Guoqiang Yu

List of Publications by Citations

129 papers	6,248 citations	36 h-index	77 g-index
142 ext. papers	7,792 ext. citations	8 avg, IF	5.57 L-index

#	Paper	IF	Citations
129	Magnetism. Blowing magnetic skyrmion bubbles. *Science*, **2015**, 349, 283-6	33.3	908
128	Magnetization switching through giant spin-orbit torque in a magnetically doped topological insulator heterostructure. *Nature Materials*, **2014**, 13, 699-704	27	616
127	Switching of perpendicular magnetization by spin-orbit torques in the absence of external magnetic fields. *Nature Nanotechnology*, **2014**, 9, 548-54	28.7	569
126	Direct observation of the skyrmion Hall effect. *Nature Physics*, **2017**, 13, 162-169	16.2	555
125	Room-Temperature Creation and Spin-Orbit Torque Manipulation of Skyrmions in Thin Films with Engineered Asymmetry. *Nano Letters*, **2016**, 16, 1981-8	11.5	211
124	Strong Rashba-Edelstein Effect-Induced Spin-Orbit Torques in Monolayer Transition Metal Dichalcogenide/Ferromagnet Bilayers. *Nano Letters*, **2016**, 16, 7514-7520	11.5	181
123	Electric-field control of spin-orbit torque in a magnetically doped topological insulator. *Nature Nanotechnology*, **2016**, 11, 352-9	28.7	170
122	Room-Temperature Skyrmion Shift Device for Memory Application. *Nano Letters*, **2017**, 17, 261-268	11.5	160
121	Proximity induced high-temperature magnetic order in topological insulator--ferrimagnetic insulator heterostructure. *Nano Letters*, **2014**, 14, 3459-65	11.5	156
120	Current-driven magnetization switching in a van der Waals ferromagnet FeGeTe. *Science Advances*, **2019**, 5, eaaw8904	14.3	119
119	Tailoring exchange couplings in magnetic topological-insulator/antiferromagnet heterostructures. *Nature Materials*, **2017**, 16, 94-100	27	108
118	Magnetization switching through spin-Hall-effect-induced chiral domain wall propagation. *Physical Review B*, **2014**, 89,	3.3	105
117	Temperature dependence of the voltage-controlled perpendicular anisotropy in nanoscale MgO|CoFeB|Ta magnetic tunnel junctions. *Applied Physics Letters*, **2014**, 104, 112410	3.4	92
116	Topological Hall effect at above room temperature in heterostructures composed of a magnetic insulator and a heavy metal. *Nature Electronics*, **2019**, 2, 182-186	28.4	73
115	Interfacial Dzyaloshinskii-Moriya Interaction: Effect of 5d Band Filling and Correlation with Spin Mixing Conductance. *Physical Review Letters*, **2018**, 120, 157204	7.4	73
114	. *IEEE Transactions on Magnetics*, **2015**, 51, 1-7	2	72
113	Room-Temperature Skyrmions in an Antiferromagnet-Based Heterostructure. *Nano Letters*, **2018**, 18, 980-986	11.5	68

