Guangyu Zhang

List of Publications by Year
in descending order

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129 papers	11,162 citations	44069 48 h-index	30087 103 g-index
135 all docs	135 docs citations	135 times ranked	13958 citing authors

#	Article	IF	Citations
1	Structural superlubricity in 2D van der Waals heterojunctions. Nanotechnology, 2022, 33, 102002.	2.6	18
2	Ultra-low friction and edge-pinning effect in large-lattice-mismatch van der Waals heterostructures. Nature Materials, 2022, 21, 47-53.	27.5	110
3	Repairable Polymer Solid Electrolyte Gated MoS₂ Field Effect Devices with Large Radiation Tolerance. Advanced Electronic Materials, 2022, 8, 2100619.	5.1	3
4	Dual-coupling-guided epitaxial growth of wafer-scale single-crystal WS2 monolayer on vicinal a-plane sapphire. Nature Nanotechnology, 2022, 17, 33-38.	31.5	171
5	Spatially indirect intervalley excitons in bilayer <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:mi mathvariant="normal">W</mml:mi><mml:msub><mml:mi>Se</mml:mi><mml:mn>2</mml:mn></mml:msub></mml:mrow></mml:m Physical Review B, 2022, 105, .	3.2	11
6	Interlayer exciton complexes in bilayer <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:msub><mml:mi>MoS</mml:mi><mml:mn>2</mml:mn></mml:msub></mm Physical Review B, 2022, 105, .	3.2	10
7	Real-space detection and manipulation of two-dimensional quantum well states in few-layer <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:msub><mml:mi>MoS</mml:mi><mml:mn>2</mml:mn></mml:msub></m Physical Review B, 2022, 105, .	3.2	4
8	Robust growth of two-dimensional metal dichalcogenides and their alloys by active chalcogen monomer supply. Nature Communications, 2022, 13, 1007.	12.8	42
9	Gate-tunable large-scale flexible monolayer MoS2 devices for photodetectors and optoelectronic synapses. Nano Research, 2022, 15, 5418-5424.	10.4	48
10	High turnover and rescue effect of XRCC1 inÂresponse to heavy charged particle radiation. Biophysical Journal, 2022, , .	0.5	1
11	Enhanced critical field and anomalous metallic state in two-dimensional centrosymmetric <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:mn>1</mml:mn><mml:msup><mml:mi>T</mml:mi><mml:mi mathvariant="normal">W</mml:mi><mml:msub><mml:mi mathvariant="normal">S</mml:mi><mml:mn>2</mml:mn></mml:msub></mml:mrow></mml:math>. Physical Review B, 2022, 105, .	3.2	6
12	Persistence of Monoclinic Crystal Structure in 3D Secondâ€Order Topological Insulator Candidate 1 T â€²â€MoTe ₂ Thin Flake Without Structural Phase Transition. Advanced Science, 2022, 9, 2101532.	11.2	4
13	Layer-by-layer epitaxy of multi-layer MoS2 wafers. National Science Review, 2022, 9, .	9.5	41
14	Hot-Pressed Two-Dimensional Amorphous Metals and Their Electronic Properties. Crystals, 2022, 12, 616.	2.2	0
15	Highly Stretchable MoS₂â€Based Transistors with Optoâ€Synaptic Functionalities. Advanced Electronic Materials, 2022, 8, .	5.1	8
16	Rail-to-Rail MoS₂ Inverters. ACS Applied Electronic Materials, 2022, 4, 2636-2640.	4.3	2
17	Isospin competitions and valley polarized correlated insulators in twisted double bilayer graphene. Nature Communications, 2022, 13, .	12.8	20
18	Imaging gate-tunable Tomonagaâ€“Luttinger liquids in 1H-MoSe2 mirror twin boundaries. Nature Materials, 2022, 21, 748-753.	27.5	17

