

# Yue Zhang

## List of Publications by Year in descending order

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114  
papers

2,925  
citations

186265

28  
h-index

182427

51  
g-index

115  
all docs

115  
docs citations

115  
times ranked

2160  
citing authors

#	ARTICLE	IF	CITATIONS
1	Compact Modeling of Perpendicular-Anisotropy CoFeB/MgO Magnetic Tunnel Junctions. IEEE Transactions on Electron Devices, 2012, 59, 819-826.	3.0	330
2	Reconfigurable Skyrmion Logic Gates. Nano Letters, 2018, 18, 1180-1184.	9.1	201
3	Compact Model of Dielectric Breakdown in Spin-Transfer Torque Magnetic Tunnel Junction. IEEE Transactions on Electron Devices, 2016, 63, 1762-1767.	3.0	132
4	Low Power Magnetic Full-Adder Based on Spin Transfer Torque MRAM. IEEE Transactions on Magnetism, 2013, 49, 4982-4987.	2.1	126
5	Field-free spin-orbit torque-induced switching of perpendicular magnetization in a ferrimagnetic layer with a vertical composition gradient. Nature Communications, 2021, 12, 4555.	12.8	105
6	Synchronous Non-Volatile Logic Gate Design Based on Resistive Switching Memories. IEEE Transactions on Circuits and Systems I: Regular Papers, 2014, 61, 443-454.	5.4	90
7	All Spin Artificial Neural Networks Based on Compound Spintronic Synapse and Neuron. IEEE Transactions on Biomedical Circuits and Systems, 2016, 10, 828-836.	4.0	84
8	Spintronics. ACM Journal on Emerging Technologies in Computing Systems, 2015, 12, 1-42.	2.3	83
9	Ultra Low Power Magnetic Flip-Flop Based on Checkpointing/Power Gating and Self-Enable Mechanisms. IEEE Transactions on Circuits and Systems I: Regular Papers, 2014, 61, 1755-1765.	5.4	79
10	Compact Model of Subvolume MTJ and Its Design Application at Nanoscale Technology Nodes. IEEE Transactions on Electron Devices, 2015, 62, 2048-2055.	3.0	78
11	Electrical Modeling of Stochastic Spin Transfer Torque Writing in Magnetic Tunnel Junctions for Memory and Logic Applications. IEEE Transactions on Magnetism, 2013, 49, 4375-4378.	2.1	74
12	Magnetic Adder Based on Racetrack Memory. IEEE Transactions on Circuits and Systems I: Regular Papers, 2013, 60, 1469-1477.	5.4	74
13	Self-Enabled "Error-Free" Switching Circuit for Spin Transfer Torque MRAM and Logic. IEEE Transactions on Magnetism, 2012, 48, 2403-2406.	2.1	71
14	Skyrmions in Magnetic Tunnel Junctions. ACS Applied Materials & Interfaces, 2018, 10, 16887-16892.	8.0	68
15	Compact Modeling of Perpendicular-Magnetic-Anisotropy Double-Barrier Magnetic Tunnel Junction With Enhanced Thermal Stability Recording Structure. IEEE Transactions on Electron Devices, 2019, 66, 2431-2436.	3.0	51
16	Synchronous 8-bit Non-Volatile Full-Adder based on Spin Transfer Torque Magnetic Tunnel Junction. IEEE Transactions on Circuits and Systems I: Regular Papers, 2015, 62, 1757-1765.	5.4	50
17	Skyrmion-Based Ultra-Low Power Electric-Field-Controlled Reconfigurable (SUPER) Logic Gate. IEEE Electron Device Letters, 2019, 40, 1984-1987.	3.9	45
18	A low-cost built-in error correction circuit design for STT-MRAM reliability improvement. Microelectronics Reliability, 2013, 53, 1224-1229.	1.7	43

