

# Kaiyou Wang

## List of Publications by Citations

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

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	Mn interstitial diffusion in (Ga,Mn)As. <i>Physical Review Letters</i> , <b>2004</b> , 92, 037201	7.4	454
90	Prospects for high temperature ferromagnetism in (Ga,Mn)As semiconductors. <i>Physical Review B</i> , <b>2005</b> , 72,	3.3	351
89	High-Curie-temperature Ga <sub>1-x</sub> Mn <sub>x</sub> As obtained by resistance-monitored annealing. <i>Applied Physics Letters</i> , <b>2002</b> , 81, 4991-4993	3.4	306
88	Electric field control of deterministic current-induced magnetization switching in a hybrid ferromagnetic/ferroelectric structure. <i>Nature Materials</i> , <b>2017</b> , 16, 712-716	27	269
87	Gate Tuning of High-Performance InSe-Based Photodetectors Using Graphene Electrodes. <i>Advanced Optical Materials</i> , <b>2015</b> , 3, 1418-1423	8.1	137
86	Fast, multicolor photodetection with graphene-contacted p-GaSe/n-InSe van der Waals heterostructures. <i>Nanotechnology</i> , <b>2017</b> , 28, 27LT01	3.4	133
85	High-Performance, Self-Driven Photodetector Based on Graphene Sandwiched GaSe/WS <sub>2</sub> Heterojunction. <i>Advanced Optical Materials</i> , <b>2018</b> , 6, 1700490	8.1	133
84	Hall effect and hole densities in Ga <sub>1-x</sub> Mn <sub>x</sub> As. <i>Applied Physics Letters</i> , <b>2002</b> , 81, 3010-3012	3.4	121
83	Dc-transport properties of ferromagnetic (Ga,Mn)As semiconductors. <i>Applied Physics Letters</i> , <b>2003</b> , 83, 320-322	3.4	94
82	Tuning a Binary Ferromagnet into a Multistate Synapse with Spin-Orbit-Torque-Induced Plasticity. <i>Advanced Functional Materials</i> , <b>2019</b> , 29, 1808104	15.6	93
81	Wafer-scale two-dimensional ferromagnetic Fe <sub>3</sub> GeTe <sub>2</sub> thin films grown by molecular beam epitaxy. <i>Npj 2D Materials and Applications</i> , <b>2017</b> , 1,	8.8	93
80	Strong enhancement of photoresponsivity with shrinking the electrodes spacing in few layer GaSe photodetectors. <i>Scientific Reports</i> , <b>2015</b> , 5, 8130	4.9	91
79	Anisotropic magnetoresistance and magnetic anisotropy in high-quality (Ga,Mn)As films. <i>Physical Review B</i> , <b>2005</b> , 72,	3.3	89
78	Fast gate-tunable photodetection in the graphene sandwiched WSe/GaSe heterojunctions. <i>Nanoscale</i> , <b>2017</b> , 9, 8388-8392	7.7	88
77	Toward High-Performance Photodetectors Based on 2D Materials: Strategy on Methods. <i>Small Methods</i> , <b>2018</b> , 2, 1700349	12.8	83
76	Spin-orbit torque in Pt/CoNiCo/Pt symmetric devices. <i>Scientific Reports</i> , <b>2016</b> , 6, 20778	4.9	82
75	Adjustable Current-Induced Magnetization Switching Utilizing Interlayer Exchange Coupling. <i>Advanced Electronic Materials</i> , <b>2018</b> , 4, 1800224	6.4	75