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19	Monolayer MoS2 epitaxy. Nano Research, 2021, 14, 1598-1608.	10.4	11
20	A Reliable Allâ€2D Materials Artificial Synapse for High Energyâ€Efficient Neuromorphic Computing. Advanced Functional Materials, 2021, 31, 2011083.	14.9	53
21	Waferâ€Scale Oxygenâ€Doped MoS₂ Monolayer. Small Methods, 2021, 5, e2100091.	8.6	30
22	Atomically Precise Engineering of Singleâ€Molecule Stereoelectronic Effect. Angewandte Chemie - International Edition, 2021, 60, 12274-12278.	13.8	16
23	Exchange bias and spinâ€“orbit torque in the Fe3GeTe2-based heterostructures prepared by vacuum exfoliation approach. Applied Physics Letters, 2021, 118, .	3.3	27
24	Inside Back Cover: Waferâ€Scale Oxygenâ€Doped MoS₂ Monolayer (Small Methods 6/2021). Small Methods, 2021, 5, 2170026.	8.6	0
25	Artificial Synapses: A Reliable Allâ€2D Materials Artificial Synapse for High Energyâ€Efficient Neuromorphic Computing (Adv. Funct. Mater. 27/2021). Advanced Functional Materials, 2021, 31, 2170197.	14.9	2
26	Skinâ€Inspired Highâ€Performance Activeâ€Matrix Circuitry for Multimodal Userâ€Interaction. Advanced Functional Materials, 2021, 31, 2105480.	14.9	14
27	Giant anisotropic photonics in the 1D van der Waals semiconductor fibrous red phosphorus. Nature Communications, 2021, 12, 4822.	12.8	32
28	Twist-Angle-Dependent Ultrafast Charge Transfer in MoS₂-Graphene van der Waals Heterostructures. Nano Letters, 2021, 21, 8051-8057.	9.1	30
29	Experimental evidence of plasmarons and effective fine structure constant in electron-doped graphene/h-BN heterostructure. Npj Quantum Materials, 2021, 6, .	5.2	3
30	A robust neuromorphic vision sensor with optical control of ferroelectric switching. Nano Energy, 2021, 89, 106439.	16.0	73
31	Determining Quasiparticle Bandgap of Two-Dimensional Transition Metal Dichalcogenides by Observation of Hot Carrier Relaxation Dynamics. Journal of Physical Chemistry Letters, 2021, 12, 585-591.	4.6	4
32	Ultrashort Verticalâ€Channel van der Waals Semiconductor Transistors. Advanced Science, 2020, 7, 1902964.	11.2	24
33	Vertical Integration of 2D Building Blocks for Allâ€2D Electronics. Advanced Electronic Materials, 2020, 6, 2000550.	5.1	20
34	Observation of logarithmic Kohn anomaly in monolayer graphene. Physical Review B, 2020, 102, .	3.2	6
35	In Situ Oxygen Doping of Monolayer MoS₂ for Novel Electronics. Small, 2020, 16, e2004276.	10.0	54
36	Large-scale flexible and transparent electronics based on monolayer molybdenum disulfide field-effect transistors. Nature Electronics, 2020, 3, 711-717.	26.0	255

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37	Wafer-Scale Highly Oriented Monolayer MoS₂ with Large Domain Sizes. Nano Letters, 2020, 20, 7193-7199.	9.1	160
38	Ultrahigh-resolution scanning microwave impedance microscopy of moirÃ© lattices and superstructures. Science Advances, 2020, 6, .	10.3	23
39	General synthesis of two-dimensional van der Waals heterostructure arrays. Nature, 2020, 579, 368-374.	27.8	393
40	Correlated states in twisted double bilayer graphene. Nature Physics, 2020, 16, 520-525.	16.7	374
41	Electrical Control of Interband Resonant Nonlinear Optics in Monolayer MoS₂. ACS Nano, 2020, 14, 8442-8448.	14.6	34
42	High-order minibands and interband Landau level reconstruction in graphene moirÃ© superlattices. Physical Review B, 2020, 102, .	3.2	7
