Jia-Tao Sun

List of Publications by Year
in descending order

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72 papers	2,577 citations	279798 23 h-index	189892 50 g-index
73 all docs	73 docs citations	73 times ranked	3980 citing authors

#	Article	IF	Citations
1	Monolayer puckered pentagonal VTe2: An emergent two-dimensional ferromagnetic semiconductor with multiferroic coupling. Nano Research, 2022, 15, 1486-1491.	10.4	20
2	Emission properties of sequentially deposited ultrathin CH3NH3PbI3/MoS2 heterostructures. Current Applied Physics, 2022, 36, 27-33.	2.4	8
3	Size Dependence of Charge-Density-Wave Orders in Single-Layer NbSe₂ Hetero/Homophase Junctions. Journal of Physical Chemistry Letters, 2022, 13, 1901-1907.	4.6	6
4	Direct evidence of two-dimensional electron gas-like band structures in hafnene. Nano Research, 2022, 15, 3770-3774.	10.4	0
5	Rational Design of Heteroanionic Two-Dimensional Materials with Emerging Topological, Magnetic, and Dielectric Properties. Journal of Physical Chemistry Letters, 2022, , 3594-3601.	4.6	9
6	High-temperature fractional quantum Hall state in the Floquet kagome flat band. Physical Review B, 2022, 105, .	3.2	7
7	Nonequilibrium states in quantum materials under time-period driving. Wuli Xuebao/Acta Physica Sinica, 2021, .	0.5	1
8	Direct identification of Mott Hubbard band pattern beyond charge density wave superlattice in monolayer 1T-NbSe2. Nature Communications, 2021, 12, 1978.	12.8	45
9	Band engineering of honeycomb monolayer CuSe via atomic modification*. Chinese Physics B, 2021, 30, 106807.	1.4	1
10	Manipulating Weyl quasiparticles by orbital-selective photoexcitation in WTe2. Nature Communications, 2021, 12, 1885.	12.8	25
11	Waferâ€Scale Oxygenâ€Doped MoS₂ Monolayer. Small Methods, 2021, 5, e2100091.	8.6	30
12	Inside Back Cover: Waferâ€Scale Oxygenâ€Doped MoS₂ Monolayer (Small Methods 6/2021). Small Methods, 2021, 5, 2170026.	8.6	0
13	Intriguing one-dimensional electronic behavior in emerging two-dimensional materials. Nano Research, 2021, 14, 3810-3819.	10.4	5
14	Topical review: recent progress of charge density waves in 2D transition metal dichalcogenide-based heterojunctions and their applications. Nanotechnology, 2021, 32, 492001.	2.6	30
15	Manipulation of Dirac Fermions in Nanochain-Structured Graphene. Chinese Physics Letters, 2021, 38, 097101.	3.3	4
16	Robust Interlayer Exciton in WS₂/MoSe₂ van der Waals Heterostructure under High Pressure. Nano Letters, 2021, 21, 8035-8042.	9.1	30
17	Quantum charge and spin pumping in monolayer phosphorene. Physical Review B, 2020, 102, .	3.2	10
18	Fermionic Analogue of High Temperature Hawking Radiation in Black Phosphorus. Chinese Physics Letters, 2020, 37, 067101.	3.3	18

