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	Structural, magnetic, and electronic properties of EuSi₂ thin films on the Si(111) surface. Physical Chemistry Chemical Physics, 2022, 24, 6782-6787.	2.8	6
2	Topological nodal line semimetal in an all-sp ² monoclinic carbon. New Journal of Physics, 2022, 24, 043007.	2.9	4
3	Structural stability and electronic properties of Er nanowire on Si(001). Physica E: Low-Dimensional Systems and Nanostructures, 2022, , 115233.	2.7	0
4	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:r compounds <mml:math		

#	Article	IF	Citations
19	New carbon allotropes derived from nanotubes via a three-fold distortion mechanism. Physical Chemistry Chemical Physics, 2020, 22, 12489-12495.	2.8	2
20	Structural and electronic properties of BaSi2(100) thin film on Si(111) substrate. Journal of Materials Science, 2020, 55, 9483-9492.	3.7	2
21	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
22	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
23	Mn-Doped Sr/Si(111)-(3 Ã— 2) HCC Surfaces: Antiferromagnetic Semiconductors for Spintronic Applications. ACS Applied Materials & Interfaces, 2020, 12, 9918-9924.	8.0	5
24	Topological nodal line semimetals in graphene network structures. Advances in Physics: X, 2019, 4, 1625724.	4.1	9
25	Giant Magnetic Quantum Oscillations in the Thermal Conductivity of TaAs: Indications of Chiral Zero Sound. Physical Review X, 2019, 9, .	8.9	19
26	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
27	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
28	Orthorhombic carbon oC24: A novel topological nodal line semimetal. Carbon, 2018, 133, 39-43.	10.3	48
29	New carbon allotropes in sp + sp³ bonding networks consisting of C₈ cubes. Physical Chemistry Chemical Physics, 2018, 20, 7962-7967.	2.8	33
30	Topological Nodal-Net Semimetal in a Graphene Network Structure. Physical Review Letters, 2018, 120, 026402.	7.8	93
31	Structural stability and electronic properties of alkaline-earth metal induced Si(111)-(3 Ã— 2) surfaces. Physical Chemistry Chemical Physics, 2018, 20, 25235-25239.	2.8	6
32	Computational discovery of a new rhombohedral diamond phase. Physical Review B, 2018, 98, .	3.2	22
33	Topological nodal line semimetal in an orthorhombic graphene network structure. Physical Review B, 2018, 97, .	3.2	29
34	A new carbon allotrope with orthorhombic symmetry formed via graphitic sheet buckling. Physical Chemistry Chemical Physics, 2018, 20, 22762-22767.	2.8	9
35	Self-assembly of glycine on Cu(001): the effect of temperature and polarity. RSC Advances, 2017, 7, 4116-4123.	3.6	3
36	Phonon-mediated high-T c superconductivity in hole-doped diamond-like crystalline hydrocarbon. Scientific Reports, 2017, 7, 1464.	3.3	6

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37	Computational prediction of a simple cubic carbon allotrope consisting of C12 clusters. Journal of Chemical Physics, 2017, 147, 064512.	3.0	6
38	H18 Carbon: A New Metallic Phase with sp2-sp3 Hybridized Bonding Network. Scientific Reports, 2016, 6, 21879.	3.3	57
39	Three-Dimensional Carbon Allotropes Comprising Phenyl Rings and Acetylenic Chains in sp+sp2 Hybrid Networks. Scientific Reports, 2016, 6, 24665.	3.3	29
40	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
41	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></mml:mrow></mml:msub></mml:mrow></mml:math> Physical Review Applied, 2016, 5, .	3.8	12
42	Ab initio prediction of superdense tetragonal and monoclinic polymorphs of carbon. Physical Review B, 2016, 94, .	3.2	18
43	Ab initiostudy of the anharmonic lattice dynamics of iron at theÎ³â˜’Î´phase transition. Physical Review B, 2015, 92, .	3.2	10
44	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>3</mml:mn></mml:msup></mml:mrow></mml:math> ring configuration. Physical Review B, 2015, 91, .	3.2	49
45	Crystalline structures of polymeric hydrocarbon with 3,4-fold helical chains. Scientific Reports, 2015, 5, 7723.	3.3	9
46	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></mml:math> disilicides and digermanides. Physical Review B, 2015, 91, .	3.2	10
47	Three-dimensional polymeric structures of single-wall carbon nanotubes. Journal of Chemical Physics, 2014, 140, 204709.	3.0	8
48	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
49	K6 carbon: A metallic carbon allotrope in sp3 bonding networks. Journal of Chemical Physics, 2014, 140, 054514.	3.0	52
50	A New Carbon Allotrope with Six-Fold Helical Chains in all-sp2 Bonding Networks. Scientific Reports, 2014, 4, 4339.	3.3	77
51	Mechanism for direct graphite-to-diamond phase transition. Scientific Reports, 2014, 4, 5930.	3.3	52
52	Prediction of a new two-dimensional metallic carbon allotrope. Physical Chemistry Chemical Physics, 2013, 15, 2024-2030.	2.8	124
53	New Carbon Allotropes with Helical Chains of Complementary Chirality Connected by Ethene-type Ï€-Conjugation. Scientific Reports, 2013, 3, 3077.	3.3	52
54	Size-selective self-assembly of magnetic Mn nanoclusters on Si(111). Journal of Chemical Physics, 2013, 138, 164705.	3.0	7

