

Jing-Tao Lu

List of Publications by Year in descending order

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83
papers

3,051
citations

218677

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161849

54
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83
all docs

83
docs citations

83
times ranked

3668
citing authors

#	ARTICLE	IF	CITATIONS
1	Quantum thermal transport in nanostructures. <i>European Physical Journal B</i> , 2008, 62, 381-404.	1.5	503
2	Tunneling Diode Based on WSe ₂ /SnS ₂ Heterostructure Incorporating High Detectivity and Responsivity. <i>Advanced Materials</i> , 2018, 30, 1703286.	21.0	293
3	Vertical heterostructures based on SnSe ₂ /MoS ₂ for high performance photodetectors. <i>2D Materials</i> , 2017, 4, 025048.	4.4	183
4	Nuclear quantum effects of hydrogen bonds probed by tip-enhanced inelastic electron tunneling. <i>Science</i> , 2016, 352, 321-325.	12.6	130
5	Spin-Dependent Transport in van der Waals Magnetic Tunnel Junctions with Fe ₃ GeTe ₂ Electrodes. <i>Nano Letters</i> , 2019, 19, 5133-5139.	9.1	115
6	Interlayer Coupling Induced Infrared Response in WS ₂ /MoS ₂ Heterostructures Enhanced by Surface Plasmon Resonance. <i>Advanced Functional Materials</i> , 2018, 28, 1800339.	14.9	114
7	Blowing the Fuse: Berry's Phase and Runaway Vibrations in Molecular Conductors. <i>Nano Letters</i> , 2010, 10, 1657-1663.	9.1	103
8	Current-induced atomic dynamics, instabilities, and Raman signals: Quasiclassical Langevin equation approach. <i>Physical Review B</i> , 2012, 85, .	3.2	94
9	P-GaSe/N-MoS ₂ Vertical Heterostructures Synthesized by van der Waals Epitaxy for Photoresponse Modulation. <i>Small</i> , 2018, 14, 1702731.	10.0	87
10	Comparative study of phonon spectrum and thermal expansion of graphene, silicene, germanene, and blue phosphorene. <i>Physical Review B</i> , 2016, 94, .	3.2	80
11	Strain-induced thermoelectric performance enhancement of monolayer ZrSe ₂ . <i>RSC Advances</i> , 2017, 7, 47243-47250.	3.6	70
12	Controlling Molecular Growth between Fractals and Crystals on Surfaces. <i>ACS Nano</i> , 2015, 9, 11909-11915.	14.6	68
13	Light Emission Probing Quantum Shot Noise and Charge Fluctuations at a Biased Molecular Junction. <i>Physical Review Letters</i> , 2012, 109, 186601.	7.8	56
14	Enhancing the Thermoelectric Figure of Merit by Low-Dimensional Electrical Transport in Phonon-Glass Crystals. <i>Nano Letters</i> , 2015, 15, 5229-5234.	9.1	55
15	Spin Manipulation by Creation of Single-Molecule Radical Cations. <i>Physical Review Letters</i> , 2016, 116, 027201.	7.8	53
16	Coulomb scattering in the Monte Carlo simulation of terahertz quantum-cascade lasers. <i>Applied Physics Letters</i> , 2006, 89, 211115.	3.3	51
17	Laserlike Vibrational Instability in Rectifying Molecular Conductors. <i>Physical Review Letters</i> , 2011, 107, 046801.	7.8	51
18	Efficient calculation of inelastic vibration signals in electron transport: Beyond the wide-band approximation. <i>Physical Review B</i> , 2014, 89, .	3.2	51

