Zhengfei Wang

List of Publications by Year
in descending order

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104	10,067	57758	33894
papers	citations	44 h-index	99 g-index

105	105	105	11669
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Atomic layers of hybridized boron nitride and graphene domains. Nature Materials, 2010, 9, 430-435.	27.5	2,002
2	Phase diagram and electronic indication of high-temperature superconductivity at 65â€‰K in single-layer FeSe films. Nature Materials, 2013, 12, 605-610.	27.5	706
3	Electronic origin of high-temperature superconductivity in single-layer FeSe superconductor. Nature Communications, 2012, 3, 931.	12.8	495
4	Controlled nanocutting of graphene. Nano Research, 2008, 1, 116-122.	10.4	472
5	Redox Control and High Conductivity of Nickel Bis(dithiolene) Complex Ï€-Nanosheet: A Potential Organic Two-Dimensional Topological Insulator. Journal of the American Chemical Society, 2014, 136, 14357-14360.	13.7	395
6	Landau Quantization of Topological Surface States in<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:msub><mml:mi>Bi</mml:mi><mml:mn>2</mml:mn></mml:msub><mml:msub><mml:mi>Se</mml:mi><mml:mn Physical Review Letters, 2010, 105, 076801.	7.8	352
7	Spatial and Energy Distribution of Topological Edge States in Single Bi(111) Bilayer. Physical Review Letters, 2012, 109, 016801.	7.8	293
8	Prediction of a Two-Dimensional Organic Topological Insulator. Nano Letters, 2013, 13, 2842-2845.	9.1	292
9	Quantum Anomalous Hall Effect in 2D Organic Topological Insulators. Physical Review Letters, 2013, 110, 196801.	7.8	292
10	Analytical study of electronic structure in armchair graphene nanoribbons. Physical Review B, 2007, 75, .	3.2	278
11	Organic topological insulators in organometallic lattices. Nature Communications, 2013, 4, 1471.	12.8	238
12	Epitaxial growth of large-gap quantum spin Hall insulator on semiconductor surface. Proceedings of the National Academy of Sciences of the United States of America, 2014, 111, 14378-14381.	7.1	205
13	Pt₃Co Octapods as Superior Catalysts of CO₂ Hydrogenation. Angewandte Chemie - International Edition, 2016, 55, 9548-9552.	13.8	162
14	Tuning the electronic structure of graphene nanoribbons through chemical edge modification: A theoretical study. Physical Review B, 2007, 75, .	3.2	156
15	Topological insulator Bi2Se3 thin films grown on double-layer graphene by molecular beam epitaxy. Applied Physics Letters, 2010, 97, .	3.3	154
16	Topological edge states in a high-temperature superconductor FeSe/SrTiO3(001) film. Nature Materials, 2016, 15, 968-973.	27.5	145
17	Prediction of a Dirac state in monolayer<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:msub><mml:mi mathvariant="normal">TiB</mml:mi><mml:mn>2</mml:mn></mml:msub></mml:math>. Physical Review B, 2014, 90, .	3.2	134
18	Band-gap scaling of graphene nanohole superlattices. Physical Review B, 2009, 80, .	3.2	121