112	Electric-field guiding of magnetic skyrmions. *Physical Review B*, **2015**, 92,	3.3	68
111	Enhancement of voltage-controlled magnetic anisotropy through precise control of Mg insertion thickness at CoFeB|MgO interface. *Applied Physics Letters*, **2017**, 110, 052401	3.4	64
110	Strain-induced modulation of perpendicular magnetic anisotropy in Ta/CoFeB/MgO structures investigated by ferromagnetic resonance. *Applied Physics Letters*, **2015**, 106, 072402	3.4	63
109	High Spin Hall Conductivity in Large-Area Type-II Dirac Semimetal PtTe. *Advanced Materials*, **2020**, 32, e2000513	24	61
108	Current-driven perpendicular magnetization switching in Ta/CoFeB/[TaOx or MgO/TaOx] films with lateral structural asymmetry. *Applied Physics Letters*, **2014**, 105, 102411	3.4	61
107	Magnon Valve Effect between Two Magnetic Insulators. *Physical Review Letters*, **2018**, 120, 097205	7.4	59
106	Room temperature ferromagnetism in ultra-thin van der Waals crystals of 1T-CrTe2. *Nano Research*, **2020**, 13, 3358-3363	10	59
105	Magneto-optical investigation of spin-orbit torques in metallic and insulating magnetic heterostructures. *Nature Communications*, **2015**, 6, 8958	17.4	55
104	Role of dimensional crossover on spin-orbit torque efficiency in magnetic insulator thin films. *Nature Communications*, **2018**, 9, 3612	17.4	53
103	Effect of the oxide layer on current-induced spin-orbit torques in Hf|CoFeB|MgO and Hf|CoFeB|TaOx structures. *Applied Physics Letters*, **2015**, 106, 032406	3.4	51
102	Spin-orbit torques in perpendicularly magnetized Ir22Mn78/Co20Fe60B20/MgO multilayer. *Applied Physics Letters*, **2016**, 109, 222401	3.4	51
101	Interfacial control of Dzyaloshinskii-Moriya interaction in heavy metal/ferromagnetic metal thin film heterostructures. *Physical Review B*, **2016**, 94,	3.3	50
100	Current-induced spin-orbit torque switching of perpendicularly magnetized Hf|CoFeB|MgO and Hf|CoFeB|TaOx structures. *Applied Physics Letters*, **2015**, 106, 162409	3.4	48
99	Spin-Orbit Torque Switching of a Nearly Compensated Ferrimagnet by Topological Surface States. *Advanced Materials*, **2019**, 31, e1901681	24	48
98	Dzyaloshinskii-Moriya Interaction across an Antiferromagnet-Ferromagnet Interface. *Physical Review Letters*, **2017**, 119, 027202	7.4	48
97	Exchange-biasing topological charges by antiferromagnetism. *Nature Communications*, **2018**, 9, 2767	17.4	46
96	Anatomy of Skyrmionic Textures in Magnetic Multilayers. *Advanced Materials*, **2019**, 31, e1807683	24	41
95	Thermally stable voltage-controlled perpendicular magnetic anisotropy in Mo|CoFeB|MgO structures. *Applied Physics Letters*, **2015**, 107, 142403	3.4	39

94	. *Proceedings of the IEEE*, **2016**, 104, 1974-2008	14.3	36
93	Creating zero-field skyrmions in exchange-biased multilayers through X-ray illumination. *Nature Communications*, **2020**, 11, 949	17.4	34
92	Mobile Néel skyrmions at room temperature: status and future. *AIP Advances*, **2016**, 6, 055602	1.5	34
91	Lattice Dynamics, Phonon Chirality, and Spin–Phonon Coupling in 2D Itinerant Ferromagnet Fe3GeTe2. *Advanced Functional Materials*, **2019**, 29, 1904734	15.6	33
90	Topological Transitions Induced by Antiferromagnetism in a Thin-Film Topological Insulator. *Physical Review Letters*, **2018**, 121, 096802	7.4	32
89	Proximity-Induced Magnetic Order in a Transferred Topological Insulator Thin Film on a Magnetic Insulator. *ACS Nano*, **2018**, 12, 5042-5050	16.7	31
88	Spin-orbit torques: Materials, physics, and devices. *Applied Physics Letters*, **2021**, 118, 120502	3.4	30
87	Joule Heating Effect on Field-Free Magnetization Switching by Spin-Orbit Torque in Exchange-Biased Systems. *Physical Review Applied*, **2017**, 7,	4.3	29
86	Effect of heavy metal layer thickness on spin-orbit torque and current-induced switching in Hf|CoFeB|MgO structures. *Applied Physics Letters*, **2016**, 109, 022403	3.4	27
85	Exploring interfacial exchange coupling and sublattice effect in heavy metal/ferrimagnetic insulator heterostructures using Hall measurements, x-ray magnetic circular dichroism, and neutron reflectometry. *Physical Review B*, **2019**, 99,	3.3	26
84	Evolution of topological skyrmions across the spin reorientation transition in Pt/Co/Ta multilayers. *Physical Review B*, **2018**, 97,	3.3	25
83	1/f noise in MgO double-barrier magnetic tunnel junctions. *Applied Physics Letters*, **2011**, 98, 112504	3.4	24
82	Spin-torque ferromagnetic resonance measurements utilizing spin Hall magnetoresistance in W/Co40Fe40B20/MgO structures. *Applied Physics Letters*, **2016**, 109, 202404	3.4	24
81	Enhanced voltage-controlled magnetic anisotropy in magnetic tunnel junctions with an MgO/PZT/MgO tunnel barrier. *Applied Physics Letters*, **2016**, 108, 112402	3.4	24
80	Magnon valves based on YIG/NiO/YIG all-insulating magnon junctions. *Physical Review B*, **2018**, 98,	3.3	24
79	In-plane current-driven spin-orbit torque switching in perpendicularly magnetized films with enhanced thermal tolerance. *Applied Physics Letters*, **2016**, 108, 212406	3.4	23
78	Deterministic Spin-Orbit Torque Switching by a Light-Metal Insertion. *Nano Letters*, **2020**, 20, 3703-3709	11.5	22
77	Strain-Mediated Spin-Orbit-Torque Switching for Magnetic Memory. *Physical Review Applied*, **2018**, 10,	4.3	21

