

# Stephan Menzel

## List of Publications by Year in Descending Order

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

150  
papers

3,913  
citations

33  
h-index

58  
g-index

170  
ext. papers

4,839  
ext. citations

5.7  
avg. IF

5.75  
L-index

#	Paper	IF	Citations
150	MNEMOSENE: Tile Architecture and Simulator for Memristor-based Computation-in-memory. <i>ACM Journal on Emerging Technologies in Computing Systems</i> , <b>2022</b> , 18, 1-24	1.7	1
149	Towards Simplified Physics-based Memristor Modeling of Valence Change Mechanism Devices. <i>IEEE Transactions on Circuits and Systems II: Express Briefs</i> , <b>2022</b> , 1-1	3.5	3
148	Application of the Quantum-Point-Contact Formalism to Model the Filamentary Conduction in Ta 2 O. <i>Physical Review Applied</i> , <b>2022</b> , 17,	4.3	2
147	A Voltage-Controlled, Oscillation-Based ADC Design for Computation-in-Memory Architectures Using Emerging ReRAMs. <i>ACM Journal on Emerging Technologies in Computing Systems</i> , <b>2022</b> , 18, 1-25	1.7	1
146	Oxygen Diffusion in Platinum Electrodes: A Molecular Dynamics Study of the Role of Extended Defects. <i>Advanced Materials Interfaces</i> , <b>2022</b> , 9, 2101257	4.6	0
145	Standards for the Characterization of Endurance in Resistive Switching Devices. <i>ACS Nano</i> , <b>2021</b> ,	16.7	36
144	A Consistent Model for Short-Term Instability and Long-Term Retention in Filamentary Oxide-Based Memristive Devices. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2021</b> , 13, 58066-58075	9.5	2
143	Review of Manufacturing Process Defects and Their Effects on Memristive Devices. <i>Journal of Electronic Testing: Theory and Applications (JETTA)</i> , <b>2021</b> , 37, 427	0.7	1
142	Impact of the Ohmic Electrode on the Endurance of Oxide-Based Resistive Switching Memory. <i>IEEE Transactions on Electron Devices</i> , <b>2021</b> , 68, 1024-1030	2.9	12
141	Utilizing the Switching Stochasticity of HfO/TiO-Based ReRAM Devices and the Concept of Multiple Device Synapses for the Classification of Overlapping and Noisy Patterns. <i>Frontiers in Neuroscience</i> , <b>2021</b> , 15, 661856	5.1	8
140	Trade-Off Between Data Retention and Switching Speed in Resistive Switching ReRAM Devices. <i>Advanced Electronic Materials</i> , <b>2021</b> , 7, 2000815	6.4	10
139	Comments on Experimental Demonstration of Memristor-Aided Logic (MAGIC) Using Valence Change Memory (VCM) <i>IEEE Transactions on Electron Devices</i> , <b>2021</b> , 1-1	2.9	
138	Theory and experimental verification of configurable computing with stochastic memristors. <i>Scientific Reports</i> , <b>2021</b> , 11, 4218	4.9	4
137	Comprehensive Model of Electron Conduction in Oxide-Based Memristive Devices. <i>ACS Applied Electronic Materials</i> , <b>2021</b> , 3, 3674-3692	4	9
136	Determining the Electrical Charging Speed Limit of ReRAM Devices. <i>IEEE Journal of the Electron Devices Society</i> , <b>2021</b> , 9, 667-678	2.3	1
135	Intrinsic RESET Speed Limit of Valence Change Memories. <i>ACS Applied Electronic Materials</i> , <b>2021</b> , 3, 5563-5572	3	3
134	Study of the SET switching event of VCM-based memories on a picosecond timescale. <i>Journal of Applied Physics</i> , <b>2020</b> , 127, 204501	2.5	8

