failure mechanisms?. <i>IEEE Electron Device Letters</i> , 2000, 21, 167-169.	2.2	65
17	Simulation of thermal reset transitions in resistive switching memories including quantum effects. <i>Journal of Applied Physics</i> , 2014, 115, .	1.1	61
18	Soft breakdown fluctuation events in ultrathin SiO_2 layers. <i>Applied Physics Letters</i> , 1998, 73, 490-492.	1.5	60

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19	Multi-scale quantum point contact model for filamentary conduction in resistive random access memories devices. Journal of Applied Physics, 2014, 115, .	1.1	54
20	Impact of Intercell and Intracell Variability on Forming and Switching Parameters in RRAM Arrays. IEEE Transactions on Electron Devices, 2015, 62, 2502-2509.	1.6	52
21	Model for multi-filamentary conduction in graphene/hexagonal-boron-nitride/graphene based resistive switching devices. 2D Materials, 2017, 4, 025099.	2.0	51
22	A simple drain current model for Schottky-barrier carbon nanotube field effect transistors. Nanotechnology, 2007, 18, 025201.	1.3	50
23	Electrical characterization and modeling of pulse-based forming techniques in RRAM arrays. Solid-State Electronics, 2016, 115, 17-25.	0.8	47
24	The Quantum Point-Contact Memristor. IEEE Electron Device Letters, 2012, 33, 1474-1476.	2.2	46
25	SIM^2RRAM : a physical model for RRAM devices simulation. Journal of Computational Electronics, 2017, 16, 1095-1120.	1.3	45
26	Nonlinear conductance quantization effects in CeOx/SiO2-based resistive switching devices. Applied Physics Letters, 2012, 101, .	1.5	43
27	Set statistics in conductive bridge random access memory device with Cu/HfO2/Pt structure. Applied Physics Letters, 2014, 105, .	1.5	42
28	Compact Model for the Major and Minor Hysteretic V Loops in Nonlinear Memristive Devices. IEEE Nanotechnology Magazine, 2015, 14, 787-789.	1.1	42
29	Modeling the breakdown spots in silicon dioxide films as point contacts. Applied Physics Letters, 1999, 75, 959-961.	1.5	41
30	Point contact conduction at the oxide breakdown of MOS devices. , 0, , .		40
31	On the Thermal Models for Resistive Random Access Memory Circuit Simulation. Nanomaterials, 2021, 11, 1261.	1.9	39
32	n-Monotone exact functionals. Journal of Mathematical Analysis and Applications, 2008, 347, 143-156.	0.5	37
33	On the role of Ti adlayers for resistive switching in HfO2-based metal-insulator-metal structures: Top versus bottom electrode integration. Journal of Vacuum Science and Technology B: Nanotechnology and Microelectronics, 2011, 29, 01AD02.	0.6	37
34	Analytic modeling of leakage current through multiple breakdown paths in SiO/sub 2/ films. , 0, , .		34
35	Impact of the precursor chemistry and process conditions on the cell-to-cell variability in 1T-1R based HfO2 RRAM devices. Scientific Reports, 2018, 8, 11160.	1.6	33
36	A comprehensive analysis on progressive reset transitions in RRAMs. Journal Physics D: Applied Physics, 2014, 47, 205102.	1.3	31

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37	Voltage-Driven Hysteresis Model for Resistive Switching: SPICE Modeling and Circuit Applications. IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems, 2017, 36, 2044-2051.	1.9	31
38	Quantum Conductance in Memristive Devices: Fundamentals, Developments, and Applications. Advanced Materials, 2022, 34, e2201248.	11.1	31
39	Atomic layer deposited (TiO ₂) _x (Al ₂ O ₃) _{1-x} /In _{0.53} Ga _{0.47} As gate stacks for III-V based metal-oxide-semiconductor field-effect transistor applications. Applied Physics Letters, 2012, 100, 062905.	1.5	30
