Themis Prodromakis

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.

170 papers

4,056 citations

30 h-index 59 g-index

216 ext. papers

5,132 ext. citations

5.1 avg, IF

5.78 L-index

#	Paper	IF	Citations
170	Thermal Effects on Initial Volatile Response and Relaxation Dynamics of Resistive RAM Devices. <i>IEEE Electron Device Letters</i> , 2022 , 1-1	4.4	1
169	Formation of a ternary oxide barrier layer and its role in switching characteristic of ZnO-based conductive bridge random access memory devices. <i>APL Materials</i> , 2022 , 10, 031103	5.7	2
168	Design Flow for Hybrid CMOS/Memristor SystemsPart II: Circuit Schematics and Layout. <i>IEEE Transactions on Circuits and Systems I: Regular Papers</i> , 2021 , 1-13	3.9	1
167	Design Flow for Hybrid CMOS/Memristor SystemsPart I: Modeling and Verification Steps. <i>IEEE Transactions on Circuits and Systems I: Regular Papers</i> , 2021 , 1-14	3.9	1
166	Standards for the Characterization of Endurance in Resistive Switching Devices. ACS Nano, 2021,	16.7	36
165	Technology agnostic frequency characterization methodology for memristors. <i>Scientific Reports</i> , 2021 , 11, 20599	4.9	1
164	Negative effect of cations out-diffusion and auto-doping on switching mechanisms of transparent memristor devices employing ZnO/ITO heterostructure. <i>Applied Physics Letters</i> , 2021 , 118, 173502	3.4	2
163	Low-power electronic technologies for harsh radiation environments. <i>Nature Electronics</i> , 2021 , 4, 243-2	. 52 8.4	10
162	Review B rogress in Electrolytes for Rechargeable Aluminium Batteries. <i>Journal of the Electrochemical Society</i> , 2021 , 168, 056509	3.9	4
161	Practical demonstration of a RRAM memory fuse. <i>International Journal of Circuit Theory and Applications</i> , 2021 , 49, 2363	2	O
160	ZrOX insertion layer enhanced switching and synaptic performances of TiOX-based memristive devices. <i>IOP Conference Series: Materials Science and Engineering</i> , 2021 , 1034, 012142	0.4	
159	Band tailoring by annealing and current conduction of Co-doped ZnO transparent resistive switching memory. <i>IOP Conference Series: Materials Science and Engineering</i> , 2021 , 1034, 012140	0.4	
158	Conduction mechanism of Co-doped ZnO transparent memristive devices. <i>IOP Conference Series:</i> Materials Science and Engineering, 2021 , 1034, 012139	0.4	
157	Transformation of digital to analog switching in TaOx-based memristor device for neuromorphic applications. <i>Applied Physics Letters</i> , 2021 , 118, 112103	3.4	14
156	Frequency Response of Metal-Oxide Memristors. <i>IEEE Transactions on Electron Devices</i> , 2021 , 68, 3636-	3 6 492	O
155	Compact Modeling of the Switching Dynamics and Temperature Dependencies in TiOx Memristors Part II: Physics-Based Model. <i>IEEE Transactions on Electron Devices</i> , 2021 , 68, 4885-4890	2.9	1
154	Compact Modeling of the Switching Dynamics and Temperature Dependencies in TiOx-Based Memristors Part I: Behavioral Model. <i>IEEE Transactions on Electron Devices</i> , 2021 , 68, 4877-4884	2.9	O

(2019-2021)

