

Lei Zhang

List of Publications by Year in descending order

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Version: 2024-02-01

70
papers

1,876
citations

236925

25
h-index

289244

40
g-index

70
all docs

70
docs citations

70
times ranked

1748
citing authors

#	ARTICLE	IF	CITATIONS
1	Generation and transport of valley-polarized current in transition-metal dichalcogenides. <i>Physical Review B</i> , 2014, 90, .	3.2	147
2	Electrical contacts to monolayer black phosphorus: A first-principles investigation. <i>Physical Review B</i> , 2014, 90, .	3.2	122
3	Photogalvanic effect in monolayer black phosphorus. <i>Nanotechnology</i> , 2015, 26, 455202.	2.6	118
4	RESCU: A real space electronic structure method. <i>Journal of Computational Physics</i> , 2016, 307, 593-613.	3.8	89
5	Inkjet Printing Short-Channel Polymer Transistors with High-Performance and Ultrahigh Photoresponsivity. <i>Advanced Materials</i> , 2014, 26, 4683-4689.	21.0	82
6	Topological Anderson insulator phenomena. <i>Physical Review B</i> , 2011, 84, .	3.2	72
7	Molecular Spintronics: Destructive Quantum Interference Controlled by a Gate. <i>Journal of the American Chemical Society</i> , 2014, 136, 15065-15071.	13.7	65
8	Experimental observation of non-Abelian topological charges and edge states. <i>Nature</i> , 2021, 594, 195-200.	27.8	61
9	Topological One-Way Large-Area Waveguide States in Magnetic Photonic Crystals. <i>Physical Review Letters</i> , 2021, 126, 067401.	7.8	53
10	Giant tunneling electroresistance in two-dimensional ferroelectric tunnel junctions with out-of-plane ferroelectric polarization. <i>Physical Review B</i> , 2020, 101, .	3.2	52
11	<i>h</i> -BN/graphene van der Waals vertical heterostructure: a fully spin-polarized photocurrent generator. <i>Nanoscale</i> , 2018, 10, 174-183.	5.6	49
12	Twist-induced control of near-field heat radiation between magnetic Weyl semimetals. <i>ACS Photonics</i> , 2021, 8, 443-448.	6.6	46
13	Pure spin current generation via photogalvanic effect with spatial inversion symmetry. <i>Physical Review B</i> , 2020, 102, .	3.2	43
14	Photogalvanic effect induced fully spin polarized current and pure spin current in zigzag SiC nanoribbons. <i>Physical Chemistry Chemical Physics</i> , 2018, 20, 26744-26751.	2.8	42
15	First-principles investigation of transient current in molecular devices by using complex absorbing potentials. <i>Physical Review B</i> , 2013, 87, .	3.2	39
16	Experiment and DFT study on the photocatalytic properties of La-doped Bi ₂ WO ₆ nanoplate-like materials. <i>Applied Surface Science</i> , 2022, 579, 152219.	6.1	37
17	First-principles investigation of transient dynamics of molecular devices. <i>Physical Review B</i> , 2012, 86, .	3.2	36
18	Valley caloritronics and its realization by graphene nanoribbons. <i>Physical Review B</i> , 2015, 92, .	3.2	35

