Themis Prodromakis

List of Publications by Year
in descending order

211 papers	5,906 citations	117625 34 h-index	85541 71 g-index
216 all docs	216 docs citations	216 times ranked	5787 citing authors

#	Article	IF	Citations
1	Electron Transporting Perylene Diimide-Based Random Terpolymers with Variable Co-Monomer Feed Ratio: A Route to All-Polymer-Based Photodiodes. Macromolecules, 2022, 55, 672-683.	4.8	7
2	Thermal Effects on Initial Volatile Response and Relaxation Dynamics of Resistive RAM Devices. IEEE Electron Device Letters, 2022, 43, 386-389.	3.9	3
3	Formation of a ternary oxide barrier layer and its role in switching characteristic of ZnO-based conductive bridge random access memory devices. APL Materials, 2022, 10, 031103.	5.1	2
4	Advances in Organic and Perovskite Photovoltaics Enabling a Greener Internet of Things. Advanced Functional Materials, 2022, 32, .	14.9	24
5	Low-power supralinear photocurrent generation via excited state fusion in single-component nanostructured organic photodetectors. Journal of Materials Chemistry C, 2022, 10, 7575-7585.	5.5	4
6	NeuroPack: An Algorithm-Level Python-Based Simulator for Memristor-Empowered Neuro-Inspired Computing. Frontiers in Nanotechnology, 2022, 4, .	4.8	5
7	An Adiabatic Capacitive Artificial Neuron With RRAM-Based Threshold Detection for Energy-Efficient Neuromorphic Computing. IEEE Transactions on Circuits and Systems I: Regular Papers, 2022, 69, 3512-3525.	5.4	4
8	Palimpsest memories stored in memristive synapses. Science Advances, 2022, 8, .	10.3	5
9	Selectively biased tri-terminal vertically-integrated memristor configuration. Scientific Reports, 2022, 12, .	3.3	0
10	ZrOX insertion layer enhanced switching and synaptic performances of TiOX-based memristive devices. IOP Conference Series: Materials Science and Engineering, 2021, 1034, 012142.	0.6	0
11	Band tailoring by annealing and current conduction of Co-doped ZnO transparent resistive switching memory. IOP Conference Series: Materials Science and Engineering, 2021, 1034, 012140.	0.6	0
12	Conduction mechanism of Co-doped ZnO transparent memristive devices. IOP Conference Series: Materials Science and Engineering, 2021, 1034, 012139.	0.6	0
13	Transformation of digital to analog switching in TaOx-based memristor device for neuromorphic applications. Applied Physics Letters, 2021, 118, .	3.3	37
14	Negative effect of cations out-diffusion and auto-doping on switching mechanisms of transparent memristor devices employing ZnO/ITO heterostructure. Applied Physics Letters, 2021, 118, .	3.3	7
15	Low-power electronic technologies for harsh radiation environments. Nature Electronics, 2021, 4, 243-253.	26.0	39
16	Accounting for Memristor I-V Non-Linearity in Low Power Memristive Amplifiers. , 2021, , .		0
17	Reviewâ€"Progress in Electrolytes for Rechargeable Aluminium Batteries. Journal of the Electrochemical Society, 2021, 168, 056509.	2.9	31
18	A RRAM-Based Associative Memory Cell. , 2021, , .		2

#	Article	IF	Citations
19	An Adiabatic Regenerative Capacitive Artificial Neuron. , 2021, , .		1
20	Practical demonstration of a RRAM memory fuse. International Journal of Circuit Theory and Applications, 2021, 49, 2363-2372.	2.0	2
21	Analysing and measuring the performance of memristive integrating amplifiers. International Journal of Circuit Theory and Applications, 2021, 49, 3507-3525.	2.0	4
22	Frequency Response of Metal-Oxide Memristors. IEEE Transactions on Electron Devices, 2021, 68, 3636-3642.	3.0	5
