Tao Ouyang

List of Publications by Year
in descending order

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82	2,063	257101 24	253896 43
papers	citations	h-index	g-index

83	83	83	2084
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Thermal transport in hexagonal boron nitride nanoribbons. Nanotechnology, 2010, 21, 245701.	1.3	184
2	Large tunability of lattice thermal conductivity of monolayer silicene via mechanical strain. Physical Review B, 2016, 93, .	1.1	166
3	Thermal transport in graphyne nanoribbons. Physical Review B, 2012, 85, .	1.1	103
4	Complex Low Energy Tetrahedral Polymorphs of Group IV Elements from First Principles. Physical Review Letters, 2018, 121, 175701.	2.9	95
5	Stone-Wales graphene: A two-dimensional carbon semimetal with magic stability. Physical Review B, 2019, 99, .	1.1	95
6	Thermal and thermoelectric properties of monolayer indium triphosphide (InP₃): a first-principles study. Journal of Materials Chemistry A, 2018, 6, 21532-21541.	5.2	91
7	Thermal transport of isotopic-superlattice graphene nanoribbons with zigzag edge. Europhysics Letters, 2009, 88, 28002.	0.7	75
8	Competing mechanism driving diverse pressure dependence of thermal conductivity of<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mi>X</mml:mi><mml:mtext>Te</mml:mtext></mml:math><mml:math		

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19	Newly discovered graphyne allotrope with rare and robust Dirac node loop. Nanoscale, 2021, 13, 3564-3571.	2.8	33
20	Five low energy phosphorene allotropes constructed through gene segments recombination. Scientific Reports, 2017, 7, 46431.	1.6	31
21	Intrinsic piezoelectricity of monolayer group IVâ€“V MX2: SiP2, SiAs2, GeP2, and GeAs2. Applied Physics Letters, 2020, 116, .	1.5	30
22	Effect of triangle vacancy on thermal transport in boron nitride nanoribbons. Solid State Communications, 2011, 151, 460-464.	0.9	29
23	First-principles study of thermal transport in nitrogenated holey graphene. Nanotechnology, 2017, 28, 045709.	1.3	29
24	Thermal conductivity of ordered-disordered material: a case study of superionic Ag₂Te. Nanotechnology, 2015, 26, 025702.	1.3	27
25	New Two-Dimensional Wide Band Gap Hydrocarbon Insulator by Hydrogenation of a Biphenylene Sheet. Journal of Physical Chemistry Letters, 2021, 12, 8889-8896.	2.1	26
26	The intrinsic thermal transport properties of the biphenylene network and the influence of hydrogenation: a first-principles study. Journal of Materials Chemistry C, 2021, 9, 16945-16951.	2.7	26
27	Bayesian optimization-based design of defect gamma-graphyne nanoribbons with high thermoelectric conversion efficiency. Carbon, 2021, 176, 52-60.	5.4	25
28	Tuning thermal conductance in the twisted graphene and gamma graphyne nanoribbons. Journal of Applied Physics, 2014, 115, .	1.1	23
29	High-Throughput Computation of New Carbon Allotropes with Diverse Hybridization and Ultrahigh Hardness. Crystals, 2021, 11, 783.	1.0	23
30	High-throughput computation of novel ternary Bâ€“Câ€“N structures and carbon allotropes with electronic-level insights into superhard materials from machine learning. Journal of Materials Chemistry A, 2021, 9, 27596-27614.	5.2	21
31	Thermoelectric properties of graphene nanoribbons with surface roughness. Applied Physics Letters, 2018, 112, .	1.5	20
32	Tunable photoelectronic properties of hydrogenated-silicene/halogenated-silicene superlattices for water splitting. Journal of Applied Physics, 2020, 127, .	1.1	18
33	Ge3P2: New viable two-dimensional semiconductors with ultrahigh carrier mobility. Applied Surface Science, 2019, 497, 143803.	3.1	17
34	Systematic Enumeration of Lowâ€Energy Graphyne Allotropes Based on a Coordinationâ€Constrained Searching Strategy. Physica Status Solidi - Rapid Research Letters, 2020, 14, 2000437.	1.2	17
35	First-principles study on lattice thermal conductivity of thermoelectrics HgTe in different phases. Journal of Applied Physics, 2015, 117, .	1.1	16
36	Allotropes of Phosphorus with Remarkable Stability and Intrinsic Piezoelectricity. Physical Review Applied, 2018, 9, .	1.5	16