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19	Realizing giant tunneling electroresistance in two-dimensional graphene/BiP ferroelectric tunnel junction. <i>Nanoscale</i> , 2019, 11, 16837-16843.	5.6	35
20	Transient dynamics of molecular devices under a step-like pulse bias. <i>Physical Review B</i> , 2010, 81, .	3.2	29
21	Anderson Localization from the Berry-Curvature Interchange in Quantum Anomalous Hall Systems. <i>Physical Review Letters</i> , 2016, 117, 056802.	7.8	29
22	Tuning a zigzag SiC nanoribbon as a thermal spin current generator. <i>2D Materials</i> , 2017, 4, 035001.	4.4	29
23	Perfect spin and valley polarized quantum transport in twisted SiC nanoribbons. <i>2D Materials</i> , 2017, 4, 025013.	4.4	27
24	Electric control of spin in monolayer WSe_2 field effect transistors. <i>Nanotechnology</i> , 2014, 25, 435201.	2.6	26
25	Largely Enhanced Photogalvanic Effects in a Phosphorene Photodetector by Strain-Increased Device Asymmetry. <i>Physical Review Applied</i> , 2020, 14, .	3.8	26
26	Giant tunnel electroresistance in ferroelectric tunnel junctions with metal contacts to two-dimensional ferroelectric materials. <i>Physical Review B</i> , 2021, 103, .	3.2	26
27	Oscillation of dynamic conductance of $Al-C_60$ Single-Molecule Junctions: Nonequilibrium Green's function and density functional theory study. <i>Physical Review B</i> , 2009, 79, .	4.5	25
28	Fabrication and Biosensing with CNT/Aligned Mesostructured Silica Core-Shell Nanowires. <i>ACS Applied Materials & Interfaces</i> , 2010, 2, 2767-2772.	8.0	25
29	Universal transport properties of three-dimensional topological insulator nanowires. <i>Physical Review B</i> , 2014, 89, .	3.2	24
30	Influence of dephasing and B/N doping on valley Seebeck effect in zigzag graphene nanoribbons. <i>Carbon</i> , 2018, 126, 183-189.	10.3	22
31	Gate-tunable large spin polarization in a few-layer black phosphorus-based spintronic device. <i>Nanoscale</i> , 2019, 11, 11872-11878.	5.6	19
32	Near-Field Energy Transfer between Graphene and Magneto-Optic Media. <i>Physical Review Letters</i> , 2021, 127, 247401.	7.8	19
33	First-principles calculation of current density in molecular devices. <i>Physical Review B</i> , 2011, 84, .	3.2	18
34	Robust generation of half-metallic transport and pure spin current with photogalvanic effect in zigzag silicene nanoribbons. <i>Journal of Physics Condensed Matter</i> , 2019, 31, 495701.	1.8	18
35	Pure spin current generation with photogalvanic effect in graphene interconnect junctions. <i>Nanophotonics</i> , 2021, 10, 1701-1709.	6.0	18
36	Realizing robust half-metallic transport with chemically modified graphene nanoribbons. <i>Carbon</i> , 2019, 141, 676-684.	10.3	17

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37	Gate controllable optical spin current generation in zigzag graphene nanoribbon. Carbon, 2021, 173, 565-571.	10.3	17
38	Two-Dimensional \hat{I}^3 -Graphyne Suspended on Si(111): A Hybrid Device. Journal of Physical Chemistry C, 2016, 120, 4605-4611.	3.1	16
39	First-principles investigation of alternating current density distribution in molecular devices. Physical Review B, 2012, 86, .	3.2	15
40	A novel electrically controllable volatile memory device based on few-layer black phosphorus. Journal of Materials Chemistry C, 2018, 6, 2460-2466.	5.5	15
41	Influence of surface charges on the emission polarization properties of single CdSe/CdS dot-in-rods. Frontiers of Physics, 2019, 14, 1.	5.0	13
42	First principles calculation of ac conductance for Al-BDT-Al and Al-Cn-Al systems. AIP Advances, 2011, 1, 042180.	1.3	12
43	Investigation of transient heat current from first principles using complex absorbing potential. Physical Review B, 2014, 90, .	3.2	12
44	An electrically switchable anti-ferroelectric bilayer In_2Se_3 based opto-spintronic device. Nanoscale, 2021, 13, 8555-8561.	5.6	12
45	Thermal rectification in a double quantum dots system with a polaron effect. Physical Review B, 2018, 97, .	3.2	11
46	Spin current generation by thermal gradient in graphene/h-BN/graphene lateral heterojunctions. Journal Physics D: Applied Physics, 2019, 52, 015303.	2.8	11
47	Antichiral edge states and hinge states based on the Haldane model. Physical Review B, 2021, 104, .	3.2	11
48	Giant Tunneling Electroresistance Induced by Interfacial Doping in $\text{Pt}/\text{BaO}/\text{MnO}_2/\text{Pt}$ Ferroelectric Tunnel Junctions. Physical Review Applied, 2022, 17, .	3.8	11
49	Large tunnel magnetoresistance ratio in $\text{Fe}/\text{O}/\text{NaCl}/\text{O}/\text{Fe}$. Journal of Applied Physics, 2015, 118, 093902.	2.5	10
50	Enhancement of shot noise due to the fluctuation of Coulomb interaction. Physical Review B, 2012, 85, .	3.2	9
51	Enhancing the spin transfer torque in magnetic tunnel junctions by ac modulation. Physical Review B, 2017, 95, .	3.2	7
52	First-principles investigation of transient spin transfer torque in magnetic multilayer systems. Physical Review B, 2017, 96, .	3.2	7
53	Domain-wall induced giant tunneling electroresistance effect in two-dimensional Graphene/ In_2Se_3 ferroelectric tunnel junctions. Physica E: Low-Dimensional Systems and Nanostructures, 2021, 133, 114783.	2.7	7
54	Site and length dependent quantum interference and resonance in the electron transport of armchair carbon nanotube molecular junctions. Physical Chemistry Chemical Physics, 2022, 24, 8032-8040.	2.8	7