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19	Recent progress in 2D group-V elemental monolayers: fabrications and properties. Journal of Semiconductors, 2020, 41, 081003.	3.7	11
20	Fabrication and manipulation of nanosized graphene homojunction with atomically-controlled boundaries. Nano Research, 2020, 13, 3286-3291.	10.4	3
21	Anisotropic High Carrier Mobilities of One-Third-Hydrogenated Group-V Elemental Monolayers. Journal of Physical Chemistry C, 2020, 124, 12628-12635.	3.1	1
22	The effect of moirÃ© superstructures on topological edge states in twisted bismuthene homojunctions. Science Advances, 2020, 6, eaba2773.	10.3	39
23	Type-II Interface Band Alignment in the vdW PbI₂â€“MoSe₂ Heterostructure. ACS Applied Materials & Interfaces, 2020, 12, 32099-32105.	8.0	20
24	Emergence of <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mi>d</mml:mi></mml:math> -orbital magnetic Dirac fermions in a <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:mi>Mo</mml:mi><mml:msub><mml:mi mathvariant="normal">S</mml:mi><mml:mn>2</mml:mn></mml:msub></mml:mrow></mml:math> monolayer with squared pentagon structure. Physical Review B, 2020, 101, .	3.2	7
25	Quantum anomalous Hall effect in two-dimensional Cu-dicyanobenzene coloring-triangle lattice. Nano Research, 2020, 13, 1571-1575.	10.4	14
26	Simultaneous generation of direct- and indirect-gap photoluminescence in multilayer <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:msub><mml:mi>MoS</mml:mi><mml:mn>2</mml:mn></mml:msub></mml:math> bubbles. Physical Review Materials, 2020, 4, .	2.4	21
27	Progress on 2D topological insulators and potential applications in electronic devices*. Chinese Physics B, 2020, 29, 097304.	1.4	5
28	Evidence of Topological Edge States in Buckled Antimonene Monolayers. Nano Letters, 2019, 19, 6323-6329.	9.1	61
29	Band evolution of two-dimensional transition metal dichalcogenides under electric fields. Applied Physics Letters, 2019, 115, 083104.	3.3	9
30	Ideal type-II Weyl phonons in wurtzite CuI. Physical Review B, 2019, 100, .	3.2	45
31	Spin-Orientation-Dependent Topological States in Two-Dimensional Antiferromagnetic NiTl₂S₄ Monolayers. Nano Letters, 2019, 19, 3321-3326.	9.1	28
32	Engineering Dirac states in graphene: Coexisting type-I and type-II Floquet-Dirac fermions. Physical Review B, 2019, 99, .	3.2	12
33	Orbital design of topological insulators from two-dimensional semiconductors. Nanoscale, 2019, 11, 22743-22747.	5.6	11
34	Quantum nutcracker for near-room-temperature H2 dissociation. Science Bulletin, 2019, 64, 4-7.	9.0	3
35	Epitaxial Growth of Honeycomb Monolayer CuSe with Dirac Nodal Line Fermions. Advanced Materials, 2018, 30, e1707055.	21.0	110
36	Epitaxial Growth of Flat Antimonene Monolayer: A New Honeycomb Analogue of Graphene. Nano Letters, 2018, 18, 2133-2139.	9.1	219

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37	Hidden spin polarization in the 1 T -phase layered transition-metal dichalcogenides MX 2 (M â€¯=â€¯Zr, Hf; X) Tj ETQq1 1 0.784314 rgBT	9.0	25
38	Screening Magnetic Two-Dimensional Atomic Crystals with Nontrivial Electronic Topology. Journal of Physical Chemistry Letters, 2018, 9, 6709-6715.	4.6	53
39	Band engineering of double-wall Mo-based hybrid nanotubes. Chinese Physics B, 2018, 27, 076104.	1.4	4
40	Fabrication of Millimeterâ€Scale, Singleâ€Crystal Oneâ€Thirdâ€Hydrogenated Graphene with Anisotropic Electronic Properties. Advanced Materials, 2018, 30, 1801838.	21.0	19
41	Photoinduced Nonequilibrium Topological States in Strained Black Phosphorus. Physical Review Letters, 2018, 120, 237403.	7.8	80
42	Suppressed superconductivity in substrate-supported Î² ₁₂ borophene by tensile strain and electron doping. 2D Materials, 2017, 4, 025032.	4.4	90
43	Allâ€Silicon Switchable Magnetoelectric Effect through Interlayer Exchange Coupling. ChemPhysChem, 2017, 18, 1916-1920.	2.1	1
44	Intrinsic valley polarization of magnetic VSe₂ monolayers. Journal of Physics Condensed Matter, 2017, 29, 255501.	1.8	73
45	Epitaxial Growth and Airâ€Stability of Monolayer Antimonene on PdTe₂. Advanced Materials, 2017, 29, 1605407.	21.0	313
46	Lattice-Directed Construction of Metalâ€“Organic Molecular Wires of Pentacene on the Au(110) Surface. Journal of Physical Chemistry C, 2017, 121, 21650-21657.	3.1	14
47	Superconducting transition of FeSe / SrTiO3 induced by adsorption of semiconducting organic molecules. Physical Review B, 2017, 95, .	3.2	10
48	Tunable electron-phonon coupling superconductivity in platinum diselenide. Physical Review Materials, 2017, 1, .	2.4	18
49	Prediction of silicon-based room temperature quantum spin Hall insulator via orbital mixing. Europhysics Letters, 2016, 113, 67003.	2.0	6
50	Adsorption-enhanced spinâ€“orbit coupling of buckled honeycomb silicon. Physica E: Low-Dimensional Systems and Nanostructures, 2016, 83, 141-145.	2.7	0
51	Nonlinear Rashba spin splitting in transition metal dichalcogenide monolayers. Nanoscale, 2016, 8, 17854-17860.	5.6	60
52	Spin-polarized valley Hall effect in ultrathin silicon nanomembrane via interlayer antiferromagnetic coupling. 2D Materials, 2016, 3, 035026.	4.4	9
53	Magnetic Dirac fermions and Chern insulator supported on pristine silicon surface. Physical Review B, 2016, 94, .	3.2	18
54	Tunable magnetic moment and potential half-metal behavior of Fe-nanostructure-embedded graphene perforation. Carbon, 2016, 107, 268-272.	10.3	6