133	Statistical Modeling and Understanding of HRS Retention in 2.5 Mb HfO <sub>2</sub> based ReRAM <b>2020</b> ,		4
132	Studying the switching variability in redox-based resistive switching devices. <i>Journal of Computational Electronics</i> , <b>2020</b> , 19, 1426-1432	1.8	4
131	Resistive switching memories <b>2020</b> , 17-61		2
130	Experimental Demonstration of Memristor-Aided Logic (MAGIC) Using Valence Change Memory (VCM). <i>IEEE Transactions on Electron Devices</i> , <b>2020</b> , 67, 3115-3122	2.9	26
129	Dynamics of the spatial separation of electrons and mobile oxygen vacancies in oxide heterostructures. <i>Physical Review Materials</i> , <b>2020</b> , 4,	3.2	4
128	Effect of Cationic Interface Defects on Band Alignment and Contact Resistance in Metal/Oxide Heterojunctions. <i>Advanced Electronic Materials</i> , <b>2020</b> , 6, 1900808	6.4	5
127	HRS Instability in Oxide-Based Bipolar Resistive Switching Cells. <i>IEEE Transactions on Electron Devices</i> , <b>2020</b> , 67, 4208-4215	2.9	13
126	Picosecond multilevel resistive switching in tantalum oxide thin films. <i>Scientific Reports</i> , <b>2020</b> , 10, 16391	4.9	15
125	Comprehensive model for the electronic transport in Pt/SrTiO <sub>3</sub> analog memristive devices. <i>Physical Review B</i> , <b>2020</b> , 102,	3.3	7
124	Variability-Aware Modeling of Filamentary Oxide-Based Bipolar Resistive Switching Cells Using SPICE Level Compact Models. <i>IEEE Transactions on Circuits and Systems I: Regular Papers</i> , <b>2020</b> , 67, 4618-4630	2.9	17
123	In-Memory Binary Vector-Matrix Multiplication Based on Complementary Resistive Switches. <i>Advanced Intelligent Systems</i> , <b>2020</b> , 2, 2000134	6	3
122	Compact Modelling of Resistive Switching Devices based on the Valence Change Mechanism <b>2019</b> ,		2
121	Metallic filamentary conduction in valence change-based resistive switching devices: the case of TaO thin film with $x \sim 1$ . <i>Nanoscale</i> , <b>2019</b> , 11, 16978-16990	7.7	10
120	Exploiting the switching dynamics of HfO <sub>2</sub> -based ReRAM devices for reliable analog memristive behavior. <i>APL Materials</i> , <b>2019</b> , 7, 091105	5.7	37
119	Analyses of a 1-layer neuromorphic network using memristive devices with non-continuous resistance levels. <i>APL Materials</i> , <b>2019</b> , 7, 091110	5.7	4
118	Spectroscopic elucidation of ionic motion processes in tunnel oxide-based memristive devices. <i>Faraday Discussions</i> , <b>2019</b> , 213, 215-230	3.6	4
117	The ultimate switching speed limit of redox-based resistive switching devices. <i>Faraday Discussions</i> , <b>2019</b> , 213, 197-213	3.6	27
116	Compact Modeling of Complementary Switching in Oxide-Based ReRAM Devices. <i>IEEE Transactions on Electron Devices</i> , <b>2019</b> , 66, 1268-1275	2.9	22