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19	Spatially Separated Spin Carriers in Spin-Semiconducting Graphene Nanoribbons. Physical Review Letters, 2013, 111, 096803.	7.8	119
20	Z-shaped graphene nanoribbon quantum dot device. Applied Physics Letters, 2007, 91, .	3.3	109
21	Experimental Observation of Dirac-like Surface States and Topological Phase Transition in<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:msub><mml:mrow><mml:mi>Pb</mml:mi></mml:mrow><mml:mrow><mml:mn>1</mml:mn><mml:mo stretchy="false">(</mml:mo><mml:mn>111</mml:mn><mml:mo stretchy="false">)</m. Physical Review Letters, 2014, 112, 186801.	7.8	100
22	Intrinsic Quantum Anomalous Hall Effect with In-Plane Magnetization: Searching Rule and Material Prediction. Physical Review Letters, 2018, 121, 246401.	7.8	95
23	Chiral selective tunneling induced negative differential resistance in zigzag graphene nanoribbon: A theoretical study. Applied Physics Letters, 2008, 92, .	3.3	93
24	Robustness of two-dimensional topological insulator states in bilayer bismuth against strain and electrical field. Physical Review B, 2013, 87, .	3.2	91
25	Tuning Topological Edge States of Bi(111) Bilayer Film by Edge Adsorption. Nano Letters, 2014, 14, 2879-2883.	9.1	91
26	<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mi>s</mml:mi><mml:msup><mml:mi>d</mml:mi><mml:mn>2</mml:mn></mml:msup></mml:math>Graphene: Kagome Band in a Hexagonal Lattice. Physical Review Letters, 2014, 113, 236802.	7.8	88
27	Quasiparticle dynamics in reshaped helical Dirac cone of topological insulators. Proceedings of the National Academy of Sciences of the United States of America, 2013, 110, 2758-2762.	7.1	86
28	Fractal Landau-Level Spectra in Twisted Bilayer Graphene. Nano Letters, 2012, 12, 3833-3838.	9.1	85
29	Creation of helical Dirac fermions by interfacing two gapped systems of ordinary fermions. Nature Communications, 2013, 4, 1384.	12.8	81
30	Intrinsic Two-Dimensional Organic Topological Insulators in Metalâ€“Dicyanoanthracene Lattices. Nano Letters, 2016, 16, 2072-2075.	9.1	81
31	Highly Anisotropic Dirac Fermions in Square Graphynes. Journal of Physical Chemistry Letters, 2015, 6, 2959-2962.	4.6	75
32	Formation of quantum spin Hall state on Si surface and energy gap scaling with strength of spin orbit coupling. Scientific Reports, 2014, 4, 7102.	3.3	75
33	Two-Dimensional Quadrupole Topological Insulator in Î³-Graphyne. Nano Letters, 2019, 19, 6492-6497.	9.1	74
34	Electronic and magnetic structure of infinite-layer NdNiO2: trace of antiferromagnetic metal. Npj Quantum Materials, 2020, 5, .	5.2	66
35	Formation of hydrogenated graphene nanoripples by strain engineering and directed surface self-assembly. Physical Review B, 2011, 83, .	3.2	65
36	Penta-Pt₂N₄: an ideal two-dimensional material for nanoelectronics. Nanoscale, 2018, 10, 16169-16177.	5.6	58

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37	Strain gauge fields for rippled graphene membranes under central mechanical load: An approach beyond first-order continuum elasticity. Physical Review B, 2013, 87, .	3.2	57
38	Higher-Order Band Topology in Twisted MoirÃ© Superlattice. Physical Review Letters, 2021, 126, 066401.	7.8	56
39	Ballistic rectification in a Z-shaped graphene nanoribbon junction. Applied Physics Letters, 2008, 92, .	3.3	55
40	Quantum Electronic Stress: Density-Functional-Theory Formulation and Physical Manifestation. Physical Review Letters, 2012, 109, 055501.	7.8	55
41	Photo-switchable two-dimensional nanofluidic ionic diodes. Chemical Science, 2017, 8, 4381-4386.	7.4	50
42	Synthesis and Luminescence Properties of Nano-/Microstructured Y₃Al₅O₁₂:Ce³⁺ Microspheres by Controlled Glass Crystallization. Crystal Growth and Design, 2011, 11, 5355-5361.	3.0	47
43	Manipulation of Electron Beam Propagation by Hetero-Dimensional Graphene Junctions. ACS Nano, 2010, 4, 2459-2465.	14.6	46
44	Graphene's morphology and electronic properties from discrete differential geometry. Physical Review B, 2014, 89, .	3.2	45
45	Formation of Ideal Rashba States on Layered Semiconductor Surfaces Steered by Strain Engineering. Nano Letters, 2016, 16, 404-409.	9.1	44
46	Preparation of <scp>Ce:YAG</scp> Glassâ€Ceramics with Low <scp>SiO₂</scp>. Journal of the American Ceramic Society, 2011, 94, 3800-3803.	3.8	43
47	Quantum spin Hall phase in 2D trigonal lattice. Nature Communications, 2016, 7, 12746.	12.8	43
48	Topological Band Engineering of Lieb Lattice in Phthalocyanine-Based Metalâ€“Organic Frameworks. Nano Letters, 2020, 20, 1959-1966.	9.1	43
49	Modeling STM images in graphene using the effective-mass approximation. Physical Review B, 2006, 74, .	3.2	42
50	Strain-engineering of graphene's electronic structure beyond continuum elasticity. Solid State Communications, 2013, 166, 70-75.	1.9	42
51	Magnetotransport signatures of Weyl physics and discrete scale invariance in the elemental semiconductor tellurium. Proceedings of the National Academy of Sciences of the United States of America, 2020, 117, 11337-11343.	7.1	42
52	Computational design of twoâ€dimensional topological materials. Wiley Interdisciplinary Reviews: Computational Molecular Science, 2017, 7, e1304.	14.6	38
53	Thickness dependence of surface energy and contact angle of water droplets on ultrathin MoS₂ films. Physical Chemistry Chemical Physics, 2016, 18, 14449-14453.	2.8	37
54	Prediction of large gap flat Chern band in a two-dimensional metal-organic framework. Applied Physics Letters, 2018, 112, .	3.3	37