23	Compact Modeling of the Switching Dynamics and Temperature Dependencies in TiOâ‚“ Memristorsâ€”Part II: Physics-Based Model. IEEE Transactions on Electron Devices, 2021, 68, 4885-4890.	3.0	2
24	Compact Modeling of the Switching Dynamics and Temperature Dependencies in TiOâ‚“-Based Memristorsâ€”Part I: Behavioral Model. IEEE Transactions on Electron Devices, 2021, 68, 4877-4884.	3.0	4
25	Technology agnostic frequency characterization methodology for memristors. Scientific Reports, 2021, 11, 20599.	3.3	5
26	Design Flow for Hybrid CMOS/Memristor Systemsâ€”Part II: Circuit Schematics and Layout. IEEE Transactions on Circuits and Systems I: Regular Papers, 2021, 68, 4876-4888.	5.4	2
27	Design Flow for Hybrid CMOS/Memristor Systemsâ€”Part I: Modeling and Verification Steps. IEEE Transactions on Circuits and Systems I: Regular Papers, 2021, 68, 4862-4875.	5.4	9
28	Standards for the Characterization of Endurance in Resistive Switching Devices. ACS Nano, 2021, 15, 17214-17231.	14.6	128
29	Conduction channel configuration controlled digital and analogÂresponse in TiO₂-based inorganic memristive artificial synapses. APL Materials, 2021, 9, 121103.	5.1	5
30	A semi-holographic hyperdimensional representation system for hardware-friendly cognitive computing. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2020, 378, 20190162.	3.4	1
31	A Reconfigurable CMOS-Memristor Active Inductor. , 2020, , .		0
32	An FPGA Based System for Interfacing with Crossbar Arrays. , 2020, , .		5
33	Monitoring PSA levels as chemical state-variables in metal-oxide memristors. Scientific Reports, 2020, 10, 15281.	3.3	6
34	Formation and Stability of Smooth Thin Films with Soft Microgels Made of Poly(N-Isopropylacrylamide) and Poly(Acrylic Acid). Polymers, 2020, 12, 2638.	4.5	6
35	Bidirectional Volatile Signatures of Metal-Oxide Memristorsâ€”Part II: Modeling. IEEE Transactions on Electron Devices, 2020, 67, 5166-5173.	3.0	6
36	Surface Acoustic Wave Resonators for Wireless Sensor Network Applications in the 433.92 MHz ISM Band. Sensors, 2020, 20, 4294.	3.8	10

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37	UV induced resistive switching in hybrid polymer metal oxide memristors. Scientific Reports, 2020, 10, 21130.	3.3	4
38	Bidirectional Volatile Signatures of Metalâ€“Oxide Memristorsâ€”Part I: Characterization. IEEE Transactions on Electron Devices, 2020, 67, 5158-5165.	3.0	8
39	Live Demonstration: Electroforming of TiO_{2â€“x} Memristor Devices using High Speed Pulses. , 2020, , .		1
40	Memristive synapses connect brain and silicon spiking neurons. Scientific Reports, 2020, 10, 2590.	3.3	59
41	Hierarchical AI - from neurons to psychology. , 2020, , .		0
42	Memristor-Enabled Reconfigurable Integrated Circuits. , 2020, , .		0
43	Poly(N-isopropylacrylamide) based thin microgel films for use in cell culture applications. Scientific Reports, 2020, 10, 6126.	3.3	59
44	Conductive Polymers As Hybrid Battery-Capacitor Electrode Materials. ECS Meeting Abstracts, 2020, MA2020-02, 336-336.	0.0	2
45	Aluminium Electrodeposition in Emimcl-AlCl3 ionogels for Improved Aluminium Batteries. ECS Meeting Abstracts, 2020, MA2020-02, 461-461.	0.0	0
46	Spike sorting using non-volatile metal-oxide memristors. Faraday Discussions, 2019, 213, 511-520.	3.2	6
47	Synaptic and neuromorphic functions: general discussion. Faraday Discussions, 2019, 213, 553-578.	3.2	2