115	Memristive Device Modeling and Circuit Design Exploration for Computation-in-Memory <b>2019</b> ,		12
114	Towards Oxide Electronics: a Roadmap. <i>Applied Surface Science</i> , <b>2019</b> , 482, 1-93	6.7	160
113	An atomistic view on the Schottky barrier lowering applied to SrTiO <sub>3</sub> /Pt contacts. <i>AIP Advances</i> , <b>2019</b> , 9, 045116	1.5	7
112	Current channeling along extended defects during electroreduction of SrTiO. <i>Scientific Reports</i> , <b>2019</b> , 9, 2502	4.9	14
111	Introduction to new memory paradigms: memristive phenomena and neuromorphic applications. <i>Faraday Discussions</i> , <b>2019</b> , 213, 11-27	3.6	17
110	On the universality of the I-V switching characteristics in non-volatile and volatile resistive switching oxides. <i>Faraday Discussions</i> , <b>2019</b> , 213, 183-196	3.6	13
109	Switching Speed Analysis and Controlled Oscillatory Behavior of a Cr-Doped V <sub>2</sub> O <sub>3</sub> Threshold Switching Device for Memory Selector and Neuromorphic Computing Application <b>2019</b> ,		2
108	Mechanism of memristive switching in OxRAM <b>2019</b> , 137-170		5
107	Stateful Three-Input Logic with Memristive Switches. <i>Scientific Reports</i> , <b>2019</b> , 9, 14618	4.9	31
106	Sklansky tree adder realization in 1S1R resistive switching memory architecture. <i>European Physical Journal: Special Topics</i> , <b>2019</b> , 228, 2269-2285	2.3	10
105	In-Gap States and Band-Like Transport in Memristive Devices. <i>Nano Letters</i> , <b>2019</b> , 19, 54-60	11.5	19
104	ReRAM: Role of the Electrode Material on the RESET Limitation in Oxide ReRAM Devices (Adv. Electron. Mater. 2/2018). <i>Advanced Electronic Materials</i> , <b>2018</b> , 4, 1870011	6.4	1
103	Role of the Electrode Material on the RESET Limitation in Oxide ReRAM Devices. <i>Advanced Electronic Materials</i> , <b>2018</b> , 4, 1700243	6.4	17
102	Kogge-Stone Adder Realization using 1S1R Resistive Switching Crossbar Arrays. <i>ACM Journal on Emerging Technologies in Computing Systems</i> , <b>2018</b> , 14, 1-14	1.7	2
101	Improved Switching Stability and the Effect of an Internal Series Resistor in HfO <sub>2</sub> /TiO <sub>x</sub> Bilayer ReRAM Cells. <i>IEEE Transactions on Electron Devices</i> , <b>2018</b> , 65, 3229-3236	2.9	53
100	Understanding the Coexistence of Two Bipolar Resistive Switching Modes with Opposite Polarity in Pt/TiO/Ti/Pt Nanosized ReRAM Devices. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2018</b> , 10, 29766-29778	9.5	44
99	Exploring the Dynamics of Real-World Memristors on the Basis of Circuit Theoretic Model Predictions. <i>IEEE Circuits and Systems Magazine</i> , <b>2018</b> , 18, 48-76	3.2	10
98	A Theoretical and Experimental View on the Temperature Dependence of the Electronic Conduction through a Schottky Barrier in a Resistively Switching SrTiO <sub>3</sub> -Based Memory Cell. <i>Advanced Electronic Materials</i> , <b>2018</b> , 4, 1800062	6.4	24