40	Resistive switching in CeO ₂ /La _{0.8} Sr _{0.2} MnO ₃ bilayer for non-volatile memory applications. Microelectronic Engineering, 2015, 147, 37-40.	1.1	30
41	Memristors for Neuromorphic Circuits and Artificial Intelligence Applications. Materials, 2020, 13, 938.	1.3	29
42	Model for the voltage and temperature dependence of the soft breakdown current in ultrathin gate oxides. Journal of Applied Physics, 2005, 97, 014104.	1.1	27
43	Volume Resistive Switching in metallic perovskite oxides driven by the Metal-Insulator Transition. Journal of Electroceramics, 2017, 39, 185-196.	0.8	26
44	Analysis and simulation of the multiple resistive switching modes occurring in HfO ₂ -based resistive random access memories using memdiodes. Journal of Applied Physics, 2019, 125, .	1.1	26
45	Detection and fitting of the soft breakdown failure mode in MOS structures. Solid-State Electronics, 1999, 43, 1801-1805.	0.8	24
46	Resistive Switching with Self-Rectifying Tunability and Influence of the Oxide Layer Thickness in Ni/HfO ₂ /n ⁺ -Si RRAM Devices. IEEE Transactions on Electron Devices, 2017, 64, 3159-3166.	1.6	24
47	Multivariate analysis and extraction of parameters in resistive RAMs using the Quantum Point Contact model. Journal of Applied Physics, 2018, 123, .	1.1	22
48	Experimental study of the series resistance effect and its impact on the compact modeling of the conduction characteristics of HfO ₂ -based resistive switching memories. Journal of Applied Physics, 2021, 130, .	1.1	22
49	Degradation of high-K LA2O3 gate dielectrics using progressive electrical stress. Microelectronics Reliability, 2005, 45, 1365-1369.	0.9	21
50	Equivalent circuit modeling of the bistable conduction characteristics in electroformed thin dielectric films. Microelectronics Reliability, 2015, 55, 1-14.	0.9	21
51	Soft Breakdown in Ultrathin SiO ₂ Layers: the Conduction Problem from a New Point of View. Japanese Journal of Applied Physics, 1999, 38, 2223-2226.	0.8	20
52	Monitoring the degradation that causes the breakdown of ultrathin (<5 nm) SiO ₂ gate oxides. IEEE Electron Device Letters, 2000, 21, 251-253.	2.2	20
53	Failure physics of ultra-thin SiO ₂ gate oxides near their scaling limit. Semiconductor Science and Technology, 2000, 15, 445-454.	1.0	20
54	Multilevel recording in Bi-deficient Pt/BFO/SRO heterostructures based on ferroelectric resistive switching targeting high-density information storage in nonvolatile memories. Applied Physics Letters, 2013, 103, .	1.5	20

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55	Relationship among Current Fluctuations during Forming, Cell-To-Cell Variability and Reliability in RRAM Arrays. , 2015, , .		20
56	Investigation on the Conductive Filament Growth Dynamics in Resistive Switching Memory via a Universal Monte Carlo Simulator. Scientific Reports, 2017, 7, 11204.	1.6	20
57	Switching Voltage and Time Statistics of Filamentary Conductive Paths in HfO ₂ -Based ReRAM Devices. IEEE Electron Device Letters, 2018, 39, 656-659.	2.2	20
58	Tailoring the Switching Dynamics in Yttrium Oxide-Based RRAM Devices by Oxygen Engineering: From Digital to Multi-Level Quantization toward Analog Switching. Advanced Electronic Materials, 2020, 6, 2000439.	2.6	20
59	Modeling of Short-Term Synaptic Plasticity Effects in ZnO Nanowire-Based Memristors Using a Potentiation-Depression Rate Balance Equation. IEEE Nanotechnology Magazine, 2020, 19, 609-612.	1.1	20
