Zheng Liu

List of Publications by Year in descending order

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Version: 2024-02-01

60	6,177	117625	123424
papers	citations	34 h-index	61 g-index

63	63	63	7897
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	The role of LiO2 solubility in O2 reduction in aprotic solvents and its consequences for Liâ€“O2 batteries. Nature Chemistry, 2014, 6, 1091-1099.	13.6	942
2	A stable cathode for the aprotic Liâ€“O2Âbattery. Nature Materials, 2013, 12, 1050-1056.	27.5	677
3	Nanoparticulate TiO₂(B): An Anode for Lithiumâ€Ion Batteries. Angewandte Chemie - International Edition, 2012, 51, 2164-2167.	13.8	305
4	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
5	Stable Nontrivial<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:msub><mml:mi>Z</mml:mi><mml:mn>2</mml:mn></mml:msub></mml:math>Topology in Ultrathin Bi (111) Films: A First-Principles Study. Physical Review Letters, 2011, 107, 136805.	7.8	292
6	Quantum Anomalous Hall Effect in 2D Organic Topological Insulators. Physical Review Letters, 2013, 110, 196801.	7.8	292
7	Organic topological insulators in organometallic lattices. Nature Communications, 2013, 4, 1471.	12.8	238
8	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
9	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
10	Flat Chern Band in a Two-Dimensional Organometallic Framework. Physical Review Letters, 2013, 110, 106804.	7.8	191
11	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
12	Single-ion conducting gel polymer electrolytes: design, preparation and application. Journal of Materials Chemistry A, 2020, 8, 1557-1577.	10.3	154
13	Exotic electronic states in the world of flat bands: From theory to material. Chinese Physics B, 2014, 23, 077308.	1.4	153
14	Tunable spin states in the two-dimensional magnet CrI₃. Nanoscale, 2018, 10, 14298-14303.	5.6	136
15	Nonflammable organic electrolytes for high-safety lithium-ion batteries. Energy Storage Materials, 2020, 32, 425-447.	18.0	127
16	Progress and Perspective: MXene and MXeneâ€Based Nanomaterials for Highâ€Performance Energy Storage Devices. Advanced Electronic Materials, 2021, 7, 2000967.	5.1	122
17	Electronic Strengthening of Graphene by Charge Doping. Physical Review Letters, 2012, 109, 226802.	7.8	104
18	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

#	Article	IF	Citations
19	Gapped Spin-1/2 Spinon Excitations in a New Kagome Quantum Spin Liquid Compound Cu₃Zn(OH)₆FBr. Chinese Physics Letters, 2017, 34, 077502.	3.3	98
20	<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
21	A solid with a hierarchical tetramodal micro-meso-macro pore size distribution. Nature Communications, 2013, 4, 2015.	12.8	85
22	Nanostructured TiO2(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
23	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
24	Orthorhombic Cobalt Ditelluride with Te Vacancy Defects Anchoring on Elastic MXene Enables Efficient Potassiumâ€Ion Storage. Advanced Materials, 2021, 33, e2100272.	21.0	66
25	A Highâ€Performance Carbonateâ€Free Lithium | Garnet Interface Enabled by a Trace Amount of Sodium. Advanced Materials, 2020, 32, e2000575.	21.0	58
26	Electronic Phase Diagram of Single-Element Silicon â€œStrainâ€•Superlattices. Physical Review Letters, 2010, 105, 016802.	7.8	57
27	Quantum Electronic Stress: Density-Functional-Theory Formulation and Physical Manifestation. Physical Review Letters, 2012, 109, 055501.	7.8	55
28	The Morphology of TiO₂ (B) Nanoparticles. Journal of the American Chemical Society, 2015, 137, 13612-13623.	13.7	55
29	Mottness Collapse in <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:mn>1</mml:mn><mml:mi mathvariant="normal">T</mml:mi><mml:mtext>â€™</mml:mtext><mml:msub><mml:mrow><mml:mi>TaS</mml:mi></mml:mrow><m Transition-Metal Dichalcogenide: An Interplay between Localized. Physical Review X, 2017, 7, .	8.9	53
30	Topological superconducting phase in high-Tc superconductor MgB2 with Diracâ€“nodal-line fermions. Npj Computational Materials, 2019, 5, .	8.7	52
31	Scanning tunneling spectroscopic study of monolayer 1T-TaS2 and 1T-TaSe2. Nano Research, 2020, 13, 133-137.	10.4	46
32	Lithiation Thermodynamics and Kinetics of the TiO₂ (B) Nanoparticles. Journal of the American Chemical Society, 2017, 139, 13330-13341.	13.7	45
33	Kagome bands disguised in a coloring-triangle lattice. Physical Review B, 2019, 99, .	3.2	42
34	Dichotomy between frustrated local spins and conjugated electrons in a two-dimensional metalâ€“organic framework. Nanoscale, 2019, 11, 955-961.	5.6	34
35	The Shape of TiO₂-B Nanoparticles. Journal of the American Chemical Society, 2014, 136, 6306-6312.	13.7	33
36	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