43	Artificial Synapse Based on van der Waals Heterostructures with Tunable Synaptic Functions for Neuromorphic Computing. ACS Applied Materials & Interfaces, 2020, 12, 11945-11954.	8.0	75
44	Efficient Allâ€Optical Plasmonic Modulators with Atomically Thin Van Der Waals Heterostructures. Advanced Materials, 2020, 32, e1907105.	21.0	44
45	Precise control of the interlayer twist angle in large scale MoS2 homostructures. Nature Communications, 2020, 11, 2153.	12.8	142
46	Fabrication and Functioning of Magnetically Gated PET Nanochannels. ChemNanoMat, 2020, 6, 1075-1079.	2.8	7
47	Control of Unipolar/Ambipolar Transport in Singleâ€Molecule Transistors through Interface Engineering. Advanced Electronic Materials, 2020, 6, 1901237.	5.1	14
48	Simultaneous generation of direct- and indirect-gap photoluminescence in multilayer <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:msub><mml:mi>MoS</mml:mi><mml:mn>2</mml:mn></mml:msub></mm bubbles. Physical Review Materials, 2020, 4, .	2.4	21
49	Band evolution of two-dimensional transition metal dichalcogenides under electric fields. Applied Physics Letters, 2019, 115, 083104.	3.3	9
50	The interface of epitaxial nanographene on GaN by PECVD. AIP Advances, 2019, 9, 095060.	1.3	5
51	Robust circular polarization of indirect Q-K transitions in bilayer <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:mn>3</mml:mn><mml:mi>R</mml:mi><mml:mo>â^'</mml:mo><mml:mn mathvariant="normal">W</mml:mi><mml:msub><mml:mi mathvariant="normal">S</mml:mi><mml:mn>2</mml:mn></mml:msub></mml:mrow></mml:math>. Physical Review B, 2019, 100, .	3.2	11
52	Electronic structure of exfoliated millimeter-sized monolayer WSe2 on silicon wafer. Nano Research, 2019, 12, 3095-3100.	10.4	15
53	Lattice Dynamics, Phonon Chirality, and Spinâ€“Phonon Coupling in 2D Itinerant Ferromagnet Fe₃GeTe₂. Advanced Functional Materials, 2019, 29, 1904734.	14.9	70
54	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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55	Enhancing and controlling valley magnetic response in MoS2/WS2 heterostructures by all-optical route. Nature Communications, 2019, 10, 4226.	12.8	38
56	Weakened interlayer coupling in two-dimensional MoSe2 flakes with screw dislocations. Nano Research, 2019, 12, 1900-1905.	10.4	23
57	Atomic Layer Deposition: Atomic Layer Deposition of Al₂O₃ Directly on 2D Materials for Highâ€Performance Electronics (Adv. Mater. Interfaces 10/2019). Advanced Materials Interfaces, 2019, 6, 1970065.	3.7	2
58	One-Step Growth of Spatially Graded Mo_{1â€“x}W_xS₂ Monolayers with a Wide Span in Composition (from x = 0 to 1) at a Large Scale. ACS Applied Materials & Interfaces, 2019, 11, 20979-20986.	8.0	12
59	Strongly distinct electrical response between circular and valley polarization in bilayer transition metal dichalcogenides. Physical Review B, 2019, 99, .	3.2	16
60	Strong and tunable interlayer coupling of infrared-active phonons to excitons in van der Waals heterostructures. Physical Review B, 2019, 99, .	3.2	17
61	Boundary activated hydrogen evolution reaction on monolayer MoS2. Nature Communications, 2019, 10, 1348.	12.8	263
62	Atomic Layer Deposition of Al₂O₃ Directly on 2D Materials for Highâ€Performance Electronics. Advanced Materials Interfaces, 2019, 6, 1802055.	3.7	25