60	SPICE Implementation of the Dynamic Memdiode Model for Bipolar Resistive Switching Devices. Micromachines, 2022, 13, 330.	1.4	20
61	Effects of Ti incorporation on the interface properties and band alignment of HfTaOx thin films on sulfur passivated GaAs. Applied Physics Letters, 2011, 98, 022901.	1.5	19
62	Multi-channel conduction in redox-based resistive switch modelled using quantum point contact theory. Applied Physics Letters, 2013, 103, .	1.5	19
63	Application of the Quasi-Static Memdiode Model in Cross-Point Arrays for Large Dataset Pattern Recognition. IEEE Access, 2020, 8, 202174-202193.	2.6	19
64	Connectome of memristive nanowire networks through graph theory. Neural Networks, 2022, 150, 137-148.	3.3	19
65	Post soft breakdown conduction in SiO ₂ / gate oxides. , 0, , .		18
66	Effects of high-field electrical stress on the conduction properties of ultrathin La ₂ O ₃ films. Applied Physics Letters, 2005, 86, 232104.	1.5	18
67	Formation and Characterization of Filamentary Current Paths in HfO ₂ -Based Resistive Switching Structures. IEEE Electron Device Letters, 2012, 33, 1057-1059.	2.2	18
68	Modeling of the Hysteretic $I-V$ Characteristics of $m\text{TiO}_2$ -Based Resistive Switches Using the Generalized Diode Equation. IEEE Electron Device Letters, 2014, 35, 390-392.	2.2	18
69	Characterization of HfO ₂ -based devices with indication of second order memristor effects. Microelectronic Engineering, 2018, 195, 101-106.	1.1	18
70	Mesoscopic approach to the soft breakdown failure mode in ultrathin SiO ₂ films. Applied Physics Letters, 2001, 78, 225-227.	1.5	17
71	Post-radiation-induced soft breakdown conduction properties as a function of temperature. Applied Physics Letters, 2001, 79, 1336-1338.	1.5	17
72	A diodelike conduction model for the postbreakdown current in metal-oxide-semiconductor structures. Journal of Applied Physics, 2004, 96, 6940-6942.	1.1	17

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73	Initial leakage current related to extrinsic breakdown in HfO ₂ /Al ₂ O ₃ nanolaminate ALD dielectrics. Microelectronic Engineering, 2011, 88, 1380-1383.	1.1	17
74	Statistical model for radiation-induced wear-out of ultra-thin gate oxides after exposure to heavy ion irradiation. IEEE Transactions on Nuclear Science, 2003, 50, 2167-2175.	1.2	16
75	Statistical characteristics of reset switching in Cu/HfO ₂ /Pt resistive switching memory. Nanoscale Research Letters, 2014, 9, 2500.	3.1	16
76	A physical compact DC drain current model for long-channel undoped ultra-thin body (UTB) SOI and asymmetric double-gate (DG) MOSFETs with independent gate operation. Solid-State Electronics, 2011, 57, 61-66.	0.8	15
77	Modeling the breakdown statistics of Al ₂ O ₃ /HfO ₂ nanolaminates grown by atomic-layer-deposition. Solid-State Electronics, 2012, 71, 48-52.	0.8	15
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.	2.2	15
79	Study From Cryogenic to High Temperatures of the High- and Low-Resistance-State Currents of ReRAM Ni ²⁺ /HfO ₂ /Si Capacitors. IEEE Transactions on Electron Devices, 2016, 63, 1877-1883.	1.6	15
80	Effect of the voltage ramp rate on the set and reset voltages of ReRAM devices. Microelectronic Engineering, 2017, 178, 61-65.	1.1	15
81	Analysis and control of the intermediate memory states of RRAM devices by means of admittance parameters. Journal of Applied Physics, 2018, 124, .	1.1	15
82	Switching behavior of the soft breakdown conduction characteristic in ultra-thin (<5 nm) oxide MOS capacitors. , 1998, , .		14
