Andrey Emelyanov

List of Publications by Year
in descending order

68 papers	1,275 citations	331642 21 h-index	377849 34 g-index
69 all docs	69 docs citations	69 times ranked	776 citing authors

#	Article	IF	Citations
1	Nanocomposite parylene-C memristors with embedded Ag nanoparticles for biomedical data processing. Organic Electronics, 2022, 102, 106455.	2.6	14
2	Technology and neuromorphic functionality of magnetron-sputtered memristive devices. , 2022, , 109-131.		0
3	Parylene-based memristive crossbar structures with multilevel resistive switching for neuromorphic computing. Nanotechnology, 2022, 33, 255201.	2.6	13
4	Arrays of Nanocomposite Crossbar Memristors for the Implementation of Formal and Spiking Neuromorphic Systems. Nanobiotechnology Reports, 2022, 17, 118-125.	0.6	6
5	Necessary conditions for STDP-based pattern recognition learning in a memristive spiking neural network. Neural Networks, 2021, 134, 64-75.	5.9	84
6	Resistive switching kinetics of parylene-based memristive devices with Cu active electrodes. Journal of Physics: Conference Series, 2021, 1758, 012025.	0.4	2
7	Noise-assisted persistence and recovery of memory state in a memristive spiking neuromorphic network. Chaos, Solitons and Fractals, 2021, 146, 110890.	5.1	76
8	Parylene-based memristive synapses for hardware neural networks capable of dopamine-modulated STDP learning. Journal Physics D: Applied Physics, 2021, 54, 484002.	2.8	11
9	Temporal Coding of Binary Patterns for Learning of Spiking Neuromorphic Systems Based on Nanocomposite Memristors. Nanobiotechnology Reports, 2021, 16, 732-736.	0.6	1
10	Simulation of a Central Pattern Generator Using Memristive Devices. Nanobiotechnology Reports, 2021, 16, 755-760.	0.6	2
11	Silver and Copper Alloys for the Top Electrodes of Memristive Structures Based on Poly-n-Xylylene. Nanobiotechnology Reports, 2021, 16, 777-781.	0.6	1
12	Self-adaptive STDP-based learning of a spiking neuron with nanocomposite memristive weights. Nanotechnology, 2020, 31, 045201.	2.6	65
13	Evolution of magnetic and transport properties in (Cr1â^'xMnx)2AlC MAX-phase synthesized by arc melting technique. Journal of Magnetism and Magnetic Materials, 2020, 493, 165642.	2.3	10
14	Resistive Switching of Memristors Based on (Co40Fe40B20)x(LiNbO3)100Ââ€“Âx Nanocomposite with a LiNbO3 Interlayer: Plasticity and Time Characteristics. Journal of Communications Technology and Electronics, 2020, 65, 1198-1203.	0.5	2
15	Conductance Quantization in Memristive Structures Based on Poly-p-Xylylene. Semiconductors, 2020, 54, 1103-1107.	0.5	3
16	Transport Properties of Magnetic Nanogranular Composites with Dispersed Ions in an Insulating Matrix. Journal of Experimental and Theoretical Physics, 2020, 131, 160-176.	0.9	24
17	Optical Monitoring of the Resistive States of a Polyanilineâ€Based Memristive Device. Advanced Electronic Materials, 2020, 6, 2000511.	5.1	16
18	Multifilamentary Character of Anticorrelated Capacitive and Resistive Switching in Memristive Structures Based on <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline" overflow="scroll"><mml:mo		

