Jian-Tao Wang

List of Publications by Year
in descending order

82 papers	2,003 citations	304743 22 h-index	254184 43 g-index
83 all docs	83 docs citations	83 times ranked	1765 citing authors

#	Article	IF	Citations
1	Low-Temperature Phase Transformation from Graphite to<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mi>s</mml:mi><mml:msup><mml:mi>p</mml:mi><mml:mn>3</mml:mn></mml:msup></mml:math>Orthorhombic Carbon. Physical Review Letters, 2011, 106, 075501.	7.8	259
2	Body-Centered Orthorhombic<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:msub><mml:mrow><mml:mi mathvariant="normal">C</mml:mi></mml:mrow><mml:mrow><mml:mn>16</mml:mn></mml:mrow></mml:msub></mml:mrow></mml:math> A Novel Topological Node-Line Semimetal. Physical Review Letters, 2016, 116, 195501.	7.8	170
3	Prediction of a new two-dimensional metallic carbon allotrope. Physical Chemistry Chemical Physics, 2013, 15, 2024-2030.	2.8	124
4	Topological Nodal-Net Semimetal in a Graphene Network Structure. Physical Review Letters, 2018, 120, 026402.	7.8	93
5	Orthorhombic carbon allotrope of compressed graphite:Ab initiocalculations. Physical Review B, 2012, 85, .	3.2	80
6	A New Carbon Allotrope with Six-Fold Helical Chains in all-sp2 Bonding Networks. Scientific Reports, 2014, 4, 4339.	3.3	77
7	H18 Carbon: A New Metallic Phase with sp2-sp3 Hybridized Bonding Network. Scientific Reports, 2016, 6, 21879.	3.3	57
8	New Carbon Allotropes with Helical Chains of Complementary Chirality Connected by Ethene-type Ï€-Conjugation. Scientific Reports, 2013, 3, 3077.	3.3	52
9	K6 carbon: A metallic carbon allotrope in sp3 bonding networks. Journal of Chemical Physics, 2014, 140, 054514.	3.0	52
10	Mechanism for direct graphite-to-diamond phase transition. Scientific Reports, 2014, 4, 5930.	3.3	52
11	Computational prediction of body-centered cubic carbon in an all-<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:mi>s</mml:mi><mml:msup><mml:mi>p</mml:mi><mml:mn>2</mml:mn></mml:msup></mml:mrow></mml:math> ring configuration. Physical Review B, 2015, 91, .	3.2	49
12	Orthorhombic carbon oC24: A novel topological nodal line semimetal. Carbon, 2018, 133, 39-43.	10.3	48
13	Kinetic Origin of Divergent Decompression Pathways in Silicon and Germanium. Physical Review Letters, 2013, 110, 165503.	7.8	44
14	Phase conversion from graphite toward a simple monoclinic sp3-carbon allotrope. Journal of Chemical Physics, 2012, 137, 024502.	3.0	38
15	Mechanism for direct conversion of graphite to diamond. Physical Review B, 2011, 84, .	3.2	34
16	New carbon allotropes in sp + sp³ bonding networks consisting of C₈ cubes. Physical Chemistry Chemical Physics, 2018, 20, 7962-7967.	2.8	33
17	Phase stability of carbon clathrates at high pressure. Journal of Applied Physics, 2010, 107, .	2.5	31
18	Magic Monatomic Linear Chains for Mn Nanowire Self-Assembly on Si(001). Physical Review Letters, 2010, 105, 116102.	7.8	30