74	High-detectivity ultraviolet photodetectors based on laterally mesoporous GaN. <i>Nanoscale</i> , <b>2017</b> , 9, 8142-8148	7.8	73
73	Charge trap memory based on few-layer black phosphorus. <i>Nanoscale</i> , <b>2016</b> , 8, 2686-92	7.7	72
72	Deterministic Magnetization Switching Using Lateral Spin-Orbit Torque. <i>Advanced Materials</i> , <b>2020</b> , 32, e1907929	24	61
71	Influence of the Mn interstitial on the magnetic and transport properties of (Ga,Mn)As. <i>Journal of Applied Physics</i> , <b>2004</b> , 95, 6512-6514	2.5	60
70	Magnetism in (Ga,Mn)As Thin Films With TC Up To 173K. <i>AIP Conference Proceedings</i> , <b>2005</b> ,	0	57
69	Spin Logic Devices via Electric Field Controlled Magnetization Reversal by Spin-Orbit Torque. <i>IEEE Electron Device Letters</i> , <b>2019</b> , 40, 1554-1557	4.4	52
68	Low-temperature magnetization of (Ga,Mn)As semiconductors. <i>Physical Review B</i> , <b>2006</b> , 73,	3.3	43
67	Enhanced Photoresponse in MoTe <sub>2</sub> Photodetectors with Asymmetric Graphene Contacts. <i>Advanced Optical Materials</i> , <b>2019</b> , 7, 1900190	8.1	42
66	Interlayer Band-to-Band Tunneling and Negative Differential Resistance in van der Waals BP/InSe Field-Effect Transistors. <i>Advanced Functional Materials</i> , <b>2020</b> , 30, 1910713	15.6	41
65	Control of coercivities in (Ga,Mn)As thin films by small concentrations of MnAs nanoclusters. <i>Applied Physics Letters</i> , <b>2006</b> , 88, 022510	3.4	39
64	Spin-Valve Effect in FeGeTe/MoS/FeGeTe van der Waals Heterostructures. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2020</b> , 12, 43921-43926	9.5	39
63	Versatile Crystal Structures and (Opto)electronic Applications of the 2D Metal Mono-, Di-, and Tri-Chalcogenide Nanosheets. <i>Advanced Functional Materials</i> , <b>2019</b> , 29, 1900040	15.6	37
62	Rational Design of Ultralarge Pb <sub>1-x</sub> Sn <sub>x</sub> Te Nanoplates for Exploring Crystalline Symmetry-Protected Topological Transport. <i>Advanced Materials</i> , <b>2016</b> , 28, 617-23	24	35
61	Intrinsic and extrinsic contributions to the lattice parameter of GaMnAs. <i>Applied Physics Letters</i> , <b>2005</b> , 86, 071902	3.4	35
60	(Ga,Mn)As grown on (311) GaAs substrates: Modified Mn incorporation and magnetic anisotropies. <i>Physical Review B</i> , <b>2005</b> , 72,	3.3	33
59	Manipulation of Magnetization by Spin-Orbit Torque. <i>Advanced Quantum Technologies</i> , <b>2019</b> , 2, 1800052	4.3	32
58	From two- to multi-state vertical spin valves without spacer layer based on Fe <sub>3</sub> GeTe <sub>2</sub> van der Waals homo-junctions. <i>Science Bulletin</i> , <b>2020</b> , 65, 1072-1077	10.6	30
57	Anisotropic current-controlled magnetization reversal in the ferromagnetic semiconductor (Ga,Mn)As. <i>Applied Physics Letters</i> , <b>2013</b> , 103, 022401	3.4	29

56	p-type conductivity in cubic (Ga,Mn)N thin films. <i>Applied Physics Letters</i> , <b>2005</b> , 86, 152114	3.4	28
55	Prospect of Spin-Orbitronic Devices and Their Applications. <i>IScience</i> , <b>2020</b> , 23, 101614	6.1	27
54	Tuning Interfacial Spins in Antiferromagnetic/Ferromagnetic/Heavy-Metal Heterostructures via Spin-Orbit Torque. <i>Physical Review Applied</i> , <b>2020</b> , 13,	4.3	25
53	Room-Temperature Nanoseconds Spin Relaxation in WTe and MoTe Thin Films. <i>Advanced Science</i> , <b>2018</b> , 5, 1700912	13.6	25
52	Current-driven domain wall motion across a wide temperature range in a (Ga,Mn)(As,P) device. <i>Applied Physics Letters</i> , <b>2010</b> , 97, 262102	3.4	25
51	Hybrid light emitting diodes based on stable, high brightness all-inorganic CsPbI perovskite nanocrystals and InGaN. <i>Nanoscale</i> , <b>2019</b> , 11, 13450-13457	7.7	24
50	Broadband polarized photodetector based on p-BP/n-ReS <sub>2</sub> heterojunction. <i>Journal of Semiconductors</i> , <b>2019</b> , 40, 092001	2.3	24
49	Pressure-Induced Metallization and Robust Superconductivity in Pristine 1T-SnSe <sub>2</sub> . <i>Advanced Electronic Materials</i> , <b>2018</b> , 4, 1800155	6.4	23
48	Current-induced four-state magnetization switching by spin-orbit torques in perpendicular ferromagnetic trilayers. <i>Applied Physics Letters</i> , <b>2018</b> , 113, 112406	3.4	23
47	Determination of the Mn concentration in GaMnAs. <i>Semiconductor Science and Technology</i> , <b>2005</b> , 20, 369-373	1.8	22
46	Direct Polarimetric Image Sensor and Wide Spectral Response Based on Quasi-1D Sb <sub>2</sub> S <sub>3</sub> Nanowire. <i>Advanced Functional Materials</i> , <b>2021</b> , 31, 2006601	15.6	16
45	High Responsivity and Wavelength Selectivity of GaN-Based Resonant Cavity Photodiodes. <i>Advanced Optical Materials</i> , <b>2020</b> , 8, 1901276	8.1	15
44	Voltage manipulation of the magnetization reversal in Fe/n-GaAs/piezoelectric heterostructure. <i>Journal of Magnetism and Magnetic Materials</i> , <b>2015</b> , 375, 148-152	2.8	14
43	Non-layered ZnSb nanoplates for room temperature infrared polarized photodetectors. <i>Journal of Materials Chemistry C</i> , <b>2020</b> , 8, 6388-6395	7.1	14
42	High-Efficiency Spin-Orbit Torque Switching Using a Single Heavy-Metal Alloy with Opposite Spin Hall Angles. <i>Advanced Electronic Materials</i> , <b>2021</b> , 7, 2000793	6.4	13
41	Controlling vertical magnetization shift by spin-orbit torque in ferromagnetic/antiferromagnetic/ferromagnetic heterostructure. <i>Applied Physics Letters</i> , <b>2020</b> , 116, 062403	3.4	11
40	Large Tunneling Magnetoresistance in van der Waals Ferromagnet/Semiconductor Heterojunctions. <i>Advanced Materials</i> , <b>2021</b> , e2104658	24	10
39	Complementary Lateral-Spin-Orbit Building Blocks for Programmable Logic and In-Memory Computing. <i>Advanced Electronic Materials</i> , <b>2020</b> , 6, 2000296	6.4	10

