Stephan Menzel

List of Publications by Year
in descending order

163 papers	5,804 citations	81889 39 h-index	88628 70 g-index
170 all docs	170 docs citations	170 times ranked	4431 citing authors

#	Article	IF	Citations
1	2022 roadmap on neuromorphic computing and engineering. Neuromorphic Computing and Engineering, 2022, 2, 022501.	5.9	217
2	MNEMOSENE: Tile Architecture and Simulator for Memristor-based Computation-in-memory. ACM Journal on Emerging Technologies in Computing Systems, 2022, 18, 1-24.	2.3	7
3	Toward Simplified Physics-Based Memristor Modeling of Valence Change Mechanism Devices. IEEE Transactions on Circuits and Systems II: Express Briefs, 2022, 69, 2473-2477.	3.0	11
4	Chemical Structure of Conductive Filaments in Tantalum Oxide Memristive Devices and Its Implications for the Formation Mechanism. Advanced Electronic Materials, 2022, 8, .	5.1	20
5	Application of the Quantum-Point-Contact Formalism to Model the Filamentary Conduction in <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline" overflow="scroll"><mml:mi>Ta</mml:mi></mml:math> <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline" overflow="scroll"><mml:msub><mml:mi /><mml:mn>2</mml:mn></mml:msub></mml:math> <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline" overflow="scroll"><mml:mrow>	3.8	5
6	A Voltage-Controlled, Oscillation-Based ADC Design for Computation-in-Memory Architectures Using Emerging ReRAMs. ACM Journal on Emerging Technologies in Computing Systems, 2022, 18, 1-25.	2.3	9
7	Effect of the Threshold Kinetics on the Filament Relaxation Behavior of Agâ€Based Diffusive Memristors. Advanced Functional Materials, 2022, 32, .	14.9	33
8	Oxygen Diffusion in Platinum Electrodes: A Molecular Dynamics Study of the Role of Extended Defects. Advanced Materials Interfaces, 2022, 9, .	3.7	7
9	Reliability aspects of binary vector-matrix-multiplications using ReRAM devices. Neuromorphic Computing and Engineering, 2022, 2, 034001.	5.9	14
10	NeuroHammer: Inducing Bit-Flips in Memristive Crossbar Memories. , 2022, , .		8
11	NEUROTEC I: Neuro-inspired Artificial Intelligence Technologies for the Electronics of the Future. , 2022, , .		0
12	Tradeâ€Off Between Data Retention and Switching Speed in Resistive Switching ReRAM Devices. Advanced Electronic Materials, 2021, 7, 2000815.	5.1	20
13	Comments on ``Experimental Demonstration of Memristor-Aided Logic (MAGIC) Using Valence Change Memory (VCM)''. IEEE Transactions on Electron Devices, 2021, , 1-1.	3.0	0
14	Theory and experimental verification of configurable computing with stochastic memristors. Scientific Reports, 2021, 11, 4218.	3.3	15
15	Impact of the Ohmic Electrode on the Endurance of Oxide-Based Resistive Switching Memory. IEEE Transactions on Electron Devices, 2021, 68, 1024-1030.	3.0	26
16	Implementation of Multinary Åukasiewicz Logic Using Memristive Devices. , 2021, , .		7
17	Utilizing the Switching Stochasticity of HfO2/TiOx-Based ReRAM Devices and the Concept of Multiple Device Synapses for the Classification of Overlapping and Noisy Patterns. Frontiers in Neuroscience, 2021, 15, 661856.	2.8	26
18	Comprehensive Model of Electron Conduction in Oxide-Based Memristive Devices. ACS Applied Electronic Materials, 2021, 3, 3674-3692.	4.3	48

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19	Determining the Electrical Charging Speed Limit of ReRAM Devices. IEEE Journal of the Electron Devices Society, 2021, 9, 667-678.	2.1	11