83	A strong analogy between the dielectric breakdown of high-K gate stacks and the progressive breakdown of ultrathin oxides. Journal of Applied Physics, 2011, 109, 124115.	1.1	14
84	DC and low-frequency noise behavior of the conductive filament in bipolar HfO ₂ -based resistive random access memory. Microelectronic Engineering, 2013, 107, 1-5.	1.1	14
85	Threshold Switching and Conductance Quantization in Al/HfO ₂ /Si(p) Structures. Japanese Journal of Applied Physics, 2013, 52, 04CD06.	0.8	14
86	Memristive State Equation for Bipolar Resistive Switching Devices Based on a Dynamic Balance Model and Its Equivalent Circuit Representation. IEEE Nanotechnology Magazine, 2020, 19, 837-840.	1.1	14
87	Analysis of the degradation and breakdown of thin SiO ₂ films under static and dynamic tests using a two-step stress procedure. IEEE Transactions on Electron Devices, 2000, 47, 2138-2145.	1.6	13
88	BREAKDOWN MODES AND BREAKDOWN STATISTICS OF ULTRATHIN SiO ₂ GATE OXIDES. International Journal of High Speed Electronics and Systems, 2001, 11, 789-848.	0.3	13
89	Degradation dynamics of ultrathin gate oxides subjected to electrical stress. IEEE Electron Device Letters, 2003, 24, 604-606.	2.2	13
90	Effects of the electrical stress on the conduction characteristics of metal gate/MgO/InP stacks. Microelectronics Reliability, 2009, 49, 1052-1055.	0.9	13

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91	(Invited) Elucidating the Origin of Resistive Switching in Ultrathin Hafnium Oxides through High Spatial Resolution Tools. ECS Transactions, 2014, 64, 19-28.	0.3	13
92	Modeling of hysteretic Schottky diode-like conduction in Pt/BiFeO ₃ /SrRuO ₃ switches. Applied Physics Letters, 2014, 105, .	1.5	13
93	Temperature and polarity dependence of the switching behavior of Ni/HfO ₂ -based RRAM devices. Microelectronic Engineering, 2015, 147, 75-78.	1.1	13
94	Analysis on the Filament Structure Evolution in Reset Transition of Cu/HfO ₂ /Pt RRAM Device. Nanoscale Research Letters, 2016, 11, 269.	3.1	13
95	Study of the admittance hysteresis cycles in TiN/Ti/HfO ₂ /W-based RRAM devices. Microelectronic Engineering, 2017, 178, 30-33.	1.1	13
96	Comparative study of the breakdown transients of thin Al ₂ O ₃ and HfO ₂ films in MIM structures and their connection with the thermal properties of materials. Journal of Applied Physics, 2017, 121, 094102.	1.1	13
97	Compact Modeling of the I-V Characteristics of ZnO Nanowires Including Nonlinear Series Resistance Effects. IEEE Nanotechnology Magazine, 2020, 19, 297-300.	1.1	13
98	A New Perspective Towards the Understanding of the Frequency-Dependent Behavior of Memristive Devices. IEEE Electron Device Letters, 2021, 42, 565-568.	2.2	13
99	Method for extracting series resistance in MOS devices using Fowler-Nordheim plot. Electronics Letters, 2004, 40, 1153.	0.5	12
100	Equivalent Circuit Model for the Gate Leakage Current in Broken Down $\text{HfO}_2/\text{TaN/TiN}$ Gate Stacks. IEEE Electron Device Letters, 2008, 29, 1353-1355.	2.2	12
101	An extension of the Curie-von Schweidler law for the leakage current decay in MIS structures including progressive breakdown. Microelectronics Reliability, 2011, 51, 1535-1539.	0.9	12
102	Analytic expression for the Fowler-Nordheim α characteristic including the series resistance effect. Solid-State Electronics, 2011, 61, 93-95.	0.8	12
