

Qiming Shao

List of Publications by Year in descending order

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52
papers

3,678
citations

218381

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all docs

53
docs citations

53
times ranked

4405
citing authors

#	ARTICLE	IF	CITATIONS
1	Scale-Invariant Quantum Anomalous Hall Effect in Magnetic Topological Insulators beyond the Two-Dimensional Limit. <i>Physical Review Letters</i> , 2014, 113, 137201.	2.9	453
2	Strong Rashba-Edelstein Effect-Induced Spin-Orbit Torques in Monolayer Transition Metal Dichalcogenide/Ferromagnet Bilayers. <i>Nano Letters</i> , 2016, 16, 7514-7520.	4.5	247
3	Room-Temperature Skyrmion Shift Device for Memory Application. <i>Nano Letters</i> , 2017, 17, 261-268.	4.5	227
4	Roadmap of Spin-Orbit Torques. <i>IEEE Transactions on Magnetics</i> , 2021, 57, 1-39.	1.2	225
5	Electric-field control of spin-orbit torque in a magnetically doped topological insulator. <i>Nature Nanotechnology</i> , 2016, 11, 352-359.	15.6	212
6	Reversible Switching of Interlayer Exchange Coupling through Atomically Thin VO ₂ via Electronic State Modulation. <i>Matter</i> , 2020, 2, 1582-1593.	5.0	202
7	Highly Efficient Spin-Orbit Torque and Switching of Layered Ferromagnet Fe ₃ Ge ₂ . <i>Nano Letters</i> , 2019, 19, 4400-4405.	4.5	180
8	Tailoring exchange couplings in magnetic topological-insulator/antiferromagnet heterostructures. <i>Nature Materials</i> , 2017, 16, 94-100.	13.3	137
9	Metal-to-insulator switching in quantum anomalous Hall states. <i>Nature Communications</i> , 2015, 6, 8474.	5.8	136
10	Topological Hall effect at above room temperature in heterostructures composed of a magnetic insulator and a heavy metal. <i>Nature Electronics</i> , 2019, 2, 182-186.	13.1	117
11	Room-Temperature Skyrmions in an Antiferromagnet-Based Heterostructure. <i>Nano Letters</i> , 2018, 18, 980-986.	4.5	98
12	Role of dimensional crossover on spin-orbit torque efficiency in magnetic insulator thin films. <i>Nature Communications</i> , 2018, 9, 3612.	5.8	84
13	Spin-Orbit Torque Switching of a Nearly Compensated Ferrimagnet by Topological Surface States. <i>Advanced Materials</i> , 2019, 31, e1901681.	11.1	81
14	Two-Dimensional Materials for Energy-Efficient Spin-Orbit Torque Devices. <i>ACS Nano</i> , 2020, 14, 9389-9407.	7.3	59
15	Spin-orbit torques in perpendicularly magnetized Ir ₂₂ Mn ₇₈ /Co ₂₀ Fe ₆₀ B ₂₀ /MgO multilayer. <i>Applied Physics Letters</i> , 2016, 109, .	1.5	58
16	Electric-Field Control of Spin-Orbit Interaction for Low-Power Spintronics. <i>Proceedings of the IEEE</i> , 2016, 104, 1974-2008.	16.4	53
17	Deterministic Spin-Orbit Torque Switching by a Light-Metal Insertion. <i>Nano Letters</i> , 2020, 20, 3703-3709.	4.5	52
18	Spin-orbit torque from a ferromagnetic metal. <i>Physical Review B</i> , 2019, 99, .	1.1	49

