

# Zheng Liu

## List of Publications by Year in descending order

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60  
papers

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citations

117625

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all docs

63  
docs citations

63  
times ranked

7897  
citing authors

#	ARTICLE	IF	CITATIONS
1	Effect of stacking order on the electronic state of $\text{TaSe}_2$ . Physical Review B, 2022, 105, .	3.2	27
2	Reconciling the bulk metallic and surface insulating state in $\text{TaSe}_2$ . Physical Review B, 2022, 105, .	3.2	9
3	Visualizing the evolution from Mott insulator to Anderson insulator in Ti-doped 1T-TaS <sub>2</sub> . Npj Quantum Materials, 2022, 7, .	5.2	9
4	Flame-retardant single-ion conducting polymer electrolytes based on anion acceptors for high-safety lithium metal batteries. Journal of Materials Chemistry A, 2021, 9, 7692-7702.	10.3	33
5	Progress and Perspective: MXene and MXene-Based Nanomaterials for High-Performance Energy Storage Devices. Advanced Electronic Materials, 2021, 7, 2000967.	5.1	122
6	Prediction of intrinsic topological superconductivity in Mn-doped GeTe monolayer from first-principles. Npj Computational Materials, 2021, 7, .	8.7	15
7	An Anode Material for Lithium Storage: Si@N,S-Doped Carbon Synthesized via In Situ Self-Polymerization. ACS Applied Energy Materials, 2021, 4, 3555-3562.	5.1	5
8	Orthorhombic Cobalt Ditelluride with Te Vacancy Defects Anchoring on Elastic MXene Enables Efficient Potassium-Ion Storage. Advanced Materials, 2021, 33, e2100272.	21.0	66
9	Testing density functional theory in a quantum Ising chain. Physical Review B, 2021, 104, .	3.2	2
10	Understanding the flat band in $\text{TaSe}_2$ using a rotated basis. Physical Review B, 2021, 104, .	3.2	14
11	Tunable bending modulus and bending limit of oxidized graphene. Nanoscale, 2020, 12, 1623-1628.	5.6	16
12	Single-ion conducting gel polymer electrolytes: design, preparation and application. Journal of Materials Chemistry A, 2020, 8, 1557-1577.	10.3	154
13	Scanning tunneling spectroscopic study of monolayer 1T-TaS <sub>2</sub> and 1T-TaSe <sub>2</sub> . Nano Research, 2020, 13, 133-137.	10.4	46
14	Nonflammable organic electrolytes for high-safety lithium-ion batteries. Energy Storage Materials, 2020, 32, 425-447.	18.0	127
15	A first-principle perspective on electronic nematicity in FeSe. Npj Quantum Materials, 2020, 5, .	5.2	15
16	Stabilizing Ni-Rich $\text{LiNi}_{0.92}\text{Co}_{0.06}\text{Al}_{0.02}\text{O}_2$ Cathodes by Boracic Polyanion and Tungsten Cation Co-Doping for High-Energy Lithium Batteries. ChemElectroChem, 2020, 7, 3811-3817.	3.4	24
17	A High-Performance Carbonate-Free Lithium   Garnet Interface Enabled by a Trace Amount of Sodium. Advanced Materials, 2020, 32, e2000575.	21.0	58
18	In-plane ordering of oxygen vacancies in a high- $T_c$ cuprate superconductor with compressed Cu-O octahedrons: An automated cluster expansion study. Physical Review Materials, 2020, 4, .	2.4	12

#	ARTICLE	IF	CITATIONS
19	Renormalization of the Mott gap by lattice entropy: The case of 1T- TaS <sub>2</sub> . Physical Review Research, 2020, 2, .	3.6	4
20	Improving the cycling performance of LiNi <sub>0.8</sub> Co <sub>0.15</sub> Al <sub>0.05</sub> O <sub>2</sub> cathode materials via zirconium and fluorine co-substitution. Journal of Alloys and Compounds, 2019, 806, 136-145.	5.5	32
21	Electron-nuclear hyperfine coupling in quantum kagome antiferromagnets from first-principles calculation and a reflection of the defect effect. Science Bulletin, 2019, 64, 1584-1591.	9.0	0
22	Dichotomy between frustrated local spins and conjugated electrons in a two-dimensional metal-organic framework. Nanoscale, 2019, 11, 955-961.	5.6	34
23	Topological superconducting phase in high-T <sub>c</sub> superconductor MgB <sub>2</sub> with Dirac-nodal-line fermions. Npj Computational Materials, 2019, 5, .	8.7	52
24	Kagome bands disguised in a coloring-triangle lattice. Physical Review B, 2019, 99, .	3.2	42
25	Prediction of two-dimensional nodal-line semimetals in a carbon nitride covalent network. Journal of Materials Chemistry A, 2018, 6, 11252-11259.	10.3	101
26	Tunable spin states in the two-dimensional magnet CrI <sub>3</sub> . Nanoscale, 2018, 10, 14298-14303.	5.6	136
27	Role of interstitial hydrogen in $\text{SrCoO}_{2.5}$ antiferromagnetic insulator. Physical Review Materials, 2018, 2, .	3.2	5
28	$\pi$ -conjugation in the epitaxial Si(111)- $3\sqrt{3}\sqrt{3}$ surface: Unconventional $\pi$ -bonding geometry for Si. Physical Review B, 2017, 95, .	13.7	45
29	Lithiation Thermodynamics and Kinetics of the TiO <sub>2</sub> (B) Nanoparticles. Journal of the American Chemical Society, 2017, 139, 13330-13341.	3.3	98
30	Gapped Spin-1/2 Spinon Excitations in a New Kagome Quantum Spin Liquid Compound Cu <sub>3</sub> Zn(OH) <sub>6</sub> FBr. Chinese Physics Letters, 2017, 34, 077502.	8.9	53
31	Mottness Collapse in $\text{TaS}_2$ Transition-Metal Dichalcogenide: An Interplay between Localized. Physical Review X, 2017, 7, .	3.2	18
32	Electronic and spin dynamics in the insulating iron pnictide $\text{NaFe}_{1-x}\text{Co}_x\text{P}_2\text{As}_2$ . Physical Review B, 2017, 96, .	3.2	31
33	Magnetic Dirac fermions and Chern insulator supported on pristine silicon surface. Physical Review B, 2016, 94, .	3.2	31
34	First-principles study of the organometallic compound Cu(1,3-bdc). Physical Review B, 2015, 92, .	13.7	55
35	Selectively doping barlowite for quantum spin liquid: A first-principles study. Physical Review B, 2015, 92, .		
36	The Morphology of TiO <sub>2</sub> (B) Nanoparticles. Journal of the American Chemical Society, 2015, 137, 13612-13623.		