20	Review of Manufacturing Process Defects and Their Effects on Memristive Devices. Journal of Electronic Testing: Theory and Applications (JETTA), 2021, 37, 427-437.	1.2	8
21	Standards for the Characterization of Endurance in Resistive Switching Devices. ACS Nano, 2021, 15, 17214-17231.	14.6	128
22	Reliability Aspects of Memristive Devices for Computation-in-Memory Applications. , 2021, , .		0
23	A Consistent Model for Short-Term Instability and Long-Term Retention in Filamentary Oxide-Based Memristive Devices. ACS Applied Materials & Interfaces, 2021, 13, 58066-58075.	8.0	19
24	System Theory Enables a Deep Exploration of ReRAM Cells' Switching Phenomena. , 2021, , .		0
25	Intrinsic RESET Speed Limit of Valence Change Memories. ACS Applied Electronic Materials, 2021, 3, 5563-5572.	4.3	15
26	Effect of Cationic Interface Defects on Band Alignment and Contact Resistance in Metal/Oxide Heterojunctions. Advanced Electronic Materials, 2020, 6, 1900808.	5.1	9
27	Empirical Tunneling Model Describing the Retention of 2.5 Mb HfO2 based ReRAM. , 2020, , .		0
28	HRS Instability in Oxide-Based Bipolar Resistive Switching Cells. IEEE Transactions on Electron Devices, 2020, 67, 4208-4215.	3.0	32
29	Picosecond multilevel resistive switching in tantalum oxide thin films. Scientific Reports, 2020, 10, 16391.	3.3	41
30	Comprehensive model for the electronic transport in <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:mtext>Pt/SrTi</mml:mtext><mml:msub><mml:mi mathvariant="normal">O</mml:mi><mml:mn>3</mml:mn></mml:msub></mml:mrow></mml:math> analog memristive devices. Physical Review B, 2020, 102, .	3.2	20
31	Variability-Aware Modeling of Filamentary Oxide-Based Bipolar Resistive Switching Cells Using SPICE Level Compact Models. IEEE Transactions on Circuits and Systems I: Regular Papers, 2020, 67, 4618-4630.	5.4	72
32	Inâ€Memory Binary Vectorâ€“Matrix Multiplication Based on Complementary Resistive Switches. Advanced Intelligent Systems, 2020, 2, 2000134.	6.1	9
33	A Compact Model for the Electroforming Process of Memristive Devices. , 2020, , .		1
34	Study of the SET switching event of VCM-based memories on a picosecond timescale. Journal of Applied Physics, 2020, 127, .	2.5	20
35	Statistical Modeling and Understanding of HRS Retention in 2.5 Mb HfO₂ based ReRAM. , 2020, , .		5
36	Studying the switching variability in redox-based resistive switching devices. Journal of Computational Electronics, 2020, 19, 1426-1432.	2.5	10

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37	Resistive switching memories. , 2020, , 17-61.		5
38	Experimental Demonstration of Memristor-Aided Logic (MAGIC) Using Valence Change Memory (VCM). IEEE Transactions on Electron Devices, 2020, 67, 3115-3122.	3.0	58
39	Dynamics of the spatial separation of electrons and mobile oxygen vacancies in oxide heterostructures. Physical Review Materials, 2020, 4, .	2.4	9
40	On the universality of the <i>I</i>â€“<i>V</i> switching characteristics in non-volatile and volatile resistive switching oxides. Faraday Discussions, 2019, 213, 183-196.	3.2	18
41	Switching Speed Analysis and Controlled Oscillatory Behavior of a Cr-Doped V₂O₃ Threshold Switching Device for Memory Selector and Neuromorphic Computing Application. , 2019, , .		5
42	Mechanism of memristive switching in OxRAM. , 2019, , 137-170.		7
43	Stateful Three-Input Logic with Memristive Switches. Scientific Reports, 2019, 9, 14618.	3.3	44