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55	Electronic structure of bilayer graphene: A real-space Greenâ€™s function study. Physical Review B, 2007, 75, .	3.2	35
56	Giant magnetoresistance in zigzag graphene nanoribbon. Applied Physics Letters, 2011, 99, 042110.	3.3	35
57	Light-Induced Type-II Band Inversion and Quantum Anomalous Hall State in Monolayer FeSe. Physical Review Letters, 2018, 120, 156406.	7.8	35
58	Magnetic Fieldâ€Enhanced Thermoelectric Performance in Dirac Semimetal Cd₃As₂ Crystals with Different Carrier Concentrations. Advanced Functional Materials, 2019, 29, 1902437.	14.9	33
59	Half metal in two-dimensional hexagonal organometallic framework. Nanoscale Research Letters, 2014, 9, 2414.	5.7	30
60	Nanopatterned graphene quantum dots as building blocks for quantum cellular automata. Nanoscale, 2011, 3, 4201.	5.6	29
61	Evolution of the electronic structure in ultrathin Bi(111) films. Physical Review B, 2015, 91, .	3.2	29
62	Engineering Electronic Structure of a Two-Dimensional Topological Insulator Bi(111) Bilayer on Sb Nanofilms by Quantum Confinement Effect. ACS Nano, 2016, 10, 3859-3864.	14.6	29
63	Superconductivity in the metastable <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:mo and <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:mo phases of <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:mi>Mo</mml:mi><m. Physical R	8.2	29
64	Ubiquitous Spin-Orbit Coupling in a Screw Dislocation with High Spin Coherency. Physical Review Letters, 2018, 121, 066401.	7.8	29
65	Strain-Engineered Surface Transport in Si(001): Complete Isolation of the Surface State via Tensile Strain. Physical Review Letters, 2013, 111, 246801.	7.8	27
66	Electronic structure in gapped graphene with a Coulomb potential. Physical Review B, 2009, 79, .	3.2	25
67	Doping dependence of electronic structure of infinite-layer <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:msub><mml:mrow><mml:mi>NdNiO</mml:mi></mml:mrow><mml:mrow><mml:mn>2 Physical Review B, 2021, 103, .	3.2	24
68	Hourglass Fermion in Two-Dimensional Material. Physical Review Letters, 2019, 123, 126403.	7.8	23
69	Weyl points created by a three-dimensional flat band. Physical Review B, 2019, 99, .	3.2	23
70	A 2D nonsymmorphic Dirac semimetal in a chemically modified group-VA monolayer with a black phosphorene structure. Nanoscale, 2019, 11, 7256-7262.	5.6	22
71	Flat-Band-Induced Anomalous Anisotropic Charge Transport and Orbital Magnetism in Kagome Metal CoSn. Physical Review Letters, 2022, 128, 096601.	7.8	22
72	Pressure-induced organic topological nodal-line semimetal in the three-dimensional molecular crystal Pd(dddt)2. Physical Review B, 2018, 97, .	3.2	21