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55	Full counting statistics of conductance for disordered systems. <i>Physical Review B</i> , 2017, 96, .	3.2	6
56	Giant magnetoresistance and dual spin filtering effect in ferromagnetic 6,6,12/ $\sqrt{3}$ -graphyne zigzag nanoribbon lateral heterojunction. <i>Physical Chemistry Chemical Physics</i> , 2020, 22, 18548-18555.	2.8	6
57	Flexible engineering of light emission in monolayer MoS ₂ via direct laser writing for multimode optical recording. <i>AIP Advances</i> , 2020, 10, 045230.	1.3	6
58	Flexible electromagnetic manipulation by topological one-way large-area waveguide states. <i>Physical Review B</i> , 2022, 105, .	3.2	6
59	Entanglement entropy fluctuation and distribution for open systems. <i>Physical Review B</i> , 2017, 95, .	3.2	5
60	Visualizing Quantum Coherence Based on Single-Molecule Coherent Modulation Microscopy. <i>Nano Letters</i> , 2021, 21, 1477-1483.	9.1	4
61	Negative differential resistance in GeSi core-shell transport junctions: the role of local sp ² hybridization. <i>Nanoscale</i> , 2016, 8, 16026-16033.	5.6	3
62	Realizing fully spin polarized transport in graphene nanoribbons with design of van der Waals vertical heterostructure leads. <i>Journal Physics D: Applied Physics</i> , 2018, 51, 385301.	2.8	3
63	Giant tunneling electroresistance arising from reversible partial barrier metallization in the NaTiO ₃ /BaTiO ₃ /LaTiO ₃ ferroelectric tunnel junction. <i>Physical Chemistry Chemical Physics</i> , 2021, 23, 16349-16356.	2.8	3
64	Quantum transport investigation of anomalous Hall resistance in four-probe magnetic nanostructures. <i>Physical Review B</i> , 2016, 94, .	3.2	2
65	Frequency-dependent transport properties in disordered systems: A generalized coherent potential approximation approach. <i>Physical Review B</i> , 2019, 99, .	3.2	2
66	Gain-induced large optical torque in optical twist settings. <i>Chinese Physics B</i> , 2020, 29, 084201.	1.4	2
67	Gate tunable self-powered few-layer black phosphorus broadband photodetector. <i>Physical Chemistry Chemical Physics</i> , 2021, 23, 399-404.	2.8	2
68	First-principles investigation of quantum transport through an endohedral N@C ₆₀ in the Coulomb blockade regime. <i>Journal of Physics Condensed Matter</i> , 2013, 25, 495302.	1.8	1
69	First-principles investigation of transient current of molecular devices by using complex absorbing potential. , 2013, , .		1
70	Magnetization dynamics induced by the Rashba effect in ferromagnetic films. <i>Nanoscale</i> , 2018, 10, 18728-18733.	5.6	1