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	KekulÃ© Lattice in Graphdiyne: Coexistence of Phononic and Electronic Second-Order Topological Insulator. Nano Letters, 2022, 22, 1122-1128.	9.1	21
2	Flat-Band-Induced Anomalous Anisotropic Charge Transport and Orbital Magnetism in Kagome Metal CoSn. Physical Review Letters, 2022, 128, 096601.	7.8	22
3	Bipolar semiconductor in two-dimensional covalent organic frameworks. Physical Review B, 2022, 105, .	3.2	5
4	Antiferromagnetic second-order topological insulator with fractional mass-kink. Npj Computational Materials, 2022, 8, .	8.7	19
5	Giant Negative Magnetoresistance beyond Chiral Anomaly in Topological Material YCuAs₂. Advanced Materials, 2022, 34, e2201597.	21.0	6
6	Topological Field-Effect Transistor Based on Quasi-Two-Dimensional Tellurium Flakes. Physical Review Applied, 2022, 17, .	3.8	1
7	Excited quantum anomalous and spin Hall effect: dissociation of flat-bands-enabled excitonic insulator state. Nanotechnology, 2022, 33, 415001.	2.6	12
8	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:mn>2</ Physical Review B, 2021, 103, .	3.2	24
9	Higher-Order Band Topology in Twisted MoirÃ© Superlattice. Physical Review Letters, 2021, 126, 066401.	7.8	56
10	Field-induced metal-to-insulator transition and colossal anisotropic magnetoresistance in a nearly Dirac material EuMnSb2. Npj Quantum Materials, 2021, 6, .	5.2	20
11	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></ induced by dimensional crossover. Physical Review B, 2020, 102, .	3.2	5
12	Folding Graphene into a Chern Insulator with Light Irradiation. Nano Letters, 2020, 20, 5860-5865.	9.1	4
13	Non-Collinear Orbital-induced Planar Quantum Anomalous Hall Effect. Nano Letters, 2020, 20, 7606-7612.	9.1	7
14	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
15	Electronic and magnetic structure of infinite-layer NdNiO2: trace of antiferromagnetic metal. Npj Quantum Materials, 2020, 5, .	5.2	66
16	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
17	Creation of the Dirac Nodal Line by Extrinsic Symmetry Engineering. Nano Letters, 2020, 20, 2157-2162.	9.1	7
18	Topological Band Engineering of Lieb Lattice in Phthalocyanine-Based Metalâ€“Organic Frameworks. Nano Letters, 2020, 20, 1959-1966.	9.1	43

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19	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
20	Quantum anomalous Hall effect in twisted bilayer graphene quasicrystal*. Chinese Physics B, 2020, 29, 107101.	1.4	10
21	Two-Dimensional Quadrupole Topological Insulator in Î³-Graphyne. Nano Letters, 2019, 19, 6492-6497.	9.1	74
22	Magnetic Fieldâ€Enhanced Thermoelectric Performance in Dirac Semimetal Cd₃As₂ Crystals with Different Carrier Concentrations. Advanced Functional Materials, 2019, 29, 1902437.	14.9	33
23	Hourglass Fermion in Two-Dimensional Material. Physical Review Letters, 2019, 123, 126403.	7.8	23
24	Weyl points created by a three-dimensional flat band. Physical Review B, 2019, 99, .	3.2	23
25	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
26	Asymmetrically optimized structure in a high-T _c single unit-cell FeSe superconductor. Journal of Physics Condensed Matter, 2019, 31, 055701.	1.8	4
27	Pressure-induced organic topological nodal-line semimetal in the three-dimensional molecular crystal Pd(dddt)2. Physical Review B, 2018, 97, .	3.2	21
28	Light-Induced Type-II Band Inversion and Quantum Anomalous Hall State in Monolayer FeSe. Physical Review Letters, 2018, 120, 156406.	7.8	35
29	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
30	Prediction of large gap flat Chern band in a two-dimensional metal-organic framework. Applied Physics Letters, 2018, 112, .	3.3	37
31	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:mn> 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:mn> phases of <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:mi>Mo</mml:mi><mml:mi> Physical R	3.2	29
32	Intrinsic Quantum Anomalous Hall Effect with In-Plane Magnetization: Searching Rule and Material Prediction. Physical Review Letters, 2018, 121, 246401.	7.8	95
33	Edge States at Nematic Domain Walls in FeSe Films. Nano Letters, 2018, 18, 7176-7180.	9.1	16
34	Ubiquitous Spin-Orbit Coupling in a Screw Dislocation with High Spin Coherency. Physical Review Letters, 2018, 121, 066401.	7.8	29
35	Penta-Pt₂N₄: an ideal two-dimensional material for nanoelectronics. Nanoscale, 2018, 10, 16169-16177.	5.6	58
36	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

