Kaiyou Wang

List of Publications by Year in Descending Order

91 papers	4,050 citations	32 h-index	63 g-index
99 ext. papers	4,727 ext. citations	7.4 avg, IF	5.52 L-index

#	Paper	IF	Citations
91	Current-assisted magnetization reversal in FeGeTe van der Waals homojunctions.. *Nanoscale*, **2022**,	7.7	1
90	Spin logic operations based on magnetization switching by asymmetric spin current. *Science China Information Sciences*, **2022**, 65, 1	3.4	1
89	High performance conical nanostructured GaN-based photodetectors. *Journal Physics D: Applied Physics*, **2022**, 55, 035102	3	1
88	Progress of GaN-Based Optoelectronic Devices Integrated with Optical Resonances.. *Small*, **2022**, e2106757	13	2
87	Memristor with BiVO4 nanoparticle as artificial synapse for neuroinspired computing. *Applied Physics Letters*, **2022**, 120, 093501	3.4	0
86	Large Tunneling Magnetoresistance in van der Waals Ferromagnet/Semiconductor Heterojunctions. *Advanced Materials*, **2021**, e2104658	24	10
85	Manipulating antiferromagnetic interfacial states by spin-orbit torques. *Physical Review B*, **2021**, 104,	3.3	4
84	Oscillation of current-induced interfacial spins reorientation in a like-synthetic antiferromagnet/antiferromagnet system. *Science China: Physics, Mechanics and Astronomy*, **2021**, 64, 1	3.6	3
83	All-Electrical Multifunctional Spin Logics by Adjusting the Spin Current Density Gradient in a Single Device. *ACS Applied Electronic Materials*, **2021**, 3, 2646-2651	4	3
82	All-Linear Multistate Magnetic Switching Induced by Electrical Current. *Physical Review Applied*, **2021**, 15,	4.3	4
81	Perspectives on photodetectors based on selenides and their van der Waals heterojunctions. *Applied Physics Letters*, **2021**, 118, 190501	3.4	6
80	High-Efficiency Spin–Orbit Torque Switching Using a Single Heavy-Metal Alloy with Opposite Spin Hall Angles. *Advanced Electronic Materials*, **2021**, 7, 2000793	6.4	13
79	Direct Polarimetric Image Sensor and Wide Spectral Response Based on Quasi-1D Sb2S3 Nanowire. *Advanced Functional Materials*, **2021**, 31, 2006601	15.6	16
78	A nanopillar-modified high-sensitivity asymmetric graphene-GaN photodetector. *Nanoscale*, **2021**, 13, 17512-17520	7.7	4
77	RF magnetron sputtering induced the perpendicular magnetic anisotropy modification in Pt/Co based multilayers*. *Chinese Physics B*, **2021**, 30, 028506	1.2	1
76	Field-Free Manipulation of Skyrmion Creation and Annihilation by Tunable Strain Engineering. *Advanced Functional Materials*, **2021**, 31, 2008715	15.6	7
75	Gradient Descent on Multilevel Spin–Orbit Synapses with Tunable Variations. *Advanced Intelligent Systems*, **2021**, 3, 2000182	6	8

