Yu-Hui He

List of Publications by Year
in descending order

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65	2,285	186265	223800
papers	citations	28 h-index	46 g-index

66	66	66	2257
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Complementary Memtransistor-Based Multilayer Neural Networks for Online Supervised Learning Through (Anti-)Spike-Timing-Dependent Plasticity. IEEE Transactions on Neural Networks and Learning Systems, 2022, 33, 6640-6651.	11.3	4
2	A Reconfigurable Twoâ€WSe₂â€Transistor Synaptic Cell for Reinforcement Learning. Advanced Materials, 2022, 34, e2107754.	21.0	48
3	Reconfigurable Synaptic and Neuronal Functions in a V/VO_x/HfWO_x/Pt Memristor for Nonpolar Spiking Convolutional Neural Network. Advanced Functional Materials, 2022, 32, .	14.9	25
4	Toward memristive in-memory computing: principles and applications. Frontiers of Optoelectronics, 2022, 15, .	3.7	17
5	Memristive brain-like computing. Wuli Xuebao/Acta Physica Sinica, 2022, 71, 140501.	0.5	1
6	A non-linear two-dimensional float gate transistor as a lateral inhibitory synapse for retinal early visual processing. Materials Horizons, 2022, 9, 2335-2344.	12.2	9
7	2022 roadmap on neuromorphic devices and applications research in China. Neuromorphic Computing and Engineering, 2022, 2, 042501.	5.9	4
8	Threshold switching memristor-based stochastic neurons for probabilistic computing. Materials Horizons, 2021, 8, 619-629.	12.2	50
9	Ferroelectric Synaptic Transistor Network for Associative Memory. Advanced Electronic Materials, 2021, 7, 2001276.	5.1	52
10	Nanochannelâ€Based Interfacial Memristor: Electrokinetic Analysis of the Frequency Characteristics. Advanced Electronic Materials, 2021, 7, 2000848.	5.1	6
11	A Flexible Mott Synaptic Transistor for Nociceptor Simulation and Neuromorphic Computing. Advanced Functional Materials, 2021, 31, 2101099.	14.9	76
12	Field effect control of translocation dynamics in surround-gate nanopores. Communications Materials, 2021, 2, .	6.9	14
13	Solid-state nanopore systems: from materials to applications. NPG Asia Materials, 2021, 13, .	7.9	47
14	Low-Power Artificial Neurons Based on Ag/TiN/HfAlOx/Pt Threshold Switching Memristor for Neuromorphic Computing. IEEE Electron Device Letters, 2020, 41, 1245-1248.	3.9	58
15	Nano-corrugated Nanochannels for In Situ Tracking of Single-Nanoparticle Translocation Dynamics. ACS Sensors, 2020, 5, 2530-2536.	7.8	3
16	Electroosmosis-Driven Nanofluidic Diodes. Journal of Physical Chemistry B, 2020, 124, 7086-7092.	2.6	12
17	Enhancing LiAlO_X synaptic performance by reducing the Schottky barrier height for deep neural network applications. Nanoscale, 2020, 12, 22970-22977.	5.6	10
18	Recent Advances on Neuromorphic Devices Based on Chalcogenide Phaseâ€Change Materials. Advanced Functional Materials, 2020, 30, 2003419.	14.9	144

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19	Quasi-Stable Salt Gradient and Resistive Switching in Solid-State Nanopores. ACS Applied Materials & Interfaces, 2020, 12, 52175-52181.	8.0	12
20	High-Precision Symmetric Weight Update of Memristor by Gate Voltage Ramping Method for Convolutional Neural Network Accelerator. IEEE Electron Device Letters, 2020, 41, 353-356.	3.9	31
21	Strategies to Improve the Accuracy of Memristor-Based Convolutional Neural Networks. IEEE Transactions on Electron Devices, 2020, 67, 895-901.	3.0	49
22	An asymmetric hot carrier tunneling van der Waals heterostructure for multibit optoelectronic memory. Materials Horizons, 2020, 7, 1331-1340.	12.2	40
23	Low dimensional materials and devices for neuromorphic computing. , 2020, , .		0
24	An electro-photo-sensitive synaptic transistor for edge neuromorphic visual systems. Nanoscale, 2019, 11, 17590-17599.	5.6	71
25	Nanocrystal-Embedded-Insulator (NEI) Ferroelectric Field-Effect Transistor Featuring Low Operating Voltages and Improved Synaptic Behavior. IEEE Electron Device Letters, 2019, 40, 1933-1936.	3.9	20
26	Grapheneâ€“ferroelectric transistors as complementary synapses for supervised learning in spiking neural network. Npj 2D Materials and Applications, 2019, 3, .	7.9	67
27	Solid-State Nanopore Time-of-Flight Mass Spectrometer. ACS Sensors, 2019, 4, 2974-2979.	7.8	17
28	Multifunctional Mixedâ€Dimensional MoS₂â€“CuO Junction Fieldâ€Effect Transistor for Logic Operation and Phototransistor. Advanced Electronic Materials, 2019, 5, 1800976.	5.1	30
29	Nanochannel-Based Transport in an Interfacial Memristor Can Emulate the Analog Weight Modulation of Synapses. Nano Letters, 2019, 19, 4279-4286.	9.1	73
30	Optimal Tuning of Memristor Conductance Variation in Spiking Neural Networks for Online Unsupervised Learning. IEEE Transactions on Electron Devices, 2019, 66, 2844-2849.	3.0	14
31	Discrimination of VOCs molecules via extracting concealed features from a temperature-modulated p-type NiO sensor. Sensors and Actuators B: Chemical, 2019, 293, 342-349.	7.8	60
32	Enhancing the efficiency of energy harvesting from salt gradient with ion-selective nanochannel. Nanotechnology, 2019, 30, 295402.	2.6	14
33	LiSiO_X-Based Analog Memristive Synapse for Neuromorphic Computing. IEEE Electron Device Letters, 2019, 40, 542-545.	3.9	48
34	Complementary Graphene-Ferroelectric Transistors (C-GFTs) as Synapses with Modulatable Plasticity for Supervised Learning. , 2019, , .		6
35	Alleviating Conductance Nonlinearity via Pulse Shape Designs in TaO_{<italic>x</italic>} Memristive Synapses. IEEE Transactions on Electron Devices, 2019, 66, 810-813.	3.0	17
36	Impact of ionization equilibrium on electrokinetic flow of weak electrolytes in nanochannels. Nanotechnology, 2018, 29, 295402.	2.6	0

