

Jie Shan

List of Publications by Year in descending order

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83
papers

32,524
citations

43973

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79541

73
g-index

88
all docs

88
docs citations

88
times ranked

25940
citing authors

#	ARTICLE	IF	CITATIONS
1	Coexisting ferromagnetic and antiferromagnetic state in twisted bilayer CrI ₃ . Nature Nanotechnology, 2022, 17, 143-147.	15.6	115
2	Dipolar excitonic insulator in a moiré lattice. Nature Physics, 2022, 18, 395-400.	6.5	65
3	Strong interlayer interactions in bilayer and trilayer moiré superlattices. Science Advances, 2022, 8, eabk1911.	4.7	9
4	van der Waals Josephson Junctions. Nano Letters, 2022, 22, 5510-5515.	4.5	9
5	Semiconductor moiré materials. Nature Nanotechnology, 2022, 17, 686-695.	15.6	129
6	Tuning layer-hybridized moiré excitons by the quantum-confined Stark effect. Nature Nanotechnology, 2021, 16, 52-57.	15.6	60
7	Site-Controlled and Optically Accessible Single Spins in van der Waals Heterostructures. , 2021, , .		0
8	Tunable Exciton-Optomechanical Coupling in Suspended Monolayer MoSe ₂ . Nano Letters, 2021, 21, 2538-2543.	4.5	25
9	Stripe phases in WSe ₂ /WS ₂ moiré superlattices. Nature Materials, 2021, 20, 940-944.	13.3	137
10	Two-fold symmetric superconductivity in few-layer NbSe ₂ . Nature Physics, 2021, 17, 949-954.	6.5	65
11	Spin Dynamics Slowdown near the Antiferromagnetic Critical Point in Atomically Thin FePS ₃ . Nano Letters, 2021, 21, 5045-5052.	4.5	21
12	Charge-order-enhanced capacitance in semiconductor moiré superlattices. Nature Nanotechnology, 2021, 16, 1068-1072.	15.6	40
13	Continuous Mott transition in semiconductor moiré superlattices. Nature, 2021, 597, 350-354.	13.7	174
14	Creation of moiré bands in a monolayer semiconductor by spatially periodic dielectric screening. Nature Materials, 2021, 20, 645-649.	13.3	45
15	Air-Stable and Layer-Dependent Ferromagnetism in Atomically Thin van der Waals CrPS ₄ . ACS Nano, 2021, 15, 16904-16912.	7.3	34
16	Strongly correlated excitonic insulator in atomic double layers. Nature, 2021, 598, 585-589.	13.7	105
17	Excitons and emergent quantum phenomena in stacked 2D semiconductors. Nature, 2021, 599, 383-392.	13.7	136
18	Quantum anomalous Hall effect from intertwined moiré bands. Nature, 2021, 600, 641-646.	13.7	181

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19	Quantum Oscillations in Two-Dimensional Insulators Induced by Graphite Gates. Physical Review Letters, 2021, 127, 247702.	2.9	12
20	Magneto- Memristive Switching in a 2D Layer Antiferromagnet. Advanced Materials, 2020, 32, e1905433.	11.1	21
21	Correlated insulating states at fractional fillings of moiré superlattices. Nature, 2020, 587, 214-218.	13.7	315
22	Strain relaxation induced transverse resistivity anomalies in SrRuO_3 thin films. Physical Review B, 2020, 102, .	1.1	15
23	Spectral and spatial isolation of single tungsten diselenide quantum emitters using hexagonal boron nitride wrinkles. APL Photonics, 2020, 5, 096105.	3.0	7
24	Observation of site-controlled localized charged excitons in $\text{CrI}_3/\text{WSe}_2$ heterostructures. Nature Communications, 2020, 11, 5502.	5.8	23
25	Manipulation of the van der Waals Magnet $\text{Cr}_2\text{Ge}_2\text{Te}_6$ by Spin-Orbit Torques. Nano Letters, 2020, 20, 7482-7488.	4.5	59
26	Gate-tunable spin waves in antiferromagnetic atomic bilayers. Nature Materials, 2020, 19, 838-842.	13.3	90
27	Imaging and control of critical fluctuations in two-dimensional magnets. Nature Materials, 2020, 19, 1290-1294.	13.3	28
28	Simulation of Hubbard model physics in WSe_2/WS_2 moiré superlattices. Nature, 2020, 579, 353-358.	13.7	511
29	Exchange magnetostriction in two-dimensional antiferromagnets. Nature Materials, 2020, 19, 1295-1299.	13.3	69
30	Memristive Switching: Magneto- Memristive Switching in a 2D Layer Antiferromagnet (Adv. Mater.)	11.1	21
31	Electrical switching of valley polarization in monolayer semiconductors. Physical Review Materials, 2020, 4, .	0.9	19
32	Layer-dependent spin-orbit torques generated by the centrosymmetric transition metal dichalcogenide TaTe_2 . Physical Review B, 2019, 100, .	1.1	61
33	Pressure-controlled interlayer magnetism in atomically thin CrI_3 . Nature Materials, 2019, 18, 1303-1308.	13.3	364
34	Long valley lifetime of dark excitons in single-layer WSe_2 . Nature Communications, 2019, 10, 4047.	5.8	53
35	Probing and controlling magnetic states in 2D layered magnetic materials. Nature Reviews Physics, 2019, 1, 646-661.	11.9	290
36	Probing many-body interactions in monolayer transition-metal dichalcogenides. Physical Review B, 2019, 99, .	1.1	56