44	Sklansky tree adder realization in 1S1R resistive switching memory architecture. European Physical Journal: Special Topics, 2019, 228, 2269-2285.	2.6	15
45	Compact Modelling of Resistive Switching Devices based on the Valence Change Mechanism. , 2019, , .		4
46	Metallic filamentary conduction in valence change-based resistive switching devices: the case of TaO_x thin film with <i>x</i> â^¼ 1. Nanoscale, 2019, 11, 16978-16990.	5.6	16
47	Exploiting the switching dynamics of HfO2-based ReRAM devices for reliable analog memristive behavior. APL Materials, 2019, 7, .	5.1	94
48	Analyses of a 1-layer neuromorphic network using memristive devices with non-continuous resistance levels. APL Materials, 2019, 7, 091110.	5.1	8
49	Spectroscopic elucidation of ionic motion processes in tunnel oxide-based memristive devices. Faraday Discussions, 2019, 213, 215-230.	3.2	13
50	The ultimate switching speed limit of redox-based resistive switching devices. Faraday Discussions, 2019, 213, 197-213.	3.2	48
51	Valence change ReRAMs (VCM) - Experiments and modelling: general discussion. Faraday Discussions, 2019, 213, 259-286.	3.2	2
52	Compact Modeling of Complementary Switching in Oxide-Based ReRAM Devices. IEEE Transactions on Electron Devices, 2019, 66, 1268-1275.	3.0	39
53	Memristive Device Modeling and Circuit Design Exploration for Computation-in-Memory. , 2019, , .		16
54	Towards Oxide Electronics: a Roadmap. Applied Surface Science, 2019, 482, 1-93.	6.1	236

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55	An atomistic view on the Schottky barrier lowering applied to SrTiO3/Pt contacts. AIP Advances, 2019, 9, 045116.	1.3	9
56	Current channeling along extended defects during electroreduction of SrTiO3. Scientific Reports, 2019, 9, 2502.	3.3	20
57	Introduction to new memory paradigms: memristive phenomena and neuromorphic applications. Faraday Discussions, 2019, 213, 11-27.	3.2	35
58	In-Gap States and Band-Like Transport in Memristive Devices. Nano Letters, 2019, 19, 54-60.	9.1	22
59	(Invited) Impact of Stoichiometry and Interface Configuration on the Time Stability and the Speed-Limiting Step in Memristive SrTiO3 Cells. ECS Meeting Abstracts, 2019, , .	0.0	0
60	ReRAM: Role of the Electrode Material on the RESET Limitation in Oxide ReRAM Devices (Adv. Electron.) Tj ETQq0 0 0 rgBT /Overlock 10	5.1	2
61	Role of the Electrode Material on the RESET Limitation in Oxide ReRAM Devices. Advanced Electronic Materials, 2018, 4, 1700243.	5.1	20
62	Characterization of HfO<inf>2</inf>/TiO<inf>x</inf> ReRAM Cells in Pulse Operation Mode. , 2018, , .		0
63	Multiscale Simulation of ReRAMs Based on the Valence Change mechanism. , 2018, , .		0
64	Atomistic Investigation of the Schottky Contact Conductance Limits at SrTiO3 based Resistive Switching Devices. , 2018, , .		2
65	Forming-free Mott-oxide threshold selector nanodevice showing s-type NDR with high endurance (> 10¹² cycles), excellent V<inf>th</inf> stability (5%), fast (< 10 ns) switching, and promising scaling properties. , 2018, , .		9
66	The influence of interfacial (sub)oxide layers on the properties of pristine resistive switching devices. , 2018, , .		2
67	Field-Driven Hopping Transport of Oxygen Vacancies in Memristive Oxide Switches with Interface-Mediated Resistive Switching. Physical Review Applied, 2018, 10, .	3.8	34
68	KMC Simulation of the Electroforming, Set and Reset Processes in Redox-Based Resistive Switching Devices. IEEE Nanotechnology Magazine, 2018, 17, 1181-1188.	2.0	21