76	Topology-Dependent Brownian Gyromotion of a Single Skyrmion. *Physical Review Letters*, **2020**, 125, 027206	7.4	20
75	Deficiency of the bulk spin Hall effect model for spin-orbit torques in magnetic-insulator/heavy-metal heterostructures. *Physical Review B*, **2017**, 95,	3.3	19
74	Competing effect of spin-orbit torque terms on perpendicular magnetization switching in structures with multiple inversion asymmetries. *Scientific Reports*, **2016**, 6, 23956	4.9	18
73	Efficient Excitation of High-Frequency Exchange-Dominated Spin Waves in Periodic Ferromagnetic Structures. *Physical Review Applied*, **2017**, 7,	4.3	17
72	Control of Spin-Wave Damping in YIG Using Spin Currents from Topological Insulators. *Physical Review Applied*, **2019**, 11,	4.3	17
71	Characterization of Spin-Orbit Torque Efficiency in Magnetic Heterostructures with Perpendicular Magnetic Anisotropy via Spin-Torque Ferromagnetic Resonance. *Physical Review Applied*, **2020**, 13,	4.3	17
70	Single-spin sensing of domain-wall structure and dynamics in a thin-film skyrmion host. *Physical Review Materials*, **2019**, 3,	3.2	16
69	Anomalous Nernst effect in Ir22Mn78/Co20Fe60B20/MgO layers with perpendicular magnetic anisotropy. *Applied Physics Letters*, **2017**, 111, 222401	3.4	15
68	Effects of annealing on the magnetic properties and microstructures of Ta/Mo/CoFeB/MgO/Ta films. *Journal of Alloys and Compounds*, **2017**, 692, 243-248	5.7	15
67	Spin-Torque Ferromagnetic Resonance in W/CoFeB/W/CoFeB/MgO Stacks. *Physical Review Applied*, **2018**, 10,	4.3	15
66	Electric-field control of CoFeB/IrMn exchange bias system. *Journal of Applied Physics*, **2012**, 112, 064120	2.5	14
65	Electron Beam Lithography of Magnetic Skyrmions. *Advanced Materials*, **2020**, 32, e2003003	24	14
64	Determining spin-torque efficiency in ferromagnetic metals via spin-torque ferromagnetic resonance. *Physical Review B*, **2020**, 101,	3.3	12
63	Record thermopower found in an IrMn-based spintronic stack. *Nature Communications*, **2020**, 11, 2023	17.4	12
62	Perspectives on exfoliated two-dimensional spintronics. *Journal of Semiconductors*, **2019**, 40, 081508	2.3	12
61	Magnetic memory driven by topological insulators. *Nature Communications*, **2021**, 12, 6251	17.4	12
60	Improved tunneling magnetoresistance in (Ga,Mn)As/AlOx/CoFeB magnetic tunnel junctions. *Applied Physics Letters*, **2011**, 98, 262501	3.4	11
59	Observation of large anomalous Nernst effect in 2D layered materials Fe 3 GeTe 2. *Applied Physics Letters*, **2019**, 115, 212402	3.4	11

