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	The Phonon Quasiparticle Approach for Anharmonic Properties of Solids. Journal of Physics: Conference Series, 2022, 2207, 012042.	0.3	0
2	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
3	Flat bands in twisted bilayers of polar two-dimensional semiconductors. Physical Review Materials, 2021, 5, .	0.9	6
4	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
5	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></mml:math> perovskite at lower mantle conditions. Physical Review B, 2021, 104, .	1.1	9
6	Strain gradient induced spatially indirect excitons in single crystalline ZnO nanowires. Nanoscale, 2020, 12, 19083-19087.	2.8	6
7	Unconventional deformation potential and half-metallicity in zigzag nanoribbons of 2D-Xenes. Physical Chemistry Chemical Physics, 2020, 22, 7294-7299.	1.3	4
8	Lattice dynamics of twisted ZnO nanowires under generalized Bornâ€“von Karman boundary conditions. New Journal of Physics, 2020, 22, 023004.	1.2	3
9	Strain induced spin-splitting and half-metallicity in antiferromagnetic bilayer silicene under bending. Physical Chemistry Chemical Physics, 2020, 22, 11567-11571.	1.3	6
10	Type-II band alignment in single crystalline TiO2 nanowires under twisting. Electronic Structure, 2020, 2, 044001.	1.0	1
11	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></mml:mrow></mml:math> 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></mml:mrow></mml:math> SnSe studied by phonon quasiparticle approach. Physical Review B, 2019, 100, .	1.1	14
12	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
13	Twist-driven separation of p-type and n-type dopants in single-crystalline nanowires. National Science Review, 2019, 6, 532-539.	4.6	12
14	Interfacial Landau levels in bent graphene racetracks. Physical Review B, 2019, 99, .	1.1	4
15	Twist-induced preferential distribution of dopants in single-crystalline Si nanowires. Physical Review B, 2019, 100, .	1.1	6
16	Lattice anharmonicity, phonon dispersion, and thermal conductivity of PbTe studied by the phonon quasiparticle approach. Physical Review B, 2018, 97, .	1.1	42
17	Temperature and isotope effects on the thermoelectric properties in SnTe. Journal of Physics Condensed Matter, 2017, 29, 175701.	0.7	4
18	Inhomogeneous strain-induced half-metallicity in bent zigzag graphene nanoribbons. Npj Computational Materials, 2017, 3, .	3.5	33

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19	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
20	Lattice Thermal Conductivity of MgSiO3 Perovskite from First Principles. Scientific Reports, 2017, 7, 5417.	1.6	23
21	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
22	Premelting hcp to bcc Transition in Beryllium. Physical Review Letters, 2017, 118, 145702.	2.9	32
23	Enhanced half-metallicity in orientationally misaligned graphene/hexagonal boron nitride lateral heterojunctions. Physical Review B, 2016, 94, .	1.1	17
24	Structural prediction for scandium carbide monolayer sheet. Chemical Physics Letters, 2016, 660, 238-243.	1.2	5
25	Interface engineering of electronic properties of graphene/boron nitride lateral heterostructures. 2D Materials, 2015, 2, 041001.	2.0	40
26	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
27	Phonon Quasiparticles and Anharmonic Free Energy in Complex Systems. Physical Review Letters, 2014, 112, 058501.	2.9	83
28	Ice Carbons. Journal of Physical Chemistry C, 2014, 118, 27502-27508.	1.5	4
29	Strain-Induced Pseudomagnetic Fields in Twisted Graphene Nanoribbons. Physical Review Letters, 2014, 112, 096805.	2.9	74
30	Dislocation morphology and nucleation within compressed Si nanospheres: A molecular dynamics study. Computational Materials Science, 2012, 54, 280-286.	1.4	24
31	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
32	Screw Dislocations in âŸ¨100âŸ© Silicon Nanowires: An Objective Molecular Dynamics Study. Journal of Physical Chemistry Letters, 2011, 2, 2544-2548.	2.1	17
33	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
34	Helical BN and ZnO nanotubes with intrinsic twisting: An objective molecular dynamics study. Physical Review B, 2011, 84, .	1.1	33
35	Bending Ultrathin Graphene at the Margins of Continuum Mechanics. Physical Review Letters, 2011, 106, 255503.	2.9	215
36	Effectiveâ€Tensionalâ€Strainâ€Driven Bandgap Modulations in Helical Graphene Nanoribbons. Small, 2011, 7, 1023-1027.	5.2	32

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37	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
38	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
39	Wavelike rippling in multiwalled carbon nanotubes under pure bending. Applied Physics Letters, 2010, 96, .	1.5	54
40	Effective shear-strain driven electromechanical response in helical rippled carbon nanotubes. Physical Review B, 2010, 82, .	1.1	5
41	Effective Strain in Helical Rippled Carbon Nanotubes: A Unifying Concept for Understanding Electromechanical Response. ACS Nano, 2010, 4, 6966-6972.	7.3	16
42	Modulating the optical and electronic properties of highly symmetric Si quantum dots. Nanotechnology, 2009, 20, 445401.	1.3	2
43	Electromechanical characterization of carbon nanotubes in torsion via symmetry adapted tight-binding objective molecular dynamics. Physical Review B, 2009, 80, .	1.1	52
44	Dislocation onset and nearly axial glide in carbon nanotubes under torsion. Journal of Chemical Physics, 2009, 130, 071101.	1.2	31
45	Elasticity of ideal single-walled carbon nanotubes via symmetry-adapted tight-binding objective modeling. Applied Physics Letters, 2008, 93, .	1.5	44
46	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
47	Nanomechanics of Silicon Nanowires via Symmetry-Adapted Tight-Binding and Classical Objective Molecular Dynamics. , 2008, , .		0
48	Effect of small shape changes on the optical response of highly symmetric silicon quantum dots. Physical Review B, 2007, 76, .	1.1	6
49	First principles study of the carbon-(silicon-) doped La13 clusters. Journal of Chemical Physics, 2005, 122, 114305.	1.2	6
50	Continuation calculations of boron- (aluminum-, titanium-, and nickel-) doped La13 clusters. Journal of Chemical Physics, 2005, 123, 154313.	1.2	4
51	First principles study of the stability and electronic structure of the icosahedral La13, La13âˆ'1, and La13+1 clusters. Journal of Chemical Physics, 2004, 120, 5081-5086.	1.2	24
52	Ground state, growth, and electronic properties of small lanthanum clusters. Journal of Chemical Physics, 2004, 120, 5104-5109.	1.2	59