97	Oxygen Exchange Processes between Oxide Memristive Devices and Water Molecules. <i>Advanced Materials</i> , <b>2018</b> , 30, e1800957	24	41
96	Requirements and Challenges for Modelling Redox-based Memristive Devices <b>2018</b> ,		8
95	Field-enhanced route to generating anti-Frenkel pairs in HfO <sub>2</sub> . <i>Physical Review Materials</i> , <b>2018</b> , 2,	3.2	23
94	Atomistic Investigation of the Schottky Contact Conductance Limits at SrTiO <sub>3</sub> based Resistive Switching Devices <b>2018</b> ,		1
93	<b>2018</b> ,		5
92	The influence of interfacial (sub)oxide layers on the properties of pristine resistive switching devices <b>2018</b> ,		2
91	Field-Driven Hopping Transport of Oxygen Vacancies in Memristive Oxide Switches with Interface-Mediated Resistive Switching. <i>Physical Review Applied</i> , <b>2018</b> , 10,	4.3	17
90	KMC Simulation of the Electroforming, Set and Reset Processes in Redox-Based Resistive Switching Devices. <i>IEEE Nanotechnology Magazine</i> , <b>2018</b> , 17, 1181-1188	2.6	13
89	Crossover From Deterministic to Stochastic Nature of Resistive-Switching Statistics in a Tantalum Oxide Thin Film. <i>IEEE Transactions on Electron Devices</i> , <b>2018</b> , 65, 4320-4325	2.9	8
88	Correlation between the transport mechanisms in conductive filaments inside Ta <sub>2</sub> O <sub>5</sub> -based resistive switching devices and in substoichiometric TaO <sub>x</sub> thin films. <i>Applied Physics Letters</i> , <b>2018</b> , 112, 213504	3.4	12
87	3-bit Resistive RAM Write-Read Scheme Based on Complementary Switching Mechanism. <i>IEEE Electron Device Letters</i> , <b>2017</b> , 38, 449-452	4.4	17
86	SET kinetics of electrochemical metallization cells: influence of counter-electrodes in SiO/Ag based systems. <i>Nanotechnology</i> , <b>2017</b> , 28, 135205	3.4	37
85	Anomalous Resistance Hysteresis in Oxide ReRAM: Oxygen Evolution and Reincorporation Revealed by In Situ TEM. <i>Advanced Materials</i> , <b>2017</b> , 29, 1700212	24	129
84	Pulse wake-up and breakdown investigation of ferroelectric yttrium doped HfO <sub>2</sub> . <i>Journal of Applied Physics</i> , <b>2017</b> , 121, 154102	2.5	37
83	Overcoming the RESET Limitation in Tantalum Oxide-Based ReRAM Using an Oxygen-Blocking Layer <b>2017</b> ,		1
82	Spectroscopic Indications of Tunnel Barrier Charging as the Switching Mechanism in Memristive Devices. <i>Advanced Functional Materials</i> , <b>2017</b> , 27, 1702282	15.6	20
81	Volatile HRS asymmetry and subloops in resistive switching oxides. <i>Nanoscale</i> , <b>2017</b> , 9, 14414-14422	7.7	8
80	Comprehensive modeling of electrochemical metallization memory cells. <i>Journal of Computational Electronics</i> , <b>2017</b> , 16, 1017-1037	1.8	15

79	Design rules for threshold switches based on a field triggered thermal runaway mechanism. <i>Journal of Computational Electronics</i> , <b>2017</b> , 16, 1175-1185	1.8	7
78	Investigation of the Impact of High Temperatures on the Switching Kinetics of Redox-Based Resistive Switching Cells using a High-Speed Nanoheater. <i>Advanced Electronic Materials</i> , <b>2017</b> , 3, 1700294	6.4	26
77	Subfilamentary Networks Cause Cycle-to-Cycle Variability in Memristive Devices. <i>ACS Nano</i> , <b>2017</b> , 11, 6921-6929	16.7	55
76	Physical modeling of the electroforming process in resistive-switching devices <b>2017</b> ,		8
75	On the origin of the fading memory effect in ReRAMs <b>2017</b> ,		2
74	Kinetic Monte Carlo modeling of the charge transport in a HfO <sub>2</sub> -based ReRAM with a rough anode <b>2017</b> ,		2
73	Thermal effects on the I-V characteristics of filamentary VCM based ReRAM-cells using a nanometer-sized heater <b>2017</b> ,		1
72	Random telegraph noise analysis in redox-based resistive switching devices using KMC simulations <b>2017</b> ,		3
71	Modeling of Complementary Resistive Switches <b>2017</b> , 315-325		
70	Impact of oxygen exchange reaction at the ohmic interface in TaO-based ReRAM devices. <i>Nanoscale</i> , <b>2016</b> , 8, 17774-17781	7.7	92
69	Modeling the VCM- and ECM-Type Switching Kinetics <b>2016</b> , 395-436		2
68	Universal Switching Behavior <b>2016</b> , 317-340		1
67	Quantifying redox-induced Schottky barrier variations in memristive devices via in operando spectromicroscopy with graphene electrodes. <i>Nature Communications</i> , <b>2016</b> , 7, 12398	17.4	68
66	Energy dissipation during pulsed switching of strontium-titanate based resistive switching memory devices <b>2016</b> ,		4
65	KMC simulation of the electroforming, set and reset processes in redox-based resistive switching devices <b>2016</b> ,		3
64	A 2D axisymmetric dynamic drift-diffusion model for numerical simulation of resistive switching phenomena in metal oxides <b>2016</b> ,		10
63	Simulation of threshold switching based on an electric field induced thermal runaway <b>2016</b> ,		3
62	Internal Cell Resistance as the Origin of Abrupt Reset Behavior in HfO <sub>2</sub> -Based Devices Determined from Current Compliance Series <b>2016</b> ,		8