153	Conduction channel configuration controlled digital and analog response in TiO2-based inorganic memristive artificial synapses. <i>APL Materials</i> , 2021 , 9, 121103	5.7	4
152	UV induced resistive switching in hybrid polymer metal oxide memristors. <i>Scientific Reports</i> , 2020 , 10, 21130	4.9	1
151	Bidirectional Volatile Signatures of Metal®xide MemristorsPart I: Characterization. <i>IEEE Transactions on Electron Devices</i> , 2020 , 67, 5158-5165	2.9	5
150	Memristive synapses connect brain and silicon spiking neurons. <i>Scientific Reports</i> , 2020 , 10, 2590	4.9	33
149	A semi-holographic hyperdimensional representation system for hardware-friendly cognitive computing. <i>Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences</i> , 2020 , 378, 20190162	3	О
148	Monitoring PSA levels as chemical state-variables in metal-oxide memristors. <i>Scientific Reports</i> , 2020 , 10, 15281	4.9	3
147	Formation and Stability of Smooth Thin Films with Soft Microgels Made of Poly(-Isopropylacrylamide) and Poly(Acrylic Acid). <i>Polymers</i> , 2020 , 12,	4.5	3
146	Bidirectional Volatile Signatures of Metal-Oxide MemristorsPart II: Modeling. <i>IEEE Transactions on Electron Devices</i> , 2020 , 67, 5166-5173	2.9	3
145	Surface Acoustic Wave Resonators for Wireless Sensor Network Applications in the 433.92 MHz ISM Band. <i>Sensors</i> , 2020 , 20,	3.8	3
144	Poly(N-isopropylacrylamide) based thin microgel films for use in cell culture applications. <i>Scientific Reports</i> , 2020 , 10, 6126	4.9	30
143	Spike sorting using non-volatile metal-oxide memristors. <i>Faraday Discussions</i> , 2019 , 213, 511-520	3.6	1
142	Synaptic and neuromorphic functions: general discussion. <i>Faraday Discussions</i> , 2019 , 213, 553-578	3.6	1
141	Electrochemical metallization ReRAMs (ECM) - Experiments and modelling: general discussion. <i>Faraday Discussions</i> , 2019 , 213, 115-150	3.6	4
140	An electrical characterisation methodology for identifying the switching mechanism in TiO memristive stacks. <i>Scientific Reports</i> , 2019 , 9, 8168	4.9	6
139	A Memristive Switching Uncertainty Model. <i>IEEE Transactions on Electron Devices</i> , 2019 , 66, 2946-2953	2.9	10
138	Microstructured hybrid scaffolds for aligning neonatal rat ventricular myocytes. <i>Materials Science and Engineering C</i> , 2019 , 103, 109783	8.3	1
137	Functional Connectivity of Organic Neuromorphic Devices by Global Voltage Oscillations. <i>Advanced Intelligent Systems</i> , 2019 , 1, 1900013	6	19
136	Practical Implementation of Memristor-Based Threshold Logic Gates. <i>IEEE Transactions on Circuits and Systems I: Regular Papers</i> , 2019 , 66, 3041-3051	3.9	15

135	Modular Pressure and Flow Rate-Balanced Microfluidic Serial Dilution Networks for Miniaturised Point-of-Care Diagnostic Platforms. <i>Sensors</i> , 2019 , 19,	3.8	1
134	Computing Shortest Paths in 2D and 3D Memristive Networks 2019 , 1161-1176		
133	Computing Image and Motion with 3-D Memristive Grids 2019 , 1177-1210		0
132	An Electrical Characterisation Methodology for Benchmarking Memristive Device Technologies. <i>Scientific Reports</i> , 2019 , 9, 19412	4.9	11
131	Interface Asymmetry Induced by Symmetric Electrodes on MetalAl:TiO \$_{x}Metal Structures. <i>IEEE Nanotechnology Magazine</i> , 2018 , 17, 867-872	2.6	6
130	A Data-Driven Verilog-A ReRAM Model. <i>IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems</i> , 2018 , 37, 3151-3162	2.5	38
129	Sub 100 nW Volatile Nano-Metal-Oxide Memristor as Synaptic-Like Encoder of Neuronal Spikes. <i>IEEE Transactions on Biomedical Circuits and Systems</i> , 2018 , 12, 351-359	5.1	13
128	Metal Oxide-enabled Reconfigurable Memristive Threshold Logic Gates 2018,		3
127	Effect of patterned polyacrylamide hydrogel on morphology and orientation of cultured NRVMs. <i>Scientific Reports</i> , 2018 , 8, 11991	4.9	10
126	Electrical characteristics of interfacial barriers at metalIIiO2 contacts. <i>Journal Physics D: Applied Physics</i> , 2018 , 51, 425101	3	15
125	Seamlessly fused digital-analogue reconfigurable computing using memristors. <i>Nature Communications</i> , 2018 , 9, 2170	17.4	19
124	Electrothermal deterioration factors in gold planar inductors designed for microscale bio-applications. <i>Microelectronic Engineering</i> , 2018 , 197, 61-66	2.5	1
123	Magnetic stimulation in the microscale: the development of a 6 LG array of micro-coils for stimulation of excitable cells in vitro. <i>Biomedical Physics and Engineering Express</i> , 2018 , 4, 025016	1.5	7
122	Challenges hindering memristive neuromorphic hardware from going mainstream. <i>Nature Communications</i> , 2018 , 9, 5267	17.4	41
121	A Novel Microfluidic Point-of-Care Biosensor System on Printed Circuit Board for Cytokine Detection. <i>Sensors</i> , 2018 , 18,	3.8	24
120	Conduction mechanisms at distinct resistive levels of Pt/TiO2-x/Pt memristors. <i>Applied Physics Letters</i> , 2018 , 113, 143503	3.4	24
119	An Embedded Environmental Control Micro-chamber System for RRAM Memristor Characterisation 2018 ,		3
118	Impact of ultra-thin Al2O3 layers on TiO2 ReRAM switching characteristics. <i>Journal of Applied Physics</i> , 2017 , 121, 184505	2.5	21