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19	Unexpectedly high cross-plane thermoelectric performance of layered carbon nitrides. <i>Journal of Materials Chemistry A</i> , 2019, 7, 2114-2121.	10.3	44
20	Current-induced forces: a simple derivation. <i>European Journal of Physics</i> , 2014, 35, 065004.	0.6	43
21	Sierpiński-triangle fractal crystals with the C _{3v} point group. <i>Chinese Chemical Letters</i> , 2015, 26, 1198-1202.	9.0	43
22	Terahertz generation and chaotic dynamics in GaN NDR diode. <i>Semiconductor Science and Technology</i> , 2004, 19, 451-456.	2.0	42
23	Current-Induced Forces and Hot Spots in Biased Nanojunctions. <i>Physical Review Letters</i> , 2015, 114, 096801.	7.8	39
24	Semi-classical generalized Langevin equation for equilibrium and nonequilibrium molecular dynamics simulation. <i>Progress in Surface Science</i> , 2019, 94, 21-40.	8.3	36
25	Monte Carlo simulation of extraction barrier width effects on terahertz quantum cascade lasers. <i>Applied Physics Letters</i> , 2008, 92, 221105.	3.3	34
26	Monte Carlo simulation of carrier transport and output characteristics of terahertz quantum cascade lasers. <i>Journal of Applied Physics</i> , 2008, 103, 103113.	2.5	32
27	Effects of electron-phonon interaction on thermal and electrical transport through molecular nano-conductors. <i>AIP Advances</i> , 2015, 5, 053204.	1.3	25
28	The integrated spintronic functionalities of an individual high-spin state spin-crossover molecule between graphene nanoribbon electrodes. <i>Nanotechnology</i> , 2015, 26, 315201.	2.6	24
29	Electron and phonon drag in thermoelectric transport through coherent molecular conductors. <i>Physical Review B</i> , 2016, 93, .	3.2	24
30	Density functional theory study of inter-layer coupling in bulk tin selenide. <i>Chemical Physics Letters</i> , 2018, 695, 200-204.	2.6	24
31	Charge Transfer Gap Tuning via Structural Distortion in Monolayer 1T-NbSe ₂ . <i>Nano Letters</i> , 2021, 21, 7005-7011.	9.1	24
32	Thermal transport across metal-insulator interface via electron-phonon interaction. <i>Journal of Physics Condensed Matter</i> , 2013, 25, 445801.	1.8	23
33	Energy transfer between two vacuum-gapped metal plates: Coulomb fluctuations and electron tunneling. <i>Physical Review B</i> , 2018, 97, .	3.2	22
34	Monte Carlo study of terahertz generation from streaming distribution of two-dimensional electrons in a GaN quantum well. <i>Semiconductor Science and Technology</i> , 2005, 20, 829-833.	2.0	21
35	Light emission and finite-frequency shot noise in molecular junctions: From tunneling to contact. <i>Physical Review B</i> , 2013, 88, .	3.2	21
36	Heat vortex in hydrodynamic phonon transport of two-dimensional materials. <i>Scientific Reports</i> , 2020, 10, 8272.	3.3	21

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37	Phonon excitation and instabilities in biased graphene nanoconstrictions. <i>Physical Review B</i> , 2013, 88, .	3.2	18
38	Graded thermal conductivity in 2D and 3D homogeneous hotspot systems. <i>Materials Today Physics</i> , 2022, 22, 100605.	6.0	18
39	Recent advances in inelastic electron tunneling spectroscopy. <i>Advances in Physics: X</i> , 2017, 2, 907-936.	4.1	16
40	First-principles study of thermoelectric transport properties of monolayer gallium chalcogenides. <i>Journal Physics D: Applied Physics</i> , 2017, 50, 405301.	2.8	16
41	Current-induced dynamics in carbon atomic contacts. <i>Beilstein Journal of Nanotechnology</i> , 2011, 2, 814-823.	2.8	15
42	Mechanochemistry Induced Using Force Exerted by a Functionalized Microscope Tip. <i>Angewandte Chemie - International Edition</i> , 2017, 56, 11769-11773.	13.8	15
43	Angular momentum radiation from current-carrying molecular junctions. <i>Physical Review B</i> , 2020, 101, .	3.2	15
44	Vacuum synthesis of magnetic aluminum phthalocyanine on Au(111). <i>Chemical Communications</i> , 2016, 52, 10338-10341.	4.1	14
45	Thermal transport through a spin-phonon interacting junction: A nonequilibrium Green's function method study. <i>Physical Review B</i> , 2017, 96, .	3.2	13
46	Coulomb-force-mediated heat transfer in the near field: Geometric effect. <i>Physical Review E</i> , 2018, 98, 012118.	2.1	13
47	Ultrahigh spin thermopower and pure spin current in a single-molecule magnet. <i>Scientific Reports</i> , 2014, 4, 4128.	3.3	12
48	Intrinsically low thermal conductivity of bismuth oxychalcogenides originating from interlayer coupling. <i>Physical Chemistry Chemical Physics</i> , 2019, 21, 18259-18264.	2.8	12
49	On the Fano Line Shape of Single Molecule Electroluminescence Induced by a Scanning Tunneling Microscope. <i>Nano Letters</i> , 2018, 18, 6826-6831.	9.1	11
50	Current-Perpendicular-to-Plane Giant Magnetoresistance Effect in van der Waals Heterostructures. <i>Physical Review Applied</i> , 2021, 16, .	3.8	11
51	Finite-size effects in the quantum anomalous Hall system. <i>Physical Review B</i> , 2014, 89, .	3.2	9
52	Triazatriangulene platform for self-assembled monolayers of free-standing diarylethene. <i>Science China Materials</i> , 2018, 61, 1345-1350.	6.3	9
53	Possible Phason-Polaron Effect on Purely One-Dimensional Charge Order of Mo_6 Nanowires. <i>Physical Review X</i> , 2020, 10, .	8.9	9
54	Single-site point defects in semimetal WTe_2 : A density functional theory study. <i>AIP Advances</i> , 2018, 8, 125323.	1.3	8