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19	First-principles study of point defects in solar cell semiconductor CuInS2. Journal of Applied Physics, 2012, 112, .	2.5	30
20	New cubic carbon phase via graphitic sheet rumpling. Physical Review B, 2012, 85, .	3.2	30
21	Three-Dimensional Carbon Allotropes Comprising Phenyl Rings and Acetylenic Chains in sp+sp2 Hybrid Networks. Scientific Reports, 2016, 6, 24665.	3.3	29
22	Topological nodal line semimetal in an orthorhombic graphene network structure. Physical Review B, 2018, 97, .	3.2	29
23	Monoclinic <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:msub><mml:mrow><mml:mi>EuSn</mml:mi></mml:mrow><mml:mrow><mml:mn>2</mml:mn></mml:mrow></mml:msub></mml:mrow></mml:math> : A Novel High-Pressure Network Structure. Physical Review Letters, 2021, 126, 155701.	7.8	24
24	Large Enhancement of Magnetocaloric and Barocaloric Effects by Hydrostatic Pressure in La(Fe_{0.92}Co_{0.08})_{11.9}Si_{1.1} with a NaZn₁₃-Type Structure. Chemistry of Materials, 2020, 32, 1807-1818.	6.7	23
25	Computational discovery of a new rhombohedral diamond phase. Physical Review B, 2018, 98, .	3.2	22
26	Dynamic Ad-Dimer Twisting Assisted Nanowire Self-Assembly on Si(001). Physical Review Letters, 2005, 94, 226103.	7.8	21
27	Body centered cubic carbon BC14: An all- <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:mi>s</mml:mi><mml:msup><mml:mi>p</mml:mi><mml:mn>2</mml:mn></mml:msup></mml:mrow></mml:math> bonded full-fledged pentadiamond. Physical Review B, 2020, 102, .	3.2	21
28	Highly stable and symmetric boron caged B@Co12@B80 core-shell cluster. Applied Physics Letters, 2009, 94, 133102.	3.3	19
29	Giant Magnetic Quantum Oscillations in the Thermal Conductivity of TaAs: Indications of Chiral Zero Sound. Physical Review X, 2019, 9, .	8.9	19
30	A superhard orthorhombic carbon with all six-membered-ring in sp3 bonding networks. Physics Letters, Section A: General, Atomic and Solid State Physics, 2019, 383, 2809-2812.	2.1	19
31	Cone-spiral magnetic ordering dominated lattice distortion and giant negative thermal expansion in Fe-doped MnNiGe compounds. Materials Horizons, 2020, 7, 804-810.	12.2	19
32	Vacancy-assisted diffusion mechanism of group-III elements in ZnO: An ab initio study. Journal of Applied Physics, 2009, 105, 073504.	2.5	18
33	Hydrogenated K4 carbon: A new stable cubic gauche structure of carbon hydride. Journal of Chemical Physics, 2013, 138, 024702.	3.0	18
34	Ab initio prediction of superdense tetragonal and monoclinic polymorphs of carbon. Physical Review B, 2016, 94, .	3.2	18
35	Topological semimetal in an <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:mi>s</mml:mi><mml:msup><mml:mi>p</mml:mi><mml:mn>2</mml:mn></mml:msup></mml:mrow></mml:math> hybridized carbon network with nodal rings. Physical Review B, 2020, 101, .	3.2	18
36	Stability of Sb line structures on Si(001). Physical Review B, 2003, 67, .	3.2	17