74	Ferroelectric semiconductor junctions based on graphene/In2Se3/graphene van der Waals heterostructures. *2D Materials*, **2021**, 8, 045020	5.9	4
73	Vertical WS2 spin valve with Ohmic property based on Fe3GeTe2 electrodes*. *Chinese Physics B*, **2021**, 30, 097505	1.2	1
72	Atomic origin of spin-valve magnetoresistance at the SrRuO grain boundary. *National Science Review*, **2020**, 7, 755-762	10.8	8
71	Tuning Interfacial Spins in Antiferromagnetic□Ferromagnetic□Heavy-Metal Heterostructures via Spin-Orbit Torque. *Physical Review Applied*, **2020**, 13,	4.3	25
70	Deterministic Magnetization Switching Using Lateral Spin-Orbit Torque. *Advanced Materials*, **2020**, 32, e1907929	24	61
69	Interlayer Band-to-Band Tunneling and Negative Differential Resistance in van der Waals BP/InSe Field-Effect Transistors. *Advanced Functional Materials*, **2020**, 30, 1910713	15.6	41
68	High Responsivity and Wavelength Selectivity of GaN-Based Resonant Cavity Photodiodes. *Advanced Optical Materials*, **2020**, 8, 1901276	8.1	15
67	Controlling vertical magnetization shift by spin□orbit torque in ferromagnetic/antiferromagnetic/ferromagnetic heterostructure. *Applied Physics Letters*, **2020**, 116, 062403	3.4	11
66	From two- to multi-state vertical spin valves without spacer layer based on Fe3GeTe2 van der Waals homo-junctions. *Science Bulletin*, **2020**, 65, 1072-1077	10.6	30
65	Non-layered ZnSb nanoplates for room temperature infrared polarized photodetectors. *Journal of Materials Chemistry C*, **2020**, 8, 6388-6395	7.1	14
64	Prospect of Spin-Orbitronic Devices and Their Applications. *IScience*, **2020**, 23, 101614	6.1	27
63	Current-induced out-of-plane effective magnetic field in antiferromagnet/heavy metal/ferromagnet/heavy metal multilayer. *Applied Physics Letters*, **2020**, 117, 092404	3.4	7
62	Complementary Lateral-Spin□Orbit Building Blocks for Programmable Logic and In-Memory Computing. *Advanced Electronic Materials*, **2020**, 6, 2000296	6.4	10
61	Magnetic Skyrmions in a Hall Balance with Interfacial Canted Magnetizations. *Advanced Materials*, **2020**, 32, e1907452	24	10
60	Spin-Valve Effect in FeGeTe/MoS/FeGeTe van der Waals Heterostructures. *ACS Applied Materials & Interfaces*, **2020**, 12, 43921-43926	9.5	39
59	Estimating spin Hall angle in heavy metal/ferromagnet heterostructures. *Journal of Magnetism and Magnetic Materials*, **2020**, 496, 165920	2.8	4
58	Spin Logical and Memory Device Based on the Nonvolatile Ferroelectric Control of the Perpendicular Magnetic Anisotropy in PbZr0.2Ti0.8O3/Co/Pt Heterostructure. *Advanced Electronic Materials*, **2020**, 6, 2000102	6.4	7
57	Spintronic Synapses: Tuning a Binary Ferromagnet into a Multistate Synapse with Spin□Orbit-Torque-Induced Plasticity (Adv. Funct. Mater. 25/2019). *Advanced Functional Materials*, **2019**, 29, 1970175	15.6	3

