

Jie Shan

List of Publications by Year in descending order

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83
papers

32,524
citations

43973

48
h-index

79541

73
g-index

88
all docs

88
docs citations

88
times ranked

25940
citing authors

#	ARTICLE	IF	CITATIONS
1	Atomically Thin MoS_2 : A New Direct-Gap Semiconductor. <i>Physical Review Letters</i> , 2010, 105, 136805.	2.9	12,565
2	Control of valley polarization in monolayer MoS_2 by optical helicity. <i>Nature Nanotechnology</i> , 2012, 7, 494-498.	15.6	3,280
3	Photonics and optoelectronics of 2D semiconductor transition metal dichalcogenides. <i>Nature Photonics</i> , 2016, 10, 216-226.	15.6	2,779
4	Tightly bound trions in monolayer MoS_2 . <i>Nature Materials</i> , 2013, 12, 207-211.	13.3	2,329
5	Tightly Bound Excitons in Monolayer WSe_2 . <i>Physical Review Letters</i> , 2014, 113, 026803.	15.6	836
6	Controlling magnetism in 2D CrI_3 by electrostatic doping. <i>Nature Nanotechnology</i> , 2018, 13, 549-553.	15.6	836
7	Experimental Demonstration of Continuous Electronic Structure Tuning via Strain in Atomically Thin MoS_2 . <i>Nano Letters</i> , 2013, 13, 2931-2936.	4.5	808
8	Ising pairing in superconducting NbSe_2 atomic layers. <i>Nature Physics</i> , 2016, 12, 139-143.	6.5	806
9	Electric-field switching of two-dimensional van der Waals magnets. <i>Nature Materials</i> , 2018, 17, 406-410.	13.3	671
10	Strongly enhanced charge-density-wave order in monolayer NbSe_2 . <i>Nature Nanotechnology</i> , 2015, 10, 765-769.	15.6	643
11	Simulation of Hubbard model physics in WSe_2/WS_2 moiré superlattices. <i>Nature</i> , 2020, 579, 353-358.	13.7	511
12	Pressure-controlled interlayer magnetism in atomically thin CrI_3 . <i>Nature Materials</i> , 2019, 18, 1303-1308.	13.3	364
13	Electrical control of the valley Hall effect in bilayer MoS_2 transistors. <i>Nature Nanotechnology</i> , 2016, 11, 421-425.	15.6	342
14	Evidence of high-temperature exciton condensation in two-dimensional atomic double layers. <i>Nature</i> , 2019, 574, 76-80.	13.7	331
15	Light valley interactions in 2D semiconductors. <i>Nature Photonics</i> , 2018, 12, 451-460.	15.6	316
16	Correlated insulating states at fractional fillings of moiré superlattices. <i>Nature</i> , 2020, 587, 214-218.	13.7	315
17	Probing and controlling magnetic states in 2D layered magnetic materials. <i>Nature Reviews Physics</i> , 2019, 1, 646-661.	11.9	290
18	Nonlinear anomalous Hall effect in few-layer WTe_2 . <i>Nature Materials</i> , 2019, 18, 324-328.	13.3	281