(2016-2017)

117	Correlated resistive/capacitive state variability in solid TiO2 based memory devices. <i>Applied Physics A: Materials Science and Processing</i> , 2017 , 123, 1	2.6	2
116	Resistive switching of Pt/TiO /Pt devices fabricated on flexible Parylene-C substrates. <i>Nanotechnology</i> , 2017 , 28, 025303	3.4	14
115	A memristor-CMOS hybrid architecture concept for on-line template matching 2017,		1
114	A TiO2 ReRAM parameter extraction method 2017 ,		5
113	Introducing the nanoworld. <i>Nature Nanotechnology</i> , 2017 , 12, 832	28.7	
112	An Assay System for Point-of-Care Diagnosis of Tuberculosis using Commercially Manufactured PCB Technology. <i>Scientific Reports</i> , 2017 , 7, 685	4.9	18
111	Parylene C topographic micropattern as a template for patterning PDMS and Polyacrylamide hydrogel. <i>Scientific Reports</i> , 2017 , 7, 5764	4.9	9
110	Multibit memory operation of metal-oxide bi-layer memristors. Scientific Reports, 2017, 7, 17532	4.9	133
109	High-performance PCB-based capillary pumps for affordable point-of-care diagnostics. <i>Microfluidics and Nanofluidics</i> , 2017 , 21, 103	2.8	11
108	Volatility Characterization for RRAM Devices. <i>IEEE Electron Device Letters</i> , 2017 , 38, 28-31	4.4	4
108	Volatility Characterization for RRAM Devices. <i>IEEE Electron Device Letters</i> , 2017 , 38, 28-31 Towards a smartphone-aided electronic ELISA for real-time electrochemical monitoring 2017 ,	4.4	2
		4.4	
107	Towards a smartphone-aided electronic ELISA for real-time electrochemical monitoring 2017 ,	3.8	2
107	Towards a smartphone-aided electronic ELISA for real-time electrochemical monitoring 2017, Live demonstration: A TiO2 ReRAM parameter extraction method 2017, A Sub-30 mpH Resolution Thin Film Transistor-Based Nanoribbon Biosensing Platform. Sensors,		2
107 106 105	Towards a smartphone-aided electronic ELISA for real-time electrochemical monitoring 2017, Live demonstration: A TiO2 ReRAM parameter extraction method 2017, A Sub-30 mpH Resolution Thin Film Transistor-Based Nanoribbon Biosensing Platform. Sensors, 2017, 17, Computationally efficient concentration-based model for accurate evaluation of T-junction inlet	3.8	2 4
107 106 105	Towards a smartphone-aided electronic ELISA for real-time electrochemical monitoring 2017, Live demonstration: A TiO2 ReRAM parameter extraction method 2017, A Sub-30 mpH Resolution Thin Film Transistor-Based Nanoribbon Biosensing Platform. Sensors, 2017, 17, Computationally efficient concentration-based model for accurate evaluation of T-junction inlet staggered herringbone micromixers. Micro and Nano Letters, 2016, 11, 236-239 Investigation of the Switching Mechanism in TiO2-Based RRAM: A Two-Dimensional EDX Approach.	3.8	2 4 1
107 106 105 104	Towards a smartphone-aided electronic ELISA for real-time electrochemical monitoring 2017, Live demonstration: A TiO2 ReRAM parameter extraction method 2017, A Sub-30 mpH Resolution Thin Film Transistor-Based Nanoribbon Biosensing Platform. Sensors, 2017, 17, Computationally efficient concentration-based model for accurate evaluation of T-junction inlet staggered herringbone micromixers. Micro and Nano Letters, 2016, 11, 236-239 Investigation of the Switching Mechanism in TiO2-Based RRAM: A Two-Dimensional EDX Approach. ACS Applied Materials & Samp; Interfaces, 2016, 8, 19605-11 Unsupervised learning in probabilistic neural networks with multi-state metal-oxide memristive	3.8 0.9 9.5	2 4 1 7 46

