Matthew D Pickett

List of Publications by Year
in descending order

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29 papers	7,642 citations	279487 23 h-index	580395 25 g-index
29 all docs	29 docs citations	29 times ranked	6533 citing authors

#	Article	IF	Citations
1	Memristive switching mechanism for metal/oxide/metal nanodevices. Nature Nanotechnology, 2008, 3, 429-433.	15.6	2,578
2	A scalable neuristor built with Mott memristors. Nature Materials, 2013, 12, 114-117.	13.3	867
3	The mechanism of electroforming of metal oxide memristive switches. Nanotechnology, 2009, 20, 215201.	1.3	699
4	Switching dynamics in titanium dioxide memristive devices. Journal of Applied Physics, 2009, 106, .	1.1	609
5	High switching endurance in TaOx memristive devices. Applied Physics Letters, 2010, 97, .	1.5	543
6	Direct Identification of the Conducting Channels in a Functioning Memristive Device. Advanced Materials, 2010, 22, 3573-3577.	11.1	307
7	Sub-100 fJ and sub-nanosecond thermally driven threshold switching in niobium oxide crosspoint nanodevices. Nanotechnology, 2012, 23, 215202.	1.3	290
8	State Dynamics and Modeling of Tantalum Oxide Memristors. IEEE Transactions on Electron Devices, 2013, 60, 2194-2202.	1.6	183
9	Engineering nonlinearity into memristors for passive crossbar applications. Applied Physics Letters, 2012, 100, .	1.5	179
10	Local Temperature Redistribution and Structural Transition During Jouleâ€Heatingâ€Driven Conductance Switching in VO₂. Advanced Materials, 2013, 25, 6128-6132.	11.1	173
11	SPICE modeling of memristors. , 2011, , .		160
12	Metal/TiO2 interfaces for memristive switches. Applied Physics A: Materials Science and Processing, 2011, 102, 785-789.	1.1	138
13	Continuous Electrical Tuning of the Chemical Composition of TaO_x-Based Memristors. ACS Nano, 2012, 6, 2312-2318.	7.3	119
14	Coexistence of Memristance and Negative Differential Resistance in a Nanoscale Metalâ€Oxideâ€Metal System. Advanced Materials, 2011, 23, 1730-1733.	11.1	103
15	Iron point defect reduction in multicrystalline silicon solar cells. Applied Physics Letters, 2008, 92, .	1.5	87
16	Electrical transport and thermometry of electroformed titanium dioxide memristive switches. Journal of Applied Physics, 2009, 106, .	1.1	87
17	Lognormal switching times for titanium dioxide bipolar memristors: origin and resolution. Nanotechnology, 2011, 22, 095702.	1.3	77
18	Sequential Electronic and Structural Transitions in VO₂ Observed Using Xâ€ray Absorption Spectromicroscopy. Advanced Materials, 2014, 26, 7505-7509.	11.1	77

#	Article	IF	Citations
19	Feedback write scheme for memristive switching devices. Applied Physics A: Materials Science and Processing, 2011, 102, 973-982.	1.1	75
20	Twoâ€•and Threeâ€Terminal Resistive Switches: Nanometerâ€Scale Memristors and Memistors. Advanced Functional Materials, 2011, 21, 2660-2665.	7.8	74
21	Dopant Control by Atomic Layer Deposition in Oxide Films for Memristive Switches. Chemistry of Materials, 2011, 23, 123-125.	3.2	65
22	Phase transitions enable computational universality in neuristor-based cellular automata. Nanotechnology, 2013, 24, 384002.	1.3	46
23	Impact of geometry on the performance of memristive nanodevices. Nanotechnology, 2011, 22, 254026.	1.3	26
24	The phase transition in VO2 probed using x-ray, visible and infrared radiations. Applied Physics Letters, 2016, 108, .	1.5	25
25	Memristor structures for high scalability: Non-linear and symmetric devices utilizing fabrication friendly materials and processes. Microelectronic Engineering, 2013, 103, 66-69.	1.1	23
26	Complex intermetallic phase in multicrystalline silicon doped with transition metals. Physical Review B, 2006, 73, .	1.1	20
27	The Art and Science of Constructing a Memristor Model. , 2014, , 93-104.		5
28	Interactions Between Metals and Different Grain Boundary Types and Their Impact on Multicrystalline Silicon Device Performance. , 2006, , .		4
29	The Art and Science of Constructing a Memristor Model: Updated. , 2019, , 267-285.		3