63	Nonvolatile Memory: New Floating Gate Memory with Excellent Retention Characteristics (Adv.) Tj ETQq1 1 0.784314 rgBT /Overlock 10	5.1	8
64	Side-group chemical gating via reversible optical and electric control in a single molecule transistor. Nature Communications, 2019, 10, 1450.	12.8	96
65	Ultrasensitive Monolayer MoS₂ Field-Effect Transistor Based DNA Sensors for Screening of Down Syndrome. Nano Letters, 2019, 19, 1437-1444.	9.1	165
66	Superconductors, orbital magnets and correlated states in magic-angle bilayer graphene. Nature, 2019, 574, 653-657.	27.8	987
67	Static and Dynamic Piezopotential Modulation in Piezo-Electret Gated MoS₂ Field-Effect Transistor. ACS Nano, 2019, 13, 582-590.	14.6	38
68	2D proximate quantum spin liquid state in atomic-thin Î± -RuCl ₃. 2D Materials, 2019, 6, 015014.	4.4	28
69	New Floating Gate Memory with Excellent Retention Characteristics. Advanced Electronic Materials, 2019, 5, 1800726.	5.1	48
70	Giant Valley Coherence at Room Temperature in 3R WS ₂ with Broken Inversion Symmetry. Research, 2019, 2019, 6494565.	5.7	17
71	Temperature-driven evolution of critical points, interlayer coupling, and layer polarization in bilayer <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:mi>Mo</mml:mi><mml:msub><mml:mi mathvariant="normal">S</mml:mi><mml:mn>2</mml:mn></mml:msub></mml:mrow></mml:math>. Physical Review B, 2018, 97, .	3.2	23
72	Manipulation of domain-wall solitons in bi- and trilayer graphene. Nature Nanotechnology, 2018, 13, 204-208.	31.5	67

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73	Emergence of Interfacial Polarons from Electronâ€“Phonon Coupling in Graphene/h-BN van der Waals Heterostructures. Nano Letters, 2018, 18, 1082-1087.	9.1	55
74	Robust spin-valley polarization in commensurate <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:mi>Mo</mml:mi><mml:msub><mml:mi mathvariant="normal">S</mml:mi><mml:mn>2</mml:mn></mml:msub></mml:mrow></mml:math> /graphene heterostructures. Physical Review B, 2018, 97, .	3.2	27
75	Frontispiz: Tuning Charge Transport in Aromatic-Ring Single-Molecule Junctions via Ionic-Liquid Gating. Angewandte Chemie, 2018, 130, .	2.0	0
76	Frontispiece: Tuning Charge Transport in Aromatic-Ring Single-Molecule Junctions via Ionic-Liquid Gating. Angewandte Chemie - International Edition, 2018, 57, .	13.8	0
77	Spin-Orbit Electromagnetic Resonance in <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline" overflow="scroll"><mml:mrow><mml:mrow><mml:mi mathvariant="normal">W</mml:mi></mml:mrow></mml:mrow><mml:mo>/</mml:mo><mml:mi>Co</mml:mi><mml:mstyle displaystyle="false" scriptlevel="0"><mml:mtext>â€</mml:mtext></mml:mstyle><mml:mi>Fe</mml:mi><mml:mstyle displaystyle	3.8	23
78	Tuning Charge Transport in Aromaticâ€Ring Singleâ€Molecule Junctions via Ionicâ€Liquid Gating. Angewandte Chemie, 2018, 130, 14222-14227.	2.0	22
79	Twist angle-dependent conductivities across MoS2/graphene heterojunctions. Nature Communications, 2018, 9, 4068.	12.8	90
80	Tuning Charge Transport in Aromaticâ€Ring Singleâ€Molecule Junctions via Ionicâ€Liquid Gating. Angewandte Chemie - International Edition, 2018, 57, 14026-14031.	13.8	52
81	Magnetotransport Properties of Graphene Nanoribbons with Zigzag Edges. Physical Review Letters, 2018, 120, 216601.	7.8	28