69	Crossover From Deterministic to Stochastic Nature of Resistive-Switching Statistics in a Tantalum Oxide Thin Film. IEEE Transactions on Electron Devices, 2018, 65, 4320-4325.	3.0	10
70	Correlation between the transport mechanisms in conductive filaments inside Ta2O5-based resistive switching devices and in substoichiometric TaOx thin films. Applied Physics Letters, 2018, 112, .	3.3	19
71	Kogge-Stone Adder Realization using 1S1R Resistive Switching Crossbar Arrays. ACM Journal on Emerging Technologies in Computing Systems, 2018, 14, 1-14.	2.3	6
72	Improved Switching Stability and the Effect of an Internal Series Resistor in HfO₂/TiO_{<italic>x</italic>} Bilayer ReRAM Cells. IEEE Transactions on Electron Devices, 2018, 65, 3229-3236.	3.0	95

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73	Understanding the Coexistence of Two Bipolar Resistive Switching Modes with Opposite Polarity in Pt/TiO₂/Ti/Pt Nanosized ReRAM Devices. ACS Applied Materials & Interfaces, 2018, 10, 29766-29778.	8.0	71
74	Exploring the Dynamics of Real-World Memristors on the Basis of Circuit Theoretic Model Predictions. IEEE Circuits and Systems Magazine, 2018, 18, 48-76.	2.3	17
75	A Theoretical and Experimental View on the Temperature Dependence of the Electronic Conduction through a Schottky Barrier in a Resistively Switching SrTiO₃â€Based Memory Cell. Advanced Electronic Materials, 2018, 4, 1800062.	5.1	31
76	Oxygen Exchange Processes between Oxide Memristive Devices and Water Molecules. Advanced Materials, 2018, 30, e1800957.	21.0	57
77	Requirements and Challenges for Modelling Redox-based Memristive Devices. , 2018, , .		10
78	Field-enhanced route to generating anti-Frenkel pairs in <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:msub><mml:mi>HfO</mml:mi><mml:mn>2</mml:mn></mml:msub></mm Physical Review Materials, 2018, 2, .	2.4	32
79	3-bit Resistive RAM Write-Read Scheme Based on Complementary Switching Mechanism. IEEE Electron Device Letters, 2017, 38, 449-452.	3.9	20
80	SET kinetics of electrochemical metallization cells: influence of counter-electrodes in SiO₂/Ag based systems. Nanotechnology, 2017, 28, 135205.	2.6	55
81	Anomalous Resistance Hysteresis in Oxide ReRAM: Oxygen Evolution and Reincorporation Revealed by In Situ TEM. Advanced Materials, 2017, 29, 1700212.	21.0	166
82	Pulse wake-up and breakdown investigation of ferroelectric yttrium doped HfO2. Journal of Applied Physics, 2017, 121, .	2.5	48
83	Overcoming the RESET Limitation in Tantalum Oxide-Based ReRAM Using an Oxygen-Blocking Layer. , 2017, , .		1
84	Spectroscopic Indications of Tunnel Barrier Charging as the Switching Mechanism in Memristive Devices. Advanced Functional Materials, 2017, 27, 1702282.	14.9	29
85	Volatile HRS asymmetry and subloops in resistive switching oxides. Nanoscale, 2017, 9, 14414-14422.	5.6	11
86	Comprehensive modeling of electrochemical metallization memory cells. Journal of Computational Electronics, 2017, 16, 1017-1037.	2.5	26
87	Design rules for threshold switches based on a field triggered thermal runaway mechanism. Journal of Computational Electronics, 2017, 16, 1175-1185.	2.5	10
88	Investigation of the Impact of High Temperatures on the Switching Kinetics of Redoxâ€Based Resistive Switching Cells using a Highâ€Speed Nanoheater. Advanced Electronic Materials, 2017, 3, 1700294.	5.1	41
89	Subfilamentary Networks Cause Cycle-to-Cycle Variability in Memristive Devices. ACS Nano, 2017, 11, 6921-6929.	14.6	95