38	Magnetic Skyrmions in a Hall Balance with Interfacial Canted Magnetizations. <i>Advanced Materials</i> , <b>2020</b> , 32, e1907452	24	10
37	Sensitivity enhancement of graphene Hall sensors modified by single-molecule magnets at room temperature. <i>RSC Advances</i> , <b>2017</b> , 7, 1776-1781	3.7	8
36	Atomic origin of spin-valve magnetoresistance at the SrRuO grain boundary. <i>National Science Review</i> , <b>2020</b> , 7, 755-762	10.8	8
35	Magnetic reversal under external field and current-driven domain wall motion in (Ga,Mn)As: influence of extrinsic pinning. <i>New Journal of Physics</i> , <b>2008</b> , 10, 085007	2.9	8
34	Secondary magnetic phases in (Ga,Mn)As determined by x-ray magnetic circular dichroism. <i>Journal of Applied Physics</i> , <b>2007</b> , 102, 023902	2.5	8
33	Gradient Descent on Multilevel SpinOrbit Synapses with Tunable Variations. <i>Advanced Intelligent Systems</i> , <b>2021</b> , 3, 2000182	6	8
32	Deterministic magnetic switching of perpendicular magnets by gradient current density. <i>Journal of Magnetism and Magnetic Materials</i> , <b>2019</b> , 489, 165474	2.8	7
31	Magnetic domain structure and magnetization reversal in (311)B Ga <sub>0.91</sub> Mn <sub>0.09</sub> As films. <i>Journal of Applied Physics</i> , <b>2006</b> , 99, 093908	2.5	7
30	Edmonds et al. Reply. <i>Physical Review Letters</i> , <b>2005</b> , 94,	7.4	7
29	Current-induced out-of-plane effective magnetic field in antiferromagnet/heavy metal/ferromagnet/heavy metal multilayer. <i>Applied Physics Letters</i> , <b>2020</b> , 117, 092404	3.4	7
28	Spin Logical and Memory Device Based on the Nonvolatile Ferroelectric Control of the Perpendicular Magnetic Anisotropy in PbZr <sub>0.2</sub> Ti <sub>0.8</sub> O <sub>3</sub> /Co/Pt Heterostructure. <i>Advanced Electronic Materials</i> , <b>2020</b> , 6, 2000102	6.4	7
27	Field-Free Manipulation of Skyrmion Creation and Annihilation by Tunable Strain Engineering. <i>Advanced Functional Materials</i> , <b>2021</b> , 31, 2008715	15.6	7
26	Spin and orbital splitting in ferromagnetic contacted single wall carbon nanotube devices. <i>Applied Physics Letters</i> , <b>2013</b> , 102, 093508	3.4	6
25	Perspectives on photodetectors based on selenides and their van der Waals heterojunctions. <i>Applied Physics Letters</i> , <b>2021</b> , 118, 190501	3.4	6
24	Polarized x-ray spectroscopy of quaternary ferromagnetic semiconductor (Ga,Mn)(As,P) thin films. <i>Applied Physics Letters</i> , <b>2011</b> , 99, 022502	3.4	4
23	Manipulating antiferromagnetic interfacial states by spin-orbit torques. <i>Physical Review B</i> , <b>2021</b> , 104,	3.3	4
22	All-Linear Multistate Magnetic Switching Induced by Electrical Current. <i>Physical Review Applied</i> , <b>2021</b> , 15,	4.3	4
21	Estimating spin Hall angle in heavy metal/ferromagnet heterostructures. <i>Journal of Magnetism and Magnetic Materials</i> , <b>2020</b> , 496, 165920	2.8	4