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19	Memristors Based on Nanoscale Layers LiNbO3 and (Co40Fe40B20)x(LiNbO3)100Ââ€“Âx. Physics of the Solid State, 2020, 62, 1732-1735.	0.6	6
20	Memristors Based on Poly(p-xylylene) with Embedded Silver Nanoparticles. Technical Physics Letters, 2020, 46, 73-76.	0.7	13
21	Associative STDP-like learning of neuromorphic circuits based on polyaniline memristive microdevices. Journal Physics D: Applied Physics, 2020, 53, 414001.	2.8	26
22	Spikeâ€Timingâ€Dependent and Spikeâ€Shapeâ€Independent Plasticities with Dopamineâ€Like Modulation in Nanocomposite Memristive Synapses. Physica Status Solidi (A) Applications and Materials Science, 2020, 217, 1900938.	1.8	13
23	Sneak, discharge, and leakage current issues in a high-dimensional 1T1M memristive crossbar. Journal of Computational Electronics, 2020, 19, 565-575.	2.5	16
24	The Properties of Memristive Structures Based on (Co40Fe40B20)x(LiNbO3)100 â€“x Nanocomposites Synthesized on SiO2/Si Substrates. Technical Physics, 2020, 65, 243-249.	0.7	1
25	Resistive switching kinetics and second-order effects in parylene-based memristors. Applied Physics Letters, 2020, 117, .	3.3	23
26	Second-Order Nanoscale Thermal Effects in Memristive Structures Based on Poly-p-Xylylene. JETP Letters, 2020, 112, 357-363.	1.4	6
27	Parylene Based Memristive Devices with Multilevel Resistive Switching for Neuromorphic Applications. Scientific Reports, 2019, 9, 10800.	3.3	92
28	Dopamine-like STDP modulation in nanocomposite memristors. AIP Advances, 2019, 9, .	1.3	36
29	On the resistive switching mechanism of parylene-based memristive devices. Organic Electronics, 2019, 74, 89-95.	2.6	44
30	Formation of a Memristive Array of Crossbar-Structures Based on (Co40Fe40B20)x(LiNbO3)100 Nanocomposite. Journal of Communications Technology and Electronics, 2019, 64, 1135-1139.	0.5	5
31	Unusual Behavior of the Coercive Field in a (CoFeB)x(LiNbOy)100 â€“x Nanocomposite with a High Content of Magnetic Ions in an Insulating Matrix. Journal of Experimental and Theoretical Physics, 2019, 128, 115-124.	0.9	7
32	Adaptive Properties of Spiking Neuromorphic Networks with Synapses Based on Memristive Elements. Technical Physics Letters, 2019, 45, 386-390.	0.7	16
33	Yttria-stabilized zirconia cross-point memristive devices for neuromorphic applications. Microelectronic Engineering, 2019, 215, 110988.	2.4	61
34	Poly-para-xylylene-Based Memristors on Flexible Substrates. Technical Physics Letters, 2019, 45, 1103-1106.	0.7	11
35	Magnetization of a superconducting Nb-Ti tape with anisotropic current-carrying capacity in an inclined magnetic field. AIP Conference Proceedings, 2019, , .	0.4	1
36	Properties of Nanocomposites With Different Concentrations of Magnetic Ions in an Insulating Matrix. IEEE Magnetics Letters, 2019, 10, 1-4.	1.1	7

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37	SYNAPTIC PLASTICITY OF MEMRISTIVE STRUCTURES BASED ON POLY-P-XYLYLENE. Nanotechnologies in Russia, 2019, 14, 1-6.	0.7	6
38	Polyaniline-based memristive microdevice with high switching rate and endurance. Applied Physics Letters, 2018, 112, .	3.3	55
39	Transport, Magnetic, and Memristive Properties of a Nanogranular (CoFeB) x (LiNbO y)100â€“x Composite Material. Journal of Experimental and Theoretical Physics, 2018, 126, 353-367.	0.9	55
40	Spike-timing-dependent plasticity of polyaniline-based memristive element. Microelectronic Engineering, 2018, 185-186, 43-47.	2.4	34
41	Properties of granular (CoFeB) (Al2O3)100-x and (CoFeB) (LiNbO3)100-x nanocomposites: Manifestation of superferromagnetic ordering effects. Journal of Magnetism and Magnetic Materials, 2018, 459, 197-201.	2.3	22
42	A Precise Algorithm of Memristor Switching to a State with Preset Resistance. Technical Physics Letters, 2018, 44, 416-419.	0.7	31
43	Magnetic Metal-Nonstoichiometric Oxide Nanocomposites: Structure, Transport, and Memristive Properties. , 2018, , 427-464.		2
44	Low Temperature Magnetic Properties of Amorphous Ferromagnetic Feâ€“Siâ€“B Glass-Coated and Glass Removed Microwire. Physics of the Solid State, 2018, 60, 1158-1162.	0.6	2
45	Solvothermal synthesis of Sm3+-doped Fe3O4 nanoparticles. Materials Science and Engineering C, 2017, 80, 110-116.	7.3	16
46	Structural and electrophysical properties in LiNbO₃/CoFeB nanocomposite films. Acta Crystallographica Section A: Foundations and Advances, 2017, 73, C1225-C1225.	0.1	0
47	First steps towards the realization of a double layer perceptron based on organic memristive devices. AIP Advances, 2016, 6, .	1.3	77
48	Neuromorphic elements and systems as the basis for the physical implementation of artificial intelligence technologies. Crystallography Reports, 2016, 61, 992-1001.	0.6	15
49	Influence of Formation Conditions on Structure and Properties of Paramagnetic Centers in Polymorphous Silicon Films. Applied Magnetic Resonance, 2016, 47, 693-700.	1.2	0
50	Effect of TiOx /TiO2 layer thickness on the properties of the pulsed laser deposited memristive device. Physica Status Solidi C: Current Topics in Solid State Physics, 2015, 12, 229-232.	0.8	1
51	PANI-based neuromorphic networks - first results and close perspectives. , 2015, , .		0
52	Effect of the thickness of the TiO x /TiO2 layers on their memristor properties. Technical Physics, 2015, 60, 112-115.	0.7	8
53	Hardware elementary perceptron based on polyaniline memristive devices. Organic Electronics, 2015, 25, 16-20.	2.6	79
54	Organic Memristive Device Based on Polyaniline Film Prepared by Spin Coating. BioNanoScience, 2015, 5, 181-184.	3.5	10

