Yuriy V Pershin

List of Publications by Year
in descending order

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78 papers	7,454 citations	236925 25 h-index	91884 69 g-index
78 all docs	78 docs citations	78 times ranked	6560 citing authors

#	Article	IF	Citations
1	Theory of Heterogeneous Circuits With Stochastic Memristive Devices. IEEE Transactions on Circuits and Systems II: Express Briefs, 2022, 69, 214-218.	3.0	1
2	Analytic and SPICE modeling of stochastic ReRAM circuits. , 2022, , .		0
3	Custodial Chiral Symmetry in a Su-Schrieffer-Heeger Electrical Circuit with Memory. Physical Review Letters, 2022, 128, 097701.	7.8	13
4	The Rich Dynamics of Memristive Devices With Non-Separable Nonlinear Response. IEEE Transactions on Circuits and Systems II: Express Briefs, 2022, 69, 1802-1806.	3.0	4
5	Kinks in buckled graphene uncompressed and compressed in the longitudinal direction. Theoretical and Computational Chemistry, 2022, , 41-60.	0.4	0
6	An experimental demonstration of the memristor test. Physica E: Low-Dimensional Systems and Nanostructures, 2022, 142, 115290.	2.7	4
7	Importance of the Window Function Choice for the Predictive Modelling of Memristors. IEEE Transactions on Circuits and Systems II: Express Briefs, 2021, 68, 2167-2171.	3.0	10
8	Probabilistic memristive networks: Application of a master equation to networks of binary ReRAM cells. Chaos, Solitons and Fractals, 2021, 142, 110385.	5.1	14
9	The Fourier signatures of memristive hysteresis. Journal Physics D: Applied Physics, 2021, 54, 245302.	2.8	3
10	Influence of a constriction on the motion of graphene kinks. Physical Review B, 2021, 103, .	3.2	3
11	On the validity of memristor modeling in the neural network literature. Neural Networks, 2020, 121, 52-56.	5.9	31
12	Ultrafast lithium diffusion in bilayer buckled graphene: A comparative study of Li and Na. Scripta Materialia, 2020, 178, 139-143.	5.2	7
13	An Experimental Proof that Resistanceâ€Switching Memory Cells are not Memristors. Advanced Electronic Materials, 2020, 6, 2000010.	5.1	20
14	Comment on â€˜If it's pinched it's a memristorâ€™. Semiconductor Science and Technology, 2019, 34, 098001.	2.0	8
15	Bifurcation analysis of a TaO memristor model. Journal Physics D: Applied Physics, 2019, 52, 505304.	2.8	14
16	Transient dynamics of pulse-driven memristors in the presence of a stable fixed point. Physica E: Low-Dimensional Systems and Nanostructures, 2019, 114, 113561.	2.7	5
17	A Demonstration of Implication Logic Based on Volatile (Diffusive) Memristors. IEEE Transactions on Circuits and Systems II: Express Briefs, 2019, 66, 1033-1037.	3.0	8
18	A simple test for ideal memristors. Journal Physics D: Applied Physics, 2019, 52, 01LT01.	2.8	27

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19	Switching Synchronization and Metastable States in 1D Memristive Networks. , 2019, , 955-971.		0
20	Snap-through transition of buckled graphene membranes for memcapacitor applications. Scientific Reports, 2018, 8, 3566.	3.3	19
21	Finding Stable Graphene Conformations from Pull and Release Experiments with Molecular Dynamics. Scientific Reports, 2017, 7, 42356.	3.3	12
22	Similarity between the response of memristive and memcapacitive circuits subjected to ramped voltage. Journal of Nanophotonics, 2017, 11, 032507.	1.0	0
23	Metastable memristive lines for signal transmission and information processing applications. Physical Review E, 2017, 95, 042213.	2.1	5
24	Memristive Sisyphus circuit for clock signal generation. Scientific Reports, 2016, 6, 26155.	3.3	7
25	Qubit-Based Memcapacitors and Meminductors. Physical Review Applied, 2016, 6, .	3.8	27
26	The theory of spin noise spectroscopy: a review. Reports on Progress in Physics, 2016, 79, 106501.	20.1	80
27	Memcomputing Implementation of Ant Colony Optimization. Neural Processing Letters, 2016, 44, 265-277.	3.2	11
28	A Memristive Pascaline. IEEE Transactions on Circuits and Systems II: Express Briefs, 2016, 63, 558-562.	3.0	10
29	Memristive model of hysteretic field emission from carbon nanotube arrays. Journal of Nanophotonics, 2016, 10, 012524.	1.0	11
30	Switching synchronization in one-dimensional memristive networks. Physical Review E, 2015, 92, 052917.	2.1	3
31	Electromechanical Emulator of Memristive Systems and Devices. IEEE Transactions on Electron Devices, 2015, 62, 3678-3684.	3.0	10
32	Giant Up-Conversion Efficiency of InGaAs Quantum Dots in a Planar Microcavity. Scientific Reports, 2015, 4, 3953.	3.3	4
33	Memcapacitive neural networks. Electronics Letters, 2014, 50, 141-143.	1.0	28
34	Dynamic computing random access memory: A brain-inspired computing paradigm with memelements. , 2014, , .		0
35	Electric Field Cycling Behavior of Ferroelectric Hafnium Oxide. ACS Applied Materials & Interfaces, 2014, 6, 19744-19751.	8.0	154
36	Memcomputing: A computing paradigm to store and process information on the same physical platform. , 2014, , .		7