99	Real-time encoding and compression of neuronal spikes by metal-oxide memristors. <i>Nature Communications</i> , 2016 , 7, 12805	17.4	97
98	Role and Optimization of the Active Oxide Layer in TiO2-Based RRAM. <i>Advanced Functional Materials</i> , 2016 , 26, 507-513	15.6	36
97	Long-lasting FR-4 surface hydrophilisation towards commercial PCB passive microfluidics. <i>Applied Surface Science</i> , 2016 , 368, 69-75	6.7	13
96	Practical Determination of Individual Element Resistive States in Selectorless RRAM Arrays. <i>IEEE Transactions on Circuits and Systems I: Regular Papers</i> , 2016 , 63, 827-835	3.9	17
95	Analog Memristive Synapse in Spiking Networks Implementing Unsupervised Learning. <i>Frontiers in Neuroscience</i> , 2016 , 10, 482	5.1	95
94	Effects of Ar and O2 Plasma Etching on Parylene C: Topography versus Surface Chemistry and the Impact on Cell Viability. <i>Plasma Processes and Polymers</i> , 2016 , 13, 324-333	3.4	22
93	Practical operation considerations for memristive integrating sensors 2016,		1
92	Engineering the switching dynamics of TiOx-based RRAM with Al doping. <i>Journal of Applied Physics</i> , 2016 , 120, 025108	2.5	18
91	A planar micro-magnetic platform for stimulation of neural cells in vitro 2016,		2
90	Towards a memristor-based spike-sorting platform 2016 ,		2
89	An amorphous titanium dioxide metal insulator metal selector device for resistive random access memory crossbar arrays with tunable voltage margin. <i>Applied Physics Letters</i> , 2016 , 108, 033505	3.4	16
88	The Lab-on-PCB framework for affordable, electronic-based point-of-care diagnostics: From design to manufacturing 2016 ,		4
87	HfO2-based memristors for neuromorphic applications 2016 ,		22
86	Experimental study of gradual/abrupt dynamics of HfO2-based memristive devices. <i>Applied Physics Letters</i> , 2016 , 109, 133504	3.4	42
85	Emulating short-term synaptic dynamics with memristive devices. <i>Scientific Reports</i> , 2016 , 6, 18639	4.9	84
84	On the origin of resistive switching volatility in Ni/TiO2/Ni stacks. <i>Journal of Applied Physics</i> , 2016 , 120, 065104	2.5	11
83	A PCB-based electronic ELISA system for rapid, portable infectious disease diagnosis 2016,		4
82	Surface Chemistry and Microtopography of Parylene C Films Control the Morphology and Microtubule Density of Cardiac Myocytes. <i>Tissue Engineering - Part C: Methods</i> , 2016 , 22, 464-72	2.9	9

(2015-2016)