61	3-Bit Multilevel Switching by Deep Reset Phenomenon in Pt/W/TaOX/Pt-ReRAM Devices. <i>IEEE Electron Device Letters</i> , <b>2016</b> , 37, 564-567	4.4	43
60	Resistive Switching Memory: Nanoionic Resistive Switching Memories: On the Physical Nature of the Dynamic Reset Process (Adv. Electron. Mater. 1/2016). <i>Advanced Electronic Materials</i> , <b>2016</b> , 2,	6.4	2
59	Nonlinearity analysis of TaOX redox-based RRAM. <i>Microelectronic Engineering</i> , <b>2016</b> , 154, 38-41	2.5	11
58	Multidimensional Simulation of Threshold Switching in NbO2 Based on an Electric Field Triggered Thermal Runaway Model. <i>Advanced Electronic Materials</i> , <b>2016</b> , 2, 1600169	6.4	73
57	Dependence of the SET switching variability on the initial state in HfOX-based ReRAM. <i>Physica Status Solidi (A) Applications and Materials Science</i> , <b>2016</b> , 213, 316-319	1.6	13
56	The influence of non-stoichiometry on the switching kinetics of strontium-titanate ReRAM devices. <i>Journal of Applied Physics</i> , <b>2016</b> , 120, 244502	2.5	8
55	Uniting Gradual and Abrupt set Processes in Resistive Switching Oxides. <i>Physical Review Applied</i> , <b>2016</b> , 6,	4.3	43
54	Forming-free metal-oxide ReRAM by oxygen ion implantation process <b>2016</b> ,		8
53	Evidence for oxygen vacancies movement during wake-up in ferroelectric hafnium oxide. <i>Applied Physics Letters</i> , <b>2016</b> , 108, 032903	3.4	142
52	Nanoionic Resistive Switching Memories: On the Physical Nature of the Dynamic Reset Process. <i>Advanced Electronic Materials</i> , <b>2016</b> , 2, 1500233	6.4	110
51	Ultrafast switching in Ta2O5-based resistive memories <b>2016</b> ,		6
50	A Complementary Resistive Switch-Based Crossbar Array Adder. <i>IEEE Journal on Emerging and Selected Topics in Circuits and Systems</i> , <b>2015</b> , 5, 64-74	5.2	75
49	Understanding filamentary growth in electrochemical metallization memory cells using kinetic Monte Carlo simulations. <i>Nanoscale</i> , <b>2015</b> , 7, 12673-81	7.7	66
48	Effect of RESET Voltage on Distribution of SET Switching Time of Bipolar Resistive Switching in a Tantalum Oxide Thin Film. <i>IEEE Transactions on Electron Devices</i> , <b>2015</b> , 62, 1561-1567	2.9	21
47	Study of Memristive Associative Capacitive Networks for CAM Applications. <i>IEEE Journal on Emerging and Selected Topics in Circuits and Systems</i> , <b>2015</b> , 5, 153-161	5.2	6
46	Low-current operations in 4F(2)-compatible Ta2O5-based complementary resistive switches. <i>Nanotechnology</i> , <b>2015</b> , 26, 415202	3.4	17
45	The role of the interface reactions in the electroforming of redox-based resistive switching devices using KMC simulations <b>2015</b> ,		7
44	Physical simulation of dynamic resistive switching in metal oxides using a Schottky contact barrier model <b>2015</b> ,		18