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37	Short channel effects on electrokinetic energy conversion in solid-state nanopores. Scientific Reports, 2017, 7, 46661.	3.3	34
38	Electrokinetic Analysis of Energy Harvest from Natural Salt Gradients in Nanochannels. Scientific Reports, 2017, 7, 13156.	3.3	31
39	Rapid structural analysis of nanomaterials in aqueous solutions. Nanotechnology, 2017, 28, 155501.	2.6	26
40	The impact of membrane surface charges on the ion transport in MoS2 nanopore power generators. Applied Physics Letters, 2017, 111, .	3.3	15
41	Electrical trapping mechanism of single-microparticles in a pore sensor. AIP Advances, 2016, 6, 115004.	1.3	6
42	Salt-Gradient Approach for Regulating Capture-to-Translocation Dynamics of DNA with Nanochannel Sensors. ACS Sensors, 2016, 1, 807-816.	7.8	26
43	Particle Trajectory-Dependent Ionic Current Blockade in Low-Aspect-Ratio Pores. ACS Nano, 2016, 10, 803-809.	14.6	69
44	High thermopower of mechanically stretched single-molecule junctions. Scientific Reports, 2015, 5, 11519.	3.3	45
45	Theoretical assessment of feasibility to sequence DNA through interlayer electronic tunneling transport at aligned nanopores in bilayer graphene. Scientific Reports, 2015, 5, 17560.	3.3	45
46	Impact of Water-Depletion Layer on Transport in Hydrophobic Nanochannels. Analytical Chemistry, 2015, 87, 12040-12050.	6.5	5
47	Graphene/hexagonal boron nitride/graphene nanopore for electrical detection of single molecules. NPG Asia Materials, 2014, 6, e104-e104.	7.9	17
48	Mechanism of How Salt-Gradient-Induced Charges Affect the Translocation of DNA Molecules through a Nanopore. Biophysical Journal, 2013, 105, 776-782.	0.5	45
49	Trapping and identifying single-nanoparticles using a low-aspect-ratio nanopore. Applied Physics Letters, 2013, 103, 013108.	3.3	28
50	Thermophoretic Manipulation of DNA Translocation through Nanopores. ACS Nano, 2013, 7, 538-546.	14.6	77
51	Tracking single-particle dynamics via combined optical and electrical sensing. Scientific Reports, 2013, 3, 1855.	3.3	24
52	Transverse electric field dragging of DNA in a nanochannel. Scientific Reports, 2012, 2, 394.	3.3	60
53	DNA capture in nanopores for genome sequencing: challenges and opportunities. Journal of Materials Chemistry, 2012, 22, 13423.	6.7	21
54	Single-Nanoparticle Detection Using a Low-Aspect-Ratio Pore. ACS Nano, 2012, 6, 3499-3505.	14.6	90

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55	Controlling DNA Translocation through Gate Modulation of Nanopore Wall Surface Charges. ACS Nano, 2011, 5, 5509-5518.	14.6	208
56	Gate Manipulation of DNA Capture into Nanopores. ACS Nano, 2011, 5, 8391-8397.	14.6	104
57	Enhanced DNA Sequencing Performance Through Edgeâ€Hydrogenation of Graphene Electrodes. Advanced Functional Materials, 2011, 21, 2674-2679.	14.9	70
58	Differential conductance as a promising approach for rapid DNA sequencing with nanopore-embedded electrodes. Applied Physics Letters, 2010, 97, 043701.	3.3	16
59	Strain distributions in lattice-mismatched semiconductor core-shell nanowires. Journal of Vacuum Science & Technology B, 2009, 27, 827-830.	1.3	27
60	Performance Evaluation of GaAsâ€“GaP Coreâ€“Shell-Nanowire Field-Effect Transistors. IEEE Transactions on Electron Devices, 2009, 56, 1199-1203.	3.0	7
61	Spin-current shot noise in mesoscopic conductors. Journal of Applied Physics, 2007, 101, 023710.	2.5	7
62	Time-Dependent Transport in Low-Dimensional Systemsâ€”A Numerical Solution Using the Nonequilibrium Green's Functions. IEEE Nanotechnology Magazine, 2007, 6, 56-62.	2.0	6
63	AC conductance of finite-length carbon nanotubes. Journal of Physics Condensed Matter, 2006, 18, 8707-8713.	1.8	6
64	Time-dependent transport: Time domain recursively solving NEGF technique. Physica E: Low-Dimensional Systems and Nanostructures, 2006, 31, 191-195.	2.7	20
65	Spin-Current Shot Noise in Spin Transitors. , 2006, , .		0