Panagiotis Anastasios Bousoulas

List of Publications by Year
in descending order

40 papers	573 citations	566801 15 h-index	610482 24 g-index
41 all docs	41 docs citations	41 times ranked	640 citing authors

#	Article	IF	Citations
1	Low-Power and Highly Uniform 3-b Multilevel Switching in Forming Free TiO_{2â€“<italic>x</italic>}-Based RRAM With Embedded Pt Nanocrystals. IEEE Electron Device Letters, 2016, 37, 874-877.	2.2	59
2	Influence of oxygen content of room temperature TiO_{2âˆ’x} deposited films for enhanced resistive switching memory performance. Journal of Applied Physics, 2014, 115, 034516.	1.1	47
3	Low-Power Forming Free TiO_{2â€“<italic>x</italic>}/HfO_{2â€“<italic>y</italic>}/TiO<sub>2â€“<italic>x</italic RRAM Devices Exhibiting Synaptic Property Characteristics. IEEE Transactions on Electron Devices, 2017, 64, 3151-3158.	1.6	43
4	Engineering amorphous-crystalline interfaces in TiO2âˆ’x/TiO2âˆ’y-based bilayer structures for enhanced resistive switching and synaptic properties. Journal of Applied Physics, 2016, 120, .	1.1	38
5	Investigating the origins of ultra-short relaxation times of silver filaments in forming-free SiO₂-based conductive bridge memristors. Nanotechnology, 2020, 31, 454002.	1.3	34
6	Influence of Ti top electrode thickness on the resistive switching properties of forming free and self-rectified TiO 2âˆ’x thin films. Thin Solid Films, 2014, 571, 23-31.	0.8	33
7	Investigating the origins of high multilevel resistive switching in forming free Ti/TiO2âˆ’x-based memory devices through experiments and simulations. Journal of Applied Physics, 2017, 121, .	1.1	32
8	Ultraâ€Low Power Multilevel Switching with Enhanced Uniformity in Forming Free TiO_{2âˆ’x}â€Based RRAM with Embedded Pt Nanocrystals. Physica Status Solidi (A) Applications and Materials Science, 2017, 214, 1700570.	0.8	25
9	Heavy metal ion detection using DNAzyme-modified platinum nanoparticle networks. Sensors and Actuators B: Chemical, 2017, 239, 962-969.	4.0	25
10	Memory programming of TiO2âˆ’x films by Conductive Atomic Force Microscopy evidencing filamentary resistive switching. Applied Surface Science, 2015, 332, 55-61.	3.1	24
11	Impact of Pt embedded nanocrystals on the resistive switching and synaptic properties of forming free TiO2â€‰â€“â€‰x/TiO2â€‰â€“â€‰y-based bilayer structures. Journal of Applied Physics, 2019, 126, .	1.1	24
12	Emulating artificial neuron and synaptic properties with SiO₂-based memristive devices by tuning threshold and bipolar switching effects. Journal Physics D: Applied Physics, 2021, 54, 225303.	1.3	23
13	Enhancing the synaptic properties of low-power and forming-free HfOx/TaOy/HfOx resistive switching devices. Microelectronic Engineering, 2020, 229, 111358.	1.1	22
14	Tuning the analog synaptic properties of forming free SiO2 memristors by material engineering. Applied Physics Letters, 2021, 118, .	1.5	20
15	Impact of Active Electrode on the Synaptic Properties of SiO₂-Based Forming-Free Conductive Bridge Memory. IEEE Transactions on Electron Devices, 2021, 68, 1598-1603.	1.6	15
16	Spatial Confinement Effects of Embedded Nanocrystals on Multibit and Synaptic Properties of Forming Free SiO₂-Based Conductive Bridge Random Access Memory. IEEE Electron Device Letters, 2020, 41, 1013-1016.	2.2	13
17	Tuning Resistive, Capacitive, and Synaptic Properties of Forming Free TiO_{2â€x}â€Based RRAM Devices by Embedded Pt and Ta Nanocrystals. Physica Status Solidi (A) Applications and Materials Science, 2018, 215, 1700440.	0.8	12
18	Coexistence of bipolar and threshold resistive switching in TiO₂based structure with embedded hafnium nanoparticles. Journal Physics D: Applied Physics, 2017, 50, 045103.	1.3	11