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37	Evolution of interlayer and intralayer magnetism in three atomically thin chromium trihalides. Proceedings of the National Academy of Sciences of the United States of America, 2019, 116, 11131-11136.	3.3	223
38	Spin tunnel field-effect transistors based on two-dimensional van der Waals heterostructures. Nature Electronics, 2019, 2, 159-163.	13.1	198
39	Nonlinear anomalous Hall effect in few-layer WTe ₂ . Nature Materials, 2019, 18, 324-328.	13.3	281
40	Evidence of high-temperature exciton condensation in two-dimensional atomic double layers. Nature, 2019, 574, 76-80.	13.7	331
41	Valley-Selective Exciton Bistability in a Suspended Monolayer Semiconductor. Nano Letters, 2018, 18, 3213-3220.	4.5	10
42	Strongly Interaction-Enhanced Valley Magnetic Response in Monolayer WSe_2 . Physical Review Letters, 2018, 120, 066402.	2.9	45
43	An unusual continuous paramagnetic-limited superconducting phase transition in 2D NbSe ₂ . Nature Materials, 2018, 17, 504-508.	13.3	98
44	Electrically tunable single- and few-layer MoS ₂ nanoelectromechanical systems with broad dynamic range. Science Advances, 2018, 4, eaao6653.	4.7	126
45	Electric-field switching of two-dimensional van der Waals magnets. Nature Materials, 2018, 17, 406-410.	13.3	671
46	Electrical Tuning of Interlayer Exciton Gases in WSe ₂ Bilayers. Nano Letters, 2018, 18, 137-143.	4.5	106
47	Opportunities and challenges of interlayer exciton control and manipulation. Nature Nanotechnology, 2018, 13, 974-976.	15.6	60
48	Light-valley interactions in 2D semiconductors. Nature Photonics, 2018, 12, 451-460.	15.6	316
49	Controlling magnetism in 2D CrI ₃ by electrostatic doping. Nature Nanotechnology, 2018, 13, 549-553.	15.6	836
50	Probing the Spin-Polarized Electronic Band Structure in Monolayer Transition Metal Dichalcogenides by Optical Spectroscopy. Nano Letters, 2017, 17, 740-746.	4.5	108
51	Vapor-liquid-solid synthesis of ZnSnN ₂ . Physica Status Solidi (B): Basic Research, 2017, 254, 1600718.	0.7	14
52	Valley magnetoelectricity in single-layer MoS ₂ . Nature Materials, 2017, 16, 887-891.	13.3	150
53	Valley- and spin-polarized Landau levels in monolayer WSe ₂ . Nature Nanotechnology, 2017, 12, 144-149.	15.6	150
54	Photonics and optoelectronics of 2D semiconductor transition metal dichalcogenides. Nature Photonics, 2016, 10, 216-226.	15.6	2,779

