Jing-Tao Lu

List of Publications by Year
in descending order

83 papers	3,051 citations	218677 26 h-index	161849 54 g-index
83 all docs	83 docs citations	83 times ranked	3668 citing authors

#	Article	IF	Citations
1	Graded thermal conductivity in 2D and 3D homogeneous hotspot systems. Materials Today Physics, 2022, 22, 100605.	6.0	18
2	<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mi>K</mml:mi></mml:math> -space thermodynamic funneling of light via heat exchange. Physical Review A, 2022, 105, .	2.5	0
3	Unified theory of second sound in two-dimensional materials. Physical Review B, 2022, 105, .	3.2	7
4	Observation of Biradical Spin Coupling through Hydrogen Bonds. Physical Review Letters, 2022, 128, .	7.8	6
5	Heat transfer mediated by the dynamical Casimir effect in an optomechanical system. Physical Review A, 2021, 103, .	2.5	0
6	Charge Transfer Gap Tuning via Structural Distortion in Monolayer 1T-NbSe₂. Nano Letters, 2021, 21, 7005-7011.	9.1	24
7	Current-Perpendicular-to-Plane Giant Magnetoresistance Effect in van der Waals Heterostructures. Physical Review Applied, 2021, 16, .	3.8	11
8	Making an artificial px,y -orbital honeycomb electron lattice on a metal surface. Physical Review B, 2021, 104, .	3.2	2
9	Temperature-dependent thermal transport of single molecular junctions from semiclassical Langevin molecular dynamics. Physical Review B, 2021, 104, .	3.2	8
10	Possible Phason-Polaron Effect on Purely One-Dimensional Charge Order of <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:msub><mml:mrow><mml:mi>Mo</mml:mi></mml:mrow><mml:mrow><mml:mn>6</mml:mn></mml:mr Nanowires. Physical Review X, 2020, 10, .	8.9	9
11	Effective Control of Photon Statistics from Electroluminescence by Fano-like Interference Effect. Journal of Physical Chemistry Letters, 2020, 11, 8721-8726.	4.6	6
12	Nonthermal vibrations in biased molecular junctions. Physical Review E, 2020, 102, 022127.	2.1	6
13	First-principles study on the electron and phonon transport properties of layered Bi2OX2 (X = S, Se). AIP Advances, 2020, 10, .	1.3	4
14	Ab initio current-induced molecular dynamics. Physical Review B, 2020, 101, .	3.2	7
15	Heat vortex in hydrodynamic phonon transport of two-dimensional materials. Scientific Reports, 2020, 10, 8272.	3.3	21
16	Design and optimization of a heat engine based on a porphyrin single-molecule junction with graphene electrodes. Physical Review B, 2020, 101, .	3.2	6
17	Angular momentum radiation from current-carrying molecular junctions. Physical Review B, 2020, 101, .	3.2	15
18	Nonequilibrium reservoir engineering of a biased coherent conductor for hybrid energy transport in nanojunctions. Chinese Physics B, 2020, 29, 120505.	1.4	0

