Dong-Bo Zhang

List of Publications by Year
in descending order

52	1,306	331259 21	360668 35
papers	citations	h-index	g-index

53	53	53	1607
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Bending Ultrathin Graphene at the Margins of Continuum Mechanics. Physical Review Letters, 2011, 106, 255503.	2.9	215
2	Phonon Quasiparticles and Anharmonic Free Energy in Complex Systems. Physical Review Letters, 2014, 112, 058501.	2.9	83
3	Dynamic stabilization of cubic<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mi>Ca</mml:mi><mml:mi>Si</mml:mi><mml:msub><mml:mi mathvariant="normal">O</mml:mi><mml:mn>3</mml:mn></mml:msub></mml:math>perovskite at high temperatures and pressures fromab initiomolecular dynamics. Physical Review B, 2014, 89, .	1.1	79
4	Strain-Induced Pseudomagnetic Fields in Twisted Graphene Nanoribbons. Physical Review Letters, 2014, 112, 096805.	2.9	74
5	Ground state, growth, and electronic properties of small lanthanum clusters. Journal of Chemical Physics, 2004, 120, 5104-5109.	1.2	59
6	Wavelike rippling in multiwalled carbon nanotubes under pure bending. Applied Physics Letters, 2010, 96, .	1.5	54
7	Electromechanical characterization of carbon nanotubes in torsion via symmetry adapted tight-binding objective molecular dynamics. Physical Review B, 2009, 80, .	1.1	52
8	Elasticity of ideal single-walled carbon nanotubes via symmetry-adapted tight-binding objective modeling. Applied Physics Letters, 2008, 93, .	1.5	44
9	Stability of polycrystalline and wurtzite Si nanowires via symmetry-adapted tight-binding objective molecular dynamics. Journal of Chemical Physics, 2008, 128, 084104.	1.2	44
10	Lattice anharmonicity, phonon dispersion, and thermal conductivity of PbTe studied by the phonon quasiparticle approach. Physical Review B, 2018, 97, .	1.1	42
11	Interface engineering of electronic properties of graphene/boron nitride lateral heterostructures. 2D Materials, 2015, 2, 041001.	2.0	40
12	Helical BN and ZnO nanotubes with intrinsic twisting: An objective molecular dynamics study. Physical Review B, 2011, 84, .	1.1	33
13	Inhomogeneous strain-induced half-metallicity in bent zigzag graphene nanoribbons. Npj Computational Materials, 2017, 3, .	3.5	33
14	Effectiveâ€Tensionalâ€Strainâ€Driven Bandgap Modulations in Helical Graphene Nanoribbons. Small, 2011, 7, 1023-1027.	5.2	32
15	Premelting hcp to bcc Transition in Beryllium. Physical Review Letters, 2017, 118, 145702.	2.9	32
16	Dislocation onset and nearly axial glide in carbon nanotubes under torsion. Journal of Chemical Physics, 2009, 130, 071101.	1.2	31
17	Structural and Electronic Properties of Helical TiS₂ Nanotubes Studied with Objective Molecular Dynamics. Journal of Physical Chemistry C, 2011, 115, 6392-6396.	1.5	27
18	Mixed-Valence CsCu₄Se₃: Large Phonon Anharmonicity Driven by the Hierarchy of the Rigid [(Cu⁺)₄(Se^{2â€“})₂](Se^{â€“}) Double Anti-CaF₂ Layer and the Soft Cs⁺ Sublattice. Journal of the American Chemical Society, 2021, 143, 18490-18501.	6.6	25