43	Processes and Limitations during Filament Formation and Dissolution in GeSx-based ReRAM Memory Cells. <i>Journal of Physical Chemistry C</i> , <b>2015</b> , 119, 18678-18685	3.8	18
42	In-memory adder functionality in 1S1R arrays <b>2015</b> ,		12
41	Critical ReRAM Stack Parameters Controlling Complimentary versus Bipolar Resistive Switching <b>2015</b> ,		9
40	SET and RESET Kinetics of SrTiO <sub>3</sub> -based Resistive Memory Devices. <i>Materials Research Society Symposia Proceedings</i> , <b>2015</b> , 1790, 7-12		4
39	Physics of the Switching Kinetics in Resistive Memories. <i>Advanced Functional Materials</i> , <b>2015</b> , 25, 6306-6325	3.5	187
38	Realization of Boolean Logic Functionality Using Redox-Based Memristive Devices. <i>Advanced Functional Materials</i> , <b>2015</b> , 25, 6414-6423	15.6	109
37	A HfO <sub>2</sub> -Based Complementary Switching Crossbar Adder. <i>Advanced Electronic Materials</i> , <b>2015</b> , 1, 15001384	3.4	43
36	Avalanche-Discharge-Induced Electrical Forming in Tantalum Oxide-Based Metal/Insulator/Metal Structures. <i>Advanced Functional Materials</i> , <b>2015</b> , 25, 7154-7162	15.6	23
35	Modeling of Quantized Conductance Effects in Electrochemical Metallization Cells. <i>IEEE Nanotechnology Magazine</i> , <b>2015</b> , 14, 505-512	2.6	30
34	Determination of the electrostatic potential distribution in Pt/Fe:SrTiO <sub>3</sub> /Nb:SrTiO <sub>3</sub> thin-film structures by electron holography. <i>Scientific Reports</i> , <b>2014</b> , 4, 6975	4.9	24
33	Insights into Nanoscale Electrochemical Reduction in a Memristive Oxide: the Role of Three-Phase Boundaries. <i>Advanced Functional Materials</i> , <b>2014</b> , 24, 4466-4472	15.6	43
32	Spectroscopic proof of the correlation between redox-state and charge-carrier transport at the interface of resistively switching Ti/PCMO devices. <i>Advanced Materials</i> , <b>2014</b> , 26, 2730-5	24	73
31	Interrelation of Sweep and Pulse Analysis of the SET Process in SrTiO <sub>3</sub> Resistive Switching Memories. <i>IEEE Electron Device Letters</i> , <b>2014</b> , 35, 924-926	4.4	17
30	Simulation and comparison of two sequential logic-in-memory approaches using a dynamic electrochemical metallization cell model. <i>Microelectronics Journal</i> , <b>2014</b> , 45, 1416-1428	1.8	14
29	Applicability of Well-Established Memristive Models for Simulations of Resistive Switching Devices. <i>IEEE Transactions on Circuits and Systems I: Regular Papers</i> , <b>2014</b> , 61, 2402-2410	3.9	66
28	Redox-based Resistive Memory <b>2014</b> , 137-161		3
27	On the SET/RESET current asymmetry in electrochemical metallization memory cells. <i>Physica Status Solidi - Rapid Research Letters</i> , <b>2014</b> , 8, 540-544	2.5	12
26	Origin of the SET Kinetics of the Resistive Switching in Tantalum Oxide Thin Films. <i>IEEE Electron Device Letters</i> , <b>2014</b> , 35, 259-261	4.4	42