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37	Potential thermoelectric material open framework Si24 from a first-principles study. Journal Physics D: Applied Physics, 2017, 50, 425501.	1.3	15
38	Seebeck effects in a graphene nanoribbon coupled to two ferromagnetic leads. Journal of Applied Physics, 2014, 115, 114305.	1.1	14
39	Enhancing the thermoelectric performance of gamma-graphyne nanoribbons by introducing edge disorder. Physical Chemistry Chemical Physics, 2018, 20, 7173-7179.	1.3	14
40	The thermoelectric properties of monolayer SiP and GeP from first-principles calculations. Journal of Applied Physics, 2019, 126, .	1.1	14
41	Photogalvanicâ€Effectâ€Induced Spinâ€Polarized Current in Defective Silicane with H Vacancies. Physica Status Solidi - Rapid Research Letters, 2020, 14, 2000395.	1.2	13
42	First-principles calculations of phonon transport in two-dimensional penta-X2C family. Journal of Applied Physics, 2020, 127, 205106.	1.1	13
43	Optoelectronic properties of type-II SePtTe/InS van der Waals heterojunction. Journal of Applied Physics, 2020, 128, .	1.1	12
44	Electronic properties of disordered bilayer graphene. Solid State Communications, 2010, 150, 2366-2369.	0.9	11
45	Methodology Perspective of Computing Thermal Transport in Low-Dimensional Materials and Nanostructures: The Old and the New. ACS Omega, 2018, 3, 3278-3284.	1.6	11
46	Resonant splitting of phonon transport in periodic T-shaped graphene nanoribbons. Europhysics Letters, 2010, 91, 46006.	0.7	10
47	Thermal transport properties of rolled graphene nanoribbons. Applied Physics Letters, 2013, 103, .	1.5	10
48	Potential thermoelectric candidate monolayer silicon diphosphide (SiP2) from a first-principles calculation. Computational Materials Science, 2021, 188, 110154.	1.4	10
49	SIn₂Te/TeIn₂Se: a type-II heterojunction as a water-splitting photocatalyst with high solar energy harvesting. Journal of Materials Chemistry C, 2021, 9, 7734-7744.	2.7	10
50	Ab initioprediction of a new allotrope of two-dimensional silicon. Physica Status Solidi - Rapid Research Letters, 2017, 11, 1600422.	1.2	9
51	Ballistic thermoelectric properties of nitrogenated holey graphene nanostructures. Journal of Applied Physics, 2017, 122, .	1.1	8
52	Few-Layer <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline" overflow="scroll"><mml:mi>Î²</mml:mi></mml:math> - <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline" overflow="scroll"><mml:mrow><mml:mi>Sn</mml:mi><mml:mi>Se</mml:mi></mml:mrow></mml:math> with Strong Visible Light Absorbance and Ultrahigh Carrier Mobility. Physical Review Applied, 2020, 13, .	1.5	8
53	Notable effect of magnetic order on the phonon transport in semi-hydrogenated graphene. Applied Physics Letters, 2022, 120, .	1.5	8
54	Thermoelectric properties of four typical silicon allotropes. Modelling and Simulation in Materials Science and Engineering, 2018, 26, 085006.	0.8	7