56	Deterministic magnetic switching of perpendicular magnets by gradient current density. *Journal of Magnetism and Magnetic Materials*, **2019**, 489, 165474	2.8	7
55	Metal Chalcogenides: Versatile Crystal Structures and (Opto)electronic Applications of the 2D Metal Mono-, Di-, and Tri-Chalcogenide Nanosheets (Adv. Funct. Mater. 24/2019). *Advanced Functional Materials*, **2019**, 29, 1970161	15.6	2
54	Enhanced Photoresponse in MoTe2 Photodetectors with Asymmetric Graphene Contacts. *Advanced Optical Materials*, **2019**, 7, 1900190	8.1	42
53	Tuning a Binary Ferromagnet into a Multistate Synapse with Spin□Orbit-Torque-Induced Plasticity. *Advanced Functional Materials*, **2019**, 29, 1808104	15.6	93
52	Versatile Crystal Structures and (Opto)electronic Applications of the 2D Metal Mono-, Di-, and Tri-Chalcogenide Nanosheets. *Advanced Functional Materials*, **2019**, 29, 1900040	15.6	37
51	Piezostrain modulation of magnetic damping in MBE-grown epitaxial Co2FeAl/GaAs heterostructure. *Journal Physics D: Applied Physics*, **2019**, 52, 455001	3	0
50	Spin Logic Devices via Electric Field Controlled Magnetization Reversal by Spin-Orbit Torque. *IEEE Electron Device Letters*, **2019**, 40, 1554-1557	4.4	52
49	Hybrid light emitting diodes based on stable, high brightness all-inorganic CsPbI perovskite nanocrystals and InGaN. *Nanoscale*, **2019**, 11, 13450-13457	7.7	24
48	Broadband polarized photodetector based on p-BP/n-ReS2 heterojunction. *Journal of Semiconductors*, **2019**, 40, 092001	2.3	24
47	Manipulation of Magnetization by Spin□Orbit Torque. *Advanced Quantum Technologies*, **2019**, 2, 1800052	4.3	32
46	Room-Temperature Nanoseconds Spin Relaxation in WTe and MoTe Thin Films. *Advanced Science*, **2018**, 5, 1700912	13.6	25
45	High-Performance, Self-Driven Photodetector Based on Graphene Sandwiched GaSe/WS2 Heterojunction. *Advanced Optical Materials*, **2018**, 6, 1700490	8.1	133
44	Toward High-Performance Photodetectors Based on 2D Materials: Strategy on Methods. *Small Methods*, **2018**, 2, 1700349	12.8	83
43	Adjustable Current-Induced Magnetization Switching Utilizing Interlayer Exchange Coupling. *Advanced Electronic Materials*, **2018**, 4, 1800224	6.4	75
42	Superconductivity: Pressure-Induced Metallization and Robust Superconductivity in Pristine 1T-SnSe2 (Adv. Electron. Mater. 8/2018). *Advanced Electronic Materials*, **2018**, 4, 1870040	6.4	
41	Pressure-Induced Metallization and Robust Superconductivity in Pristine 1T-SnSe2. *Advanced Electronic Materials*, **2018**, 4, 1800155	6.4	23
40	Current-induced four-state magnetization switching by spin-orbit torques in perpendicular ferromagnetic trilayers. *Applied Physics Letters*, **2018**, 113, 112406	3.4	23
39	Sensitivity enhancement of graphene Hall sensors modified by single-molecule magnets at room temperature. *RSC Advances*, **2017**, 7, 1776-1781	3.7	8

38	Fast, multicolor photodetection with graphene-contacted p-GaSe/n-InSe van der Waals heterostructures. *Nanotechnology*, **2017**, 28, 27LT01	3.4	133
37	Fast gate-tunable photodetection in the graphene sandwiched WSe/GaSe heterojunctions. *Nanoscale*, **2017**, 9, 8388-8392	7.7	88
36	Electric field control of deterministic current-induced magnetization switching in a hybrid ferromagnetic/ferroelectric structure. *Nature Materials*, **2017**, 16, 712-716	27	269
35	High-detectivity ultraviolet photodetectors based on laterally mesoporous GaN. *Nanoscale*, **2017**, 9, 8142-8148	7.7	73
34	Wafer-scale two-dimensional ferromagnetic Fe3GeTe2 thin films grown by molecular beam epitaxy. *Npj 2D Materials and Applications*, **2017**, 1,	8.8	93
33	Spin-orbit torque in Pt/CoNiCo/Pt symmetric devices. *Scientific Reports*, **2016**, 6, 20778	4.9	82
32	Rational Design of Ultralarge Pb1-x Snx Te Nanoplates for Exploring Crystalline Symmetry-Protected Topological Transport. *Advanced Materials*, **2016**, 28, 617-23	24	35
31	Charge trap memory based on few-layer black phosphorus. *Nanoscale*, **2016**, 8, 2686-92	7.7	72
30	Voltage manipulation of the magnetization reversal in Fe/n-GaAs/piezoelectric heterostructure. *Journal of Magnetism and Magnetic Materials*, **2015**, 375, 148-152	2.8	14
29	Gate Tuning of High-Performance InSe-Based Photodetectors Using Graphene Electrodes. *Advanced Optical Materials*, **2015**, 3, 1418-1423	8.1	137
28	Strong enhancement of photoresponsivity with shrinking the electrodes spacing in few layer GaSe photodetectors. *Scientific Reports*, **2015**, 5, 8130	4.9	91
27	Magnetic coupling in ferromagnetic semiconductor GaMnAs/AlGaMnAs bilayer devices. *Science China: Physics, Mechanics and Astronomy*, **2014**, 57, 1471-1475	3.6	2
26	Anisotropic current-controlled magnetization reversal in the ferromagnetic semiconductor (Ga,Mn)As. *Applied Physics Letters*, **2013**, 103, 022401	3.4	29
25	Spin and orbital splitting in ferromagnetic contacted single wall carbon nanotube devices. *Applied Physics Letters*, **2013**, 102, 093508	3.4	6
24	A scanning tunneling microscope capable of imaging specified micron-scale small samples. *Review of Scientific Instruments*, **2012**, 83, 123701	1.7	1
23	Polarized x-ray spectroscopy of quaternary ferromagnetic semiconductor (Ga,Mn)(As,P) thin films. *Applied Physics Letters*, **2011**, 99, 022502	3.4	4
22	Current-driven domain wall motion across a wide temperature range in a (Ga,Mn)(As,P) device. *Applied Physics Letters*, **2010**, 97, 262102	3.4	25
21	Magnetic reversal under external field and current-driven domain wall motion in (Ga,Mn)As: influence of extrinsic pinning. *New Journal of Physics*, **2008**, 10, 085007	2.9	8