90	Physical modeling of the electroforming process in resistive-switching devices. , 2017, , .		12

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91	On the origin of the fading memory effect in ReRAMs. , 2017, , .		4
92	Kinetic Monte Carlo modeling of the charge transport in a HfO<inf>2</inf>-based ReRAM with a rough anode. , 2017, , .		2
93	Thermal effects on the I-V characteristics of filamentary VCM based ReRAM-cells using a nanometer-sized heater. , 2017, , .		2
94	Random telegraph noise analysis in redox-based resistive switching devices using KMC simulations. , 2017, , .		4
95	(Invited) Tuning the Switching Behavior of Nano-Crossbar Reram Devices By Design and Process Treatment of ALD Functional Oxide Layer Stacks. ECS Meeting Abstracts, 2017, , .	0.0	0
96	Two Stable Switching Modes with Opposite Polarity in Pt/TiO2/Ti Cells Based on Concurring Phenomena Close to the Pt/TiO2 Interface. ECS Meeting Abstracts, 2017, , .	0.0	0
97	Modeling of Complementary Resistive Switches. , 2017, , 315-325.		0
98	Multidimensional Simulation of Threshold Switching in NbO₂ Based on an Electric Field Triggered Thermal Runaway Model. Advanced Electronic Materials, 2016, 2, 1600169.	5.1	95
99	Dependence of the SET switching variability on the initial state in HfO<i>_x</i>â€based ReRAM. Physica Status Solidi (A) Applications and Materials Science, 2016, 213, 316-319.	1.8	19
100	Efficient implementation of multiplexer and priority multiplexer using 1S1R ReRAM crossbar arrays. , 2016, , .		1
101	The influence of non-stoichiometry on the switching kinetics of strontium-titanate ReRAM devices. Journal of Applied Physics, 2016, 120, .	2.5	9
102	Uniting Gradual and Abrupt set Processes in Resistive Switching Oxides. Physical Review Applied, 2016, 6, .	3.8	61
103	Forming-free metal-oxide ReRAM by oxygen ion implantation process. , 2016, , .		13
104	Evidence for oxygen vacancies movement during wake-up in ferroelectric hafnium oxide. Applied Physics Letters, 2016, 108, .	3.3	204
105	Nanoionic Resistive Switching Memories: On the Physical Nature of the Dynamic Reset Process. Advanced Electronic Materials, 2016, 2, 1500233.	5.1	141
106	Ultrafast switching in Ta<inf>2</inf>O<inf>5</inf>-based resistive memories. , 2016, , .		9
107	Energy efficient computing by redox-based memristive oxide elements. , 2016, , .		1
108	Impact of oxygen exchange reaction at the ohmic interface in Ta₂O₅-based ReRAM devices. Nanoscale, 2016, 8, 17774-17781.	5.6	116

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109	Quantifying redox-induced Schottky barrier variations in memristive devices via in operando spectromicroscopy with graphene electrodes. Nature Communications, 2016, 7, 12398.	12.8	87
110	Energy dissipation during pulsed switching of strontium-titanate based resistive switching memory devices. , 2016, , .		6
111	KMC simulation of the electroforming, set and reset processes in redox-based resistive switching devices. , 2016, , .		6
112	A 2D axisymmetric dynamic drift-diffusion model for numerical simulation of resistive switching phenomena in metal oxides. , 2016, , .		12
113	Simulation of threshold switching based on an electric field induced thermal runaway. , 2016, , .		3
114	Internal Cell Resistance as the Origin of Abrupt Reset Behavior in HfO2-Based Devices Determined from Current Compliance Series. , 2016, , .		13
115	3-Bit Multilevel Switching by Deep Reset Phenomenon in Pt/W/TaO_X/Pt-ReRAM Devices. IEEE Electron Device Letters, 2016, 37, 564-567.	3.9	58