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55	Hydrogenated K4 carbon: A new stable cubic gauche structure of carbon hydride. Journal of Chemical Physics, 2013, 138, 024702.	3.0	18
56	Kinetic Origin of Divergent Decompression Pathways in Silicon and Germanium. Physical Review Letters, 2013, 110, 165503.	7.8	44
57	First-principles study of point defects in solar cell semiconductor CuInS2. Journal of Applied Physics, 2012, 112, .	2.5	30
58	Phase conversion from graphite toward a simple monoclinic sp3-carbon allotrope. Journal of Chemical Physics, 2012, 137, 024502.	3.0	38
59	Orthorhombic carbon allotrope of compressed graphite:Ab initiocalculations. Physical Review B, 2012, 85, .	3.2	80
60	New cubic carbon phase via graphitic sheet rumpling. Physical Review B, 2012, 85, .	3.2	30
61	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
62	Mechanism for direct conversion of graphite to diamond. Physical Review B, 2011, 84, .	3.2	34
63	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
64	Adsorption of Au and Pt dimers on Ge(001) and Si(001): A first-principles study. Solid State Communications, 2011, 151, 655-658.	1.9	3
65	Atomistic nucleation and growth mechanism for single-wall carbon nanotubes on catalytic nanoparticle surfaces. Nanotechnology, 2010, 21, 115602.	2.6	6
66	Phase stability of carbon clathrates at high pressure. Journal of Applied Physics, 2010, 107, .	2.5	31
67	Magic Monatomic Linear Chains for Mn Nanowire Self-Assembly on Si(001). Physical Review Letters, 2010, 105, 116102.	7.8	30
68	Highly stable and symmetric boron caged B@Co12@B80 core-shell cluster. Applied Physics Letters, 2009, 94, 133102.	3.3	19
69	Vacancy-assisted diffusion mechanism of group-III elements in ZnO: An ab initio study. Journal of Applied Physics, 2009, 105, 073504.	2.5	18
70	Formation of Ga dimer linear chains on Si(001): a first-principles study. Journal of Physics Condensed Matter, 2008, 20, 445002.	1.8	3
71	Effect of strain on the energetics and kinetics of dissociation of<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:msub><mml:mrow><mml:mtext>Sb</mml:mtext></mml:mrow><mml:mn>4</mml:mn></mml:msub></mml:mrow></mml:math>on Ge(001). Physical Review B, 2008, 78, .	3.2	3
72	Dimer-breaking-assisted exchange mechanism in surfactant-mediated epitaxial growth of Ge on Si(001):Ab initiototal energy calculations. Physical Review B, 2007, 76, .	3.2	3

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73	Two-Stage Rotation Mechanism for Group-V Precursor Dissociation on Si(001). Physical Review Letters, 2006, 97, 046103.	7.8	10
74	Dynamic formation process of Bi line structure on Si(100) surface. Computational Materials Science, 2006, 36, 135-138.	3.0	0
75	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
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	Dynamic Ad-Dimer Twisting Assisted Nanowire Self-Assembly on Si(001). Physical Review Letters, 2005, 94, 226103.	7.8	21
78	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
79	Stability of Sb line structures on Si(001). Physical Review B, 2003, 67, .	3.2	17
80	<I>Ab initio</I>-Monte Carlo Studies on Magnetic Properties of Tetragonal L1₀ Ordered 3d/Au Superlattices. Materials Transactions, 2003, 44, 1529-1534.	1.2	5
81	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
82	La induced Si3 trimer monolayer on Si(111) surface: An ab initio study. New Journal of Physics, 0, , .	2.9	1