20	Secondary magnetic phases in (Ga,Mn)As determined by x-ray magnetic circular dichroism. *Journal of Applied Physics*, **2007**, 102, 023902	2.5	8
19	Low-temperature magnetization of (Ga,Mn)As semiconductors. *Physical Review B*, **2006**, 73,	3.3	43
18	Control of coercivities in (Ga,Mn)As thin films by small concentrations of MnAs nanoclusters. *Applied Physics Letters*, **2006**, 88, 022510	3.4	39
17	Magnetic domain structure and magnetization reversal in (311)B Ga0.91Mn0.09As films. *Journal of Applied Physics*, **2006**, 99, 093908	2.5	7
16	Prospects for high temperature ferromagnetism in (Ga,Mn)As semiconductors. *Physical Review B*, **2005**, 72,	3.3	351
15	Anisotropic magnetoresistance and magnetic anisotropy in high-quality (Ga,Mn)As films. *Physical Review B*, **2005**, 72,	3.3	89
14	Intrinsic and extrinsic contributions to the lattice parameter of GaMnAs. *Applied Physics Letters*, **2005**, 86, 071902	3.4	35
13	Determination of the Mn concentration in GaMnAs. *Semiconductor Science and Technology*, **2005**, 20, 369-373	1.8	22
12	Search For Hole Mediated Ferromagnetism In Cubic (Ga,Mn)N. *AIP Conference Proceedings*, **2005**,	0	2
11	Magnetism in (Ga,Mn)As Thin Films With TC Up To 173K. *AIP Conference Proceedings*, **2005**,	0	57
10	p-type conductivity in cubic (Ga,Mn)N thin films. *Applied Physics Letters*, **2005**, 86, 152114	3.4	28
9	Edmonds et al. Reply:. *Physical Review Letters*, **2005**, 94,	7.4	7
8	(Ga,Mn)As grown on (311) GaAs substrates: Modified Mn incorporation and magnetic anisotropies. *Physical Review B*, **2005**, 72,	3.3	33
7	Influence of the Mn interstitial on the magnetic and transport properties of (Ga,Mn)As. *Journal of Applied Physics*, **2004**, 95, 6512-6514	2.5	60
6	Mn interstitial diffusion in (ga,mn)as. *Physical Review Letters*, **2004**, 92, 037201	7.4	454
5	Dc-transport properties of ferromagnetic (Ga,Mn)As semiconductors. *Applied Physics Letters*, **2003**, 83, 320-322	3.4	94
4	High-Curie-temperature Ga1−xMnxAs obtained by resistance-monitored annealing. *Applied Physics Letters*, **2002**, 81, 4991-4993	3.4	306
3	Hall effect and hole densities in Ga1−xMnxAs. *Applied Physics Letters*, **2002**, 81, 3010-3012	3.4	121

2	Polarization-sensitive and wide-spectrum photovoltaic detector based on quasi-1D ZrGeTe 4 nanoribbon. *Informa□□Materi□y*,	23.1	2
1	Tuning the High-Efficiency Field-Free Current-Induced Deterministic Switching via Ultrathin PtMo Layer with Mo Content. *Advanced Electronic Materials*,2100528	6.4	4