25	(Keynote) Atomic Scale and Interface Interactions in Redox-Based Resistive Switching Memories. <i>ECS Transactions</i> , <b>2014</b> , 64, 3-18	1	8
24	Quantum size effects and non-equilibrium states in nanoscale silicon dioxide based resistive switches <b>2014</b> ,		2
23	Statistical modeling of electrochemical metallization memory cells <b>2014</b> ,		4
22	Simulation of TaOx-based complementary resistive switches by a physics-based memristive model <b>2014</b> ,		20
21	3-bit read scheme for single layer Ta2O5 ReRAM <b>2014</b> ,		2
20	Switching kinetics of electrochemical metallization memory cells. <i>Physical Chemistry Chemical Physics</i> , <b>2013</b> , 15, 6945-52	3.6	126
19	Analytical analysis of the generic SET and RESET characteristics of electrochemical metallization memory cells. <i>Nanoscale</i> , <b>2013</b> , 5, 11003-10	7.7	32
18	Energy-efficient redox-based non-volatile memory devices and logic circuits <b>2013</b> ,		4
17	Compact modeling of CRS devices based on ECM cells for memory, logic and neuromorphic applications. <i>Nanotechnology</i> , <b>2013</b> , 24, 384008	3.4	29
16	Simulation of polarity independent RESET in electrochemical metallization memory cells <b>2013</b> ,		9
15	Nanosession: Valence Change Memories - Redox Mechanism and Modelling <b>2013</b> , 219-231		
14	Simulation of multilevel switching in electrochemical metallization memory cells. <i>Journal of Applied Physics</i> , <b>2012</b> , 111, 014501	2.5	129
13	Recent progress in redox-based resistive switching <b>2012</b> ,		6
12	Redox processes in silicon dioxide thin films using copper microelectrodes. <i>Applied Physics Letters</i> , <b>2011</b> , 99, 203103	3.4	61
11	Origin of the Ultra-nonlinear Switching Kinetics in Oxide-Based Resistive Switches. <i>Advanced Functional Materials</i> , <b>2011</b> , 21, 4487-4492	15.6	267
10	Modeling Complementary Resistive Switches by nonlinear memristive systems <b>2011</b> ,		9
9	Analysis of Transient Currents During Ultrafast Switching of $\text{TiO}_2$ Nanocrossbar Devices. <i>IEEE Electron Device Letters</i> , <b>2011</b> , 32, 1116-1118	4.4	40
8	Memory Devices: EnergySpaceTime Tradeoffs. <i>Proceedings of the IEEE</i> , <b>2010</b> , 98, 2185-2200	14.3	45

7	A Simulation Model of Resistive Switching in Electrochemical Metallization Memory Cells (ECM). <i>Materials Research Society Symposia Proceedings</i> , <b>2009</b> , 1160, 1		21
6	A new test facility for efficient evaluation of MEMS contact materials. <i>Journal of Micromechanics and Microengineering</i> , <b>2007</b> , 17, 1788-1795	2	24
5	Understanding the switching-off mechanism in Ag+ migration based resistively switching model systems. <i>Applied Physics Letters</i> , <b>2007</b> , 91, 133513	3-4	193
4	2022 roadmap on neuromorphic computing and engineering. <i>Neuromorphic Computing and Engineering</i> ,		24
3	Poster: Memristive Systems523-587		
2	Chemical Structure of Conductive Filaments in Tantalum Oxide Memristive Devices and Its Implications for the Formation Mechanism. <i>Advanced Electronic Materials</i> ,2100936	6-4	3
1	Effect of the Threshold Kinetics on the Filament Relaxation Behavior of Ag-Based Diffusive Memristors. <i>Advanced Functional Materials</i> ,2111242	15-6	8