

Caihua Wan

List of Publications by Year in descending order

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82
papers

2,497
citations

218677

26
h-index

214800

47
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84
all docs

84
docs citations

84
times ranked

2854
citing authors

#	ARTICLE	IF	CITATIONS
1	Field-Free Spin-Orbit Torque Switching in Perpendicularly Magnetized Synthetic Antiferromagnets. <i>Advanced Functional Materials</i> , 2022, 32, 2109455.	14.9	21
2	Role of an in-plane ferromagnet in a T-type structure for field-free magnetization switching. <i>Applied Physics Letters</i> , 2022, 120, .	3.3	5
3	A Van der Waals Interface Hosting Two Groups of Magnetic Skyrmions. <i>Advanced Materials</i> , 2022, 34, e2110583.	21.0	37
4	Transition of laser-induced terahertz spin currents from torque- to conduction-electron-mediated transport. <i>Physical Review B</i> , 2022, 105, .	3.2	17
5	Type-Y magnetic tunnel junctions with CoFeB doped tungsten as spin current source. <i>Applied Physics Letters</i> , 2022, 120, .	3.3	2
6	Piezoelectric Strain-Controlled Magnon Spin Current Transport in an Antiferromagnet. <i>Nano Letters</i> , 2022, 22, 4646-4653.	9.1	6
7	Ferromagnetic resonance linewidth broadening induced by a tunable inhomogeneity effect. <i>Journal of Magnetism and Magnetic Materials</i> , 2021, 517, 167215.	2.3	1
8	Gradual magnetization switching via domain nucleation driven by spin-orbit torque. <i>Applied Physics Letters</i> , 2021, 118, 032407.	3.3	11
9	Electrical Spin Injection into the 2D Electron Gas in AlN/GaN Heterostructures with Ultrathin AlN Tunnel Barrier. <i>Advanced Functional Materials</i> , 2021, 31, 2009771.	14.9	11
10	Spin-orbit torques: Materials, physics, and devices. <i>Applied Physics Letters</i> , 2021, 118, .	3.3	100
11	Materials, physics, and devices of spin-orbit torque effect. <i>Applied Physics Letters</i> , 2021, 118, 180401.	3.3	2
12	Nonvolatile magnetic half adder combined with memory writing. <i>Applied Physics Letters</i> , 2021, 118, .	3.3	2
13	Electron-Phonon Interaction Enables Strong Thermoelectric Seebeck Effect Variation in Hybrid Nanoscale Systems. <i>Journal of Physical Chemistry C</i> , 2021, 125, 13167-13175.	3.1	5
14	Exchange bias and spin-orbit torque in the Fe ₃ GeTe ₂ -based heterostructures prepared by vacuum exfoliation approach. <i>Applied Physics Letters</i> , 2021, 118, .	3.3	27
15	Efficient Spin-Orbit-Torque Switching Assisted by an Effective Perpendicular Field in a Magnetic Trilayer. <i>Physical Review Applied</i> , 2021, 16, .	3.8	5
16	Current-Induced Manipulation of the Exchange Bias in a Pt/Co/NiO Structure. <i>ACS Applied Materials & Interfaces</i> , 2021, 13, 42258-42265.	8.0	7
17	Switching the perpendicular magnetization of a magnetic insulator by magnon transfer torque. <i>Physical Review B</i> , 2021, 104, .	3.2	11
18	Magnetic modulation of terahertz waves via spin-polarized electron tunneling. , 2021, , .		0