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55	Effect of Laser Wavelength on Structure and Photoelectric Properties of <I>a</I>-Si:H Films Crystallized by Femtosecond Laser Pulses. Journal of Nanoelectronics and Optoelectronics, 2015, 9, 728-733.	0.5	1
56	Photoluminescence Features of Hydrogenated Silicon Films with Amorphous/Nanocrystalline Mixed Phase. Journal of Nanoelectronics and Optoelectronics, 2015, 10, 649-652.	0.5	8
57	Effect of hydrogen concentration on structure and photoelectric properties of a-Si:H films modified by femtosecond laser pulses. Canadian Journal of Physics, 2014, 92, 883-887.	1.1	4
58	Femtosecond laser induced crystallization of hydrogenated amorphous silicon for photovoltaic applications. Thin Solid Films, 2014, 556, 410-413.	1.8	22
59	Modification of the structure and hydrogen content of amorphous hydrogenated silicon films under conditions of femtosecond laser-induced crystallization. Technical Physics Letters, 2014, 40, 141-144.	0.7	2
60	Features of the structure and defect states in hydrogenated polymorphous silicon films. JETP Letters, 2013, 97, 466-469.	1.4	8
61	Influence of the fabrication conditions of polymorphous silicon films on their structural, electrical and optical properties. Semiconductors, 2013, 47, 1271-1274.	0.5	4
62	Visible luminescence from hydrogenated amorphous silicon modified by femtosecond laser radiation. Applied Physics Letters, 2012, 101, 081902.	3.3	24
63	Structural and electrophysical properties of femtosecond laser exposed hydrogenated amorphous silicon films. , 2012, , .		7
64	Percolation effect in structures with amorphous and crystalline silicon nanoclusters. Physica Status Solidi C: Current Topics in Solid State Physics, 2012, 9, 1474-1476.	0.8	3
65	Effect of the femtosecond laser treatment of hydrogenated amorphous silicon films on their structural, optical, and photoelectric properties. Semiconductors, 2012, 46, 749-754.	0.5	25
66	Investigation of the dependence of the photoluminescence properties of silicon nanoclusters on their volume fraction in a silicon oxide matrix. Journal of Surface Investigation, 2012, 6, 536-540.	0.5	2
67	Photoluminescence study of the structural evolution of amorphous and crystalline silicon nanoclusters during the thermal annealing of silicon suboxide films with different stoichiometry. Semiconductors, 2012, 46, 354-359.	0.5	6
68	Pulse Programming of Resistive States of BTBTâ€Based Organic Memristive Device with High Endurance. Physica Status Solidi - Rapid Research Letters, 0, , 2100471.	2.4	2