48	Valence change ReRAMs (VCM) - Experiments and modelling: general discussion. Faraday Discussions, 2019, 213, 259-286.	3.2	2
49	Electrochemical metallization ReRAMs (ECM) - Experiments and modelling: general discussion. Faraday Discussions, 2019, 213, 115-150.	3.2	5
50	An electrical characterisation methodology for identifying the switching mechanism in TiO2 memristive stacks. Scientific Reports, 2019, 9, 8168.	3.3	6
51	A Memristive Switching Uncertainty Model. IEEE Transactions on Electron Devices, 2019, 66, 2946-2953.	3.0	14
52	Microstructured hybrid scaffolds for aligning neonatal rat ventricular myocytes. Materials Science and Engineering C, 2019, 103, 109783.	7.3	2
53	Functional Connectivity of Organic Neuromorphic Devices by Global Voltage Oscillations. Advanced Intelligent Systems, 2019, 1, 1900013.	6.1	24
54	An Analogue-Domain, Switch-Capacitor-Based Arithmetic-Logic Unit. , 2019, , .		1

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55	A Digital In-Analogue Out Logic Gate Based on Metal-Oxide Memristor Devices. , 2019, , .		0
56	Practical Implementation of Memristor-Based Threshold Logic Gates. IEEE Transactions on Circuits and Systems I: Regular Papers, 2019, 66, 3041-3051.	5.4	32
57	Modular Pressure and Flow Rate-Balanced Microfluidic Serial Dilution Networks for Miniaturised Point-of-Care Diagnostic Platforms. Sensors, 2019, 19, 911.	3.8	4
58	An Electrical Characterisation Methodology for Benchmarking Memristive Device Technologies. Scientific Reports, 2019, 9, 19412.	3.3	19
59	Impact of Line Edge Roughness on ReRAM Uniformity and Scaling. Materials, 2019, 12, 3972.	2.9	2
60	Computing Image and Motion with 3-D Memristive Grids. , 2019, , 1177-1210.		1
61	Computing Shortest Paths in 2D and 3D Memristive Networks. , 2019, , 1161-1176.		0
62	Interface Asymmetry Induced by Symmetric Electrodes on Metalâ€“Al:TiO$_{x}$â€“Metal Structures. IEEE Nanotechnology Magazine, 2018, 17, 867-872.	2.0	8
63	A Data-Driven Verilog-A ReRAM Model. IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems, 2018, 37, 3151-3162.	2.7	73
64	Processing big-data with Memristive Technologies: Splitting the Hyperplane Efficiently. , 2018, , .		2
65	Sub 100 nW Volatile Nano-Metal-Oxide Memristor as Synaptic-Like Encoder of Neuronal Spikes. IEEE Transactions on Biomedical Circuits and Systems, 2018, 12, 351-359.	4.0	19
66	Magnetic stimulation in the microscale: the development of a 6 Ã— 6 array of micro-coils for stimulation of excitable cells in vitro. Biomedical Physics and Engineering Express, 2018, 4, 025016.	1.2	16
67	Live Demonstration: Benchmarking Analogue Performance of Emerging Random Access Memory Technologies. , 2018, , .		0
68	Challenges hindering memristive neuromorphic hardware from going mainstream. Nature Communications, 2018, 9, 5267.	12.8	75
69	A Novel Microfluidic Point-of-Care Biosensor System on Printed Circuit Board for Cytokine Detection. Sensors, 2018, 18, 4011.	3.8	35
70	Conduction mechanisms at distinct resistive levels of Pt/TiO2-x/Pt memristors. Applied Physics Letters, 2018, 113, .	3.3	33
71	Live Demonstration: An Embedded Environmental Control Micro-chamber System for RRAM Memristor Characterisation. , 2018, , .		0
72	High-sensitivity memristor-based threshold detection. , 2018, , .		7

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73	An Embedded Environmental Control Micro-chamber System for RRAM Memristor Characterisation. , 2018, , .		3