#	ARTICLE	IF	CITATIONS
19	Ultra-High Density Content Addressable Memory Based on Current Induced Domain Wall Motion in Magnetic Track. IEEE Transactions on Magnetics, 2012, 48, 3219-3222.	2.1	41
20	Tunnel Junction with Perpendicular Magnetic Anisotropy: Status and Challenges. Micromachines, 2015, 6, 1023-1045.	2.9	41
21	Current-limiting challenges for all-spin logic devices. Scientific Reports, 2015, 5, 14905.	3.3	39
22	Gate-Driven Pure Spin Current in Graphene. Physical Review Applied, 2017, 8, .	3.8	39
23	Enhanced Spin-Orbit Torque and Multilevel Current-Induced Switching in $W/Co$ Heterostructure. Physical Review Applied, 2019, 12, .	3.8	39
24	Time-Domain Computing in Memory Using Spintronics for Energy-Efficient Convolutional Neural Network. IEEE Transactions on Circuits and Systems I: Regular Papers, 2021, 68, 1193-1205.	5.4	39
25	Magnetic non-volatile flip-flop with spin-Hall assistance. Physica Status Solidi - Rapid Research Letters, 2015, 9, 375-378.	2.4	33
26	Compact modelling of ferroelectric tunnel memristor and its use for neuromorphic simulation. Applied Physics Letters, 2014, 104, 053505.	3.3	32
27	A true random number generator based on parallel STT-MTJs. , 2017, , .		31
28	Voltage-Controlled Skyrmion Memristor for Energy-Efficient Synapse Applications. IEEE Electron Device Letters, 2019, 40, 635-638.	3.9	31
29	Ultra-Dense Ring-Shaped Racetrack Memory Cache Design. IEEE Transactions on Circuits and Systems I: Regular Papers, 2019, 66, 215-225.	5.4	31
30	Proposal for a graphene-based all-spin logic gate. Applied Physics Letters, 2015, 106, .	3.3	30
31	Design Optimization and Analysis of Multicontext STT-MTJ/CMOS Logic Circuits. IEEE Nanotechnology Magazine, 2015, 14, 169-177.	2.0	29
32	Direct Observation of Domain-Wall Surface Tension by Deflating or Inflating a Magnetic Bubble. Physical Review Applied, 2018, 9, .	3.8	27
33	Magnetolectric laminate composites: an overview of methods for improving the DC and low-frequency response. Journal Physics D: Applied Physics, 2018, 51, 324005.	2.8	26
34	Interfacial Perpendicular Magnetic Anisotropy in Sub-20 nm Tunnel Junctions for Large-Capacity Spin-Transfer Torque Magnetic Random-Access Memory. IEEE Magnetics Letters, 2017, 8, 1-5.	1.1	25
35	A physics-based compact model of ferroelectric tunnel junction for memory and logic design. Journal Physics D: Applied Physics, 2014, 47, 045001.	2.8	24
36	Variation-Resilient True Random Number Generators Based on Multiple STT-MTJs. IEEE Nanotechnology Magazine, 2018, 17, 1270-1281.	2.0	24