103	Degradation analysis and characterization of multifilamentary conduction patterns in high-field stressed atomic-layer-deposited TiO ₂ /Al ₂ O ₃ nanolaminates on GaAs. Journal of Applied Physics, 2012, 112, 064113.	1.1	12
104	Study on the Connection Between the Set Transient in RRAMs and the Progressive Breakdown of Thin Oxides. IEEE Transactions on Electron Devices, 2019, 66, 3349-3355.	1.6	12
105	Switching events in the soft breakdown α characteristic of ultra-thin SiO ₂ layers. Microelectronics Reliability, 1999, 39, 161-164.	0.9	11
106	A new approach to analyze the degradation and breakdown of thin SiO ₂ films under static and dynamic electrical stress. IEEE Electron Device Letters, 1999, 20, 317-319.	2.2	11
107	Gate stack insulator breakdown when the interface layer thickness is scaled toward zero. Applied Physics Letters, 2010, 97, .	1.5	11
108	Compact Modeling of Complementary Resistive Switching Devices Using Memdiodes. IEEE Transactions on Electron Devices, 2019, 66, 2831-2836.	1.6	11

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109	Minimization of the Line Resistance Impact on Memdiode-Based Simulations of Multilayer Perceptron Arrays Applied to Pattern Recognition. <i>Journal of Low Power Electronics and Applications</i> , 2021, 11, 9.	1.3	11
110	Relation between defect generation, stress induced leakage current and soft breakdown in thin (<5) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 5	8.9	10
111	Modeling of the $I-V$ characteristics of high-field stressed MOS structures using a Fowler-Nordheim-type tunneling expression. <i>Microelectronics Reliability</i> , 2002, 42, 935-941.	0.9	10
112	Quantum point contact model of filamentary conduction in resistive switching memories. , 2012, , .		10
113	Three-state resistive switching in HfO ₂ -based RRAM. <i>Solid-State Electronics</i> , 2014, 98, 38-44.	0.8	10
114	Experimental Observation of Negative Susceptance in HfO ₂ -Based RRAM Devices. <i>IEEE Electron Device Letters</i> , 2017, 38, 1216-1219.	2.2	10
115	Coherent choice functions, desirability and indifference. <i>Fuzzy Sets and Systems</i> , 2018, 341, 1-36.	1.6	10
116	Nano-Memristors with 4ÅmV Switching Voltage Based on Surface-Modified Copper Nanoparticles. <i>Advanced Materials</i> , 2022, 34, e2201197.	11.1	10
117	A common framework for soft and hard breakdown in ultrathin oxides based on the theory of point contact conduction. <i>Microelectron Engineering</i> , 1999, 48, 171-174.	1.1	9
118	Tunneling in sub-5nm La ₂ O ₃ films deposited by E-beam evaporation. <i>Journal of Non-Crystalline Solids</i> , 2006, 352, 92-97.	1.5	9
119	A simple drain current model for Schottky-barrier carbon nanotube field effect transistors. <i>Nanotechnology</i> , 2007, 18, 419001.	1.3	9
120	Analysis of the breakdown spots spatial distribution in large area MOS structures. , 2010, , .		9
121	Nonhomogeneous spatial distribution of filamentary leakage current paths in circular area Pt/HfO ₂ /Pt capacitors. <i>Journal of Vacuum Science and Technology B: Nanotechnology and Microelectronics</i> , 2013, 31, 01A107.	0.6	9
122	Modeling of the multilevel conduction characteristics and fatigue profile of Ag/La _{1/3} Ca _{2/3} MnO ₃ /Pt structures using a compact memristive approach. <i>Journal of Applied Physics</i> , 2017, 121, .	1.1	9
123	SPICE modeling of cycle-to-cycle variability in RRAM devices. <i>Solid-State Electronics</i> , 2021, 185, 108040.	0.8	9
124	Lexicographic choice functions. <i>International Journal of Approximate Reasoning</i> , 2018, 92, 97-119.	1.9	9