74	Metal Oxide-enabled Reconfigurable Memristive Threshold Logic Gates. , 2018, , .		4
75	Effect of patterned polyacrylamide hydrogel on morphology and orientation of cultured NRVMs. Scientific Reports, 2018, 8, 11991.	3.3	12
76	Electrical characteristics of interfacial barriers at metalâ€"TiO₂ contacts. Journal Physics D: Applied Physics, 2018, 51, 425101.	2.8	22
77	Seamlessly fused digital-analogue reconfigurable computing using memristors. Nature Communications, 2018, 9, 2170.	12.8	38
78	Benchmarking Analogue Performance of Emerging Random Access Memory Technologies. , 2018, , .		2
79	Electrothermal deterioration factors in gold planar inductors designed for microscale bio-applications. Microelectronic Engineering, 2018, 197, 61-66.	2.4	1
80	Impact of ultra-thin Al2O3â€“y layers on TiO2â€“x ReRAM switching characteristics. Journal of Applied Physics, 2017, 121, .	2.5	23
81	Correlated resistive/capacitive state variability in solid TiO2 based memory devices. Applied Physics A: Materials Science and Processing, 2017, 123, 1.	2.3	3
82	Resistive switching of Pt/TiO_x/Pt devices fabricated on flexible Parylene-C substrates. Nanotechnology, 2017, 28, 025303.	2.6	18
83	A memristor-CMOS hybrid architecture concept for on-line template matching. , 2017, , .		3
84	Introducing the nanoworld. Nature Nanotechnology, 2017, 12, 832-832.	31.5	0
85	An Assay System for Point-of-Care Diagnosis of Tuberculosis using Commercially Manufactured PCB Technology. Scientific Reports, 2017, 7, 685.	3.3	25
86	Parylene C topographic micropattern as a template for patterning PDMS and Polyacrylamide hydrogel. Scientific Reports, 2017, 7, 5764.	3.3	12
87	Multibit memory operation of metal-oxide bi-layer memristors. Scientific Reports, 2017, 7, 17532.	3.3	228
88	High-performance PCB-based capillary pumps for affordable point-of-care diagnostics. Microfluidics and Nanofluidics, 2017, 21, 103.	2.2	18
89	Volatility Characterization for RRAM Devices. IEEE Electron Device Letters, 2017, 38, 28-31.	3.9	5
90	Towards a smartphone-aided electronic ELISA for real-time electrochemical monitoring. , 2017, , .		2

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91	Live demonstration: A TiO2 ReRAM parameter extraction method. , 2017, , .		6
92	A Sub-30 mpH Resolution Thin Film Transistor-Based Nanoribbon Biosensing Platform. Sensors, 2017, 17, 2000.	3.8	2
93	A TiO2 ReRAM parameter extraction method. , 2017, , .		10
94	Mitigating noise effects in volatile nano-metal oxide neural detector. , 2017, , .		0
95	A dual switched-capacitor integrator architecture for versatile, real-time amperometric biosensing. , 2017, , .		1
96	Live demonstration: MNET: A visually rich memristor crossbar simulator. , 2017, , .		0
97	Analog Memristive Synapse in Spiking Networks Implementing Unsupervised Learning. Frontiers in Neuroscience, 2016, 10, 482.	2.8	142
98	Effects of Ar and O₂ Plasma Etching on Parylene C: Topography versus Surface Chemistry and the Impact on Cell Viability. Plasma Processes and Polymers, 2016, 13, 324-333.	3.0	29
99	Practical operation considerations for memristive integrating sensors. , 2016, , .		1
100	Engineering the switching dynamics of TiOx-based RRAM with Al doping. Journal of Applied Physics, 2016, 120, .	2.5	26
101	A planar micro-magnetic platform for stimulation of neural cells in vitro. , 2016, , .		3
102	Towards a memristor-based spike-sorting platform. , 2016, , .		3
103	An ultra-low voltage RRAM read-out technique employing dithering principles. , 2016, , .		0
