Hao Wu

List of Publications by Year
in descending order

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78 papers	2,845 citations	147566 31 h-index	182168 51 g-index
80 all docs	80 docs citations	80 times ranked	2863 citing authors

#	Article	IF	Citations
1	A Spinâ€Orbit Torque Ratchet at Ferromagnet/Antiferromagnet Interface via Exchange Spring. Advanced Functional Materials, 2022, 32, .	7.8	8
2	Field-free approaches for deterministic spinâ€“orbit torque switching of the perpendicular magnet. Materials Futures, 2022, 1, 022201.	3.1	20
3	Efficient Spinâ€Orbit Torque Switching of Perpendicular Magnetization using Topological Insulators with High Thermal Tolerance. Advanced Electronic Materials, 2022, 8, .	2.6	6
4	Comprehensive Study of the Current-Induced Spinâ€“Orbit Torque Perpendicular Effective Field in Asymmetric Multilayers. Nanomaterials, 2022, 12, 1887.	1.9	4
5	NÃ©elâ€Type Elliptical Skyrmions in a Laterally Asymmetric Magnetic Multilayer. Advanced Materials, 2021, 33, e2006924.	11.1	32
6	Electrical and optical characterizations of spin-orbit torque. Applied Physics Letters, 2021, 118, 072405.	1.5	3
7	A thermodynamic core using voltage-controlled spinâ€“orbit-torque magnetic tunnel junctions. Nanotechnology, 2021, 32, 505405.	1.3	4
8	Experimental demonstration of voltage-gated spin-orbit torque switching in an antiferromagnet/ferromagnet structure. Physical Review B, 2021, 103, .	1.1	14
9	Large spin to charge conversion in antiferromagnetic Weyl semimetal Mn3Sn. APL Materials, 2021, 9, .	2.2	11
10	Enhancement of spin-to-charge conversion efficiency in topological insulators by interface engineering. APL Materials, 2021, 9, .	2.2	15
11	Roadmap of Spinâ€“Orbit Torques. IEEE Transactions on Magnetics, 2021, 57, 1-39.	1.2	225
12	Chiral Symmetry Breaking for Deterministic Switching of Perpendicular Magnetization by Spinâ€“Orbit Torque. Nano Letters, 2021, 21, 515-521.	4.5	64
13	Magnetic memory driven by topological insulators. Nature Communications, 2021, 12, 6251.	5.8	67
14	Magnon junction effect in Y3Fe5O12/CoO/Y3Fe5O12 insulating heterostructures. Applied Physics Letters, 2021, 119, .	1.5	9
15	Conversion between spin and charge currents in topological-insulator/nonmagnetic-metal systems. Physical Review B, 2021, 104, .	1.1	3
16	Investigating the influence of the depinning energy barrier on domain wall motion in perpendicularly magnetized Pt/Co/Cr/Ta multilayers. Journal of Magnetism and Magnetic Materials, 2020, 493, 165676.	1.0	2
17	Effect of CoFe dusting layer and annealing on the magnetic properties of sputtered Ta/W/CoFeB/CoFe/MgO layer structures. Journal Physics D: Applied Physics, 2020, 53, 105001.	1.3	3
18	Ferrimagnetic Skyrmions in Topological Insulator/Ferrimagnet Heterostructures. Advanced Materials, 2020, 32, e2003380.	11.1	41