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55	Competition between Hexagonal and Tetragonal Hexabromobenzene Packing on Au(111). ACS Nano, 2016, 10, 3198-3205.	14.6	32
56	Surface confined quantum well state in MoS2(0001) thin film. Applied Physics Letters, 2015, 107, .	3.3	4
57	â€œH₂ spongeâ€• pressure as a means for reversible high-capacity hydrogen storage in nanoporous Ca-intercalated covalent organic frameworks. Nanoscale, 2015, 7, 6319-6324.	5.6	12
58	Tuning magnetic splitting of zigzag graphene nanoribbons by edge functionalization with hydroxyl groups. Journal of Applied Physics, 2015, 117, .	2.5	10
59	Scanning Tunneling Microscope and Photoemission Spectroscopy Investigations of Bismuth on Epitaxial Graphene on SiC(0001). Journal of Physical Chemistry C, 2014, 118, 24995-24999.	3.1	20
60	The origin of half-metallicity in conjugated electron systemsâ€”a study on transition-metal-doped graphyne. Journal of Physics Condensed Matter, 2013, 25, 505502.	1.8	16
61	Energy-Gap Opening in a Bi(110) Nanoribbon Induced by Edge Reconstruction. Physical Review Letters, 2012, 109, 246804.	7.8	62
62	Trapping Single Polar Molecules in SiC Nanomesh via Out-of-Plane Dipoles. ACS Nano, 2012, 6, 2774-2778.	14.6	17
63	Spatially Resolved Electronic Structures of Atomically Precise Armchair Graphene Nanoribbons. Scientific Reports, 2012, 2, 983.	3.3	246
64	Theoretical investigation of the electronic structures and carrier transport of hybrid graphene and boron nitride nanostructure. AIP Advances, 2012, 2, .	1.3	11
65	Epitaxial growth of diindenoperylene ultrathin films on Ag(111) investigated by LT-STM and LEED. Physical Chemistry Chemical Physics, 2011, 13, 20933.	2.8	17
66	Substrate-mediated electron tunneling through molecule-electrode interfaces. Applied Physics Letters, 2011, 99, 143122.	3.3	2
67	Tunable two-dimensional molecular dipole dot arrays on graphite. Applied Physics Letters, 2011, 99, 143114.	3.3	18
68	Copper Phthalocyanine on Hydrogenated and Bare Diamond (001)-2 Ã— 1: Influence of Interfacial Interactions on Molecular Orientations. Langmuir, 2010, 26, 165-172.	3.5	21
69	Highly Ordered, Millimeterâ€Scale, Continuous, Singleâ€Crystalline Graphene Monolayer Formed on Ru (0001). Advanced Materials, 2009, 21, 2777-2780.	21.0	389
70	Interface electron structure of Fe3Al/TiC composites. Transactions of Nonferrous Metals Society of China, 2006, 16, 294-298.	4.2	3
71	Structural evolution of mechanically alloyed nanocrystalline Feâ€“28Al powders. Powder Technology, 2005, 149, 121-126.	4.2	26
72	Screening and Design of Bipolar Magnetic-Semiconducting Monolayers and Heterostructures. ACS Applied Electronic Materials, 0, , .	4.3	3