82	Strongly enhanced exciton-phonon coupling in two-dimensional <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:mi>WS</mml:mi><mml:msub><mml:mi mathvariant="normal">e</mml:mi><mml:mn>2</mml:mn></mml:msub></mml:mrow></mml:math>. Physical Review B, 2018, 97, .	3.2	30
83	Bandgap broadening at grain boundaries in single-layer MoS2. Nano Research, 2018, 11, 6102-6109.	10.4	26
84	A graphene Zenerâ€“Klein transistor cooled by a hyperbolic substrate. Nature Nanotechnology, 2018, 13, 47-52.	31.5	64
85	Stereoelectronic Effect-Induced Conductance Switching in Aromatic Chain Single-Molecule Junctions. Nano Letters, 2017, 17, 856-861.	9.1	76
86	Graphene: Nanostructure engineering and applications. Frontiers of Physics, 2017, 12, 1.	5.0	26
87	Free-Standing Single-Molecule Thick Crystals Consisting of Linear Long-Chain Polymers. Nano Letters, 2017, 17, 1655-1659.	9.1	10
88	Emergence of Tertiary Dirac Points in Graphene MoirÃ© Superlattices. Nano Letters, 2017, 17, 3576-3581.	9.1	28
89	Thermally Activated Tunneling Transition in a Photoswitchable Single-Molecule Electrical Junction. Journal of Physical Chemistry Letters, 2017, 8, 2849-2854.	4.6	27
90	Precisely Aligned Monolayer MoS₂ Epitaxially Grown on hâ€BN basal Plane. Small, 2017, 13, 1603005.	10.0	91

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91	Argon Plasma Induced Phase Transition in Monolayer MoS₂. Journal of the American Chemical Society, 2017, 139, 10216-10219.	13.7	332
92	Grapheneâ€Contacted Ultrashort Channel Monolayer MoS₂ Transistors. Advanced Materials, 2017, 29, 1702522.	21.0	218
93	From Type-II Triply Degenerate Nodal Points and Three-Band Nodal Rings to Type-II Dirac Points in Centrosymmetric Zirconium Oxide. Journal of Physical Chemistry Letters, 2017, 8, 5792-5797.	4.6	61
94	Wafer-Scale Growth and Transfer of Highly-Oriented Monolayer MoS₂ Continuous Films. ACS Nano, 2017, 11, 12001-12007.	14.6	397
95	Modulating PL and electronic structures of MoS2/graphene heterostructures via interlayer twisting angle. Applied Physics Letters, 2017, 111, .	3.3	41
96	The Effect of Twin Grain Boundary Tuned by Temperature on the Electrical Transport Properties of Monolayer MoS2. Crystals, 2016, 6, 115.	2.2	18
97	Rolling Up a Monolayer MoS₂Sheet. Small, 2016, 12, 3770-3774.	10.0	60
98	Anisotropic Chargeâ€Carrier Transport in Highâ€Mobility Donorâ€“Acceptor Conjugated Polymer Semiconductor Films. Chemistry - an Asian Journal, 2016, 11, 2725-2729.	3.3	7
99	Switchable friction enabled by nanoscale self-assembly on graphene. Nature Communications, 2016, 7, 10745.	12.8	59
100	Poly(ethylene oxide) Functionalized Graphene Nanoribbons with Excellent Solution Processability. Journal of the American Chemical Society, 2016, 138, 10136-10139.	13.7	83
101	Gaps induced by inversion symmetry breaking andÂsecond-generation Dirac cones in graphene/hexagonal boron nitride. Nature Physics, 2016, 12, 1111-1115.	16.7	179
102	Thermally Induced Graphene Rotation on Hexagonal Boron Nitride. Physical Review Letters, 2016, 116, 126101.	7.8	142
103	Introduction of Interfacial Charges to Black Phosphorus for a Family of Planar Devices. Nano Letters, 2016, 16, 6870-6878.	9.1	69
104	Ultrafast formation of interlayer hot excitons in atomically thin MoS2/WS2 heterostructures. Nature Communications, 2016, 7, 12512.	12.8	313
105	Observation of Strong Interlayer Coupling in MoS₂/WS₂ Heterostructures. Advanced Materials, 2016, 28, 1950-1956.	21.0	225