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19	Orientation of luminescent excitons in layered nanomaterials. Nature Nanotechnology, 2013, 8, 271-276.	15.6	250
20	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
21	Spin tunnel field-effect transistors based on two-dimensional van der Waals heterostructures. Nature Electronics, 2019, 2, 159-163.	13.1	198
22	Quantum anomalous Hall effect from intertwined moiré bands. Nature, 2021, 600, 641-646.	13.7	181
23	Continuous Mott transition in semiconductor moiré-superlattices. Nature, 2021, 597, 350-354.	13.7	174
24	Gate Tuning of Electronic Phase Transitions in Two-Dimensional NbSe_2 . Physical Review Letters, 2016, 117, 106801.	2.9	151
25	Valley magnetoelectricity in single-layer MoS ₂ . Nature Materials, 2017, 16, 887-891.	13.3	150
26	Valley- and spin-polarized Landau levels in monolayer WSe ₂ . Nature Nanotechnology, 2017, 12, 144-149.	15.6	150
27	Stripe phases in WSe ₂ /WS ₂ moiré superlattices. Nature Materials, 2021, 20, 940-944.	13.3	137
28	Excitons and emergent quantum phenomena in stacked 2D semiconductors. Nature, 2021, 599, 383-392.	13.7	136
29	Semiconductor moiré materials. Nature Nanotechnology, 2022, 17, 686-695.	15.6	129
30	Electrically tunable single- and few-layer MoS ₂ nanoelectromechanical systems with broad dynamic range. Science Advances, 2018, 4, eaao6653.	4.7	126
31	Coexisting ferromagnetic and antiferromagnetic state in twisted bilayer CrI ₃ . Nature Nanotechnology, 2022, 17, 143-147.	15.6	115
32	Synthesis, lattice structure, and band gap of ZnSnN ₂ . MRS Communications, 2013, 3, 135-138.	0.8	108
33	Probing the Spin-Polarized Electronic Band Structure in Monolayer Transition Metal Dichalcogenides by Optical Spectroscopy. Nano Letters, 2017, 17, 740-746.	4.5	108
34	Electrical Tuning of Interlayer Exciton Gases in WSe ₂ Bilayers. Nano Letters, 2018, 18, 137-143.	4.5	106
35	Strongly correlated excitonic insulator in atomic double layers. Nature, 2021, 598, 585-589.	13.7	105
36	An unusual continuous paramagnetic-limited superconducting phase transition in 2D NbSe ₂ . Nature Materials, 2018, 17, 504-508.	13.3	98

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37	Charge-neutral disorder and polytypes in heterovalent wurtzite-based ternary semiconductors: The importance of the octet rule. <i>Physical Review B</i> , 2015, 91, .	1.1	95
38	Gate-tunable spin waves in antiferromagnetic atomic bilayers. <i>Nature Materials</i> , 2020, 19, 838-842.	13.3	90
39	Tuning Many-Body Interactions in Graphene: The Effects of Doping on Excitons and Carrier Lifetimes. <i>Physical Review Letters</i> , 2014, 112, .	2.9	74
40	Exchange magnetostriction in two-dimensional antiferromagnets. <i>Nature Materials</i> , 2020, 19, 1295-1299.	13.3	69
41	Two-fold symmetric superconductivity in few-layer NbSe ₂ . <i>Nature Physics</i> , 2021, 17, 949-954.	6.5	65
42	Dipolar excitonic insulator in a moiré lattice. <i>Nature Physics</i> , 2022, 18, 395-400.	6.5	65
43	Layer-dependent spin-orbit torques generated by the centrosymmetric transition metal dichalcogenide \hat{I}^2 Physical Review B, 2019, 100, .	1.1	61
44	Opportunities and challenges of interlayer exciton control and manipulation. <i>Nature Nanotechnology</i> , 2018, 13, 974-976.	15.6	60
45	Tuning layer-hybridized moiré excitons by the quantum-confined Stark effect. <i>Nature Nanotechnology</i> , 2021, 16, 52-57.	15.6	60
46	Manipulation of the van der Waals Magnet Cr ₂ Ge ₂ Te ₆ by Spin-Orbit Torques. <i>Nano Letters</i> , 2020, 20, 7482-7488.	4.5	59
47	Probing many-body interactions in monolayer transition-metal dichalcogenides. <i>Physical Review B</i> , 2019, 99, .	1.1	56
48	Long valley lifetime of dark excitons in single-layer WSe ₂ . <i>Nature Communications</i> , 2019, 10, 4047.	5.8	53
49	Strongly Interaction-Enhanced Valley Magnetic Response in Monolayer WSe_2 Physical Review Letters, 2018, 120, 066402.	2.9	45
50	Creation of moiré bands in a monolayer semiconductor by spatially periodic dielectric screening. <i>Nature Materials</i> , 2021, 20, 645-649.	13.3	45
51	Circularly polarized light in the single-cycle limit: The nature of highly polychromatic radiation of defined polarization. <i>Optics Express</i> , 2009, 17, 7431.	1.7	42
52	Charge-order-enhanced capacitance in semiconductor moiré superlattices. <i>Nature Nanotechnology</i> , 2021, 16, 1068-1072.	15.6	40
53	Terahertz Photonic Crystals Based on Barium Titanate/Polymer Nanocomposites. <i>Advanced Materials</i> , 2008, 20, 3649-3653.	11.1	39
54	NaSn ₂ As ₂ : An Exfoliatable Layered van der Waals Zintl Phase. <i>ACS Nano</i> , 2016, 10, 9500-9508.	7.3	39