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37	Computational design of twoâ€dimensional topological materials. Wiley Interdisciplinary Reviews: Computational Molecular Science, 2017, 7, e1304.	14.6	38
38	Photo-switchable two-dimensional nanofluidic ionic diodes. Chemical Science, 2017, 8, 4381-4386.	7.4	50
39	Pt₃Co Octapods as Superior Catalysts of CO₂ Hydrogenation. Angewandte Chemie - International Edition, 2016, 55, 9548-9552.	13.8	162
40	Topological edge states in a high-temperature superconductor FeSe/SrTiO3(001) film. Nature Materials, 2016, 15, 968-973.	27.5	145
41	Innentitelbild: Pt₃Co Octapods as Superior Catalysts of CO₂ Hydrogenation (Angew. Chem. 33/2016). Angewandte Chemie, 2016, 128, 9594-9594.	2.0	1
42	Quantum spin Hall phase in 2D trigonal lattice. Nature Communications, 2016, 7, 12746.	12.8	43
43	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
44	Directionâ€Controlled Lightâ€Driven Movement of Microribbons. Advanced Materials, 2016, 28, 8538-8545.	21.0	20
45	Spin-polarized valley Hall effect in ultrathin silicon nanomembrane via interlayer antiferromagnetic coupling. 2D Materials, 2016, 3, 035026.	4.4	9
46	Pt₃Co Octapods as Superior Catalysts of CO₂ Hydrogenation. Angewandte Chemie, 2016, 128, 9700-9704.	2.0	20
47	Formation of Ideal Rashba States on Layered Semiconductor Surfaces Steered by Strain Engineering. Nano Letters, 2016, 16, 404-409.	9.1	44
48	Intrinsic Two-Dimensional Organic Topological Insulators in Metalâ€“Dicyanoanthracene Lattices. Nano Letters, 2016, 16, 2072-2075.	9.1	81
49	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
50	Evolution of the electronic structure in ultrathin Bi(111) films. Physical Review B, 2015, 91, .	3.2	29
51	Highly Anisotropic Dirac Fermions in Square Graphynes. Journal of Physical Chemistry Letters, 2015, 6, 2959-2962.	4.6	75
52	Self-Assembled Si(111) Surface States: 2D Dirac Material for THz Plasmonics. Physical Review Letters, 2015, 115, 026803.	7.8	18
53	Half metal in two-dimensional hexagonal organometallic framework. Nanoscale Research Letters, 2014, 9, 2414.	5.7	30
54	<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	58

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55	Orbit- and atom-resolved spin textures of intrinsic, extrinsic, and hybridized Dirac cone states. Physical Review B, 2014, 89, .	3.2	13
56	Graphene's morphology and electronic properties from discrete differential geometry. Physical Review B, 2014, 89, .	3.2	45
57	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 stretchy="false">(</mml:mo><mml:mn>111</mml:mn><mml:mo stretchy="false">)</m. Physical Review	7.8	109
58	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
59	Tuning Topological Edge States of Bi(111) Bilayer Film by Edge Adsorption. Nano Letters, 2014, 14, 2879-2883.	9.1	91
60	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
61	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
62	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
63	Spatially Separated Spin Carriers in Spin-Semiconducting Graphene Nanoribbons. Physical Review Letters, 2013, 111, 096803.	7.8	119
64	Strain-engineering of graphene's electronic structure beyond continuum elasticity. Solid State Communications, 2013, 166, 70-75.	1.9	42
65	Coupled Dirac Fermions and Neutrino-like Oscillations in Twisted Bilayer Graphene. Nano Letters, 2013, 13, 5159-5164.	9.1	18
66	Organic topological insulators in organometallic lattices. Nature Communications, 2013, 4, 1471.	12.8	238
67	Creation of helical Dirac fermions by interfacing two gapped systems of ordinary fermions. Nature Communications, 2013, 4, 1384.	12.8	81
68	Prediction of a Two-Dimensional Organic Topological Insulator. Nano Letters, 2013, 13, 2842-2845.	9.1	292
69	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
70	Robustness of two-dimensional topological insulator states in bilayer bismuth against strain and electrical field. Physical Review B, 2013, 87, .	3.2	91
71	Quantum Anomalous Hall Effect in 2D Organic Topological Insulators. Physical Review Letters, 2013, 110, 196801.	7.8	292
72	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