116	Resistive Switching Memory: Nanoionic Resistive Switching Memories: On the Physical Nature of the Dynamic Reset Process (Adv. Electron. Mater. 1/2016). Advanced Electronic Materials, 2016, 2, .	5.1	2
117	Nonlinearity analysis of TaOX redox-based RRAM. Microelectronic Engineering, 2016, 154, 38-41.	2.4	14
118	SET and RESET Kinetics of SrTiO₃-based Resistive Memory Devices. Materials Research Society Symposia Proceedings, 2015, 1790, 7-12.	0.1	5
119	Physics of the Switching Kinetics in Resistive Memories. Advanced Functional Materials, 2015, 25, 6306-6325.	14.9	233
120	Realization of Boolean Logic Functionality Using Redoxâ€Based Memristive Devices. Advanced Functional Materials, 2015, 25, 6414-6423.	14.9	127
121	A HfO₂â€Based Complementary Switching Crossbar Adder. Advanced Electronic Materials, 2015, 1, 1500138.	5.1	51
122	Avalancheâ€Dischargeâ€Induced Electrical Forming in Tantalum Oxideâ€Based Metalâ€"Insulatorâ€"Metal Structures. Advanced Functional Materials, 2015, 25, 7154-7162.	14.9	28
123	Modeling of Quantized Conductance Effects in Electrochemical Metallization Cells. IEEE Nanotechnology Magazine, 2015, 14, 505-512.	2.0	33
124	Controllability of multi-level states in memristive device models using a transistor as current compliance during SET operation. , 2015, , .		0
125	A Complementary Resistive Switch-Based Crossbar Array Adder. IEEE Journal on Emerging and Selected Topics in Circuits and Systems, 2015, 5, 64-74.	3.6	100
126	Understanding filamentary growth in electrochemical metallization memory cells using kinetic Monte Carlo simulations. Nanoscale, 2015, 7, 12673-12681.	5.6	85

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127	Effect of RESET Voltage on Distribution of SET Switching Time of Bipolar Resistive Switching in a Tantalum Oxide Thin Film. IEEE Transactions on Electron Devices, 2015, 62, 1561-1567.	3.0	24
128	Study of Memristive Associative Capacitive Networks for CAM Applications. IEEE Journal on Emerging and Selected Topics in Circuits and Systems, 2015, 5, 153-161.	3.6	9
129	Low-current operations in 4F²-compatible Ta₂O₅-based complementary resistive switches. Nanotechnology, 2015, 26, 415202.	2.6	20
130	The role of the interface reactions in the electroforming of redox-based resistive switching devices using KMC simulations. , 2015, , .		9
131	Physical simulation of dynamic resistive switching in metal oxides using a Schottky contact barrier model. , 2015, , .		21
132	Processes and Limitations during Filament Formation and Dissolution in GeS_{<i>x</i>}-based ReRAM Memory Cells. Journal of Physical Chemistry C, 2015, 119, 18678-18685.	3.1	20
133	In-memory adder functionality in 1S1R arrays. , 2015, , .		16
134	Critical ReRAM Stack Parameters Controlling Complimentary versus Bipolar Resistive Switching. , 2015, , .		13
135	On the SET/RESET current asymmetry in electrochemical metallization memory cells. Physica Status Solidi - Rapid Research Letters, 2014, 8, 540-544.	2.4	13
136	Origin of the SET Kinetics of the Resistive Switching in Tantalum Oxide Thin Films. IEEE Electron Device Letters, 2014, 35, 259-261.	3.9	47
137	(Keynote) Atomic Scale and Interface Interactions in Redox-Based Resistive Switching Memories. ECS Transactions, 2014, 64, 3-18.	0.5	8
138	Quantum size effects and non-equilibrium states in nanoscale silicon dioxide based resistive switches. , 2014, , .		2
139	Statistical modeling of electrochemical metallization memory cells. , 2014, , .		4