81	. IEEE Transactions on Circuits and Systems I: Regular Papers, 2016 , 63, 818-826	3.9	10
80	Amperometric IFN-Immunosensors with commercially fabricated PCB sensing electrodes. <i>Biosensors and Bioelectronics</i> , 2016 , 86, 805-810	11.8	32
79	X-ray spectromicroscopy investigation of soft and hard breakdown in RRAM devices. <i>Nanotechnology</i> , 2016 , 27, 345705	3.4	8
78	A TiO2-based volatile threshold switching selector device with 107 non linearity and sub 100 pA Off current 2016 ,		4
77	A Cell Classifier for RRAM Process Development. <i>IEEE Transactions on Circuits and Systems II:</i> Express Briefs, 2015 , 62, 676-680	3.5	17
76	Conductive Atomic Force Microscopy Investigation of Switching Thresholds in Titanium Dioxide Thin Films. <i>Journal of Physical Chemistry C</i> , 2015 , 119, 11958-11964	3.8	27
75	. IEEE Transactions on Electron Devices, 2015 , 62, 3685-3691	2.9	20
74	Limitations and precision requirements for read-out of passive, linear, selectorless RRAM arrays 2015 ,		5
73	Assessment of Parylene C Thin Films for Heart Valve Tissue Engineering. <i>Tissue Engineering - Part A</i> , 2015 , 21, 2504-14	3.9	9
72	Impact of active areas on electrical characteristics of TiO2 based solid-state memristors 2015 ,		3
7 ²	Impact of active areas on electrical characteristics of TiO2 based solid-state memristors 2015 , Biorealistic cardiac cell culture platforms with integrated monitoring of extracellular action potentials. <i>Scientific Reports</i> , 2015 , 5, 11067	4.9	3
	Biorealistic cardiac cell culture platforms with integrated monitoring of extracellular action	4.9	
71	Biorealistic cardiac cell culture platforms with integrated monitoring of extracellular action potentials. <i>Scientific Reports</i> , 2015 , 5, 11067 Surface and Electrical Characterization of Ag/AgCl Pseudo-Reference Electrodes Manufactured		17
71	Biorealistic cardiac cell culture platforms with integrated monitoring of extracellular action potentials. <i>Scientific Reports</i> , 2015 , 5, 11067 Surface and Electrical Characterization of Ag/AgCl Pseudo-Reference Electrodes Manufactured with Commercially Available PCB Technologies. <i>Sensors</i> , 2015 , 15, 18102-13 Implementation of a spike-based perceptron learning rule using TiO2-x memristors. <i>Frontiers in</i>	3.8	17 26
71 70 69	Biorealistic cardiac cell culture platforms with integrated monitoring of extracellular action potentials. <i>Scientific Reports</i> , 2015 , 5, 11067 Surface and Electrical Characterization of Ag/AgCl Pseudo-Reference Electrodes Manufactured with Commercially Available PCB Technologies. <i>Sensors</i> , 2015 , 15, 18102-13 Implementation of a spike-based perceptron learning rule using TiO2-x memristors. <i>Frontiers in Neuroscience</i> , 2015 , 9, 357	3.8 5.1	17 26 28
71 70 69	Biorealistic cardiac cell culture platforms with integrated monitoring of extracellular action potentials. <i>Scientific Reports</i> , 2015 , 5, 11067 Surface and Electrical Characterization of Ag/AgCl Pseudo-Reference Electrodes Manufactured with Commercially Available PCB Technologies. <i>Sensors</i> , 2015 , 15, 18102-13 Implementation of a spike-based perceptron learning rule using TiO2-x memristors. <i>Frontiers in Neuroscience</i> , 2015 , 9, 357 . <i>IEEE Transactions on Electron Devices</i> , 2015 , 62, 2190-2196	3.8 5.1	17 26 28 49
71 70 69 68	Biorealistic cardiac cell culture platforms with integrated monitoring of extracellular action potentials. <i>Scientific Reports</i> , 2015 , 5, 11067 Surface and Electrical Characterization of Ag/AgCl Pseudo-Reference Electrodes Manufactured with Commercially Available PCB Technologies. <i>Sensors</i> , 2015 , 15, 18102-13 Implementation of a spike-based perceptron learning rule using TiO2-x memristors. <i>Frontiers in Neuroscience</i> , 2015 , 9, 357 . <i>IEEE Transactions on Electron Devices</i> , 2015 , 62, 2190-2196 Towards a high-precision, embedded system for versatile sensitive biosensing measurements 2015 ,	3.8 5.1	17 26 28 49