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19	Modulation of thermal stability and spinâ€“orbit torque in IrMn/CoFeB/MgO structures through atom thick W insertion. Applied Physics Letters, 2020, 117, .	1.5	13
20	Termination switching of antiferromagnetic proximity effect in topological insulator. Science Advances, 2020, 6, eaaz8463.	4.7	20
21	Exchange bias switching in an antiferromagnet/ferromagnet bilayer driven by spinâ€“orbit torque. Nature Electronics, 2020, 3, 757-764.	13.1	99
22	Spinâ€“orbit torques in structures with asymmetric dusting layers. Applied Physics Letters, 2020, 117, 182403.	1.5	13
23	Interfacial spin transmission and spinâ€“orbit torques in as-grown and annealed W/Co2FeAl/MgO multilayers. Applied Physics Letters, 2020, 117, .	1.5	8
24	Study of the perpendicular magnetic anisotropy, spinâ€“orbit torque, and Dzyaloshinskiiâ€“Moriya interaction in the heavy metal/CoFeB bilayers with Ir22Mn78 insertion. Applied Physics Letters, 2020, 116, 242407.	1.5	8
25	Pressure-driven Lifshitz transition in type-II Dirac semimetal <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:msub><mml:mi>NiTe</mml:mi><mml:mn>2</mml:mn></mml:msub></mml:math>. Physical Review B, 2020, 101, .	1.1	26
26	Deterministic Spinâ€“Orbit Torque Switching by a Light-Metal Insertion. Nano Letters, 2020, 20, 3703-3709.	4.5	52
27	Creation and annihilation of non-volatile fixed magnetic skyrmions using voltage control of magnetic anisotropy. Nature Electronics, 2020, 3, 539-545.	13.1	76
28	Strongly Surface State Carrierâ€Dependent Spinâ€“Orbit Torque in Magnetic Topological Insulators. Advanced Materials, 2020, 32, e1907661.	11.1	29
29	Spin transmission in IrMn through measurements of spin Hall magnetoresistance and spin-orbit torque. Physical Review B, 2020, 101, .	1.1	11
30	Record thermopower found in an IrMn-based spintronic stack. Nature Communications, 2020, 11, 2023.	5.8	16
31	Spinâ€Orbit Torque Switching of a Nearly Compensated Ferrimagnet by Topological Surface States. Advanced Materials, 2019, 31, e1901681.	11.1	81
32	Field-Free Spinâ€“Orbit Torque Switching of Perpendicular Magnetization by the Rashba Interface. ACS Applied Materials & Interfaces, 2019, 11, 39369-39375.	4.0	45
33	Direct observation of magnetism controlled by electric fields for CoFeB mesoscopic islands on PMN-PT. AIP Advances, 2019, 9, 055215.	0.6	1
34	Spin-orbit torque switching in perpendicular Y3Fe5O12/Pt bilayer. Applied Physics Letters, 2019, 114, .	1.5	47
35	Spin-orbit torque from a ferromagnetic metal. Physical Review B, 2019, 99, .	1.1	49
36	Pressure-induced evolution of structural and electronic properties in <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:mi>TiT</mml:mi><mml:msub><mml:mi mathvariant="normal">e</mml:mi><mml:mn>2</mml:mn></mml:msub></mml:mrow></mml:math>. Physical Review B, 2019, 99, .	1.1	12

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37	Current induced magnetization switching in Pt/Co/Cr structures with enhanced perpendicular magnetic anisotropy and spin Hall effect. Applied Physics Express, 2019, 12, 043001.	1.1	3
38	Room-Temperature Spin-Orbit Torque from Topological Surface States. Physical Review Letters, 2019, 123, 207205.	2.9	129
39	Effect of pressure on structural and electronic properties of the noncentrosymmetric superconductor Rh2Mo3N. Physical Review B, 2019, 100, .	1.1	4
40	Giant nonvolatile manipulation of magnetoresistance in magnetic tunnel junctions by electric fields via magnetoelectric coupling. Nature Communications, 2019, 10, 243.	5.8	94
41	Magnon Valve Effect between Two Magnetic Insulators. Physical Review Letters, 2018, 120, 097205.	2.9	97
42	Spatially Resolved Electricâ€Field Manipulation of Magnetism for CoFeB Mesoscopic Discs on Ferroelectrics. Advanced Functional Materials, 2018, 28, 1706448.	7.8	35
43	Room-Temperature Skyrmions in an Antiferromagnet-Based Heterostructure. Nano Letters, 2018, 18, 980-986.	4.5	98
44	Hybrid magnetic anisotropy [Co/Ni]/Cu/[Co/Pt] spin-valves. Journal of Magnetism and Magnetic Materials, 2018, 449, 271-277.	1.0	4
45	Room Temperature Highly Efficient Topological Insulator/Mo/CoFeB Spin-Orbit Torque Memory with Perpendicular Magnetic Anisotropy. , 2018, , .		21
46	Spintronic devices for low energy dissipation. , 2018, , .		5
47	Room temperature spin injection into SiC via Schottky barrier. Applied Physics Letters, 2018, 113, 222402.	1.5	5
48	Voltage-controlled magnetoelectric memory and logic devices. MRS Bulletin, 2018, 43, 970-977.	1.7	47
49	Role of dimensional crossover on spin-orbit torque efficiency in magnetic insulator thin films. Nature Communications, 2018, 9, 3612.	5.8	84
50	Fieldâ€Free Programmable Spin Logics via Chiralityâ€Reversible Spinâ€“Orbit Torque Switching. Advanced Materials, 2018, 30, e1801318.	11.1	91
51	Superconductivity: Pressure-Induced Metallization and Robust Superconductivity in Pristine 1T -SnSe2 (Adv. Electron. Mater. 8/2018). Advanced Electronic Materials, 2018, 4, 1870040.	2.6	0
52	Pressureâ€Induced Metallization and Robust Superconductivity in Pristine 1Tâ€SnSe₂. Advanced Electronic Materials, 2018, 4, 1800155.	2.6	33
53	Experimental demonstration of programmable multi-functional spin logic cell based on spin Hall effect. Journal of Magnetism and Magnetic Materials, 2017, 428, 401-405.	1.0	20
54	Programmable Spin Logic Based on Spin Hall Effect in a Single Device. Advanced Electronic Materials, 2017, 3, 1600282.	2.6	59