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37	Three-Dimensional Crystalline Modification of Graphene in all-sp² Hexagonal Lattices with or without Topological Nodal Lines. Journal of Physical Chemistry Letters, 2019, 10, 2515-2521.	4.6	16
38	Dimensional crossover tuned by pressure in layered magnetic NiPS3. Science China: Physics, Mechanics and Astronomy, 2021, 64, 1.	5.1	16
39	Structural and electronic properties of linear and angular polycyclic aromatic hydrocarbons. Physics Letters, Section A: General, Atomic and Solid State Physics, 2014, 378, 1379-1382.	2.1	13
40	AbÂInitioStudy of Water Adsorption and Reactivity on the (211) Surface of Anatase<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:msub><mml:mrow><mml:mi>TiO</mml:mi></mml:mrow><mml:mrow><mml:mn>2</mml:mn></m Physical Review Applied, 2016, 5, .	3.8	12
41	Hybrid nodal chain in an orthorhombic graphene network. Physical Review B, 2021, 103, .	3.2	12
42	First-principles studies on the structural and magnetic properties of (Cr, Mn, Fe)/Ag monatomic multilayers. Journal of Physics Condensed Matter, 1998, 10, 9655-9662.	1.8	10
43	Two-Stage Rotation Mechanism for Group-V Precursor Dissociation on Si(001). Physical Review Letters, 2006, 97, 046103.	7.8	10
44	Ab initiostudy of the anharmonic lattice dynamics of iron at theÎ³â˜ÎŸphase transition. Physical Review B, 2015, 92, .	3.2	10
45	Phase stability and transition of<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:msub><mml:mtext>BaSi</mml:mtext><mml:mn>2</mml:mn></mml:msub disilicides and digermanides. Physical Review B, 2015, 91, .	3.2	10
46	Novel electronic properties of monoclinic MP4 (M = Cr, Mo, W) compounds with or without topological nodal line. Scientific Reports, 2020, 10, 11502.	3.3	10
47	Crystalline structures of polymeric hydrocarbon with 3,4-fold helical chains. Scientific Reports, 2015, 5, 7723.	3.3	9
48	A new carbon allotrope with orthorhombic symmetry formed via graphitic sheet buckling. Physical Chemistry Chemical Physics, 2018, 20, 22762-22767.	2.8	9
49	Topological nodal line semimetals in graphene network structures. Advances in Physics: X, 2019, 4, 1625724.	4.1	9
50	Molecular orbital analysis of frontier orbitals for molecular electronics: a case study of unimolecular rectifier and photovoltaic cell. Science and Technology of Advanced Materials, 2003, 4, 377-382.	6.1	8
51	Magnetic and electronic properties of Cr, Mn, and Fe adatoms on Si(001): A first-principles study. Solid State Communications, 2012, 152, 127-131.	1.9	8
52	Three-dimensional polymeric structures of single-wall carbon nanotubes. Journal of Chemical Physics, 2014, 140, 204709.	3.0	8
53	Pressure-driven electronic and structural phase transition in intrinsic magnetic topological insulator <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:mi>Mn</mml:mi><mml:msub><mml:mi>Sb</mml:mi><mml Physical Review B, 2021, 104, .	3.2	8
54	Adsorption, diffusion, and site exchange for Ge ad-dimers on Sb-coveredSi(001)from first-principles total-energy calculations. Physical Review B, 2006, 74, .	3.2	7

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55	Size-selective self-assembly of magnetic Mn nanoclusters on Si(111). Journal of Chemical Physics, 2013, 138, 164705.	3.0	7
56	Topological nodal surface semimetal states in <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:msub><mml:mi>Sr</mml:mi><mml:mn>5</mml:mn></</mml:mr compounds <mml:math		

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73	Self-assembly of glycine on Cu(001): the effect of temperature and polarity. RSC Advances, 2017, 7, 4116-4123.	3.6	3
74	New carbon allotropes derived from nanotubes via a three-fold distortion mechanism. Physical Chemistry Chemical Physics, 2020, 22, 12489-12495.	2.8	2
75	Structural and electronic properties of BaSi2(100) thin film on Si(111) substrate. Journal of Materials Science, 2020, 55, 9483-9492.	3.7	2
76	First-Principles Study of the Electronic Properties of γ⁄γ′ Interface in Ni Based Superalloys. Materials Transactions, 2005, 46, 1122-1126.	1.2	1
77	Structural stability and electronic properties of Sr induced (5Ã—4) reconstruction on Si(111) surface. Physics Letters, Section A: General, Atomic and Solid State Physics, 2020, 384, 126540.	2.1	1
78	La induced Si3 trimer bilayer on the Si(111) surface. Physical Chemistry Chemical Physics, 2021, 23, 11466-11471.	2.8	1
79	La induced Si3 trimer monolayer on Si(111) surface: An ab initio study. New Journal of Physics, 0, , .	2.9	1
80	Dynamic formation process of Bi line structure on Si(100) surface. Computational Materials Science, 2006, 36, 135-138.	3.0	0
81	Structural and electronic properties of XP4(X = Ru, Os) compounds. Solid State Communications, 2021, 326, 114173.	1.9	0
82	Structural stability and electronic properties of Er nanowire on Si(001). Physica E: Low-Dimensional Systems and Nanostructures, 2022, , 115233.	2.7	0