125	An effective-field approach for the Fowler-Nordheim tunneling current through a metal-oxide-semiconductor charged barrier. <i>Journal of Applied Physics</i> , 1997, 82, 1262-1265.	1.1	8
126	Mesoscopic approach to progressive breakdown in ultrathin SiO ₂ layers. <i>Applied Physics Letters</i> , 2007, 91, .	1.5	8

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127	Electrical characterization of the soft breakdown failure mode in MgO layers. Applied Physics Letters, 2009, 95, 012901.	1.5	8
128	Degradation dynamics and breakdown of MgO gate oxides. Microelectronic Engineering, 2009, 86, 1715-1717.	1.1	8
129	Analysis of the breakdown spot spatial distribution in Pt/HfO ₂ /Pt capacitors using nearest neighbor statistics. Journal of Applied Physics, 2013, 114, 154112.	1.1	8
130	Experimental Observation and Mitigation of Dielectric Screening in Hexagonal Boron Nitride Based Resistive Switching Devices. Crystal Research and Technology, 2018, 53, 1800006.	0.6	8
131	Conduction properties of breakdown paths in ultrathin gate oxides. Microelectronics Reliability, 2000, 40, 687-690.	0.9	7
132	Analytic model for the post-breakdown conductance of sub-5-nm SiO ₂ /gate oxides. IEEE Electron Device Letters, 2005, 26, 673-675.	2.2	7
133	Multiple Diode-Like Conduction in Resistive Switching SiO ₂ -Based MIM Devices. IEEE Nanotechnology Magazine, 2015, 14, 15-17.	1.1	7
134	Identification of the generation/rupture mechanism of filamentary conductive paths in ReRAM devices using oxide failure analysis. Microelectronics Reliability, 2017, 76-77, 178-183.	0.9	7
135	Exploratory study and application of the angular wavelet analysis for assessing the spatial distribution of breakdown spots in Pt/HfO ₂ /Pt structures. Journal of Applied Physics, 2017, 122, 215304.	1.1	7
136	Simulation of Cycle-to-Cycle Instabilities in SiO _x -Based ReRAM Devices Using a Self-Correlated Process with Long-Term Variation. IEEE Electron Device Letters, 2018, , 1-1.	2.2	7
137	Breakdown and anti-breakdown events in high-field stressed ultrathin gate oxides. Solid-State Electronics, 2001, 45, 1327-1332.	0.8	6
138	A drain current model for Schottky-barrier CNT-FETs. Journal of Computational Electronics, 2007, 5, 361-364.	1.3	6
139	Soft breakdown in MgO dielectric layers. , 2009, , .		6
140	Porosity enhancement by the utilization of screening patterns in electro-perforated paper webs. Journal of Electrostatics, 2010, 68, 196-199.	1.0	6
141	Modeling of the switching I-V characteristics in ultrathin (5 nm) atomic layer deposited HfO ₂ films using the logistic hysteron. Journal of Vacuum Science and Technology B: Nanotechnology and Microelectronics, 2015, 33, 01A102.	0.6	6
142	A thorough investigation of the progressive reset dynamics in HfO ₂ -based resistive switching structures. Applied Physics Letters, 2015, 107, 113507.	1.5	6
143	Equivalent circuit model for the electron transport in 2D resistive switching material systems. , 2017, , .		6
144	SPICE simulation of memristive circuits based on memdiodes with sigmoidal threshold functions. International Journal of Circuit Theory and Applications, 2018, 46, 39-49.	1.3	6

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145	Device variability tolerance of a RRAM-based self-organizing neuromorphic system. , 2018, , .		6
146	SPICE model for the current-voltage characteristic of resistive switching devices including the snapback effect. Microelectronic Engineering, 2019, 215, 110998.	1.1	6