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55	Large Magnetoresistance in an Electric-Field-Controlled Antiferromagnetic Tunnel Junction. <i>Physical Review Applied</i> , 2019, 12, .	3.8	8
56	Temperature-dependent thermal transport of single molecular junctions from semiclassical Langevin molecular dynamics. <i>Physical Review B</i> , 2021, 104, .	3.2	8
57	Temperature performance of resonant-phonon-assisted terahertz quantum-cascade lasers. <i>Physica E: Low-Dimensional Systems and Nanostructures</i> , 2008, 41, 282-284.	2.7	7
58	Spectroscopy of transmission resonances through a C_{60} junction. <i>Journal of Physics Condensed Matter</i> , 2015, 27, 015001.	1.8	7
59	Giant Tunnel Magnetoresistance with a Single Magnetic Phase-Transition Electrode. <i>Physical Review Applied</i> , 2018, 9, .	3.8	7
60	Orbital degrees of freedom in artificial electron lattices on a metal surface. <i>Physical Review B</i> , 2019, 99, .	3.2	7
61	<i>Ab initio</i> current-induced molecular dynamics. <i>Physical Review B</i> , 2020, 101, .	3.2	7
62	Unified theory of second sound in two-dimensional materials. <i>Physical Review B</i> , 2022, 105, .	3.2	7
63	Optical Phonon Behaviors of Photocharged Nanocrystals: Effects of Free Charge Carriers. <i>Journal of Physical Chemistry Letters</i> , 2018, 9, 5055-5062.	4.6	6
64	Effective Control of Photon Statistics from Electroluminescence by Fano-like Interference Effect. <i>Journal of Physical Chemistry Letters</i> , 2020, 11, 8721-8726.	4.6	6
65	Nonthermal vibrations in biased molecular junctions. <i>Physical Review E</i> , 2020, 102, 022127.	2.1	6
66	Design and optimization of a heat engine based on a porphyrin single-molecule junction with graphene electrodes. <i>Physical Review B</i> , 2020, 101, .	3.2	6
67	Observation of Biradical Spin Coupling through Hydrogen Bonds. <i>Physical Review Letters</i> , 2022, 128, .	7.8	6
68	Current-induced runaway vibrations in dehydrogenated graphene nanoribbons. <i>Beilstein Journal of Nanotechnology</i> , 2016, 7, 68-74.	2.8	4
69	Mechanochemistry Induced Using Force Exerted by a Functionalized Microscope Tip. <i>Angewandte Chemie</i> , 2017, 129, 11931-11935.	2.0	4
70	Tin-phthalocyanine adsorption and diffusion on Cu and Au (111) surfaces: A density functional theory study. <i>Surface Science</i> , 2018, 671, 6-10.	1.9	4
71	First-principles study on the electron and phonon transport properties of layered $Bi_2O_{X_2}$ ($X = S, Se$). <i>AIP Advances</i> , 2020, 10, .	1.3	4
72	Decay channels of gap plasmons in STM tunnel junctions. <i>Optics Express</i> , 2018, 26, 30444.	3.4	3

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73	Steady-state and small signal analysis of terahertz ballistic tunnel transit-time oscillator. Journal of Physics Condensed Matter, 2004, 16, 627-634.	1.8	2
74	Fano-shaped impurity spectral density, electric-field-induced in-gap state, and local magnetic moment of an adatom on trilayer graphene. Physical Review B, 2017, 96, .	3.2	2
75	Photodetectors: Interlayer Coupling Induced Infrared Response in WS_2/MoS_2 Heterostructures Enhanced by Surface Plasmon Resonance (Adv. Funct. Mater. 22/2018). Advanced Functional Materials, 2018, 28, 1870151.	14.9	2
76	Mechanism of Bimodal Light Emission in a Molecule-Mediated Scanning Tunneling Microscopy Junction. Journal of Physical Chemistry C, 2019, 123, 18508-18515.	3.1	2
77	Making an artificial px,y -orbital honeycomb electron lattice on a metal surface. Physical Review B, 2021, 104, .	3.2	2
78	Electron-LO-phonon interaction in wurtzite GaN quantum wells under a magnetic field. Physica B: Condensed Matter, 2008, 403, 2567-2571.	2.7	1
79	Bandstructure and electronic states in terahertz quantum cascade lasers. International Journal of Computational Science and Engineering, 2006, 2, 189.	0.5	0
80	Thermoelectric properties of disordered graphene antidot devices. , 2012, , .		0
81	Heat transfer mediated by the dynamical Casimir effect in an optomechanical system. Physical Review A, 2021, 103, .	2.5	0
82	Nonequilibrium reservoir engineering of a biased coherent conductor for hybrid energy transport in nanojunctions. Chinese Physics B, 2020, 29, 120505.	1.4	0
83	K -space thermodynamic funneling of light via heat exchange. Physical Review A, 2022, 105, .	2.5	0