104	An amorphous titanium dioxide metal insulator metal selector device for resistive random access memory crossbar arrays with tunable voltage margin. Applied Physics Letters, 2016, 108, .	3.3	19
105	The Lab-on-PCB framework for affordable, electronic-based point-of-care diagnostics: From design to manufacturing. , 2016, , .		8
106	HfO2-based memristors for neuromorphic applications. , 2016, , .		32
107	Experimental study of gradual/abrupt dynamics of HfO2-based memristive devices. Applied Physics Letters, 2016, 109, .	3.3	49
108	Emulating short-term synaptic dynamics with memristive devices. Scientific Reports, 2016, 6, 18639.	3.3	104

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109	Live demonstration: Characterization of RRAM crossbar arrays at a click of a button. , 2016, , .		2
110	On the origin of resistive switching volatility in Ni/TiO2/Ni stacks. Journal of Applied Physics, 2016, 120, .	2.5	12
111	A PCB-based electronic ELISA system for rapid, portable infectious disease diagnosis. , 2016, , .		6
112	Surface Chemistry and Microtopography of Parylene C Films Control the Morphology and Microtubule Density of Cardiac Myocytes. Tissue Engineering - Part C: Methods, 2016, 22, 464-472.	2.1	10
113	An FPGA-Based Instrument for En-Masse RRAM Characterization With ns Pulsing Resolution. IEEE Transactions on Circuits and Systems I: Regular Papers, 2016, 63, 818-826.	5.4	16
114	Amperometric IFN-Î³ immunosensors with commercially fabricated PCB sensing electrodes. Biosensors and Bioelectronics, 2016, 86, 805-810.	10.1	41
115	X-ray spectromicroscopy investigation of soft and hard breakdown in RRAM devices. Nanotechnology, 2016, 27, 345705.	2.6	11
116	A TiO2-based volatile threshold switching selector device with 107 non linearity and sub 100 pA Off current. , 2016, , .		6
117	Computationally efficient concentrationâ€based model for accurate evaluation of T â€junction inlet staggered herringbone micromixers. Micro and Nano Letters, 2016, 11, 236-239.	1.3	10
118	EU COST action IC1401 â€" Pushing the frontiers of memristive devices to systems. , 2016, , .		0
119	Investigation of the Switching Mechanism in TiO₂-Based RRAM: A Two-Dimensional EDX Approach. ACS Applied Materials & Interfaces, 2016, 8, 19605-19611.	8.0	69
120	Unsupervised learning in probabilistic neural networks with multi-state metal-oxide memristive synapses. Nature Communications, 2016, 7, 12611.	12.8	266
121	Spatially resolved TiOx phases in switched RRAM devices using soft X-ray spectromicroscopy. Scientific Reports, 2016, 6, 21525.	3.3	27
122	High Density Crossbar Arrays with Sub- 15â€‰nm Single Cells via Liftoff Process Only. Scientific Reports, 2016, 6, 32614.	3.3	32
123	Real-time encoding and compression of neuronal spikes by metal-oxide memristors. Nature Communications, 2016, 7, 12805.	12.8	141
124	Role and Optimization of the Active Oxide Layer in TiO₂â€Based RRAM. Advanced Functional Materials, 2016, 26, 507-513.	14.9	49
125	Long-lasting FR-4 surface hydrophilisation towards commercial PCB passive microfluidics. Applied Surface Science, 2016, 368, 69-75.	6.1	16
126	Practical Determination of Individual Element Resistive States in Selectorless RRAM Arrays. IEEE Transactions on Circuits and Systems I: Regular Papers, 2016, 63, 827-835.	5.4	24

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127	Biorealistic cardiac cell culture platforms with integrated monitoring of extracellular action potentials. Scientific Reports, 2015, 5, 11067.	3.3	20