140	Simulation of TaO<inf>x</inf>-based complementary resistive switches by a physics-based memristive model. , 2014, , .		33
141	3-bit read scheme for single layer Ta2O5 ReRAM. , 2014, , .		3
142	Insights into Nanoscale Electrochemical Reduction in a Memristive Oxide: the Role of Threeâ€Phase Boundaries. Advanced Functional Materials, 2014, 24, 4466-4472.	14.9	52
143	Spectroscopic Proof of the Correlation between Redoxâ€State and Chargeâ€Carrier Transport at the Interface of Resistively Switching Ti/PCMO Devices. Advanced Materials, 2014, 26, 2730-2735.	21.0	88
144	Interrelation of Sweep and Pulse Analysis of the SET Process in SrTiO₃ Resistive Switching Memories. IEEE Electron Device Letters, 2014, 35, 924-926.	3.9	27

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145	Simulation and comparison of two sequential logic-in-memory approaches using a dynamic electrochemical metallization cell model. Microelectronics Journal, 2014, 45, 1416-1428.	2.0	17
146	Applicability of Well-Established Memristive Models for Simulations of Resistive Switching Devices. IEEE Transactions on Circuits and Systems I: Regular Papers, 2014, 61, 2402-2410.	5.4	91
147	Determination of the electrostatic potential distribution in Pt/Fe:SrTiO3/Nb:SrTiO3 thin-film structures by electron holography. Scientific Reports, 2014, 4, 6975.	3.3	25
148	Switching kinetics of electrochemical metallization memory cells. Physical Chemistry Chemical Physics, 2013, 15, 6945.	2.8	156
149	Analytical analysis of the generic SET and RESET characteristics of electrochemical metallization memory cells. Nanoscale, 2013, 5, 11003.	5.6	37
150	Energy-efficient redox-based non-volatile memory devices and logic circuits. , 2013, , .		4
151	Compact modeling of CRS devices based on ECM cells for memory, logic and neuromorphic applications. Nanotechnology, 2013, 24, 384008.	2.6	33
152	Simulation of polarity independent RESET in electrochemical metallization memory cells. , 2013, , .		13
153	Simulation of multilevel switching in electrochemical metallization memory cells. Journal of Applied Physics, 2012, 111, .	2.5	151
154	Recent progress in redox-based resistive switching. , 2012, , .		10
155	Modeling Complementary Resistive Switches by nonlinear memristive systems. , 2011, , .		10
156	Analysis of Transient Currents During Ultrafast Switching of $hbox{TiO}_{2}$ Nanocrossbar Devices. IEEE Electron Device Letters, 2011, 32, 1116-1118.	3.9	46
157	Fast pulse analysis of TiO<inf>2</inf> based RRAM nano-crossbar devices. , 2011, , .		1
158	Redox processes in silicon dioxide thin films using copper microelectrodes. Applied Physics Letters, 2011, 99, .	3.3	77
159	Origin of the Ultraâ€nonlinear Switching Kinetics in Oxideâ€Based Resistive Switches. Advanced Functional Materials, 2011, 21, 4487-4492.	14.9	300
160	Memory Devices: Energyâ€"Spaceâ€"Time Tradeoffs. Proceedings of the IEEE, 2010, 98, 2185-2200.	21.3	50
161	A Simulation Model of Resistive Switching in Electrochemical Metallization Memory Cells (ECM). Materials Research Society Symposia Proceedings, 2009, 1160, 1.	0.1	23
162	Understanding the switching-off mechanism in Ag+ migration based resistively switching model systems. Applied Physics Letters, 2007, 91, .	3.3	210

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163	A new test facility for efficient evaluation of MEMS contact materials. Journal of Micromechanics and Microengineering, 2007, 17, 1788-1795.	2.6	35