Xian-Lei Sheng

List of Publications by Year
in descending order

47	2,956	186209	214721
papers	citations	28 h-index	47 g-index

47	47	47	2325
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Second-Order Real Nodal-Line Semimetal in Three-Dimensional Graphdiyne. Physical Review Letters, 2022, 128, 026405.	2.9	34
2	Doping-induced structural transformation in the spin-1/2 triangular-lattice antiferromagnet Na2Ba1-xSrxCo(PO4)2. Journal of Alloys and Compounds, 2022, 905, 164147.	2.8	2
3	Phononic real Chern insulator with protected corner modes in graphynes. Physical Review B, 2022, 105, .	1.1	16
4	Tunable anomalous Hall transport in bulk and two-dimensional <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:mn>1</mml:mn><mml:mi>T</mml:mi></mml:mrow><mml:m mathvariant="normal">CrTe</mml:mi><mml:mn>2</mml:mn></mml:msub></mml:math> : A first-principles study. Physical Review B, 2021, 103, .	1.1	24
5	Topological gimbal phonons in <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mi>T</mml:mi></mml:math> -carbon. Physical Review B, 2021, 103, .	1.1	31
6	Switching Spinless and Spinful Topological Phases with Projective <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:mi>P</mml:mi><mml:mi>T</mml:mi></mml:mrow></mml:math> Symmetry. Physical Review Letters, 2021, 126, 196402.	2.9	30
7	Evidence for the random singlet phase in the honeycomb iridate <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:msub><mml:mi>SrIr</mml:mi><mml:mn>2</mml:mn></mml:m mathvariant="normal">O</mml:mi><mml:mn>6</mml:mn></mml:msub></mml:mrow></mml:math>. Physical Review B, 2021, 103, .	1.1	5
8	Significant inverse magnetocaloric effect induced by quantum criticality. Physical Review Research, 2021, 3, .	1.3	7
9	Graphyne as a second-order and real Chern topological insulator in two dimensions. Physical Review B, 2021, 104, .	1.1	30
10	Multiple magnetism-controlled topological states in EuAgAs. Physical Review B, 2021, 104, .	1.1	12
11	Intrinsic Second-Order Anomalous Hall Effect and Its Application in Compensated Antiferromagnets. Physical Review Letters, 2021, 127, 277202.	2.9	54
12	Universal Approach to Magnetic Second-Order Topological Insulator. Physical Review Letters, 2020, 125, 056402.	2.9	91
13	Kosterlitz-Thouless melting of magnetic order in the triangular quantum Ising material TmMgGaO4. Nature Communications, 2020, 11, 1111.	5.8	46
14	Valley-Layer Coupling: A New Design Principle for Valleytronics. Physical Review Letters, 2020, 124, 037701.	2.9	69
15	Two-dimensional CoSe structures: Intrinsic magnetism, strain-tunable anisotropic valleys, magnetic Weyl point, and antiferromagnetic metal state. Physical Review B, 2020, 102, .	1.1	8
16	Two-dimensional Weyl half-semimetal and tunable quantum anomalous Hall effect. Physical Review B, 2019, 100, .	1.1	101
17	Room temperature ferromagnetism and antiferromagnetism in two-dimensional iron arsenides. Nanoscale, 2019, 11, 16508-16514.	2.8	18
18	Topological nodal lines and hybrid Weyl nodes in YCoC2. APL Materials, 2019, 7, 101109.	2.2	17