128	Surface and Electrical Characterization of Ag/AgCl Pseudo-Reference Electrodes Manufactured with Commercially Available PCB Technologies. Sensors, 2015, 15, 18102-18113.	3.8	38
129	Implementation of a spike-based perceptron learning rule using TiO2â^'x memristors. Frontiers in Neuroscience, 2015, 9, 357.	2.8	35
130	A <inline-formula> <tex-math notation="LaTeX">$mu $ </tex-math></inline-formula>-Controller-Based System for Interfacing Selectorless RRAM Crossbar Arrays. IEEE Transactions on Electron Devices, 2015, 62, 2190-2196.	3.0	73
131	Towards a high-precision, embedded system for versatile sensitive biosensing measurements. , 2015, , .		2
132	Gradual set dynamics in HfO₂-based memristor driven by sub-threshold voltage pulses. , 2015, , .		15
133	Guest Editorial Solid-state Memristive Devices and Systems. IEEE Journal on Emerging and Selected Topics in Circuits and Systems, 2015, 5, 121-122.	3.6	0
134	X-ray Absorption Spectroscopy Study of TiO_{2â€“x} Thin Films for Memory Applications. Journal of Physical Chemistry C, 2015, 119, 4362-4370.	3.1	32
135	A Cell Classifier for RRAM Process Development. IEEE Transactions on Circuits and Systems II: Express Briefs, 2015, 62, 676-680.	3.0	19
136	Conductive Atomic Force Microscopy Investigation of Switching Thresholds in Titanium Dioxide Thin Films. Journal of Physical Chemistry C, 2015, 119, 11958-11964.	3.1	34
137	An RRAM Biasing Parameter Optimizer. IEEE Transactions on Electron Devices, 2015, 62, 3685-3691.	3.0	27
138	Limitations and precision requirements for read-out of passive, linear, selectorless RRAM arrays. , 2015, , .		7
139	Assessment of Parylene C Thin Films for Heart Valve Tissue Engineering. Tissue Engineering - Part A, 2015, 21, 2504-2514.	3.1	11
140	Impact of active areas on electrical characteristics of TiO<inf>2</inf> based solid-state memristors. , 2015, , .		5
141	A Memristor SPICE Model Accounting for Synaptic Activity Dependence. PLoS ONE, 2015, 10, e0120506.	2.5	30
142	Parylene C-Based Flexible Electronics for pH Monitoring Applications. Sensors, 2014, 14, 11629-11639.	3.8	24
143	P396Improved calcium cycling is associated with microtubule reorganisation in anisotropic cardiomyocyte cultures. Cardiovascular Research, 2014, 103, S73.1-S73.	3.8	0
144	Resistive switching characteristics of indiumâ€tinâ€oxide thin film devices. Physica Status Solidi (A) Applications and Materials Science, 2014, 211, 1194-1199.	1.8	3

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145	A lab-on-chip approach for monitoring the electrochemical activity of biorealistic cell cultures. , 2014, , .		0
146	Origin of stochastic resistive switching in devices with phenomenologically identical initial states. , 2014, , .		0
147	Qualitative SPICE modeling accounting for volatile dynamics of TiO<inf>2</inf> memristors. , 2014, , .		1
148	Coexistence of memory resistance and memory capacitance in TiO2 solid-state devices. Nanoscale Research Letters, 2014, 9, 552.	5.7	29
149	Memristors as synapse emulators in the context of event-based computation. , 2014, , .		1
150	Selective hydrophilic modification of Parylene C films: a new approach to cell micro-patterning for synthetic biology applications. Biofabrication, 2014, 6, 025004.	7.1	36
151	Live demonstration: A versatile, low-cost platform for testing large ReRAM cross-bar arrays. , 2014, , .		13
