

# Mark Buckwell

## List of Publications by Year in descending order

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Version: 2024-02-01

27  
papers

1,099  
citations

566801

15  
h-index

610482

24  
g-index

27  
all docs

27  
docs citations

27  
times ranked

1402  
citing authors

#	ARTICLE	IF	CITATIONS
1	A nanoscale analysis method to reveal oxygen exchange between environment, oxide, and electrodes in ReRAM devices. <i>APL Materials</i> , 2021, 9, .	2.2	6
2	Neuromorphic Dynamics at the Nanoscale in Silicon Suboxide RRAM. <i>Frontiers in Nanotechnology</i> , 2021, 3, .	2.4	3
3	Committee machinesâ€”a universal method to deal with non-idealities in memristor-based neural networks. <i>Nature Communications</i> , 2020, 11, 4273.	5.8	51
4	The interplay between structure and function in redox-based resistance switching. <i>Faraday Discussions</i> , 2019, 213, 151-163.	1.6	16
5	Simulation of Inference Accuracy Using Realistic RRAM Devices. <i>Frontiers in Neuroscience</i> , 2019, 13, 593.	1.4	52
6	Improving the Consistency of Nanoscale Etching for Atomic Force Microscopy Tomography Applications. <i>Frontiers in Materials</i> , 2019, 6, .	1.2	5
7	Recommended Methods to Study Resistive Switching Devices. <i>Advanced Electronic Materials</i> , 2019, 5, 1800143.	2.6	452
8	High-Performance Resistance Switching Memory Devices Using Spin-On Silicon Oxide. <i>IEEE Nanotechnology Magazine</i> , 2018, 17, 884-888.	1.1	11
9	Investigation of resistance switching in SiO <sub>x</sub> RRAM cells using a 3D multi-scale kinetic Monte Carlo simulator. <i>Journal of Physics Condensed Matter</i> , 2018, 30, 084005.	0.7	23
10	On the Limits of Scalpel AFM for the 3D Electrical Characterization of Nanomaterials. <i>Advanced Functional Materials</i> , 2018, 28, 1802266.	7.8	19
11	Spike-Timing Dependent Plasticity in Unipolar Silicon Oxide RRAM Devices. <i>Frontiers in Neuroscience</i> , 2018, 12, 57.	1.4	24
12	Probing electrochemistry at the nanoscale: in situ TEM and STM characterizations of conducting filaments in memristive devices. <i>Journal of Electroceramics</i> , 2017, 39, 73-93.	0.8	28
13	Intrinsic resistance switching in amorphous silicon oxide for high performance SiO <sub>x</sub> ReRAM devices. <i>Microelectronic Engineering</i> , 2017, 178, 98-103.	1.1	64
14	Intrinsic Resistance Switching in Amorphous Silicon Suboxides: The Role of Columnar Microstructure. <i>Scientific Reports</i> , 2017, 7, 9274.	1.6	41
15	Nanoscale Transformations in Metastable, Amorphous, Silicon-Rich Silica. <i>Advanced Materials</i> , 2016, 28, 7486-7493.	11.1	52
16	<i>In situ</i> transmission electron microscopy of resistive switching in thin silicon oxide layers. <i>Resolution and Discovery</i> , 2016, 1, 27-33.	0.9	16
17	Silica: Nanoscale Transformations in Metastable, Amorphous, Silicon-Rich Silica ( <i>Adv. Mater.</i> 34/2016). <i>Advanced Materials</i> , 2016, 28, 7549-7549.	11.1	13
18	Conductive AFM Topography of Intrinsic Conductivity Variations in Silica Based Dielectrics for Memory Applications. <i>ECS Transactions</i> , 2016, 75, 3-9.	0.3	7

#	ARTICLE	IF	CITATIONS
19	Resistance Switching in Individual Hydrogen Silsesquioxane (HSQ) Nanopillars. ECS Transactions, 2016, 75, 101-105.	0.3	1
20	X-ray spectromicroscopy investigation of soft and hard breakdown in RRAM devices. Nanotechnology, 2016, 27, 345705.	1.3	11
21	Advanced physical modeling of SiO <sub>x</sub> resistive random access memories. , 2016, , .		6
22	Nanosecond Analog Programming of Substoichiometric Silicon Oxide Resistive RAM. IEEE Nanotechnology Magazine, 2016, 15, 428-434.	1.1	13
23	Structural changes and conductance thresholds in metal-free intrinsic SiO <sub>x</sub> resistive random access memory. Journal of Applied Physics, 2015, 117, .	1.1	102
24	Resistance switching in SiO <sub>x</sub> . , 2015, , .		0
25	Structural investigation of resistance switching in silicon-rich silica films. , 2015, , .		0
26	Microscopic and spectroscopic analysis of the nature of conductivity changes during resistive switching in silicon-rich silicon oxide. Physica Status Solidi C: Current Topics in Solid State Physics, 2015, 12, 211-217.	0.8	21
27	Conductance tomography of conductive filaments in intrinsic silicon-rich silica RRAM. Nanoscale, 2015, 7, 18030-18035.	2.8	62