

Catherine E Graves

List of Publications by Year in descending order

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35
papers

3,863
citations

393982

19
h-index

500791

28
g-index

36
all docs

36
docs citations

36
times ranked

4610
citing authors

#	ARTICLE	IF	CITATIONS
1	Analogue signal and image processing with large memristor crossbars. Nature Electronics, 2018, 1, 52-59.	13.1	879
2	Memristor-Based Analog Computation and Neural Network Classification with a Dot Product Engine. Advanced Materials, 2018, 30, 1705914.	11.1	517
3	Dot-product engine for neuromorphic computing. , 2016, , .		481
4	Creation and diagnosis of a solid-density plasma with an X-ray free-electron laser. Nature, 2012, 482, 59-62.	13.7	400
5	Nanoscale spin reversal by non-local angular momentum transfer following ultrafast laser excitation in ferrimagnetic GdFeCo. Nature Materials, 2013, 12, 293-298.	13.3	267
6	Low-Power, Self-Rectifying, and Forming-Free Memristor with an Asymmetric Programming Voltage for a High-Density Crossbar Application. Nano Letters, 2016, 16, 6724-6732.	4.5	171
7	Femtosecond Single-Shot Imaging of Nanoscale Ferromagnetic Order in Pd/Co/Multilayers Using Resonant X-Ray Holography. Physical Review Letters, 2012, 108, 267403.	2.9	153
8	Coherence Properties of Individual Femtosecond Pulses of an X-Ray Free-Electron Laser. Physical Review Letters, 2011, 107, 144801.	2.9	145
9	Nanoscale Confinement of All-Optical Magnetic Switching in TbFeCo - Competition with Nanoscale Heterogeneity. Nano Letters, 2015, 15, 6862-6868.	4.5	126
10	Direct Observation of Localized Radial Oxygen Migration in Functioning Tantalum Oxide Memristors. Advanced Materials, 2016, 28, 2772-2776.	11.1	92
11	Analog content-addressable memories with memristors. Nature Communications, 2020, 11, 1638.	5.8	86
12	Low-Conductance and Multilevel CMOS-Integrated Nanoscale Oxide Memristors. Advanced Electronic Materials, 2019, 5, 1800876.	2.6	67
13	Spatially Resolved Fluorescence Correlation Spectroscopy Using a Spinning Disk Confocal Microscope. Biophysical Journal, 2006, 91, 4241-4252.	0.2	64
14	Resonant $K\pm$ Spectroscopy of Solid-Density Aluminum Plasmas. Physical Review Letters, 2012, 109, 245003.	2.9	58
15	In-Memory Computing with Memristor Content Addressable Memories for Pattern Matching. Advanced Materials, 2020, 32, e2003437.	11.1	54
16	Tree-based machine learning performed in-memory with memristive analog CAM. Nature Communications, 2021, 12, 5806.	5.8	44
17	Temperature and field-dependent transport measurements in continuously tunable tantalum oxide memristors expose the dominant state variable. Applied Physics Letters, 2017, 110, .	1.5	38
18	Low Variability Resistor-Memristor Circuit Masking the Actual Memristor States. Advanced Electronic Materials, 2015, 1, 1500095.	2.6	34

#	ARTICLE	IF	CITATIONS
19	Memristor TCAMs Accelerate Regular Expression Matching for Network Intrusion Detection. IEEE Nanotechnology Magazine, 2019, 18, 963-970.	1.1	30
20	In-operando synchronous time-multiplexed O K-edge x-ray absorption spectromicroscopy of functioning tantalum oxide memristors. Journal of Applied Physics, 2015, 118, .	1.1	25
21	Optical neuronal guidance in three-dimensional matrices. Journal of Neuroscience Methods, 2009, 179, 278-283.	1.3	22
22	Irreversible transformation of ferromagnetic ordered stripe domains in single-shot infrared-pump/resonant-x-ray-scattering-probe experiments. Physical Review B, 2015, 91, .	1.1	19
23	Orbital and spin moments of 5 to 11 nm Fe ₃ O ₄ nanoparticles measured via x-ray magnetic circular dichroism. Journal of Applied Physics, 2014, 115, 17B537.	1.1	15
24	Large Memristor Crossbars for Analog Computing. , 2018, , .		14
25	Opacity effects in a solid-density aluminium plasma created by photo-excitation with an X-ray laser. High Energy Density Physics, 2014, 11, 59-69.	0.4	13
26	Volatile HRS asymmetry and subloops in resistive switching oxides. Nanoscale, 2017, 9, 14414-14422.	2.8	11
27	Magnetic design evolution in perpendicular magnetic recording media as revealed by resonant small angle x-ray scattering. Applied Physics Letters, 2013, 103, .	1.5	8
28	Regular Expression Matching with Memristor TCAMs. , 2018, , .		8
29	Regular Expression Matching with Memristor TCAMs for Network Security. , 2018, , .		8
30	Extracting magnetic cluster size and its distributions in advanced perpendicular recording media with shrinking grain size using small angle x-ray scattering. Applied Physics Letters, 2015, 106, .	1.5	4
31	The Art and Science of Constructing a Memristor Model: Updated. , 2019, , 267-285.		3
32	Differentiable Content Addressable Memory with Memristors. Advanced Electronic Materials, 2022, 8, .	2.6	3
33	Memristors: Direct Observation of Localized Radial Oxygen Migration in Functioning Tantalum Oxide Memristors (Adv. Mater. 14/2016). Advanced Materials, 2016, 28, 2771-2771.	11.1	2
34	In-Memory Computing with Non-volatile Memristor CAM Circuits. , 2022, , 105-139.		2
35	(Invited) In-Memory Computing with Memristor Circuit Primitives. ECS Meeting Abstracts, 2020, MA2020-02, 2037-2037.	0.0	0