152	Applications of solid-state memristors in tunable filters. , 2014, , .		7
153	Design considerations for a CMOS Lab-on-Chip microheater array to facilitate the in vitro thermal stimulation of neurons. , 2014, , .		7
154	Stochastic switching of TiO2-based memristive devices with identical initial memory states. Nanoscale Research Letters, 2014, 9, 293.	5.7	13
155	Origin of the OFF state variability in ReRAM cells. Journal Physics D: Applied Physics, 2014, 47, 145102.	2.8	25
156	A Memristor SPICE Model Accounting for Volatile Characteristics of Practical ReRAM. IEEE Electron Device Letters, 2014, 35, 135-137.	3.9	51
157	Memory Impedance in TiO2 based Metal-Insulator-Metal Devices. Scientific Reports, 2014, 4, 4522.	3.3	97
158	Computing Shortest Paths in 2D and 3D Memristive Networks. , 2014, , 537-552.		13
159	Computing Image and Motion with 3-D Memristive Grids. , 2014, , 553-583.		6
160	Tissue Engineering Techniques in Cardiac Repair and Disease Modelling. Current Pharmaceutical Design, 2014, 20, 2048-2056.	1.9	5
161	A Proposal for Hybrid Memristor-CMOS Spiking Neuromorphic Learning Systems. IEEE Circuits and Systems Magazine, 2013, 13, 74-88.	2.3	56
162	Integration of nanoscale memristor synapses in neuromorphic computing architectures. Nanotechnology, 2013, 24, 384010.	2.6	469

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163	The effect of microgrooved culture substrates on calcium cycling of cardiac myocytes derived from human induced pluripotent stem cells. Biomaterials, 2013, 34, 2399-2411.	11.4	154
164	The dual role of Parylene C in chemical sensing: Acting as an encapsulant and as a sensing membrane for pH monitoring applications. Sensors and Actuators B: Chemical, 2013, 186, 1-8.	7.8	32
165	Free-standing parylene C thin films as flexible pH sensing membranes. , 2013, , .		0
166	TWO CENTURIES OF MEMRISTORS. , 2013, , 508-517.		5
167	Resistive switching of oxygen enhanced TiO2 thin-film devices. Applied Physics Letters, 2013, 102, .	3.3	54
168	Sensing H+ with conventional neural probes. Applied Physics Letters, 2013, 102, 223506.	3.3	0
169	Temporal processing with volatile memristors. , 2013, , .		5
170	Pulse-induced resistive and capacitive switching in TiO2 thin film devices. Applied Physics Letters, 2013, 103, .	3.3	34
171	STDP and STDP variations with memristors for spiking neuromorphic learning systems. Frontiers in Neuroscience, 2013, 7, 2.	2.8	368
172	Memristive devices as parameter setting elements in programmable gain amplifiers. Applied Physics Letters, 2012, 101, 243502.	3.3	31
173	Microfluidic evaporator for on-chip sample concentration. Lab on A Chip, 2012, 12, 4049.	6.0	24
174	High precision analogue memristor state tuning. Electronics Letters, 2012, 48, 1105-1107.	1.0	45
175	Oxygen plasma induced hydrophilicity of Parylene-C thin films. Applied Surface Science, 2012, 261, 43-51.	6.1	54
176	Structured Culture Scaffolds Improve the Calcium Handling Properties of Cardiomyocytes Differentiated from Induced Pluripotent Stem Cells. Biophysical Journal, 2012, 102, 103a.	0.5	2
177	Biomimetic model of the outer plexiform layer by incorporating memristive devices. Physical Review E, 2012, 85, 041918.	2.1	38
178	Two centuries of memristors. Nature Materials, 2012, 11, 478-481.	27.5	334
179	A novel design approach for developing chemical sensing platforms using inexpensive technologies. , 2011, , .		14