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37	On the physical properties of memristive, memcapacitive and meminductive systems. Nanotechnology, 2013, 24, 255201.	2.6	90
38	Memory Models of Adaptive Behavior. IEEE Transactions on Neural Networks and Learning Systems, 2013, 24, 1437-1448.	11.3	35
39	Nonequilibrium Spin Noise Spectroscopy. Physical Review Letters, 2013, 111, 067201.	7.8	25
40	Hybrid spin noise spectroscopy and the spin Hall effect. Physical Review B, 2013, 88, .	3.2	4
41	The parallel approach. Nature Physics, 2013, 9, 200-202.	16.7	213
42	Two-beam spin noise spectroscopy. Applied Physics Letters, 2013, 102, 202405.	3.3	22
43	Decay of persistent spin helix due to the spin relaxation at boundaries. Physical Review B, 2013, 87, .	3.2	3
44	Complex dynamics and scale invariance of one-dimensional memristive networks. Physical Review E, 2013, 87, 022116.	2.1	24
45	Changing the state of a memristive system with white noise. Physical Review E, 2013, 87, 042103.	2.1	22
46	Spin noise spectroscopy of quantum dot molecules. Physical Review B, 2013, 88, .	3.2	11
47	Self-organization and solution of shortest-path optimization problems with memristive networks. Physical Review E, 2013, 88, 013305.	2.1	51
48	Second and higher harmonics generation with memristive systems. Applied Physics Letters, 2012, 100, .	3.3	18
49	Neuromorphic, Digital, and Quantum Computation With Memory Circuit Elements. Proceedings of the IEEE, 2012, 100, 2071-2080.	21.3	201
50	Fast computation with memory circuit elements. , 2012, , .		3
51	Biologically-Inspired Electronics with Memory Circuit Elements. , 2012, , 15-36.		5
52	Lagrange formalism of memory circuit elements: Classical and quantum formulations. Physical Review B, 2012, 85, .	3.2	23
53	Solving mazes with memristors: A massively parallel approach. Physical Review E, 2011, 84, 046703.	2.1	127
54	Kinetics of spin relaxation in quantum wires and channels: Boundary spin echo and formation of a persistent spin helix. Physical Review B, 2011, 84, .	3.2	4

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55	Memory materials: a unifying description. Materials Today, 2011, 14, 584-591.	14.2	74
56	Memory effects in complex materials and nanoscale systems. Advances in Physics, 2011, 60, 145-227.	14.4	677
57	Dynamics of spin relaxation in finite-size two-dimensional systems: An exact solution. Physical Review B, 2011, 84, .	3.2	1
58	Spontaneous emergence of a persistent spin helix from homogeneous spin polarization. Physical Review B, 2011, 83, .	3.2	15
59	Practical Approach to Programmable Analog Circuits With Memristors. IEEE Transactions on Circuits and Systems I: Regular Papers, 2010, 57, 1857-1864.	5.4	503
60	Experimental demonstration of associative memory with memristive neural networks. Neural Networks, 2010, 23, 881-886.	5.9	924
61	Radial spin helix in two-dimensional electron systems with Rashba spin-orbit coupling. Physical Review B, 2010, 82, .	3.2	9
62	Ionic Memcapacitive Effects in Nanopores. Nano Letters, 2010, 10, 2674-2678.	9.1	76
63	Experimental demonstration of associative memory with memristive neural networks. Nature Precedings, 2009, , .	0.1	20
64	Frequency doubling and memory effects in the spin Hall effect. Physical Review B, 2009, 79, .	3.2	25
65	Circuit Elements With Memory: Memristors, Memcapacitors, and Meminductors. Proceedings of the IEEE, 2009, 97, 1717-1724.	21.3	871
66	Putting Memory Into Circuit Elements: Memristors, Memcapacitors, and Meminductors [Point of View]. Proceedings of the IEEE, 2009, 97, 1371-1372.	21.3	64
67	Memristive model of amoeba learning. Physical Review E, 2009, 80, 021926.	2.1	374
68	The potential and challenges of nanopore sequencing. Nature Biotechnology, 2008, 26, 1146-1153.	17.5	2,201
69	A voltage probe of the spin Hall effect. Journal of Physics Condensed Matter, 2008, 20, 025204.	1.8	10
70	Current-voltage characteristics of semiconductor/ferromagnet junctions in the spin-blockade regime. Physical Review B, 2008, 77, .	3.2	19
71	Optically induced suppression of spin relaxation in two-dimensional electron systems with Rashba interaction. Physical Review B, 2007, 75, .	3.2	9
72	Spin blockade at semiconductor/ferromagnet junctions. Physical Review B, 2007, 75, .	3.2	11

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73	Dynamics of spin relaxation near the edge of two-dimensional electron gas. Physica E: Low-Dimensional Systems and Nanostructures, 2005, 27, 77-81.	2.7	8
74	Long-lived spin coherence states in semiconductor heterostructures. Physical Review B, 2005, 71, .	3.2	31
75	Polarization of Nuclear Spins from the Conductance of Quantum Wire. Physical Review Letters, 2004, 93, 126601.	7.8	26
76	Slow spin relaxation in two-dimensional electron systems with antidots. Physical Review B, 2004, 69, .	3.2	24
77	Driftâ€“diffusion approach to spin-polarized transport. Physica E: Low-Dimensional Systems and Nanostructures, 2004, 23, 226-231.	2.7	31
78	Memristive model of amoeba's learning. Nature Precedings, 0, , .	0.1	10