58	Direct imaging of an inhomogeneous electric current distribution using the trajectory of magnetic half-skyrmions. *Science Advances*, **2020**, 6, eaay1876	14.3	10
57	Field sensing in MgO double barrier magnetic tunnel junctions with a superparamagnetic Co50Fe50 free layer. *Journal of Applied Physics*, **2012**, 111, 113906	2.5	10
56	Magnetic Skyrmions in a Hall Balance with Interfacial Canted Magnetizations. *Advanced Materials*, **2020**, 32, e1907452	24	10
55	Colossal Anomalous Hall Effect in Ferromagnetic van der Waals CrTe. *ACS Nano*, **2021**, 15, 9759-9763	16.7	10
54	Correlation between the Dzyaloshinskii-Moriya interaction and spin-mixing conductance at an antiferromagnet/ferromagnet interface. *Physical Review B*, **2018**, 98,	3.3	10
53	Unidirectional Magneto-Resistance in Modulation-Doped Magnetic Topological Insulators. *Nano Letters*, **2019**, 19, 692-698	11.5	9
52	Predictive Materials Design of Magnetic Random-Access Memory Based on Nanoscale Atomic Structure and Element Distribution. *Nano Letters*, **2019**, 19, 8621-8629	11.5	9
51	Néel-Type Elliptical Skyrmions in a Laterally Asymmetric Magnetic Multilayer. *Advanced Materials*, **2021**, 33, e2006924	24	9
50	Influence of inserted Mo layer on the thermal stability of perpendicularly magnetized Ta/Mo/Co20Fe60B20/MgO/Ta films. *AIP Advances*, **2016**, 6, 045107	1.5	8
49	Field-Free Spin–Orbit Torque Switching in Perpendicularly Magnetized Synthetic Antiferromagnets. *Advanced Functional Materials*,2109455	15.6	7
48	Electrical detection of spin transport in Si two-dimensional electron gas systems. *Nanotechnology*, **2016**, 27, 365701	3.4	7
47	Fabrication and characterization of YIG nanotubes. *Journal of Magnetism and Magnetic Materials*, **2019**, 482, 358-363	2.8	6
46	Study of the perpendicular magnetic anisotropy, spin–orbit torque, and Dzyaloshinskii–Moriya interaction in the heavy metal/CoFeB bilayers with Ir22Mn78 insertion. *Applied Physics Letters*, **2020**, 116, 242407	3.4	6
45	Formation and magnetic-field stability of magnetic dipole skyrmions and bubbles in a ferrimagnet. *Applied Physics Letters*, **2020**, 116, 142404	3.4	6
44	Field free magnetization switching in perpendicularly magnetized Pt/Co/FeNi/Ta structure by spin orbit torque. *Applied Physics Letters*, **2020**, 117, 142404	3.4	6
43	Robust Skyrmion Shift Device Through Engineering the Local Exchange-Bias Field. *Physical Review Applied*, **2020**, 14,	4.3	6
42	Exchange bias and spin–orbit torque in the Fe3GeTe2-based heterostructures prepared by vacuum exfoliation approach. *Applied Physics Letters*, **2021**, 118, 262406	3.4	6
41	Generation and Hall effect of skyrmions enabled using nonmagnetic point contacts. *Physical Review B*, **2019**, 100,	3.3	6

40	Creation of a Chiral Bobber Lattice in Helimagnet-Multilayer Heterostructures. *Physical Review Letters*, **2021**, 126, 017204	7.4	6
39	Magnetic Configurations and State Diagram of Nanoring Magnetic Tunnel Junctions. *Physical Review Applied*, **2018**, 10,	4.3	6
38	Spin□rbit torques in structures with asymmetric dusting layers. *Applied Physics Letters*, **2020**, 117, 182403	3.4	5
37	Chirality-Reversible Multistate Switching via Two Orthogonal Spin-Orbit Torques in a Perpendicularly Magnetized System. *Physical Review Applied*, **2020**, 13,	4.3	5
36	Spin transmission in IrMn through measurements of spin Hall magnetoresistance and spin-orbit torque. *Physical Review B*, **2020**, 101,	3.3	5
35	Tunneling processes in asymmetric double barrier magnetic tunnel junctions with a thin top MgO layer. *Journal of Applied Physics*, **2013**, 114, 213909	2.5	5
34	Depth-Resolved Magnetization Dynamics Revealed by X-Ray Reflectometry Ferromagnetic Resonance. *Physical Review Letters*, **2020**, 125, 137201	7.4	5
33	Skyrmion-Based Programmable Logic Device with Complete Boolean Logic Functions. *Physical Review Applied*, **2021**, 15,	4.3	5
32	Enhancement of Spin□Orbit Torque by Strain Engineering in SrRuO3 Films. *Advanced Functional Materials*, **2021**, 31, 2100380	15.6	5
31	Soft X-ray Ptychography for Imaging of Magnetic Domains and Skyrmions in Sub-100 nm Scales. *Microscopy and Microanalysis*, **2018**, 24, 34-35	0.5	5
30	The influence of an MgO nanolayer on the planar Hall effect in NiFe films. *Journal of Applied Physics* , **2015**, 117, 123908	2.5	4
29	Spin-dependent tunneling spectroscopy in MgO-based double-barrier magnetic tunnel junctions. *Journal of Applied Physics*, **2012**, 111, 07C712	2.5	4
28	Enhancement of the spin□rbit torque efficiency in W/Cu/CoFeB heterostructures via interface engineering. *Applied Physics Letters*, **2020**, 117, 082409	3.4	4
27	Versatile Fabrication of Self-Aligned Nanoscale Hall Devices Using Nanowire Masks. *Nano Letters*, **2016**, 16, 3109-15	11.5	4
26	Gradual magnetization switching via domain nucleation driven by spin□rbit torque. *Applied Physics Letters*, **2021**, 118, 032407	3.4	4
25	Implementation of Highly Reliable and Energy-Efficient Nonvolatile In-Memory Computing using Multistate Domain Wall Spin□Orbit Torque Device. *Advanced Intelligent Systems*,2200028	6	4
24	Interfacial spin transmission and spin□rbit torques in as-grown and annealed W/Co2FeAl/MgO multilayers. *Applied Physics Letters*, **2020**, 117, 172406	3.4	3
23	High voltage-controlled magnetic anisotropy and interface magnetoelectric effect in sputtered multilayers annealed at high temperatures. *Science China: Physics, Mechanics and Astronomy*, **2020**, 63, 1	3.6	3