180	A Low-Cost Disposable Chemical Sensing Platform Based on Discrete Components. IEEE Electron Device Letters, 2011, 32, 417-419.	3.9	21

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181	Low-cost implementations of pH monitoring platforms. , 2011, , .		2
182	A CMOS-Based ISFET Chemical Imager With Auto-Calibration Capability. IEEE Sensors Journal, 2011, 11, 3253-3260.	4.7	45
183	A Biomimetic Model of the Outer Plexiform Layer by Incorporating Memristive Devices. Nature Precedings, 2011, , .	0.1	1
184	A Versatile Memristor Model With Nonlinear Dopant Kinetics. IEEE Transactions on Electron Devices, 2011, 58, 3099-3105.	3.0	463
185	An Extended CMOS ISFET Model Incorporating the Physical Design Geometry and the Effects on Performance and Offset Variation. IEEE Transactions on Electron Devices, 2011, 58, 4414-4422.	3.0	63
186	Live demonstration: A CMOS-based lab-on-chip array for combined magnetic manipulation and opto-chemical sensing. , 2011, , .		4
187	A review on memristive devices and applications. , 2010, , .		62
188	Cost-effective fabrication of nanoscale electrode memristors with reproducible electrical response. Micro and Nano Letters, 2010, 5, 91.	1.3	12
189	Interfacial polarisation on gallium arsenide membranes. Micro and Nano Letters, 2010, 5, 178.	1.3	0
190	An Experimental Technique for Characterizing Slow-Wave Characteristics of MIS-Like Transmission Lines Using Aqueous Dielectrics. IEEE Transactions on Microwave Theory and Techniques, 2010, 58, 985-993.	4.6	0
191	Application of Maxwellâ€“Wagner polarization in delay lines. Microelectronics Journal, 2010, 41, 17-24.	2.0	4
192	Fabrication and electrical characteristics of memristors with TiO<inf>2</inf>/TiO<inf>2+x</inf> active layers. , 2010, , .		15
193	Exploiting CMOS Technology to Enhance the Performance of ISFET Sensors. IEEE Electron Device Letters, 2010, 31, 1053-1055.	3.9	22
194	Cellular neural networks with memristive cell devices. , 2010, , .		1
195	Switching mechanisms in microscale memristors. Electronics Letters, 2010, 46, 63.	1.0	36
196	Practical micro/nano fabrication implementations of memristive devices. , 2010, , .		14
197	A CMOS-based lab-on-chip array for the combined magnetic stimulation and opto-chemical sensing of neural tissue. , 2010, , .		8
198	A bulk-driven ISFET-based chemical mixer. , 2010, , .		0

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199	Biocompatible encapsulation of CMOS based chemical sensors. , 2009, , .		19
200	Surface texturing for Maxwellâ€“Wagner polarisation engineering. Micro and Nano Letters, 2009, 4, 5-8.	1.3	0
201	Application of gold nanodots for Maxwellâ€“Wagner loss reduction. Micro and Nano Letters, 2009, 4, 80-83.	1.3	0
202	Engineering the Maxwellâ€“Wagner polarization effect. Applied Surface Science, 2009, 255, 6989-6994.	6.1	191
203	Effect of mobile ionic-charge on CMOS based ion-sensitive field-effect transistors (ISFETs). , 2009, , .		6
204	Batch encapsulation technique for CMOS based chemical sensors. , 2008, , .		11
205	Microstrip stepped impedance lowpass filters based on the maxwell-wagner polarization mechanism. , 2008, , .		3
206	Micro-scale lowpass filters based on the Maxwell-Wagner phenomenon. , 2007, , .		3
207	A Miniaturized Delay Line based on Slow-Wave Substrates. , 2007, , .		4
208	Towards a microstrip antenna on synthetic high-dielectric constant substrates. , 0, , .		6
209	Distributed Filter Design on Silicon CMOS. , 0, , .		4
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