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19	Field-free programmable spin logics based on spin Hall effect. Applied Physics Letters, 2021, 119, .	3.3	1
20	Magnon junction effect in Y3Fe5O12/CoO/Y3Fe5O12 insulating heterostructures. Applied Physics Letters, 2021, 119, .	3.3	9
21	Magnetic Modulation of Terahertz Waves via Spin-Polarized Electron Tunneling Based on Magnetic Tunnel Junctions. Physical Review Applied, 2020, 14, .	3.8	12
22	N�el-type skyrmion in WTe2/Fe3GeTe2 van der Waals heterostructure. Nature Communications, 2020, 11, 3860.	12.8	208
23	Regulating the anomalous Hall and Nernst effects in Heusler-based trilayers. Applied Physics Letters, 2020, 117, .	3.3	7
24	Current-induced magnetization switching in a CoTb amorphous single layer. Physical Review B, 2020, 101, .	3.2	59
25	A nonlocal spin Hall magnetoresistance in a platinum layer deposited on a magnon junction. Nature Electronics, 2020, 3, 304-308.	26.0	32
26	Spin relaxation induced by interfacial effects in n-GaN/MgO/Co spin injectors. RSC Advances, 2020, 10, 12547-12553.	3.6	7
27	Current-Induced In-Plane Magnetization Switching in a Biaxial Ferrimagnetic Insulator. Physical Review Applied, 2020, 13, .	3.8	14
28	Characterization of Spin-Orbit Torque Efficiency in Magnetic Heterostructures with Perpendicular Magnetic Anisotropy via Spin-Torque Ferromagnetic Resonance. Physical Review Applied, 2020, 13, .	3.8	22
29	Creating zero-field skyrmions in exchange-biased multilayers through X-ray illumination. Nature Communications, 2020, 11, 949.	12.8	67
30	Determining spin-torque efficiency in ferromagnetic metals via spin-torque ferromagnetic resonance. Physical Review B, 2020, 101, .	3.2	26
31	Origin of the large voltage-controlled magnetic anisotropy in a Cr/Fe/MgO junction with an ultrathin Fe layer: First-principles investigation. Physical Review B, 2020, 101, .	3.2	15
32	Spin transmission in IrMn through measurements of spin Hall magnetoresistance and spin-orbit torque. Physical Review B, 2020, 101, .	3.2	11
33	Record thermopower found in an IrMn-based spintronic stack. Nature Communications, 2020, 11, 2023.	12.8	16
34	All-electrical manipulation of magnetization in magnetic tunnel junction via spin-orbit torque. Applied Physics Letters, 2020, 116, 162401.	3.3	34
35	Evidence of magnetization switching by anomalous spin Hall torque in NiFe. Physical Review B, 2020, 101, .	3.2	19
36	Current-driven magnetization switching in a van der Waals ferromagnet Fe ₃ GeTe ₂ . Science Advances, 2019, 5, eaaw8904.	10.3	239

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37	Spin-orbit torque switching in a T-type magnetic configuration with current orthogonal to easy axes. Nature Communications, 2019, 10, 233.	12.8	91
38	Spin-orbit torque switching in perpendicular Y3Fe5O12/Pt bilayer. Applied Physics Letters, 2019, 114, .	3.3	47
39	Thermally activated magnetization back-hopping based true random number generator in nano-ring magnetic tunnel junctions. Applied Physics Letters, 2019, 114, .	3.3	6
40	Coherent Resonant Tunneling through Double Metallic Quantum Well States. Nano Letters, 2019, 19, 3019-3026.	9.1	22
41	Anatomy of Skyrmionic Textures in Magnetic Multilayers. Advanced Materials, 2019, 31, e1807683.	21.0	75
42	Observation of large anomalous Nernst effect in 2D layered materials Fe3GeTe2. Applied Physics Letters, 2019, 115, .	3.3	20
43	Magnon Valve Effect between Two Magnetic Insulators. Physical Review Letters, 2018, 120, 097205.	7.8	97
44	Room temperature spin injection into SiC via Schottky barrier. Applied Physics Letters, 2018, 113, 222402.	3.3	5
45	Study of spin-orbit torque induced magnetization switching in synthetic antiferromagnet with ultrathin Ta spacer layer. Applied Physics Letters, 2018, 113, .	3.3	19
46	Magnon valves based on YIG/NiO/YIG all-insulating magnon junctions. Physical Review B, 2018, 98, .	3.2	48
47	Microwave Spin-Torque-Induced Magnetic Resonance in a Nanoring-Shape-Confined Magnetic Tunnel Junction. Physical Review Applied, 2018, 10, .	3.8	7
48	Field-Free Programmable Spin Logics via Chirality-Reverse Spin-Orbit Torque Switching. Advanced Materials, 2018, 30, e1801318.	21.0	91
49	Tunneling anisotropic magnetoresistance in fully epitaxial magnetic tunnel junctions with different barriers. Applied Physics Letters, 2018, 112, 242404.	3.3	2
50	Experimental demonstration of programmable multi-functional spin logic cell based on spin Hall effect. Journal of Magnetism and Magnetic Materials, 2017, 428, 401-405.	2.3	20
51	Magnetoresistance and Hall resistivity of semimetal WTe ₂ ultrathin flakes. Nanotechnology, 2017, 28, 145704.	2.6	7
52	Programmable Spin Logic Based on Spin Hall Effect in a Single Device. Advanced Electronic Materials, 2017, 3, 1600282.	5.1	59
53	Controllable synthesis of ferromagnetic-antiferromagnetic core-shell NWs with tunable magnetic properties. Nanoscale, 2017, 9, 5694-5700.	5.6	16
54	Spin-orbit torque in MgO/CoFeB/Ta/CoFeB/MgO symmetric structure with interlayer antiferromagnetic coupling. Physical Review B, 2017, 95, .	3.2	82