#	ARTICLE	IF	CITATIONS
19	Topological Transitions Induced by Antiferromagnetism in a Thin-Film Topological Insulator. <i>Physical Review Letters</i> , 2018, 121, 096802.	2.9	42
20	Proximity-Induced Magnetic Order in a Transferred Topological Insulator Thin Film on a Magnetic Insulator. <i>ACS Nano</i> , 2018, 12, 5042-5050.	7.3	41
21	Exploring interfacial exchange coupling and sublattice effect in heavy metal/ferrimagnetic insulator heterostructures using Hall measurements, x-ray magnetic circular dichroism, and neutron reflectometry. <i>Physical Review B</i> , 2019, 99, .	1.1	39
22	Transferred metal gate to 2D semiconductors for sub-1 V operation and near ideal subthreshold slope. <i>Science Advances</i> , 2021, 7, eabf8744.	4.7	37
23	Spin-torque ferromagnetic resonance measurements utilizing spin Hall magnetoresistance in W/Co40Fe40B20/MgO structures. <i>Applied Physics Letters</i> , 2016, 109, .	1.5	36
24	Probing the low-temperature limit of the quantum anomalous Hall effect. <i>Science Advances</i> , 2020, 6, eaaz3595.	4.7	35
25	Strongly Surface State Carrier-Dependent Spin-Orbit Torque in Magnetic Topological Insulators. <i>Advanced Materials</i> , 2020, 32, e1907661.	11.1	29
26	Observation of Quantum Anomalous Hall Effect and Exchange Interaction in Topological Insulator/Antiferromagnet Heterostructure. <i>Advanced Materials</i> , 2020, 32, e2001460.	11.1	27
27	Dynamics of an elliptical ferromagnetic skyrmion driven by the spin-orbit torque. <i>Applied Physics Letters</i> , 2020, 116, .	1.5	27
28	In-plane current-driven spin-orbit torque switching in perpendicularly magnetized films with enhanced thermal tolerance. <i>Applied Physics Letters</i> , 2016, 108, .	1.5	26
29	Deficiency of the bulk spin Hall effect model for spin-orbit torques in magnetic-insulator/heavy-metal heterostructures. <i>Physical Review B</i> , 2017, 95, 084411.	1.1	23
30	Spin-Torque Ferromagnetic Resonance in $W/Co_{40}Fe_{40}B_{20}/MgO$ Heterostructures. <i>Physical Review Applied</i> , 2018, 10, 044002.	1.1	23
31	Room Temperature Highly Efficient Topological Insulator/Mo/CoFeB Spin-Orbit Torque Memory with Perpendicular Magnetic Anisotropy. <i>ACS Applied Materials</i> , 2018, 10, 1505-1511.	1.1	21
32	Unidirectional Magneto-Resistance in Modulation-Doped Magnetic Topological Insulators. <i>Nano Letters</i> , 2019, 19, 692-698.	4.5	20
33	Strongly heat-assisted spin-orbit torque switching of a ferrimagnetic insulator. <i>APL Materials</i> , 2021, 9, .	2.2	17
34	Spin transmission in IrMn through measurements of spin Hall magnetoresistance and spin-orbit torque. <i>Physical Review B</i> , 2020, 101, .	1.1	11
35	Efficient AI with MRAM. <i>Nature Electronics</i> , 2022, 5, 67-68.	13.1	9
36	(Bi _{0.2} Sb _{0.8}) ₂ Te ₃ based dynamic synapses with programmable spatio-temporal dynamics. <i>APL Materials</i> , 2019, 7, 101107.	2.2	8

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37	Study of the perpendicular magnetic anisotropy, spin-orbit torque, and Dzyaloshinskii-Moriya interaction in the heavy metal/CoFeB bilayers with Ir ₂₂ Mn ₇₈ insertion. Applied Physics Letters, 2020, 116, 242407.	1.5	8
38	Temperature-Driven Gate Geometry Effects in Nanoscale Cryogenic MOSFETs. IEEE Electron Device Letters, 2020, 41, 661-664.	2.2	8
39	Skyrmion Dynamics in the Presence of Deformation. Physical Review Applied, 2022, 17, .	1.5	7
40	Nonreciprocal dynamics of ferrimagnetic bimerons. Physical Review B, 2022, 105, .	1.1	7
41	Enhancement of the spin-orbit torque efficiency in W/Cu/CoFeB heterostructures via interface engineering. Applied Physics Letters, 2020, 117, 082409.	1.5	6
42	Efficient Spin-Orbit Torque Switching of Perpendicular Magnetization using Topological Insulators with High Thermal Tolerance. Advanced Electronic Materials, 2022, 8, .	2.6	6
43	Spintronic devices for low energy dissipation. , 2018, , .		5
44	Large Room Temperature Charge-to-Spin Conversion Efficiency in Topological Insulator/CoFeB bilayers. , 2018, , .		4
45	Enhanced spin-orbit torque efficiency in Pt ₁₀₀ Ni _x alloy based magnetic bilayer*. Chinese Physics B, 2021, 30, 037503.	0.7	4
46	On the temperature-dependent characteristics of perpendicular shape anisotropy-spin transfer torque-magnetic random access memories. Journal of Applied Physics, 2021, 129, .	1.1	4
47	Survey of Temperature Dependence of the Damping Parameter in the Ferrimagnet Gd ₃ Fe ₅ O ₁₂ . IEEE Transactions on Magnetics, 2022, 58, 1-6.	1.2	4
48	Heat-assisted microwave amplifier. Nature Nanotechnology, 2019, 14, 9-11.	15.6	2
49	Skyrmions get pushed beyond the limit. Nature Electronics, 2020, 3, 16-17.	13.1	2
50	Topological spintronics and Majorana fermions. , 2019, , .		1
51	Efficient High Frequency Spin Wave Excitation with Undulating Ferromagnetic Film. , 2021, , .		0
52	Editorial for the JEDS Special Issue for EDTM 2021. IEEE Journal of the Electron Devices Society, 2021, 9, 1110-1111.	1.2	0