#	ARTICLE	IF	CITATIONS
37	Spin-orbit-torque-induced magnetic domain wall motion in Ta/CoFe nanowires with sloped perpendicular magnetic anisotropy. <i>Scientific Reports</i> , 2017, 7, 2047.	3.3	23
38	A Self-Matching Complementary-Reference Sensing Scheme for High-Speed and Reliable Toggle Spin Torque MRAM. <i>IEEE Transactions on Circuits and Systems I: Regular Papers</i> , 2020, 67, 4247-4258.	5.4	23
39	Perpendicular magnetization switching by large spin-orbit torques from sputtered Bi <sub>2</sub> Te <sub>3</sub> . <i>Chinese Physics B</i> , 2020, 29, 078505.	1.4	23
40	Skyrmion-based high-frequency signal generator. <i>Applied Physics Letters</i> , 2017, 110, .	3.3	22
41	Nonvolatile Boolean Logic Block Based on Ferroelectric Tunnel Memristor. <i>IEEE Transactions on Magnetics</i> , 2014, 50, 1-4.	2.1	20
42	Reliability-Enhanced Separated Pre-Charge Sensing Amplifier for Hybrid CMOS/MTJ Logic Circuits. <i>IEEE Transactions on Magnetics</i> , 2017, 53, 1-5.	2.1	19
43	An integrated multi-objective topology optimization method for automobile wheels made of lightweight materials. <i>Structural and Multidisciplinary Optimization</i> , 2021, 64, 1585-1605.	3.5	19
44	Perspectives of Racetrack Memory for Large-Capacity On-Chip Memory: From Device to System. <i>IEEE Transactions on Circuits and Systems I: Regular Papers</i> , 2016, 63, 629-638.	5.4	18
45	Rectified Tunnel Magnetoresistance Device With High On/Off Ratio for In-Memory Computing. <i>IEEE Electron Device Letters</i> , 2020, 41, 928-931.	3.9	18
46	An overview of spin-based integrated circuits. , 2014, , .		17
47	Ring-shaped Racetrack memory based on spin orbit torque driven chiral domain wall motions. <i>Scientific Reports</i> , 2016, 6, 35062.	3.3	17
48	Multi-level cell Spin Transfer Torque MRAM based on stochastic switching. , 2013, , .		16
49	Spintronics for low-power computing. , 2014, , .		16
50	Large Magnetoresistance and 15 Boolean Logic Functions Based on a ZnCoO Film and Diode Combined Device. <i>Advanced Electronic Materials</i> , 2019, 5, 1800812.	5.1	16
51	A Multilevel Cell for STT-MRAM Realized by Capping Layer Adjustment. <i>IEEE Transactions on Magnetics</i> , 2015, 51, 1-4.	2.1	14
52	Partial spin absorption induced magnetization switching and its voltage-assisted improvement in an asymmetrical all spin logic device at the mesoscopic scale. <i>Applied Physics Letters</i> , 2017, 111, .	3.3	14
53	Efficient and controllable magnetization switching induced by intermixing-enhanced bulk spin-orbit torque in ferromagnetic multilayers. <i>Applied Physics Reviews</i> , 2022, 9, .	11.3	13
54	High Performance SoC Design Using Magnetic Logic and Memory. <i>International Federation for Information Processing</i> , 2012, , 10-33.	0.4	12

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55	Racetrack memory based reconfigurable computing. , 2013, , .		11
56	Low current writing perpendicular magnetic random access memory with high thermal stability. Materials and Design, 2016, 92, 1046-1051.	7.0	11
57	Domain-wall motion at an ultrahigh speed driven by spin-orbit torque in synthetic antiferromagnets. Nanotechnology, 2018, 29, 175404.	2.6	11
58	Peristaltic perpendicular-magnetic-anisotropy racetrack memory based on chiral domain wall motions. Journal Physics D: Applied Physics, 2015, 48, 105001.	2.8	10
59	Silicene spintronics: Fe(111)/silicene system for efficient spin injection. Applied Physics Letters, 2017, 111, .	3.3	9
60	Negative Capacitance Enhanced All Spin Logic Devices With an Ultra-Low 1 mV Working Voltage. IEEE Journal of the Electron Devices Society, 2018, 6, 245-249.	2.1	9
61	A Machine-Learning Method of Predicting Vital Capacity Plateau Value for Ventilatory Pump Failure Based on Data Mining. Healthcare (Switzerland), 2021, 9, 1306.	2.0	9
62	Memristor Crossbar Arrays Performing Quantum Algorithms. IEEE Transactions on Circuits and Systems I: Regular Papers, 2022, 69, 552-563.	5.4	9
63	Anomalous Thermal-Assisted Spin-Orbit Torque-Induced Magnetization Switching for Energy-Efficient Logic-in-Memory. ACS Nano, 2022, 16, 8264-8272.	14.6	9
64	3D Ferrimagnetic Device for Multi-Bit Storage and Efficient In-Memory Computing. IEEE Electron Device Letters, 2021, 42, 152-155.	3.9	8
65	A novel application classification and its impact on network performance. Modern Physics Letters B, 2016, 30, 1650278.	1.9	7
66	Strain-induced Megahertz Oscillation and Stable Velocity of an Antiferromagnetic Domain Wall. Physical Review Applied, 2021, 15, .	3.8	7
67	Effect on Electron Structure and Magneto-Optic Property of Heavy W-Doped Anatase TiO2. PLoS ONE, 2015, 10, e0122620.	2.5	7
68	High On/Off Ratio Spintronic Multi-Level Memory Unit for Deep Neural Network. Advanced Science, 2022, 9, e2103357.	11.2	7
69	Spin-electronics based logic fabrics. , 2013, , .		6
70	Perspectives of racetrack memory based on current-induced domain wall motion: From device to system. , 2015, , .		6
71	A Clustering-Based Collision-Free Multichannel MAC Protocol for Vehicular Ad Hoc Networks. , 2018, , .		6
72	Ultrafast and Energy-Efficient Ferrimagnetic XNOR Logic Gates for Binary Neural Networks. IEEE Electron Device Letters, 2021, 42, 621-624.	3.9	6