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73	KekulÃ© Lattice in Graphdiyne: Coexistence of Phononic and Electronic Second-Order Topological Insulator. Nano Letters, 2022, 22, 1122-1128.	9.1	21
74	Directionâ€Controlled Lightâ€Driven Movement of Microribbons. Advanced Materials, 2016, 28, 8538-8545.	21.0	20
75	Pt₃Co Octapods as Superior Catalysts of CO₂ Hydrogenation. Angewandte Chemie, 2016, 128, 9700-9704.	2.0	20
76	Field-induced metal-to-insulator transition and colossal anisotropic magnetoresistance in a nearly Dirac material EuMnSb2. Npj Quantum Materials, 2021, 6, .	5.2	20
77	Antiferromagnetic second-order topological insulator with fractional mass-kink. Npj Computational Materials, 2022, 8, .	8.7	19
78	Coupled Dirac Fermions and Neutrino-like Oscillations in Twisted Bilayer Graphene. Nano Letters, 2013, 13, 5159-5164.	9.1	18
79	Self-Assembled Si(111) Surface States: 2D Dirac Material for THz Plasmonics. Physical Review Letters, 2015, 115, 026803.	7.8	18
80	Elevating the magnetic exchange coupling in the compressed antiferromagnetic axion insulator candidate <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:mi>Eu</mml:mi><mml:msub><mml:mi>In</mml:mi><mml:m Physical Review B, 2020, 102, .	3.2	18
81	Edge States at Nematic Domain Walls in FeSe Films. Nano Letters, 2018, 18, 7176-7180.	9.1	16
82	Orbit- and atom-resolved spin textures of intrinsic, extrinsic, and hybridized Dirac cone states. Physical Review B, 2014, 89, .	3.2	13
83	Excited quantum anomalous and spin Hall effect: dissociation of flat-bands-enabled excitonic insulator state. Nanotechnology, 2022, 33, 415001.	2.6	12
84	Emerging nanocircuit paradigm: Graphene-based electronics for nanoscale computing. , 2007, , .		10
85	Quantum anomalous Hall effect in twisted bilayer graphene quasicrystal*. Chinese Physics B, 2020, 29, 107101.	1.4	10
86	Spin-polarized valley Hall effect in ultrathin silicon nanomembrane via interlayer antiferromagnetic coupling. 2D Materials, 2016, 3, 035026.	4.4	9
87	Statistical model for analyzing the dephasing effects in a one-dimensional scattering chain. Physical Review B, 2006, 74, .	3.2	8
88	Emerging nanodevice paradigm. ACM Journal on Emerging Technologies in Computing Systems, 2009, 5, 1-19.	2.3	8
89	Surface alloy engineering in 2D trigonal lattice: giant Rashba spin splitting and two large topological gaps. New Journal of Physics, 2018, 20, 023041.	2.9	7
90	Non-Collinear Orbital-induced Planar Quantum Anomalous Hall Effect. Nano Letters, 2020, 20, 7606-7612.	9.1	7

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91	Creation of the Dirac Nodal Line by Extrinsic Symmetry Engineering. Nano Letters, 2020, 20, 2157-2162.	9.1	7
92	Theory of Epitaxial Growth of Borophene on Layered Electride: Thermodynamic Stability and Kinetic Pathway. Journal of Physical Chemistry C, 2020, 124, 6063-6069.	3.1	7
93	Graphene nanoribbon field-effect transistors. , 2008, , .		6
94	Pulse laser induced graphite-to-diamond phase transition: the role of quantum electronic stress. Science China: Physics, Mechanics and Astronomy, 2017, 60, 1.	5.1	6
95	Giant Negative Magnetoresistance beyond Chiral Anomaly in Topological Material YCuAs₂. Advanced Materials, 2022, 34, e2201597.	21.0	6
96	Metal-insulator transition in organic ion intercalated <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:msub><mml:mi>VSe</mml:mi><mml:mn>2</mml:mn></mml induced by dimensional crossover. Physical Review B, 2020, 102, .	3.2	5
97	Bipolar semiconductor in two-dimensional covalent organic frameworks. Physical Review B, 2022, 105, .	3.2	5
98	A Tunable Quantum-Dot Device Based on Cross-Bar Graphene Nanoribbon Structures. Journal of Nanoscience and Nanotechnology, 2009, 9, 4580-4585.	0.9	4
99	Asymmetrically optimized structure in a high-T _c single unit-cell FeSe superconductor. Journal of Physics Condensed Matter, 2019, 31, 055701.	1.8	4
100	Folding Graphene into a Chern Insulator with Light Irradiation. Nano Letters, 2020, 20, 5860-5865.	9.1	4
101	Chiral selective tunneling induced graphene nanoribbon switch. Frontiers of Physics in China, 2009, 4, 373-377.	1.0	2
102	Innentitelbild: Pt₃Co Octapods as Superior Catalysts of CO₂ Hydrogenation (Angew. Chem. 33/2016). Angewandte Chemie, 2016, 128, 9594-9594.	2.0	1
103	Topological Field-Effect Transistor Based on Quasi-Two-Dimensional Tellurium Flakes. Physical Review Applied, 2022, 17, .	3.8	1
104	Discrete Gauge Fields for Graphene Membranes under Mechanical Strain. Materials Research Society Symposia Proceedings, 2013, 1549, 31-34.	0.1	0