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55	Embracing Structural Nonidealities and Asymmetries in Two-Dimensional Nanomechanical Resonators. Scientific Reports, 2015, 4, 3919.	1.6	38
56	Effect of Surface States on Terahertz Emission from the Bi ₂ Se ₃ Surface. Scientific Reports, 2015, 5, 10308.	1.6	34
57	Air-Stable and Layer-Dependent Ferromagnetism in Atomically Thin van der Waals CrPS ₄ . ACS Nano, 2021, 15, 16904-16912.	7.3	34
58	Size dependence of two-photon absorption in semiconductor quantum dots. Journal of Applied Physics, 2013, 114, .	1.1	31
59	Imaging and control of critical fluctuations in two-dimensional magnets. Nature Materials, 2020, 19, 1290-1294.	13.3	28
60	Tunable Exciton-Optomechanical Coupling in Suspended Monolayer MoSe ₂ . Nano Letters, 2021, 21, 2538-2543.	4.5	25
61	Terahertz Electric Polarizability of Excitons in PbSe and CdSe Quantum Dots. Journal of Physical Chemistry C, 2007, 111, 5904-5908.	1.5	23
62	Observation of site-controlled localized charged excitons in CrI ₃ /WSe ₂ heterostructures. Nature Communications, 2020, 11, 5502.	5.8	23
63	Magneto- Memristive Switching in a 2D Layer Antiferromagnet. Advanced Materials, 2020, 32, e1905433.	11.1	21
64	Spin Dynamics Slowdown near the Antiferromagnetic Critical Point in Atomically Thin FePS ₃ . Nano Letters, 2021, 21, 5045-5052.	4.5	21
65	Electrical switching of valley polarization in monolayer semiconductors. Physical Review Materials, 2020, 4, .	0.9	19
66	Strain relaxation induced transverse resistivity anomalies in SrRuO ₃ thin films. Physical Review B, 2020, 102, .	1.1	15
67	Vapor-liquid-solid synthesis of ZnSnN ₂ . Physica Status Solidi (B): Basic Research, 2017, 254, 1600718.	0.7	14
68	Quantum Oscillations in Two-Dimensional Insulators Induced by Graphite Gates. Physical Review Letters, 2021, 127, 247702.	2.9	12
69	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
70	Valley-Selective Exciton Bistability in a Suspended Monolayer Semiconductor. Nano Letters, 2018, 18, 3213-3220.	4.5	10
71	Strong interlayer interactions in bilayer and trilayer moiré superlattices. Science Advances, 2022, 8, eabk1911.	4.7	9
72	van der Waals Josephson Junctions. Nano Letters, 2022, 22, 5510-5515.	4.5	9

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73	Spectral and spatial isolation of single tungsten diselenide quantum emitters using hexagonal boron nitride wrinkles. <i>APL Photonics</i> , 2020, 5, 096105.	3.0	7
74	Probing multiple excitons in CdSe nanoparticles by terahertz time-domain spectroscopy. , 0, , .		1
75	Size dependence of two photon absorption in CdSe nanoparticles. , 2006, , .		0
76	Terahertz Electric Polarizability of Multiple Excitons in CdSe Quantum Dots. , 2007, , .		0
77	Probing Photoconductivity in Discotic Liquid Crystals by Terahertz Time-Domain Spectroscopy. , 2007, , .		0
78	Terahertz electric polarizability of multiple excitons in CdSe quantum dots. , 2007, , .		0
79	Optical Data Storage: Roll-to-Roll Fabrication of Multilayer Films for High Capacity Optical Data Storage (<i>Adv. Mater.</i> 38/2012). <i>Advanced Materials</i> , 2012, 24, 5146-5146.	11.1	0
80	THz-emission probe of surface-electronic transitions in a topological insulator. , 2013, , .		0
81	Investigation on Silicon Based Solar Cell by Ultrafast Terahertz Spectroscopy. , 2013, , .		0
82	Memristive Switching: Magneto-Memristive Switching in a 2D Layer Antiferromagnet (<i>Adv. Mater.</i>) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 5		0
83	Site-Controlled and Optically Accessible Single Spins in van der Waals Heterostructures. , 2021, , .		0