22	Large Room Temperature Charge-to-Spin Conversion Efficiency in Topological Insulator/CoFeB bilayers **2018**,		3
21	Conductance enhancement due to interface magnons in electron-beam evaporated MgO magnetic tunnel junctions with CoFeB free layer deposited at different pressure. *Journal of Applied Physics*, **2014**, 116, 153905	2.5	3
20	MgO-Based Double Barrier Magnetic Tunnel Junctions With Synthetic Antiferromagnetic Free Layer. *IEEE Transactions on Magnetics*, **2013**, 49, 5204-5207	2	3
19	PATTERNED NANOSCALE MAGNETIC TUNNEL JUNCTIONS WITH DIFFERENT GEOMETRICAL STRUCTURES. *Spin*, **2011**, 01, 109-114	1.3	3
18	Implementation of complete Boolean logic functions in single spin□orbit torque device. *AIP Advances*, **2021**, 11, 015045	1.5	3
17	Interface control of domain wall depinning field. *AIP Advances*, **2018**, 8, 056314	1.5	2
16	Enhanced spin-orbit torque efficiency in Pt100□ Ni x alloy based magnetic bilayer*. *Chinese Physics B*, **2021**, 30, 037503	1.2	2
15	Efficient Spin-Orbit-Torque Switching Assisted by an Effective Perpendicular Field in a Magnetic Trilayer. *Physical Review Applied*, **2021**, 16,	4.3	2
14	Magnetic two-dimensional van der Waals materials for spintronic devices. *Chinese Physics B*,	1.2	2
13	SUPERCONDUCTIVITY-INDUCED PINNING EFFECT IN SUPERCONDUCTOR/MAGNETIC TUNNEL JUNCTIONS. *Spin*, **2013**, 03, 1350006	1.3	1
12	Superposition of Emergent Monopole and Antimonopole in CoTb Thin Films. *Physical Review Letters*, **2021**, 127, 217201	7.4	1
11	Skyrmions in magnetic thin film heterostructures. *Wuli Xuebao/Acta Physica Sinica*, **2018**, 67, 131204	0.6	1
10	Field-free spin□orbit torque driven multi-state reversal in wedged Ta/MgO/CoFeB/MgO heterostructures. *APL Materials*, **2021**, 9, 071108	5.7	1
9	Twisted light induced magnetic anisotropy changes in an interlayer exchange coupling system. *Nanoscale Horizons*, **2021**, 6, 462-467	10.8	1
8	Anomalous anisotropic spin-wave propagation in thin manganite films with uniaxial magnetic anisotropy. *Applied Physics Letters*, **2022**, 120, 192402	3.4	1
7	Type-Y magnetic tunnel junctions with CoFeB doped tungsten as spin current source. *Applied Physics Letters*, **2022**, 120, 182405	3.4	1
6	Comprehensive Study of the Current-Induced Spin-Orbit Torque Perpendicular Effective Field in Asymmetric Multilayers. *Nanomaterials*, **2022**, 12, 1887	5.4	1
5	Field-free programmable spin logics based on spin Hall effect. *Applied Physics Letters*, **2021**, 119, 212405	3.4	0

4	Role of an in-plane ferromagnet in a T-type structure for field-free magnetization switching. *Applied Physics Letters*, **2022**, 120, 122402	3.4	0
3	High-Sensitivity Tunnel Magnetoresistance Sensors Based on Double Indirect and Direct Exchange Coupling Effect*. *Chinese Physics Letters*, **2021**, 38, 128501	1.8	0
2	Current controlled non-hysteresis magnetic switching in the absence of magnetic field. *Applied Physics Letters*, **2022**, 120, 062402	3.4	
1	Ferromagnetic resonance linewidth broadening induced by a tunable inhomogeneity effect. *Journal of Magnetism and Magnetic Materials*, **2021**, 517, 167215	2.8	