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73	THE EFFECT OF HIGH-N-DOPED ANATASE TiO <sub>2</sub> ON THE BAND GAP NARROWING AND REDSHIFT BY FIRST-PRINCIPLES. Modern Physics Letters B, 2012, 26, 1250179.	1.9	5
74	Spintronics for low-power computing. , 2014, , .		5
75	Voltage-induced high-speed DW motion in a synthetic antiferromagnet. Journal Physics D: Applied Physics, 2019, 52, 495001.	2.8	5
76	Efficient Magnetic Domain Nucleation and Domain Wall Motion With Voltage Control Magnetic Anisotropy Effect and Antiferromagnetic/Ferromagnetic Coupling. IEEE Transactions on Magnetics, 2019, 55, 1-4.	2.1	5
77	Energy consumption analysis of graphene based all spin logic device with voltage controlled magnetic anisotropy. AIP Advances, 2017, 7, 055925.	1.3	4
78	Phase transition and electronic properties of SbI <sub>3</sub> : First-principles calculations. Modern Physics Letters B, 2017, 31, 1750200.	1.9	4
79	Compact modeling of high spin transfer torque efficiency double-barrier magnetic tunnel junction. , 2017, , .		4
80	Efficient Time-Domain In-Memory Computing Based on TST-MRAM. , 2020, , .		4
81	Fully coupled global equations for hydro-mechanical analysis of unsaturated soils. Computational Mechanics, 2021, 67, 107-125.	4.0	4
82	Prediction of Hypertension Outcomes Based on Gain Sequence Forward Tabu Search Feature Selection and XGBoost. Diagnostics, 2021, 11, 792.	2.6	4
83	Low power magnetic flip-flop based on checkpointing and self-enable mechanism. , 2013, , .		3
84	Current-Induced Magnetic Switching for High-Performance Computing. , 2015, , 1-51.		3
85	Low power all spin logic device with voltage controlled magnetic anisotropy. , 2016, , .		3
86	The Impact of Tropospheric Anomalies on Sea-Based JPALS Integrity. Sensors, 2018, 18, 2579.	3.8	3
87	A Diode-Enhanced Scheme for Giant Magnetoresistance Amplification and Reconfigurable Logic. IEEE Access, 2020, 8, 87584-87591.	4.2	3
88	A Novel In-memory Computing Scheme Based on Toggle Spin Torque MRAM. , 2020, , .		3
89	A Computing-in-memory Scheme with Series Bit-cell in STT-MRAM for Efficient Multi-bit Analog Multiplication. , 2021, , .		3
90	Effects of interfacial Dzyaloshinskii-Moriya interaction on magnetic dynamics. Journal Physics D: Applied Physics, 0, , .	2.8	3