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55	NaSn ₂ As ₂ : An Exfoliatable Layered van der Waals Zintl Phase. ACS Nano, 2016, 10, 9500-9508.	7.3	39
56	Gate Tuning of Electronic Phase Transitions in Two-Dimensional $\langle \text{mml:mrow} \langle \text{mml:mrow} \langle \text{mml:mi} \text{NbSe} \langle \text{mml:mi} \rangle \langle \text{mml:mrow} \langle \text{mml:mn} \rangle 2 \langle \text{mml:mn} \rangle \rangle \rangle \rangle$ Physical Review Letters, 2016, 117, 106801.	2.9	151
57	Electrical control of the valley Hall effect in bilayer MoS ₂ transistors. Nature Nanotechnology, 2016, 11, 421-425.	15.6	342
58	Ising pairing in superconducting NbSe ₂ atomic layers. Nature Physics, 2016, 12, 139-143.	6.5	806
59	Charge-neutral disorder and polytypes in heterovalent wurtzite-based ternary semiconductors: The importance of the octet rule. Physical Review B, 2015, 91, .	1.1	95
60	Strongly enhanced charge-density-wave order in monolayer NbSe ₂ . Nature Nanotechnology, 2015, 10, 765-769.	15.6	643
61	Effect of Surface States on Terahertz Emission from the Bi ₂ Se ₃ Surface. Scientific Reports, 2015, 5, 10308.	1.6	34
62	Embracing Structural Nonidealities and Asymmetries in Two-Dimensional Nanomechanical Resonators. Scientific Reports, 2015, 4, 3919.	1.6	38
63	Tightly Bound Excitons in Monolayer $\langle \text{mml:mrow} \langle \text{mml:mrow} \langle \text{mml:mi} \text{WSe} \langle \text{mml:mi} \rangle \langle \text{mml:mrow} \langle \text{mml:mn} \rangle 2 \langle \text{mml:mn} \rangle \rangle \rangle \rangle$ Physical Review Letters, 2014, 113, 026803.	2.9	74
64	Tuning Many-Body Interactions in Graphene: The Effects of Doping on Excitons and Carrier Lifetimes. Physical Review Letters, 2014, 112, .	2.9	74
65	Size dependence of two-photon absorption in semiconductor quantum dots. Journal of Applied Physics, 2013, 114, .	1.1	31
66	THz-emission probe of surface-electronic transitions in a topological insulator. , 2013, , .		0
67	Tightly bound trions in monolayer MoS ₂ . Nature Materials, 2013, 12, 207-211.	13.3	2,329
68	Orientation of luminescent excitons in layered nanomaterials. Nature Nanotechnology, 2013, 8, 271-276.	15.6	250
69	Experimental Demonstration of Continuous Electronic Structure Tuning via Strain in Atomically Thin MoS ₂ . Nano Letters, 2013, 13, 2931-2936.	4.5	808
70	Synthesis, lattice structure, and band gap of ZnSnN ₂ . MRS Communications, 2013, 3, 135-138.	0.8	108
71	Investigation on Silicon Based Solar Cell by Ultrafast Terahertz Spectroscopy. , 2013, , .		0
72	Effect of Cation Sublattice Ordering on Structure and Raman Scattering of ZnGeN ₂ . Materials Research Society Symposia Proceedings, 2013, 1493, 237-242.	0.1	10

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73	Optical Data Storage: Roll-to-Roll Fabrication of Multilayer Films for High Capacity Optical Data Storage (Adv. Mater. 38/2012). Advanced Materials, 2012, 24, 5146-5146.	11.1	0
74	Control of valley polarization in monolayer MoS ₂ by optical helicity. Nature Nanotechnology, 2012, 7, 494-498.	15.6	3,280
75	Atomically Thin MoS_2 : A New Direct-Gap Semiconductor. Physical Review Letters, 2010, 105, 136805.	2.9	12,565
76	Circularly polarized light in the single-cycle limit: The nature of highly polychromatic radiation of defined polarization. Optics Express, 2009, 17, 7431.	1.7	42
77	Terahertz Photonic Crystals Based on Barium Titanate/Polymer Nanocomposites. Advanced Materials, 2008, 20, 3649-3653.	11.1	39
78	Terahertz Electric Polarizability of Multiple Excitons in CdSe Quantum Dots. , 2007, , .		0
79	Probing Photoconductivity in Discotic Liquid Crystals by Terahertz Time-Domain Spectroscopy. , 2007, , .		0
80	Terahertz electric polarizability of multiple excitons in CdSe quantum dots. , 2007, , .		0
81	Terahertz Electric Polarizability of Excitons in PbSe and CdSe Quantum Dots. Journal of Physical Chemistry C, 2007, 111, 5904-5908.	1.5	23
82	Size dependence of two photon absorption in CdSe nanoparticles. , 2006, , .		0
83	Probing multiple excitons in CdSe nanoparticles by terahertz time-domain spectroscopy. , 0, , .		1