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37	Exotic electronic states in the world of flat bands: From theory to material. Chinese Physics B, 2014, 23, 077308.	1.4	153
38	Exotic fractional topological states in a two-dimensional organometallic material. Physical Review B, 2014, 89, .	3.2	13
39	$\frac{1}{2} \frac{d}{dt} \langle \sigma_x \rangle$ Graphene Kagome Band in a Hexagonal Lattice. Physical Review Letters, 2014, 113, 236802.	7.1	68
40	The Shape of TiO <sub>2</sub> -B Nanoparticles. Journal of the American Chemical Society, 2014, 136, 6306-6312.	13.7	33
41	The role of LiO <sub>2</sub> solubility in O <sub>2</sub> reduction in aprotic solvents and its consequences for Li-O <sub>2</sub> batteries. Nature Chemistry, 2014, 6, 1091-1099.	13.6	942
42	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
43	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
44	A stable cathode for the aprotic Li-O <sub>2</sub> battery. Nature Materials, 2013, 12, 1050-1056.	27.5	677
45	Nanostructured TiO <sub>2</sub> (B): the effect of size and shape on anode properties for Li-ion batteries. Progress in Natural Science: Materials International, 2013, 23, 235-244.	4.4	79
46	Organic topological insulators in organometallic lattices. Nature Communications, 2013, 4, 1471.	12.8	238
47	A solid with a hierarchical tetramodal micro-meso-macro pore size distribution. Nature Communications, 2013, 4, 2015.	12.8	85
48	Quantum Anomalous Hall Effect in 2D Organic Topological Insulators. Physical Review Letters, 2013, 110, 196801.	7.8	292
49	First-Principles Calculations on the Effect of Doping and Biaxial Tensile Strain on Electron-Phonon Coupling in Graphene. Physical Review Letters, 2013, 111, 196802.	7.8	197
50	Observation of Rashba splitting on reconstructed surface. Surface Science, 2013, 618, 115-119.	1.9	7
51	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
52	Flat Chern Band in a Two-Dimensional Organometallic Framework. Physical Review Letters, 2013, 110, 106804.	7.8	191
53	Electronic Strengthening of Graphene by Charge Doping. Physical Review Letters, 2012, 109, 226802.	7.8	104
54	Quantum Electronic Stress: Density-Functional-Theory Formulation and Physical Manifestation. Physical Review Letters, 2012, 109, 055501.	7.8	55

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55	Topological and electronic transitions in a Sb(111) nanofilm: The interplay between quantum confinement and surface effect. Physical Review B, 2012, 85, .	3.2	164
56	Nanoparticulate TiO <sub>2</sub> (B): An Anode for Lithium-Ion Batteries. Angewandte Chemie - International Edition, 2012, 51, 2164-2167.	13.8	305
57	Stable Nontrivial $Z_2$ Topology in Ultrathin Bi (111) Films: A First-Principles Study. Physical Review Letters, 2011, 107, 136805.	7.8	292
58	Electronic Phase Diagram of Single-Element Silicon $\epsilon$ -Strain $\epsilon$ -Superlattices. Physical Review Letters, 2010, 105, 016802.	7.8	57
59	Relationships between strain and band structure in Si(001) and Si(110) nanomembranes. Physical Review B, 2009, 80, .	3.2	16
60	Facile Synthesis and Characterization of Novel Mesoporous and Mesorelief Oxides with Gyroidal Structures. Journal of the American Chemical Society, 2004, 126, 865-875.	13.7	297