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55	Ballistic thermal transport in black and blue phosphorene nanoribbons and in-plane heterostructures. Physics Letters, Section A: General, Atomic and Solid State Physics, 2019, 383, 1493-1497.	0.9	7
56	Strain effect on phonon transport in open framework Si24: A first-principles study. Physica E: Low-Dimensional Systems and Nanostructures, 2020, 118, 113870.	1.3	7
57	Type-II lateral SnSe/GeTe heterostructures for solar photovoltaic applications with high efficiency. Nanoscale Advances, 2021, 3, 3643-3649.	2.2	7
58	Doping Induced Abnormal Contraction and Significant Reduction of Lattice Thermal Conductivity of Open Framework Si24. ES Energy & Environments, 2018, , .	0.5	7
59	Unique Arrangement of Atoms Leads to Low Thermal Conductivity: A Comparative Study of Monolayer Mg₂C. Journal of Physical Chemistry Letters, 2021, 12, 10353-10358.	2.1	7
60	Enhancement of thermoelectric properties of gamma-graphyne nanoribbons with edge modulation. European Physical Journal B, 2015, 88, 1.	0.6	6
61	First-principles prediction of a low energy edge-reconstruction for zigzag phosphorene nanoribbons. Journal Physics D: Applied Physics, 2017, 50, 065304.	1.3	6
62	Thermoelectric properties of gamma-graphyne nanoribbon incorporating diamond-like quantum dots. Journal Physics D: Applied Physics, 2016, 49, 135303.	1.3	5
63	Optimizing the thermoelectric performance of graphyne nanotube via applying radial strain. Journal of Applied Physics, 2017, 121, 125112.	1.1	5
64	Excellent properties of type-II van der Waals Janus-XM2Xâ€™/MX heterojunctions toward solar cell utilization. Journal Physics D: Applied Physics, 2020, 53, 405101.	1.3	5
65	Effect of hydrogen passivation on the decoupling of graphene on SiC(0001) substrate: First-principles calculations. Scientific Reports, 2017, 7, 8461.	1.6	4
66	2D O-PTl monolayer: a robust large bandgap topological insulator. Journal Physics D: Applied Physics, 2020, 53, 025302.	1.3	4
67	Tunable topologically nontrivial states in newly discovered graphyne allotropes: from Dirac nodal grid to Dirac nodal loop. Nanotechnology, 2021, 32, 485705.	1.3	4
68	Electronic and Spinâ€Dependent Optical Properties of Feâ€Adsorbed Armchair Silicene/Silicane Superlattices. Physica Status Solidi - Rapid Research Letters, 2020, 14, 1900494.	1.2	3
69	Quasi-bonding driven abnormal isotropic thermal transport in intrinsically anisotropic nanostructure: a case of study of a phosphorus nanotube array. Nanotechnology, 2020, 31, 095704.	1.3	3
70	Tunable bandgaps and flat bands in twisted bilayer biphenylene carbon*. Chinese Physics B, 2021, 30, 077103.	0.7	3
71	Continuously Tunable Thermal Conductance in Arched Graphene Nanoribbons. Applied Physics Express, 2012, 5, 125103.	1.1	2
72	Improving the thermoelectric properties of carbon nanotubes through introducing graphene nanosprings. Current Applied Physics, 2020, 20, 150-154.	1.1	2

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73	Ultra-high thermal conductivities of tetrahedral carbon allotropes with non-simple structures. Physical Chemistry Chemical Physics, 2021, 23, 24550-24556.	1.3	2
74	Resonant splitting in periodic T-shaped photonic waveguides. Journal of Applied Physics, 2012, 112, 033522.	1.1	1
75	The modification of central B/N atom chain on electron transport of graphene nanoribbons. Journal of Applied Physics, 2012, 112, 113713.	1.1	1
76	The thermoelectric performance of dumbbell silicene nanoribbons. Fullerenes Nanotubes and Carbon Nanostructures, 2018, 26, 511-517.	1.0	1
77	Excellent thermoelectric performance of open framework Si24 nanowires from density functional based tight-binding calculation. Journal of Applied Physics, 2020, 128, 215108.	1.1	1
78	Thermoelectric properties of orthorhombic silicon allotrope Si (oP32) from first-principles calculations*. Chinese Physics B, 2020, 29, 118401.	0.7	1
79	Effect of ion irradiation on thermal conductivity of phosphorene and underlying mechanism. Wuli Xuebao/Acta Physica Sinica, 2022, 71, 056101.	0.2	1
80	Enhanced and spin-dependent infrared optical response of silicene/silicane superlattices with Cr adsorption. Journal Physics D: Applied Physics, 2021, 54, 405106.	1.3	0
81	KP15: Natural van der Waals material with ultra-low thermal conductivity and excellent thermoelectric performance. Journal of Applied Physics, 2021, 130, 195104.	1.1	0
82	Giant Rashba Spin Splitting in Sb/Bi2Se3/Sb and Sb/Sb2Te3 /Sb Heterojunctions. Journal of Electronic Materials, 0, , .	1.0	0