63	A memristor SPICE model accounting for synaptic activity dependence. <i>PLoS ONE</i> , 2015 , 10, e0120506	3.7	24
62	Memory impedance in TiO2 based metal-insulator-metal devices. Scientific Reports, 2014, 4, 4522	4.9	67
61	Live demonstration: A versatile, low-cost platform for testing large ReRAM cross-bar arrays 2014,		9
60	Applications of solid-state memristors in tunable filters 2014 ,		3
59	Design considerations for a CMOS Lab-on-Chip microheater array to facilitate the in vitro thermal stimulation of neurons 2014 ,		4
58	Stochastic switching of TiO2-based memristive devices with identical initial memory states. <i>Nanoscale Research Letters</i> , 2014 , 9, 293	5	12
57	Origin of the OFF state variability in ReRAM cells. <i>Journal Physics D: Applied Physics</i> , 2014 , 47, 145102	3	20
56	A Memristor SPICE Model Accounting for Volatile Characteristics of Practical ReRAM. <i>IEEE Electron Device Letters</i> , 2014 , 35, 135-137	4.4	40
55	Parylene C-based flexible electronics for pH monitoring applications. <i>Sensors</i> , 2014 , 14, 11629-39	3.8	21
54	P396Improved calcium cycling is associated with microtubule reorganisation in anisotropic cardiomyocyte cultures. <i>Cardiovascular Research</i> , 2014 , 103, S73.1-S73	9.9	
53	Resistive switching characteristics of indium-tin-oxide thin film devices. <i>Physica Status Solidi (A)</i> Applications and Materials Science, 2014 , 211, 1194-1199	1.6	3
	777		<i>J</i>
52	Qualitative SPICE modeling accounting for volatile dynamics of TiO2 memristors 2014 ,		1
52 51		5	
	Qualitative SPICE modeling accounting for volatile dynamics of TiO2 memristors 2014 , Coexistence of memory resistance and memory capacitance in TiO2 solid-state devices. <i>Nanoscale</i>		1
51	Qualitative SPICE modeling accounting for volatile dynamics of TiO2 memristors 2014, Coexistence of memory resistance and memory capacitance in TiO2 solid-state devices. Nanoscale Research Letters, 2014, 9, 552	5	1 19
51	Qualitative SPICE modeling accounting for volatile dynamics of TiO2 memristors 2014, Coexistence of memory resistance and memory capacitance in TiO2 solid-state devices. <i>Nanoscale Research Letters</i> , 2014, 9, 552 2014, Selective hydrophilic modification of Parylene C films: a new approach to cell micro-patterning for	5	1 19 1
51 50 49	Qualitative SPICE modeling accounting for volatile dynamics of TiO2 memristors 2014, Coexistence of memory resistance and memory capacitance in TiO2 solid-state devices. <i>Nanoscale Research Letters</i> , 2014, 9, 552 2014, Selective hydrophilic modification of Parylene C films: a new approach to cell micro-patterning for synthetic biology applications. <i>Biofabrication</i> , 2014, 6, 025004 Tissue engineering techniques in cardiac repair and disease modelling. <i>Current Pharmaceutical</i>	5 10.5	1 19 1 32

(2011-2013)

45	A Proposal for Hybrid Memristor-CMOS Spiking Neuromorphic Learning Systems. <i>IEEE Circuits and Systems Magazine</i> , 2013 , 13, 74-88	3.2	48
44	Integration of nanoscale memristor synapses in neuromorphic computing architectures. <i>Nanotechnology</i> , 2013 , 24, 384010	3.4	356
43	The effect of microgrooved culture substrates on calcium cycling of cardiac myocytes derived from human induced pluripotent stem cells. <i>Biomaterials</i> , 2013 , 34, 2399-411	15.6	123
42	The dual role of Parylene C in chemical sensing: Acting as an encapsulant and as a sensing membrane for pH monitoring applications. <i>Sensors and Actuators B: Chemical</i> , 2013 , 186, 1-8	8.5	27
41	TWO CENTURIES OF MEMRISTORS 2013 , 508-517		4
40	Resistive switching of oxygen enhanced TiO2 thin-film devices. <i>Applied Physics Letters</i> , 2013 , 102, 01350	06.4	49
39	Sensing H+ with conventional neural probes. <i>Applied Physics Letters</i> , 2013 , 102, 223506	3.4	
38	Temporal processing with volatile memristors 2013,		5
37	Pulse-induced resistive and capacitive switching in TiO2 thin film devices. <i>Applied Physics Letters</i> , 2013 , 103, 233513	3.4	29
36	STDP and STDP variations with memristors for spiking neuromorphic learning systems. <i>Frontiers in Neuroscience</i> , 2013 , 7, 2	5.1	274
35	Microfluidic evaporator for on-chip sample concentration. Lab on A Chip, 2012, 12, 4049-54	7.2	21
34	High precision analogue memristor state tuning. <i>Electronics Letters</i> , 2012 , 48, 1105-1107	1.1	30
33	Oxygen plasma induced hydrophilicity of Parylene-C thin films. <i>Applied Surface Science</i> , 2012 , 261, 43-51	16.7	45
32	Structured Culture Scaffolds Improve the Calcium Handling Properties of Cardiomyocytes Differentiated from Induced Pluripotent Stem Cells. <i>Biophysical Journal</i> , 2012 , 102, 103a	2.9	2
31	Biomimetic model of the outer plexiform layer by incorporating memristive devices. <i>Physical Review E</i> , 2012 , 85, 041918	2.4	30
30	Two centuries of memristors. <i>Nature Materials</i> , 2012 , 11, 478-81	27	250
29	Memristive devices as parameter setting elements in programmable gain amplifiers. <i>Applied Physics Letters</i> , 2012 , 101, 243502	3.4	24
28	Low-cost implementations of pH monitoring platforms 2011 ,		2