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55	Magneto-Seebeck effect in magnetic tunnel junctions with perpendicular anisotropy. AIP Advances, 2017, 7, 015035.	1.3	6
56	Large, Linear, and Tunable Positive Magnetoresistance of Mechanically Stable Graphene Foam—Toward High-Performance Magnetic Field Sensors. ACS Applied Materials & Interfaces, 2017, 9, 1891-1898.	8.0	27
57	Determination of spin relaxation times in heavy metals via second-harmonic spin injection magnetoresistance. Physical Review B, 2017, 96, .	3.2	14
58	Noise suppression and sensitivity manipulation of magnetic tunnel junction sensors with soft magnetic Co _{70.5} Fe _{4.5} Si ₁₅ B ₁₀ layer. Journal of Applied Physics, 2017, 122, .	2.5	28
59	Magneto-Seebeck effect in spin valves. Journal of Applied Physics, 2017, 122, .	2.5	5
60	Field-free spin Hall effect driven magnetization switching in Pd/Co/IrMn exchange coupling system. Applied Physics Letters, 2016, 109, .	3.3	48
61	Strong Electrical Manipulation of Spin—Orbit Torque in Ferromagnetic Heterostructures. Advanced Electronic Materials, 2016, 2, 1600219.	5.1	37
62	Electrical control over perpendicular magnetization switching driven by spin-orbit torques. Physical Review B, 2016, 94, .	3.2	40
63	Scaling relation between anomalous Nernst and Hall effect in Pt/ferromagnetic heterostructures. Physical Review B, 2016, 93, .	3.2	64
64	Observation of magnon-mediated electric current drag at room temperature. Physical Review B, 2016, 93, .	3.2	76
65	Spin seebeck and spin-dependent seebeck effect in ferromagnetic thin films. , 2016, , .		1
66	Magnetic response of hybrid ferromagnetic and antiferromagnetic core—shell nanostructures. Nanoscale, 2016, 8, 6064-6070.	5.6	25
67	Observation of pure inverse spin Hall effect in ferromagnetic metals via ferromagnetic/antiferromagnetic exchange-bias structures. Physical Review B, 2015, 92, .	3.2	38
68	Spin gapless semiconductor like Ti ₂ MnAl film as a new candidate for spintronics application. Physica Status Solidi - Rapid Research Letters, 2015, 9, 641-645.	2.4	70
69	Polarization—Mediated Thermal Stability of Metal/Oxide Heterointerface. Advanced Materials, 2015, 27, 6934-6938.	21.0	19
70	Influence of epitaxial BiFeO ₃ on superparamagnetic behavior of CoFeB thin film. Journal of Applied Physics, 2015, 117, 143904.	2.5	1
71	Spin Hall Magnetoresistance in CoFe ₂ O ₄ /Pt Films. IEEE Transactions on Magnetics, 2015, 51, 1-4.	2.1	8
72	Nonlocal ordinary magnetoresistance in indium arsenide. Journal of Magnetism and Magnetic Materials, 2015, 385, 292-294.	2.3	1

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73	Magnetoresistance sign change in iron-doped amorphous carbon films at low temperatures. Journal Physics D: Applied Physics, 2014, 47, 215002.	2.8	14
74	Nonlocal magnetoresistance due to Lorentz force in linear transport region in bulk silicon. Applied Physics Letters, 2013, 103, .	3.3	17
75	Magnetotransport properties of undoped amorphous carbon films. Carbon, 2013, 59, 278-282.	10.3	23
76	Temperature-dependent resistive switching of amorphous carbon/silicon heterojunctions. Diamond and Related Materials, 2012, 22, 37-41.	3.9	12
77	Electro- and magneto-transport properties of amorphous carbon films doped with iron. Diamond and Related Materials, 2011, 20, 26-30.	3.9	27
78	Geometrical enhancement of low-field magnetoresistance in silicon. Nature, 2011, 477, 304-307.	27.8	82
79	The dependence of barrier heights of a-C: Fe/n-Si heterojunctions on film-depositing temperatures. Journal of Applied Physics, 2011, 109, 103706.	2.5	2
80	Channel Switching Effect and Magnetoresistance in Iron Doped Amorphous Carbon Films on Silicon Substrates. IEEE Transactions on Magnetics, 2011, 47, 2732-2734.	2.1	2
81	Room-temperature nonsaturating magnetoresistance of intrinsic bulk silicon in high pulsed magnetic fields. Applied Physics Letters, 2011, 98, .	3.3	23
82	Abnormal humidity-dependent electrical properties of amorphous carbon/silicon heterojunctions. Applied Physics Letters, 2010, 97, .	3.3	12