106	Patterned Peeling 2D MoS₂ off the Substrate. ACS Applied Materials & Interfaces, 2016, 8, 16546-16550.	8.0	30
107	Covalently bonded single-molecule junctions with stable and reversible photoswitched conductivity. Science, 2016, 352, 1443-1445.	12.6	697
108	Integrated Flexible and Highâ€Quality Thin Film Transistors Based on Monolayer MoS₂. Advanced Electronic Materials, 2016, 2, 1500379.	5.1	40

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109	Hofstadter Butterfly and Many-Body Effects in Epitaxial Graphene Superlattice. Nano Letters, 2016, 16, 2387-2392.	9.1	36
110	Noise in Graphene Superlattices Grown on Hexagonal Boron Nitride. ACS Nano, 2015, 9, 11382-11388.	14.6	15
111	Oxygen-Assisted Chemical Vapor Deposition Growth of Large Single-Crystal and High-Quality Monolayer MoS₂. Journal of the American Chemical Society, 2015, 137, 15632-15635.	13.7	301
112	Identification of dominant scattering mechanism in epitaxial graphene on SiC. Applied Physics Letters, 2014, 104, .	3.3	11
113	Anomalous anisotropic magnetoresistance effects in graphene. AIP Advances, 2014, 4, 097101.	1.3	6
114	Scalable Growth of High-Quality Polycrystalline MoS₂ Monolayers on SiO₂ with Tunable Grain Sizes. ACS Nano, 2014, 8, 6024-6030.	14.6	263
115	Observation of an intrinsic bandgap and Landau level renormalization in graphene/boron-nitride heterostructures. Nature Communications, 2014, 5, 4461.	12.8	148
116	Gate-dependent pseudospin mixing in graphene/boron nitride moirÃ© superlattices. Nature Physics, 2014, 10, 743-747.	16.7	64
117	Fabrication of high-quality all-graphene devices with low contact resistances. Nano Research, 2014, 7, 1449-1456.	10.4	20
118	Epitaxial growth of single-domain graphene on hexagonal boron nitride. Nature Materials, 2013, 12, 792-797.	27.5	882
119	Carbon-based spintronics. Science China: Physics, Mechanics and Astronomy, 2013, 56, 207-221.	5.1	20
120	High Performance MAHAHOS Memory Devices: Charge Trapping and Distribution in Bandgap Engineered Structure. , 2012, , .		0
121	Ultra-sensitive strain sensors based on piezoresistive nanographene films. Applied Physics Letters, 2012, 101, 063112.	3.3	270
122	Competitive Growth and Etching of Epitaxial Graphene. Journal of Physical Chemistry C, 2012, 116, 26929-26931.	3.1	20
123	Vapour-phase graphene epitaxy at low temperatures. Nano Research, 2012, 5, 258-264.	10.4	35
124	Studies of graphene-based nanoelectromechanical switches. Nano Research, 2012, 5, 82-87.	10.4	54
125	Investigation of charge trap and loss characteristics for charge trap memory by electrostatic force microscopy. , 2011, , .		0
126	Catalyst-free growth of nanographene films on various substrates. Nano Research, 2011, 4, 315-321.	10.4	220

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127	Investigation on interface related charge trap and loss characteristics of high-k based trapping structures by electrostatic force microscopy. Applied Physics Letters, 2011, 99, 223504.	3.3	22
128	Self-assembly of carbon nanohelices: Characteristics and field electron emission properties. Applied Physics Letters, 2004, 84, 2646-2648.	3.3	50
129	Large-scale well aligned carbon nitride nanotube films: Low temperature growth and electron field emission. Journal of Applied Physics, 2001, 89, 5939-5943.	2.5	72