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91	Automatic cluster number selection by finding density peaks. , 2016, , .		2
92	Extracting error-related potentials from motion imagination EEG in noninvasive brain-computer interface. , 2017, , .		2
93	Spintronic Solutions for Stochastic Computing. , 2019, , 165-183.		2
94	The aperiodic facility layout problem with time-varying demands and an optimal master-slave solution approach. International Journal of Production Research, 2021, 59, 5216-5235.	7.5	2
95	Domain wall motion driven by a wide range of current in coupled soft/hard ferromagnetic nanowires. Nanoscale Advances, 2022, 4, 1545-1550.	4.6	2
96	THE MICROSTRUCTURE, CHEMICAL CHARACTERISTIC AND CRYSTALLIZATION BEHAVIOR OF THE POLYMER DERIVED $\text{Si-B-C-N}$ AMORPHOUS CERAMIC. International Journal of Modern Physics B, 2010, 24, 3263-3268.	2.0	1
97	Phase transition in lattice networks with heavy-tailed user behaviors. Physica A: Statistical Mechanics and Its Applications, 2017, 484, 367-377.	2.6	1
98	A Clustering-Based Adaptive Multiple Access Protocol for Vehicular Ad Hoc Networks. , 2018, , .		1
99	Design Space Exploration of Magnetic Tunnel Junction based Stochastic Computing in Deep Learning. , 2018, , .		1
100	High speed and reliable Sensing Scheme with Three Voltages for STT-MRAM. , 2019, , .		1
101	Status Set Sequential Pattern Mining Considering Time Windows and Periodic Analysis of Patterns. Entropy, 2021, 23, 738.	2.2	1
102	Angle-Dependent Anisotropic Magnetoresistance Under the Competition Between Anisotropic Field and Magnetic Field. IEEE Transactions on Magnetics, 2021, 57, 1-7.	2.1	1
103	Dynamic Gaming Case of the R-Interdiction Median Problem with Fortification and an MILP-Based Solution Approach. Sustainability, 2020, 12, 581.	3.2	1
104	Asymmetrical magnetic domain wall motion in symmetrical heavy metal/ferromagnet multilayers. Physical Review B, 2022, 105, .	3.2	1
105	Terahertz bremsstrahlung and frequency comb induced by variable motion of an antiferromagnetic domain wall. Journal Physics D: Applied Physics, 2022, 55, 295302.	2.8	1
106	PREPARATION OF 1-3 CONNECTIVITY COMPOSITE FILMS OF WELL-ALIGNED ZnO WHISKER ARRAYS WITH AN ORGANIC RESIN. International Journal of Modern Physics B, 2006, 20, 3658-3662.	2.0	0
107	PHASE TRANSFORMATION IN $\text{SiO}_2\text{-Si}_3\text{N}_4$ SYSTEM WITH $\text{Li}_2\text{CO}_3$ ADDITIVE. International Journal of Modern Physics B, 2010, 24, 2875-2879.	2.0	0
108	Compact modelling for Co/BTO/LSMO Ferroelectric Tunnel Junction. , 2013, , .		0

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109	Emerging Spintronic Devices: From Ultra-High-Density Memory to Logic-In-Memory. , 2018, , .		0
110	Ring-shaped content addressable memory based on spin orbit torque driven chiral domain wall motions. , 2019, , .		0
111	Guest Editorial: SPIN Special Section on Spintronics for In-Memory Processing. Spin, 2020, 10, 2002001.	1.3	0
112	An In-memory Highly Reconfigurable Logic Circuit Based on Diode-assisted Enhanced Magnetoresistance Device. , 2020, , .		0
113	Adaptive Surrogate Model for Failure Probability Estimation. , 2021, , .		0
114	A Fast Approximate Method for the Large-scale One-source P-median Problem. , 2021, , .		0