27	A CMOS-Based ISFET Chemical Imager With Auto-Calibration Capability. <i>IEEE Sensors Journal</i> , 2011 , 11, 3253-3260	4	40
26	A Versatile Memristor Model With Nonlinear Dopant Kinetics. <i>IEEE Transactions on Electron Devices</i> , 2011 , 58, 3099-3105	2.9	302
25	An Extended CMOS ISFET Model Incorporating the Physical Design Geometry and the Effects on Performance and Offset Variation. <i>IEEE Transactions on Electron Devices</i> , 2011 , 58, 4414-4422	2.9	50
24	A novel design approach for developing chemical sensing platforms using inexpensive technologies 2011 ,		10
23	A Low-Cost Disposable Chemical Sensing Platform Based on Discrete Components. <i>IEEE Electron Device Letters</i> , 2011 , 32, 417-419	4.4	18
22	Live demonstration: A CMOS-based lab-on-chip array for combined magnetic manipulation and opto-chemical sensing 2011 ,		4
21	Fabrication and electrical characteristics of memristors with TiO2/TiO2+x active layers 2010,		7
20	Exploiting CMOS Technology to Enhance the Performance of ISFET Sensors. <i>IEEE Electron Device Letters</i> , 2010 , 31, 1053-1055	4.4	18
19	Switching mechanisms in microscale memristors. <i>Electronics Letters</i> , 2010 , 46, 63	1.1	31
18	Practical micro/nano fabrication implementations of memristive devices 2010 ,		5
17	A CMOS-based lab-on-chip array for the combined magnetic stimulation and opto-chemical sensing of neural tissue 2010 ,		6
16	A review on memristive devices and applications 2010,		33
15	Cost-effective fabrication of nanoscale electrode memristors with reproducible electrical response. <i>Micro and Nano Letters</i> , 2010 , 5, 91	0.9	9
14	Interfacial polarisation on gallium arsenide membranes. <i>Micro and Nano Letters</i> , 2010 , 5, 178	0.9	
13	An Experimental Technique for Characterizing Slow-Wave Characteristics of MIS-Like Transmission Lines Using Aqueous Dielectrics. <i>IEEE Transactions on Microwave Theory and Techniques</i> , 2010 , 58, 985-	993 ¹	
12	Application of MaxwellWagner polarization in delay lines. <i>Microelectronics Journal</i> , 2010 , 41, 17-24	1.8	3
11	Biocompatible encapsulation of CMOS based chemical sensors 2009,		15
10	Surface texturing for MaxwellWagner polarisation engineering. <i>Micro and Nano Letters</i> , 2009 , 4, 5-8	0.9	

LIST OF PUBLICATIONS

9 Application of gold nanodots for MaxwellWagner loss reduction. *Micro and Nano Letters*, **2009**, 4, 80-83 0.9

8	Engineering the Maxwell Wagner polarization effect. Applied Surface Science, 2009, 255, 6989-6994	6.7	119
7	Effect of mobile ionic-charge on CMOS based ion-sensitive field-effect transistors (ISFETs) 2009,		4
6	Batch encapsulation technique for CMOS based chemical sensors 2008,		7
5	Microstrip stepped impedance lowpass filters based on the maxwell-wagner polarization mechanism 2008 ,		2
4	Towards a microstrip antenna on synthetic high-dielectric constant substrates		3
3	Poster: Memristive Systems523-587		
2	Nanosession: Neuromorphic Concepts197-206		
1	Advances in Organic and Perovskite Photovoltaics Enabling a Greener Internet of Things. <i>Advanced Functional Materials</i> ,2200694	15.6	3