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73	Discrete Gauge Fields for Graphene Membranes under Mechanical Strain. Materials Research Society Symposia Proceedings, 2013, 1549, 31-34.	0.1	0
74	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
75	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
76	Fractal Landau-Level Spectra in Twisted Bilayer Graphene. Nano Letters, 2012, 12, 3833-3838.	9.1	85
77	Quantum Electronic Stress: Density-Functional-Theory Formulation and Physical Manifestation. Physical Review Letters, 2012, 109, 055501.	7.8	55
78	Electronic origin of high-temperature superconductivity in single-layer FeSe superconductor. Nature Communications, 2012, 3, 931.	12.8	495
79	Spatial and Energy Distribution of Topological Edge States in Single Bi(111) Bilayer. Physical Review Letters, 2012, 109, 016801.	7.8	293
80	Nanopatterned graphene quantum dots as building blocks for quantum cellular automata. Nanoscale, 2011, 3, 4201.	5.6	29
81	Giant magnetoresistance in zigzag graphene nanoribbon. Applied Physics Letters, 2011, 99, 042110.	3.3	35
82	Formation of hydrogenated graphene nanoripples by strain engineering and directed surface self-assembly. Physical Review B, 2011, 83, .	3.2	65
83	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
84	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
85	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
86	Atomic layers of hybridized boron nitride and graphene domains. Nature Materials, 2010, 9, 430-435.	27.5	2,002
87	Topological insulator Bi2Se3 thin films grown on double-layer graphene by molecular beam epitaxy. Applied Physics Letters, 2010, 97, .	3.3	154
88	Manipulation of Electron Beam Propagation by Hetero-Dimensional Graphene Junctions. ACS Nano, 2010, 4, 2459-2465.	14.6	46
89	Electronic structure in gapped graphene with a Coulomb potential. Physical Review B, 2009, 79, .	3.2	25
90	A Tunable Quantum-Dot Device Based on Cross-Bar Graphene Nanoribbon Structures. Journal of Nanoscience and Nanotechnology, 2009, 9, 4580-4585.	0.9	4

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91	Chiral selective tunneling induced graphene nanoribbon switch. Frontiers of Physics in China, 2009, 4, 373-377.	1.0	2
92	Band-gap scaling of graphene nanohole superlattices. Physical Review B, 2009, 80, .	3.2	121
93	Emerging nanodevice paradigm. ACM Journal on Emerging Technologies in Computing Systems, 2009, 5, 1-19.	2.3	8
94	Controlled nanocutting of graphene. Nano Research, 2008, 1, 116-122.	10.4	472
95	Graphene nanoribbon field-effect transistors. , 2008, , .		6
96	Ballistic rectification in a Z-shaped graphene nanoribbon junction. Applied Physics Letters, 2008, 92, .	3.3	55
97	Chiral selective tunneling induced negative differential resistance in zigzag graphene nanoribbon: A theoretical study. Applied Physics Letters, 2008, 92, .	3.3	93
98	Z-shaped graphene nanoribbon quantum dot device. Applied Physics Letters, 2007, 91, .	3.3	109
99	Emerging nanocircuit paradigm: Graphene-based electronics for nanoscale computing. , 2007, , .		10
100	Tuning the electronic structure of graphene nanoribbons through chemical edge modification: A theoretical study. Physical Review B, 2007, 75, .	3.2	156
101	Analytical study of electronic structure in armchair graphene nanoribbons. Physical Review B, 2007, 75, .	3.2	278
102	Electronic structure of bilayer graphene: A real-space Greenâ€™s function study. Physical Review B, 2007, 75, .	3.2	35
103	Modeling STM images in graphene using the effective-mass approximation. Physical Review B, 2006, 74, .	3.2	42
104	Statistical model for analyzing the dephasing effects in a one-dimensional scattering chain. Physical Review B, 2006, 74, .	3.2	8