147	Modeling of the temperature effects in filamentary-type resistive switching memories using quantum point-contact theory. Journal Physics D: Applied Physics, 2020, 53, 295106.	1.3	6
148	Application of the Clustering Model to Time-Correlated Oxide Breakdown Events in Multilevel Antifuse Memory Cells. IEEE Electron Device Letters, 2020, 41, 1770-1773.	2.2	6
149	Soft breakdown in irradiated high- $\hat{\text{I}}^{\text{q}}$ nanolaminates. Microelectronic Engineering, 2011, 88, 1425-1427.	1.1	5
150	Stress Conditions to Study the Reliability Characteristics of High-k Nanolaminates. ECS Transactions, 2012, 49, 161-168.	0.3	5
151	Compact analytical models for the SET and RESET switching statistics of RRAM inspired in the cell-based percolation model of gate dielectric breakdown. , 2013, , .		5
152	Failure Analysis of MIM and MIS Structures Using Point-to-Event Distance and Angular Probability Distributions. IEEE Transactions on Device and Materials Reliability, 2014, 14, 1080-1090.	1.5	5
153	Assessing the spatial correlation and conduction state of breakdown spot patterns in Pt/HfO ₂ /Pt structures using transient infrared thermography. Journal of Applied Physics, 2014, 115, 174502.	1.1	5
154	SPICE Simulation of RRAM-Based Cross-Point Arrays Using the Dynamic Memdiode Model. Frontiers in Physics, 2021, 9, .	1.0	5
155	Two-step stress methodology for monitoring the gate oxide degradation in MOS devices. Solid-State Electronics, 2001, 45, 1317-1325.	0.8	4
156	BREAKDOWN MODES AND BREAKDOWN STATISTICS OF ULTRATHIN SiO_2 GATE OXIDES. Selected Topics in Electornics and Systems, 2002, , 173-232.	0.2	4
157	Stochastic modeling of progressive breakdown in ultrathin SiO ₂ films. Applied Physics Letters, 2003, 83, 5014-5016.	1.5	4
158	Single-equation model for low and high voltage soft breakdown conduction. Microelectronics Reliability, 2004, 44, 163-166.	0.9	4
159	Electron transport through electrically induced nanoconstrictions in HfSiON gate stacks. Applied Physics Letters, 2008, 92, 253505.	1.5	4
160	Modeling of the Tunneling Current in MOS Devices After Proton Irradiation Using a Nonlinear Series Resistance Correction. IEEE Transactions on Nuclear Science, 2011, 58, 770-775.	1.2	4
161	From dielectric failure to memory function: Learning from oxide breakdown for improved understanding of resistive switching memories. , 2011, , .		4
162	Mesoscopic nature of the electron transport in electroformed metal-insulator-metal switches. Journal of Vacuum Science and Technology B:Nanotechnology and Microelectronics, 2011, 29, 01AD05.	0.6	4

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163	On the properties of conducting filament in ReRAM. , 2014, , .		4
164	Model for the Currentâ€“Voltage Characteristic of Resistive Switches Based on Recursive Hysteretic Operators. IEEE Electron Device Letters, 2015, 36, 944-946.	2.2	4
165	Resistive Switching: Coexistence of Grainâ€“Boundariesâ€“Assisted Bipolar and Threshold Resistive Switching in Multilayer Hexagonal Boron Nitride (Adv. Funct. Mater. 10/2017). Advanced Functional Materials, 2017, 27, .	7.8	4
166	Spatial analysis of failure sites in large area MIM capacitors using wavelets. Microelectronic Engineering, 2017, 178, 10-16.	1.1	4
167	SPICE simulation of 1T1R structures based on a logistic hysteresis operator. , 2017, , .		4
168	A new method for estimating the conductive filament temperature in OxRAM devices based on escape rate theory. Microelectronics Reliability, 2018, 88-90, 142-146.	0.9	4
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