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19	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
20	Spin-Dependent Transport in van der Waals Magnetic Tunnel Junctions with Fe₃GeTe₂ Electrodes. Nano Letters, 2019, 19, 5133-5139.	9.1	115
21	Intrinsically low thermal conductivity of bismuth oxychalcogenides originating from interlayer coupling. Physical Chemistry Chemical Physics, 2019, 21, 18259-18264.	2.8	12
22	Large Magnetoresistance in an Electric-Field-Controlled Antiferromagnetic Tunnel Junction. Physical Review Applied, 2019, 12, .	3.8	8
23	Unexpectedly high cross-plane thermoelectric performance of layered carbon nitrides. Journal of Materials Chemistry A, 2019, 7, 2114-2121.	10.3	44
24	Orbital degrees of freedom in artificial electron lattices on a metal surface. Physical Review B, 2019, 99, .	3.2	7
25	Semi-classical generalized Langevin equation for equilibrium and nonequilibrium molecular dynamics simulation. Progress in Surface Science, 2019, 94, 21-40.	8.3	36
26	Triazatriangulene platform for self-assembled monolayers of free-standing diarylethene. Science China Materials, 2018, 61, 1345-1350.	6.3	9
27	Interlayer Coupling Induced Infrared Response in WS₂/MoS₂ Heterostructures Enhanced by Surface Plasmon Resonance. Advanced Functional Materials, 2018, 28, 1800339.	14.9	114
28	Density functional theory study of inter-layer coupling in bulk tin selenide. Chemical Physics Letters, 2018, 695, 200-204.	2.6	24
29	Tin-phthalocyanine adsorption and diffusion on Cu and Au (111) surfaces: A density functional theory study. Surface Science, 2018, 671, 6-10.	1.9	4
30	Tunneling Diode Based on WSe₂/SnS₂ Heterostructure Incorporating High Detectivity and Responsivity. Advanced Materials, 2018, 30, 1703286.	21.0	293
31	Pâ€GaSe/Nâ€MoS₂ Vertical Heterostructures Synthesized by van der Waals Epitaxy for Photoresponse Modulation. Small, 2018, 14, 1702731.	10.0	87
32	Giant Tunnel Magnetoresistance with a Single Magnetic Phase-Transition Electrode. Physical Review Applied, 2018, 9, .	3.8	7
33	Single-site point defects in semimetal WTe₂: A density functional theory study. AIP Advances, 2018, 8, 125323.	1.3	8
34	On the Fano Line Shape of Single Molecule Electroluminescence Induced by a Scanning Tunneling Microscope. Nano Letters, 2018, 18, 6826-6831.	9.1	11
35	Energy transfer between two vacuum-gapped metal plates: Coulomb fluctuations and electron tunneling. Physical Review B, 2018, 97, .	3.2	22
36	Coulomb-force-mediated heat transfer in the near field: Geometric effect. Physical Review E, 2018, 98, 012118.	2.1	13

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37	Optical Phonon Behaviors of Photocharged Nanocrystals: Effects of Free Charge Carriers. Journal of Physical Chemistry Letters, 2018, 9, 5055-5062.	4.6	6
38	Photodetectors: Interlayer Coupling Induced Infrared Response in WS₂/MoS₂ Heterostructures Enhanced by Surface Plasmon Resonance (Adv. Funct. Mater. 22/2018). Advanced Functional Materials, 2018, 28, 1870151.	14.9	2
39	Decay channels of gap plasmons in STM tunnel junctions. Optics Express, 2018, 26, 30444.	3.4	3
40	Vertical heterostructures based on SnSe ₂ /MoS ₂ for high performance photodetectors. 2D Materials, 2017, 4, 025048.	4.4	183
41	Recent advances in inelastic electron tunneling spectroscopy. Advances in Physics: X, 2017, 2, 907-936.	4.1	16
42	Strain-induced thermoelectric performance enhancement of monolayer ZrSe₂. RSC Advances, 2017, 7, 47243-47250.	3.6	70
43	Thermal transport through a spin-phonon interacting junction: A nonequilibrium Green's function method study. Physical Review B, 2017, 96, .	3.2	13
44	Mechanochemistry Induced Using Force Exerted by a Functionalized Microscope Tip. Angewandte Chemie - International Edition, 2017, 56, 11769-11773.	13.8	15
45	Mechanochemistry Induced Using Force Exerted by a Functionalized Microscope Tip. Angewandte Chemie, 2017, 129, 11931-11935.	2.0	4
46	First-principles study of thermoelectric transport properties of monolayer gallium chalcogenides. Journal Physics D: Applied Physics, 2017, 50, 405301.	2.8	16
47	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
48	Current-induced runaway vibrations in dehydrogenated graphene nanoribbons. Beilstein Journal of Nanotechnology, 2016, 7, 68-74.	2.8	4
49	Vacuum synthesis of magnetic aluminum phthalocyanine on Au(111). Chemical Communications, 2016, 52, 10338-10341.	4.1	14
50	Nuclear quantum effects of hydrogen bonds probed by tip-enhanced inelastic electron tunneling. Science, 2016, 352, 321-325.	12.6	130
51	Spin Manipulation by Creation of Single-Molecule Radical Cations. Physical Review Letters, 2016, 116, 027201.	7.8	53
52	Electron and phonon drag in thermoelectric transport through coherent molecular conductors. Physical Review B, 2016, 93, .	3.2	24
53	Comparative study of phonon spectrum and thermal expansion of graphene, silicene, germanene, and blue phosphorene. Physical Review B, 2016, 94, .	3.2	80
54	Spectroscopy of transmission resonances through a C₆₀junction. Journal of Physics Condensed Matter, 2015, 27, 015001.	1.8	7