20	A nanopillar-modified high-sensitivity asymmetric graphene-GaN photodetector. <i>Nanoscale</i> , <b>2021</b> , 13, 17512-17520	7.7	4
19	Ferroelectric semiconductor junctions based on graphene/In <sub>2</sub> Se <sub>3</sub> /graphene van der Waals heterostructures. <i>2D Materials</i> , <b>2021</b> , 8, 045020	5.9	4
18	Tuning the High-Efficiency Field-Free Current-Induced Deterministic Switching via Ultrathin PtMo Layer with Mo Content. <i>Advanced Electronic Materials</i> , 2100528	6.4	4
17	Spintronic Synapses: Tuning a Binary Ferromagnet into a Multistate Synapse with Spin-Orbit-Torque-Induced Plasticity (Adv. Funct. Mater. 25/2019). <i>Advanced Functional Materials</i> , <b>2019</b> , 29, 1970175	15.6	3
16	Oscillation of current-induced interfacial spins reorientation in a like-synthetic antiferromagnet/antiferromagnet system. <i>Science China: Physics, Mechanics and Astronomy</i> , <b>2021</b> , 64, 1	3.6	3
15	All-Electrical Multifunctional Spin Logics by Adjusting the Spin Current Density Gradient in a Single Device. <i>ACS Applied Electronic Materials</i> , <b>2021</b> , 3, 2646-2651	4	3
14	Metal Chalcogenides: Versatile Crystal Structures and (Opto)electronic Applications of the 2D Metal Mono-, Di-, and Tri-Chalcogenide Nanosheets (Adv. Funct. Mater. 24/2019). <i>Advanced Functional Materials</i> , <b>2019</b> , 29, 1970161	15.6	2
13	Magnetic coupling in ferromagnetic semiconductor GaMnAs/AlGaMnAs bilayer devices. <i>Science China: Physics, Mechanics and Astronomy</i> , <b>2014</b> , 57, 1471-1475	3.6	2
12	Search For Hole Mediated Ferromagnetism In Cubic (Ga,Mn)N. <i>AIP Conference Proceedings</i> , <b>2005</b> ,	0	2
11	Polarization-sensitive and wide-spectrum photovoltaic detector based on quasi-1D ZrGeTe <sub>4</sub> nanoribbon. <i>Information Materials</i> ,	23.1	2
10	Progress of GaN-Based Optoelectronic Devices Integrated with Optical Resonances.. <i>Small</i> , <b>2022</b> , e2106757	15.7	2
9	A scanning tunneling microscope capable of imaging specified micron-scale small samples. <i>Review of Scientific Instruments</i> , <b>2012</b> , 83, 123701	1.7	1
8	Current-assisted magnetization reversal in FeGeTe van der Waals homojunctions.. <i>Nanoscale</i> , <b>2022</b> ,	7.7	1
7	Spin logic operations based on magnetization switching by asymmetric spin current. <i>Science China Information Sciences</i> , <b>2022</b> , 65, 1	3.4	1
6	High performance conical nanostructured GaN-based photodetectors. <i>Journal Physics D: Applied Physics</i> , <b>2022</b> , 55, 035102	3	1
5	RF magnetron sputtering induced the perpendicular magnetic anisotropy modification in Pt/Co based multilayers*. <i>Chinese Physics B</i> , <b>2021</b> , 30, 028506	1.2	1
4	Vertical WS <sub>2</sub> spin valve with Ohmic property based on Fe <sub>3</sub> GeTe <sub>2</sub> electrodes*. <i>Chinese Physics B</i> , <b>2021</b> , 30, 097505	1.2	1
3	Piezostain modulation of magnetic damping in MBE-grown epitaxial Co <sub>2</sub> FeAl/GaAs heterostructure. <i>Journal Physics D: Applied Physics</i> , <b>2019</b> , 52, 455001	3	0

- 2 Memristor with BiVO<sub>4</sub> nanoparticle as artificial synapse for neuroinspired computing. *Applied Physics Letters*, **2022**, 120, 093501 3.4 ○
- 1 Superconductivity: Pressure-Induced Metallization and Robust Superconductivity in Pristine 1T-SnSe<sub>2</sub> (Adv. Electron. Mater. 8/2018). *Advanced Electronic Materials*, **2018**, 4, 1870040 6.4