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55	Separation of inverse spin Hall effect and anomalous Nernst effect in ferromagnetic metals. Journal of Magnetism and Magnetic Materials, 2017, 441, 149-153.	1.0	19
56	Room-Temperature Skyrmion Shift Device for Memory Application. Nano Letters, 2017, 17, 261-268.	4.5	227
57	Determination of spin relaxation times in heavy metals via second-harmonic spin injection magnetoresistance. Physical Review B, 2017, 96, .	1.1	14
58	Magneto-Seebeck effect in spin valves. Journal of Applied Physics, 2017, 122, .	1.1	5
59	In-plane current-driven spin-orbit torque switching in perpendicularly magnetized films with enhanced thermal tolerance. Applied Physics Letters, 2016, 108, .	1.5	26
60	Epitaxial yttrium iron garnet film for fabrication of high frequency on-chip inductors. Applied Physics Letters, 2016, 109, .	1.5	12
61	Field-free spin Hall effect driven magnetization switching in Pd/Co/IrMn exchange coupling system. Applied Physics Letters, 2016, 109, .	1.5	48
62	Electrical control over perpendicular magnetization switching driven by spin-orbit torques. Physical Review B, 2016, 94, .	1.1	40
63	Scaling relation between anomalous Nernst and Hall effect in<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:msub><mml:mrow><mml:mo>[</mml:mo><mml:mrow><mml:mi>Co</mml:mi></mml:mrow><mml:mo>/</mml:mo><mml:mrow><mml:mi>Pt</mml:mi></mml:mrow><mml:mo>]</mml:mo></mml:mrow><mml:mi>n</mml:mi></mml:msub></mml:math> multilayers. Physical Review B, 2016, 93, .	1.1	54
64	Observation of magnon-mediated electric current drag at room temperature. Physical Review B, 2016, 93, .	1.1	76
65	Hanle magnetoresistance: The role of edge spin accumulation and interfacial spin current. Physical Review B, 2016, 94, .	1.1	25
66	Electric-Field Control of Magnetism in Co₄₀Fe₄₀B₂₀/(1-x)Pb(Mg_{1/3}Nb_{2/3})O₃-xPbTiO₃ Multiferroic Heterostructures with Different Ferroelectric Phases. ACS Applied Materials & Interfaces, 2016, 8, 3784-3791.	4.0	31
67	Integrated Transformers With Magnetic Thin Films. IEEE Transactions on Magnetics, 2016, 52, 1-4.	1.2	18
68	Observation of pure inverse spin Hall effect in ferromagnetic metals via ferromagnetic/antiferromagnetic exchange-bias structures. Physical Review B, 2015, 92, .	1.1	38
69	Thermally stable voltage-controlled perpendicular magnetic anisotropy in Mo|CoFeB|MgO structures. Applied Physics Letters, 2015, 107, .	1.5	47
70	Polarizationâ€Mediated Thermal Stability of Metal/Oxide Heterointerface. Advanced Materials, 2015, 27, 6934-6938.	11.1	19
71	Spin Hall Magnetoresistance in CoFe₂O₄/Pt Films. IEEE Transactions on Magnetics, 2015, 51, 1-4.	1.2	8
72	Nonlocal ordinary magnetoresistance in indium arsenide. Journal of Magnetism and Magnetic Materials, 2015, 385, 292-294.	1.0	1

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73	Strain-induced modulation of perpendicular magnetic anisotropy in Ta/CoFeB/MgO structures investigated by ferromagnetic resonance. Applied Physics Letters, 2015, 106, .	1.5	79
74	Integration of magnetic materials into package RF and power inductors on organic substrates for system in package (SiP) applications. , 2014, , .		5
75	Control of magnetic flux and eddy currents in magnetic films for on-chip radio frequency inductors: Role of the magnetic vias. Journal of Applied Physics, 2014, 115, .	1.1	5
76	Improved High Frequency Response and Quality Factor of On-Chip Ferromagnetic Thin Film Inductors by Laminating and Patterning Co-Zr-Ta-B Films. IEEE Transactions on Magnetics, 2013, 49, 4176-4179.	1.2	20
77	Nonlocal magnetoresistance due to Lorentz force in linear transport region in bulk silicon. Applied Physics Letters, 2013, 103, .	1.5	17
78	Integrated RF On-Chip Inductors With Patterned Co-Zr-Ta-B Films. IEEE Transactions on Magnetics, 2012, 48, 4123-4126.	1.2	44