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55	Current-Induced Forces and Hot Spots in Biased Nanojunctions. Physical Review Letters, 2015, 114, 096801.	7.8	39
56	Enhancing the Thermoelectric Figure of Merit by Low-Dimensional Electrical Transport in Phonon-Glass Crystals. Nano Letters, 2015, 15, 5229-5234.	9.1	55
57	The integrated spintronic functionalities of an individual high-spin state spin-crossover molecule between graphene nanoribbon electrodes. Nanotechnology, 2015, 26, 315201.	2.6	24
58	Controlling Molecular Growth between Fractals and Crystals on Surfaces. ACS Nano, 2015, 9, 11909-11915.	14.6	68
59	Effects of electron-phonon interaction on thermal and electrical transport through molecular nano-conductors. AIP Advances, 2015, 5, 053204.	1.3	25
60	SierpiÅ„ski-triangle fractal crystals with the C3v point group. Chinese Chemical Letters, 2015, 26, 1198-1202.	9.0	43
61	Efficient calculation of inelastic vibration signals in electron transport: Beyond the wide-band approximation. Physical Review B, 2014, 89, .	3.2	51
62	Finite-size effects in the quantum anomalous Hall system. Physical Review B, 2014, 89, .	3.2	9
63	Current-induced forces: a simple derivation. European Journal of Physics, 2014, 35, 065004.	0.6	43
64	Ultrahigh spin thermopower and pure spin current in a single-molecule magnet. Scientific Reports, 2014, 4, 4128.	3.3	12
65	Phonon excitation and instabilities in biased graphene nanoconstrictions. Physical Review B, 2013, 88, .	3.2	18
66	Thermal transport across metalâ€“insulator interface via electronâ€“phonon interaction. Journal of Physics Condensed Matter, 2013, 25, 445801.	1.8	23
67	Light emission and finite-frequency shot noise in molecular junctions: From tunneling to contact. Physical Review B, 2013, 88, .	3.2	21
68	Current-induced atomic dynamics, instabilities, and Raman signals: Quasiclassical Langevin equation approach. Physical Review B, 2012, 85, .	3.2	94
69	Light Emission Probing Quantum Shot Noise and Charge Fluctuations at a Biased Molecular Junction. Physical Review Letters, 2012, 109, 186601.	7.8	56
70	Thermoelectric properties of disordered graphene antidot devices. , 2012, , .		0
71	Current-induced dynamics in carbon atomic contacts. Beilstein Journal of Nanotechnology, 2011, 2, 814-823.	2.8	15
72	Laserlike Vibrational Instability in Rectifying Molecular Conductors. Physical Review Letters, 2011, 107, 046801.	7.8	51

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73	Blowing the Fuse: Berryâ€™s Phase and Runaway Vibrations in Molecular Conductors. Nano Letters, 2010, 10, 1657-1663.	9.1	103
74	Temperature performance of resonant-phonon-assisted terahertz quantum-cascade lasers. Physica E: Low-Dimensional Systems and Nanostructures, 2008, 41, 282-284.	2.7	7
75	Electronâ€“LO-phonon interaction in wurtzite GaN quantum wells under a magnetic field. Physica B: Condensed Matter, 2008, 403, 2567-2571.	2.7	1
76	Quantum thermal transport in nanostructures. European Physical Journal B, 2008, 62, 381-404.	1.5	503
77	Monte Carlo simulation of carrier transport and output characteristics of terahertz quantum cascade lasers. Journal of Applied Physics, 2008, 103, 103113.	2.5	32
78	Monte Carlo simulation of extraction barrier width effects on terahertz quantum cascade lasers. Applied Physics Letters, 2008, 92, 221105.	3.3	34
79	Coulomb scattering in the Monte Carlo simulation of terahertz quantum-cascade lasers. Applied Physics Letters, 2006, 89, 211115.	3.3	51
80	Bandstructure and electronic states in terahertz quantum cascade lasers. International Journal of Computational Science and Engineering, 2006, 2, 189.	0.5	0
81	Monte Carlo study of terahertz generation from streaming distribution of two-dimensional electrons in a GaN quantum well. Semiconductor Science and Technology, 2005, 20, 829-833.	2.0	21
82	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
83	Terahertz generation and chaotic dynamics in GaN NDR diode. Semiconductor Science and Technology, 2004, 19, 451-456.	2.0	42