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19	Two-dimensional antiferromagnetic Dirac fermions in monolayer <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:msub><mml:mi>TaCoTe</mml:mi><mml:mn>2</mml:mn></mml:msub> Physical Review B, 2019, 100, .	1.1	22
20	Carboneyane: A nodal line topological carbon with spâ˜sp2Ââ˜sp3 chemical bonds. Carbon, 2019, 152, 909-914.	5.4	13
21	Quadratic and cubic nodal lines stabilized by crystalline symmetry. Physical Review B, 2019, 99, .	1.1	89
22	Weyl-loop half-metal in <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:msub><mml:mrow><mml:mi>Li</mml:mi> Physical Review B, 2019, 99, .	1.1	61
23	Two-Dimensional Second-Order Topological Insulator in Graphdiyne. Physical Review Letters, 2019, 123, 256402.	2.9	193
24	Hourglass Weyl loops in two dimensions: Theory and material realization in monolayer GaTeI family. Physical Review Materials, 2019, 3, .	0.9	44
25	Two-dimensional nodal-loop half-metal in monolayer MnN. Physical Review Materials, 2019, 3, .	0.9	55
26	Nonsymmorphic-symmetry-protected hourglass Dirac loop, nodal line, and Dirac point in bulk and monolayer <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:msub><mml:mi>X</mml:mi><mml:mn>3</mml:mn> (<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mi>X</mml:mi></mml:math> =) Tj ETQq0 0 0 rgBT /Overlock	3.1	115
27	Hybrid nodal loop metal: Unconventional magnetoresponse and material realization. Physical Review B, 2018, 97, .	1.1	75
28	Nodal surface semimetals: Theory and material realization. Physical Review B, 2018, 97, .	1.1	248
29	Quadratic contact point semimetal: Theory and material realization. Physical Review B, 2018, 98, .	1.1	57
30	Nodal loop and nodal surface states in the <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:msub><mml:mi>Ti</mml:mi><mml:mn>3</mml:mn> family of materials. Physical Review B, 2018, 97, .	3.1	115
31	Monolayer <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:msub><mml:mi>Mg</mml:mi><mml:mn>2</mml:mn> mathvariant="normal">C</mml:mi></mml:mrow></mml:math> : Negative Poisson's ratio and unconventional two-dimensional emergent fermions. Physical Review Materials, 2018, 2, .	0.9	36
32	The geometric and electronic transitions in body-centered-tetragonal C8: A first principle study. Carbon, 2017, 120, 89-94.	5.4	17
33	Criticality-Enhanced Magnetocaloric Effect in Quantum Spin Chain Material Copper Nitrate. Scientific Reports, 2017, 7, 44643.	1.6	7
34	Hourglass Dirac chain metal in rhenium dioxide. Nature Communications, 2017, 8, 1844.	5.8	116
35	From Multiple Nodal Chain to Dirac/Weyl Semimetal and Topological Insulator in Ternary Hexagonal Materials. Journal of Physical Chemistry C, 2017, 121, 28587-28593.	1.5	21
36	d Orbital Topological Insulator and Semimetal in the Antifluorite Cu₂S Family: Contrasting Spin Helicities, Nodal Box, and Hybrid Surface States. Journal of Physical Chemistry Letters, 2017, 8, 3506-3511.	2.1	65

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37	Two-layer of the <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:mn>5</mml:mn><mml:mi>d</mml:mi></mml:mrow></mml transition metal trichloride <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:msub><mml:mi>OsCl</mml:mi><mml:mn>3</mml:mn></mml:msub></ : A playground for two-dimensional magnetism, room-temperature quantum anomalous Hall effect, and topological phase transitions. Physical Review B, 2017, 95, .	1.1	98
38	Coexistence of four-band nodal rings and triply degenerate nodal points in centrosymmetric metal diborides. Physical Review B, 2017, 95, .	1.1	138
39	Graphdiyne nanoribbons with open hexagonal rings: Existence of topological unprotected edge states. Physics Letters, Section A: General, Atomic and Solid State Physics, 2017, 381, 3337-3341.	0.9	12
40	Ternary wurtzite CaAgBi materials family: A playground for essential and accidental, type-I and type-II Dirac fermions. Physical Review Materials, 2017, 1, .	0.9	59
41	Diamond polytypes under high pressure: A first-principles study. Computational Materials Science, 2015, 98, 129-135.	1.4	12
42	Topological insulator to Dirac semimetal transition driven by sign change of spin-orbit coupling in thallium nitride. Physical Review B, 2014, 90, .	1.1	43
43	Strain-induced Dirac cone-like electronic structures and semiconductorâ€“semimetal transition in graphdiyne. Physical Chemistry Chemical Physics, 2013, 15, 8179.	1.3	81
44	Octagraphene as a versatile carbon atomic sheet for novel nanotubes, unconventional fullerenes, and hydrogen storage. Journal of Applied Physics, 2012, 112, .	1.1	110
45	T-Carbon: A Novel Carbon Allotrope. Physical Review Letters, 2011, 106, 155703.	2.9	421
46	Boron carbon nanotube superlattices: Geometry, electronic structure and quantum conductance. Physics Letters, Section A: General, Atomic and Solid State Physics, 2010, 375, 63-66.	0.9	2
47	Boron fullerenes B32+8k with four-membered rings and B32 solid phases: geometrical structures and electronic properties. Physical Chemistry Chemical Physics, 2009, 11, 9696.	1.3	36