Taishan Zhu

List of Publications by Year
in descending order

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32	1,132	361413	477307
papers	citations	20	29
		h-index	g-index

33	33	33	1770
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Phonon transport on two-dimensional graphene/boron nitride superlattices. Physical Review B, 2014, 90, .	3.2	157
2	Phonons, Localization, and Thermal Conductivity of Diamond Nanothreads and Amorphous Graphene. Nano Letters, 2016, 16, 4763-4772.	9.1	129
3	Laser-sculptured ultrathin transition metal carbide layers for energy storage and energy harvesting applications. Nature Communications, 2019, 10, 3112.	12.8	91
4	Resolving anomalous strain effects on two-dimensional phonon flows: The cases of graphene, boron nitride, and planar superlattices. Physical Review B, 2015, 91, .	3.2	84
5	Generalized Debye-Peierls/Allen-Feldman model for the lattice thermal conductivity of low-dimensional and disordered materials. Physical Review B, 2016, 93, .	3.2	58
6	Mixed phononic and non-phononic transport in hybrid lead halide perovskites: glass-crystal duality, dynamical disorder, and anharmonicity. Energy and Environmental Science, 2019, 12, 216-229.	30.8	51
7	Charting lattice thermal conductivity for inorganic crystals and discovering rare earth chalcogenides for thermoelectrics. Energy and Environmental Science, 2021, 14, 3559-3566.	30.8	51
8	Unveiling the phonon scattering mechanisms in half-Heusler thermoelectric compounds. Energy and Environmental Science, 2020, 13, 5165-5176.	30.8	49
9	Origin of Knudsen forces on heated microbeams. Physical Review E, 2010, 82, 036308.	2.1	47
10	Theoretical and Numerical Studies of Noncontinuum Gas-Phase Heat Conduction in Micro/Nano Devices. Numerical Heat Transfer, Part B: Fundamentals, 2010, 57, 203-226.	0.9	41
11	Multiple temperature kinetic model and its applications to micro-scale gas flows. Computers and Fluids, 2012, 67, 115-122.	2.5	39
12	Asynchronous Photoexcited Electronic and Structural Relaxation in Lead-Free Perovskites. Journal of the American Chemical Society, 2019, 141, 13074-13080.	13.7	39
13	Striated 2D Lattice with Subâ€nm 1D Etch Channels by Controlled Thermally Induced Phase Transformations of PdSe₂. Advanced Materials, 2019, 31, e1904251.	21.0	31
14	Predicting charge density distribution of materials using a local-environment-based graph convolutional network. Physical Review B, 2019, 100, .	3.2	31
15	Atomic structure and defect dynamics of monolayer lead iodide nanodisks with epitaxial alignment on graphene. Nature Communications, 2020, 11, 823.	12.8	31
16	Ultralow Thermal Conductivity in Diamond-Like Semiconductors: Selective Scattering of Phonons from Antisite Defects. Chemistry of Materials, 2018, 30, 3395-3409.	6.7	28
17	Negative Knudsen force on heated microbeams. Physical Review E, 2011, 84, 056316.	2.1	27
18	A 3D-printed molecular ferroelectric metamaterial. Proceedings of the National Academy of Sciences of the United States of America, 2020, 117, 27204-27210.	7.1	25

#	Article	IF	Citations
19	Vibrational Energy Transport in Hybrid Ordered/Disordered Nanocomposites: Hybridization and Avoided Crossings of Localized and Delocalized Modes. Advanced Functional Materials, 2018, 28, 1706268.	14.9	21
20	Thermoelectric phonon-glass electron-crystal via ion beam patterning of silicon. Physical Review B, 2018, 97, .	3.2	20
21	Highâ€Pressureâ€Sinteringâ€Induced Microstructural Engineering for an Ultimate Phonon Scattering of Thermoelectric Halfâ€Heusler Compounds. Small, 2021, 17, e2102045.	10.0	17
22	Structural and thermal effects of ion-irradiation induced defect configurations in silicon. Physical Review B, 2017, 95, .	3.2	15
23	Screening and Understanding Li Adsorption on Two-Dimensional Metallic Materials by Learning Physics and Physics-Simplified Learning. Jacs Au, 2021, 1, 1904-1914.	7.9	12
24	Atoms to fibers: Identifying novel processing methods in the synthesis of pitch-based carbon fibers. Science Advances, 2022, 8, eabn1905.	10.3	12
25	Theoretical Two-Dimensional Modeling of Gas Conduction Between Finite Parallel Plates in High Vacuum. Journal of Heat Transfer, 2012, 134, .	2.1	6
26	Laserâ€Induced Cooperative Transition in Molecular Electronic Crystal. Advanced Materials, 2021, 33, e2103000.	21.0	6
27	Charge Transport in Highly Heterogeneous Natural Carbonaceous Materials. Advanced Functional Materials, 2019, 29, 1904283.	14.9	5
28	Emerging Magnetic Interactions in van der Waals Heterostructures. Nano Letters, 2020, 20, 7852-7859.	9.1	5
29	Printing Air-Stable High-Tc Molecular Magnet with Tunable Magnetic Interaction. Nano Letters, 2022, 22, 545-553.	9.1	4
30	Gas-Phase Heat Transfer From a Heated Microcantilever Inside a Vacuum Enclosure. , 2009, , .		0
31	Size Dependent Orientation of Knudsen Force. , 2012, , .		0
32	Laserâ€Induced Cooperative Transition in Molecular Electronic Crystal (Adv. Mater. 39/2021). Advanced Materials, 2021, 33, .	21.0	0