#	ARTICLE	IF	CITATIONS
37	Improving the cycling performance of LiNi0.8Co0.15Al0.05O2 cathode materials via zirconium and fluorine co-substitution. Journal of Alloys and Compounds, 2019, 806, 136-145.	5.5	32
38	Selectively doping barlowite for quantum spin liquid: A first-principles study. Physical Review B, 2015, 92, .	3.2	31
39	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
40	Effect of stacking order on the electronic state of <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:mn>1</mml:mn><mml:mi>T</mml:mi><mml:mtext>âˆ’</mm Physical Review B, 2022, 105, .	3.2	27
41	Stabilizing Niâ€Rich LiNi_{0.92}Co_{0.06}Al_{0.02}O₂ Cathodes by Boracic Polyanion and Tungsten Cation Coâ€Doping for Highâ€Energy Lithiumâ€Ion Batteries. ChemElectroChem, 2020, 7, 3811-3817.	3.4	24
42	Magnetic Dirac fermions and Chern insulator supported on pristine silicon surface. Physical Review B, 2016, 94, .	3.2	18
43	Relationships between strain and band structure in Si(001) and Si(110) nanomembranes. Physical Review B, 2009, 80, .	3.2	16
44	Tunable bending modulus and bending limit of oxidized graphene. Nanoscale, 2020, 12, 1623-1628.	5.6	16
45	A first-principle perspective on electronic nematicity in FeSe. Npj Quantum Materials, 2020, 5, .	5.2	15
46	Prediction of intrinsic topological superconductivity in Mn-doped GeTe monolayer from first-principles. Npj Computational Materials, 2021, 7, .	8.7	15
47	Exotic fractional topological states in a two-dimensional organometallic material. Physical Review B, 2014, 89, .	3.2	13
48	In-plane ordering of oxygen vacancies in a high- <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:msub><mml:mi>T</mml:mi><mml:mi>c</mml:mi></mml:msub></mml:ma cuprate superconductor with compressed Cu-O octahedrons: An automated cluster expansion study. Physical Review Materials, 2020, 4, .	2.4	12
49	Role of interstitial hydrogen in <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:msub><mml:mi>SrCoO</mml:mi><mml:mrow><mml:mn>2.5</mml:mn antiferromagnetic insulator. Physical Review Materials, 2018, 2, .	2.4	9
50	Reconciling the bulk metallic and surface insulating state in <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:mn>1</mml:mn><mml:mi>T</mml:mi><mml:mtext>âˆ’</mm mathvariant="normal">TaSe</mml:mi><mml:mn>2</mml:mn></mml:msub></mml:mrow></mml:math>. Physical Review B, 2022, 105, .	3.2	9
51	Visualizing the evolution from Mott insulator to Anderson insulator in Ti-doped 1T-TaS2. Npj Quantum Materials, 2022, 7, .	5.2	9
52	Observation of Rashba splitting on reconstructed surface. Surface Science, 2013, 618, 115-119.	1.9	7
53	First-principles study of the organometallic<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mi>S</mml:mi><mml:mo>=</mml:mo><mml:mfrac><mml:mn>1</mml: compound Cu(1,3-bdc). Physical Review B, 2015, 92, .	3.2	7
54	Ï€ conjugation in the epitaxial Si(111)- 3Ã—3 surface: Unconventional â€œbamboo hatâ€•bonding geometry for Si. Physical Review B, 2017, 95, .	3.2	5

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55	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
56	Electronic and spin dynamics in the insulating iron pnictide<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:msub><mml:mi>NaFe</mml:mi><mml:mrow><mml:mn>0.5< Physical Review B, 2017, 96, .	3.2	4
57	Renormalization of the Mott gap by lattice entropy: The case of 1T- TaS2. Physical Review Research, 2020, 2, .	3.6	4
58	Understanding the flat band in <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mn>1</mml:mn><mml:mi>T</mml:mi><mml:mtext>â’</mml:mtext><mm using a rotated basis. Physical Review B, 2021, 104, .	3.2	4
59	Testing density functional theory in a quantum Ising chain. Physical Review B, 2021, 104, .	3.2	2
60	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