#	Article	IF	Citations
19	First principles study of the stability and electronic structure of the icosahedral La13, La13â¯1, and La13+1 clusters. Journal of Chemical Physics, 2004, 120, 5081-5086.	1.2	24
20	Dislocation morphology and nucleation within compressed Si nanospheres: A molecular dynamics study. Computational Materials Science, 2012, 54, 280-286.	1.4	24
21	Lattice Thermal Conductivity of MgSiO3 Perovskite from First Principles. Scientific Reports, 2017, 7, 5417.	1.6	23
22	Screw Dislocations in âŸ100âŸ© Silicon Nanowires: An Objective Molecular Dynamics Study. Journal of Physical Chemistry Letters, 2011, 2, 2544-2548.	2.1	17
23	Enhanced half-metallicity in orientationally misaligned graphene/hexagonal boron nitride lateral heterojunctions. Physical Review B, 2016, 94, .	1.1	17
24	Effective Strain in Helical Rippled Carbon Nanotubes: A Unifying Concept for Understanding Electromechanical Response. ACS Nano, 2010, 4, 6966-6972.	7.3	16
25	Interlayer vibration of twisted bilayer graphene: A first-principles study. Physics Letters, Section A: General, Atomic and Solid State Physics, 2019, 383, 2628-2632.	0.9	16
26	Thermal conductivity from phonon quasiparticles with subminimal mean free path in the <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:msub><mml:mi>MgSiO</mml:mi><mml:mn>3</mml:mn></mml:msub></ perovskite. Physical Review B, 2017, 96, .	1.1	15
27	Effective Zeeman splitting in bent lateral heterojunctions of graphene and hexagonal boron nitride: A new mechanism towards half-metallicity. Physical Review B, 2017, 96, .	1.1	14
28	Phase stabilities of <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:mi>C</mml:mi><mml:mi>m</mml:mi><mml:mi>c</mml:mi> and <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:mi>P</mml:mi><mml:mi>n</mml:mi><mml:mi>m</mml:mi> SnSe studied by phonon quasiparticle approach. Physical Review B, 2019, 100, .	1.1	14
29	Twist-driven separation of p-type and n-type dopants in single-crystalline nanowires. National Science Review, 2019, 6, 532-539.	4.6	12
30	Routes to identification of intrinsic twist in helical MoS<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:msub><mml:mrow /><mml:mn>2</mml:mn></mml:msub></mml:math>nanotubes by electron diffraction and annular dark-field scanning transmission electron microscopy imaging. Physical Review B, 2011, 84, .	1.1	10
31	Thermal conductivity of <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:msub><mml:mi>CaSiO</mml:mi><mml:mn>3</mml:mn></mml:msub></ perovskite at lower mantle conditions. Physical Review B, 2021, 104, .	1.1	9
32	Role of effective tensile strain in electromechanical response of helical graphene nanoribbons with open and closed armchair edges. Physical Review B, 2012, 85, .	1.1	8
33	Note: The role of Peierls-like distortions in the modification of electronic bandgaps of graphene nanoribbons under uniaxial strain. Journal of Chemical Physics, 2011, 134, 196101.	1.2	7
34	First principles study of the carbon-(silicon-) doped La13 clusters. Journal of Chemical Physics, 2005, 122, 114305.	1.2	6
35	Effect of small shape changes on the optical response of highly symmetric silicon quantum dots. Physical Review B, 2007, 76, .	1.1	6
36	Twist-induced preferential distribution of dopants in single-crystalline Si nanowires. Physical Review B, 2019, 100, .	1.1	6

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37	Strain gradient induced spatially indirect excitons in single crystalline ZnO nanowires. Nanoscale, 2020, 12, 19083-19087.	2.8	6
38	Strain induced spin-splitting and half-metallicity in antiferromagnetic bilayer silicene under bending. Physical Chemistry Chemical Physics, 2020, 22, 11567-11571.	1.3	6
39	Flat bands in twisted bilayers of polar two-dimensional semiconductors. Physical Review Materials, 2021, 5, .	0.9	6
40	Effective shear-strain driven electromechanical response in helical rippled carbon nanotubes. Physical Review B, 2010, 82, .	1.1	5
41	Structural prediction for scandium carbide monolayer sheet. Chemical Physics Letters, 2016, 660, 238-243.	1.2	5
42	Continuation calculations of boron- (aluminum-, titanium-, and nickel-) doped La13 clusters. Journal of Chemical Physics, 2005, 123, 154313.	1.2	4
43	Ice Carbons. Journal of Physical Chemistry C, 2014, 118, 27502-27508.	1.5	4
44	Temperature and isotope effects on the thermoelectric properties in SnTe. Journal of Physics Condensed Matter, 2017, 29, 175701.	0.7	4
45	Interfacial Landau levels in bent graphene racetracks. Physical Review B, 2019, 99, .	1.1	4
46	Unconventional deformation potential and half-metallicity in zigzag nanoribbons of 2D-Xenes. Physical Chemistry Chemical Physics, 2020, 22, 7294-7299.	1.3	4
47	Lattice dynamics of twisted ZnO nanowires under generalized Bornâ€“von Karman boundary conditions. New Journal of Physics, 2020, 22, 023004.	1.2	3
48	Dynamic stabilization and heat transport characteristics of monolayer SnSe at finite temperature: A study by phonon quasiparticle approach. Physical Review B, 2021, 103, .	1.1	3
49	Modulating the optical and electronic properties of highly symmetric Si quantum dots. Nanotechnology, 2009, 20, 445401.	1.3	2
50	Type-II band alignment in single crystalline TiO2 nanowires under twisting. Electronic Structure, 2020, 2, 044001.	1.0	1
51	Nanomechanics of Silicon Nanowires via Symmetry-Adapted Tight-Binding and Classical Objective Molecular Dynamics. , 2008, , .		0
52	The Phonon Quasiparticle Approach for Anharmonic Properties of Solids. Journal of Physics: Conference Series, 2022, 2207, 012042.	0.3	0