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19	Low Power Stochastic Neurons From SiO₂-Based Bilayer Conductive Bridge Memristors for Probabilistic Spiking Neural Network Applicationsâ€"Part I: Experimental Characterization. IEEE Transactions on Electron Devices, 2022, 69, 2360-2367.	1.6	11
20	Emulating Artificial Synaptic Plasticity Characteristics from SiO2-Based Conductive Bridge Memories with Pt Nanoparticles. Micromachines, 2021, 12, 306.	1.4	10
21	Low Power Stochastic Neurons From SiO₂-Based Bilayer Conductive Bridge Memristors for Probabilistic Spiking Neural Network Applicationsâ€"Part II: Modeling. IEEE Transactions on Electron Devices, 2022, 69, 2368-2376.	1.6	9
22	Highly Flexible Artificial Synapses from SiO₂-Based Conductive Bridge Memristors and Pt Nanoparticles through a Crack Suppression Technique. ACS Applied Electronic Materials, 2021, 3, 2729-2737.	2.0	7
23	Improving the resistive switching uniformity of forming-free TiO<inf>2−x</inf> based devices by embedded Pt nanocrystals. , 2015, , .		5
24	Understanding the Formation of Conducting Filaments in RRAM Through the Design of Experiments. International Journal of High Speed Electronics and Systems, 2016, 25, 1640007.	0.3	5
25	Memristive Oscillatory Networks for Computing: The Chemical Wave Propagation Paradigm. , 2021, , .		5
26	Emulating low power nociceptive functionalities with a forming-free SiO2/VO<i>x</i> conductive bridge memory with Pt nanoparticles. Applied Physics Letters, 2022, 120, .	1.5	5
27	Resistive memory multilayer structure with self-rectifying and forming free properties along with their modification by adding a hafnium nanoparticle midlayer. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2017, 35, .	0.9	3
28	Margolus Chemical Wave Logic Gate with Memristive Oscillatory Networks. , 2021, , .		3
29	Chemical Wave Computing from Labware to Electrical Systems. Electronics (Switzerland), 2022, 11, 1683.	1.8	3
30	Physical modelling of the SET/RESET characteristics and analog properties of TiO<inf>x</inf>/HfO<inf>2â^'x</inf>/TiO<inf>x</inf>-based RRAM devices. , 2016, , .		2
31	Experiments and simulation of multilevel resistive switching in forming free Ti/TiO<inf>2â^'x</inf> RRAM devices. , 2017, , .		2
32	Unconventional Logic on Memristor-Based Oscillatory Medium. , 2021, , .		1
33	Multifunctional Spatially-Expanded Logic Gate for Unconventional Computations with Memristor-Based Oscillators. , 2021, , .		1
34	Material and Device Parameters Influencing Multi-Level Resistive Switching of Room Temperature Grown Titanium Oxide Layers. Materials Research Society Symposia Proceedings, 2015, 1729, 59-64.	0.1	0
35	Structural Characterization of Layers for Advanced Non-volatile Memories. Springer Proceedings in Physics, 2015, , 9-17.	0.1	0
36	Understanding the Formation of Conducting Filaments in RRAM Through the Design of Experiments. , 2017, , .		0

#	Article	IF	Citations
37	Emulating artificial mechanoreceptor functionalities from SiO2-based memristor and PDMS stretchable sensor for artificial skin applications. , 2021, , .		0
38	Emulating artificial mechanoreceptor functionalities from SiO₂-based memristor and PDMS stretchable sensor for artificial skin applications. , 2021, , .		0
39	Memristor-based Oscillator for Complex Chemical Wave Logic Computations: Fredkin Gate Paradigm. , 2022, , .		0
40	Demonstration of Enhanced Switching Variability and Conductance Quantization Properties in a SiO₂ Conducting Bridge Resistive Memory with Embedded Two-Dimensional MoS₂ Material. ACS Applied Electronic Materials, 2022, 4, 2869-2878.	2.0	0