Lei Wang

List of Publications by Year
in descending order

55 papers	5,148 citations	361296 20 h-index	182361 51 g-index
55 all docs	55 docs citations	55 times ranked	2502 citing authors

#	Article	IF	Citations
1	Colloquium: Phononics: Manipulating heat flow with electronic analogs and beyond. Reviews of Modern Physics, 2012, 84, 1045-1066.	16.4	1,106
2	Thermal Diode: Rectification of Heat Flux. Physical Review Letters, 2004, 93, 184301.	2.9	930
3	Thermal Logic Gates: Computation with Phonons. Physical Review Letters, 2007, 99, 177208.	2.9	542
4	Negative differential thermal resistance and thermal transistor. Applied Physics Letters, 2006, 88, 143501.	1.5	525
5	Interface Thermal Resistance between Dissimilar Anharmonic Lattices. Physical Review Letters, 2005, 95, 104302.	2.9	361
6	Thermal Memory: A Storage of Phononic Information. Physical Review Letters, 2008, 101, 267203.	2.9	357
7	Thermal rectification and negative differential thermal resistance in lattices with mass gradient. Physical Review B, 2007, 76, .	1.1	242
8	Phononics gets hot. Physics World, 2008, 21, 27-29.	0.0	143
9	Computation and data driven discovery of topological phononic materials. Nature Communications, 2021, 12, 1204.	5.8	98
10	Anomalous heat conduction and anomalous diffusion in nonlinear lattices, single walled nanotubes, and billiard gas channels. Chaos, 2005, 15, 015121.	1.0	95
11	Finite Thermal Conductivity in 1D Models Having Zero Lyapunov Exponents. Physical Review Letters, 2002, 88, 223901.	2.9	92
12	Thermal Transistor: Heat Flux Switching and Modulating. Journal of the Physical Society of Japan, 2008, 77, 054402.	0.7	91
13	Logarithmic divergent thermal conductivity in two-dimensional nonlinear lattices. Physical Review E, 2012, 86, 040101.	0.8	63
14	Validity of Fourier's law in one-dimensional momentum-conserving lattices with asymmetric interparticle interactions. Physical Review E, 2013, 88, 052112.	0.8	61
15	Power-law divergent heat conductivity in one-dimensional momentum-conserving nonlinear lattices. Europhysics Letters, 2011, 93, 54002.	0.7	51
16	Analytical results for the steady state of traffic flow models with stochastic delay. Physical Review E, 1998, 58, 2876-2882.	0.8	41
17	Cellular automaton traffic flow model between the Fukui-Ishibashi and Nagel-Schreckenberg models. Physical Review E, 2001, 63, 056117.	0.8	29
18	Heat Conduction in a Three-Dimensional Momentum-Conserving Anharmonic Lattice. Physical Review Letters, 2010, 105, 160601.	2.9	29

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19	Ratchet Effect and the Transporting Islands in the Chaotic Sea. Physical Review Letters, 2007, 99, 244101.	2.9	26
20	One-Dimensional Fukui-Ishibashi Traffic Flow Model. Journal of the Physical Society of Japan, 1997, 66, 3683-3684.	0.7	21
21	Tailoring the thermal transport properties of monolayer hexagonal boron nitride by grain size engineering. 2D Materials, 2020, 7, 015031.	2.0	21
22	The asymptotic steady states of deterministic one-dimensional traffic flow models. Physica B: Condensed Matter, 2000, 279, 237-239.	1.3	18
23	Heat current limiter and constant heat current source. Physical Review E, 2012, 85, 061112.	0.8	18
24	Super heat diffusion in one-dimensional momentum-conserving nonlinear lattices. Physical Review E, 2015, 91, 062130.	0.8	18
25	INTERFACE THERMAL RESISTANCE BETWEEN FRENKEL-KONTOROVA AND FERMI-PASTA-ULAM LATTICES. International Journal of Modern Physics B, 2007, 21, 4013-4016.	1.0	17
26	A one-dimensional hard-point gas and thermoelectric efficiency. Journal of Statistical Mechanics: Theory and Experiment, 2009, 2009, L03004.	0.9	17
27	Heat-current correlation loss induced by finite-size effects in a one-dimensional nonlinear lattice. Physical Review E, 2015, 91, 012110.	0.8	14
28	Thermal diode from two-dimensional asymmetrical Ising lattices. Physical Review E, 2011, 83, 061128.	0.8	12
29	Reduction of thermal conductivity of anharmonic lattices. Physical Review B, 2006, 74, .	1.1	10
30	Switchability and controllability of a thermal transistor. Physical Review Research, 2020, 2, .	1.3	10
31	Dispersion and absorption in one-dimensional nonlinear lattices: A resonance phonon approach. Physical Review E, 2016, 94, 030101.	0.8	8
32	Resonance phonon approach to phonon relaxation time and mean free path in one-dimensional nonlinear lattices. Physical Review E, 2017, 95, 042138.	0.8	8
33	Response and correlation functions of nonlinear systems in equilibrium states. Physical Review E, 2017, 96, 052139.	0.8	8
34	Comment on â€œFinite Heat Conduction in a 2D Disorder Latticeâ€• Physical Review Letters, 2003, 90, 119401; author reply 119402.	2.9	6
35	Validity of local thermal equilibrium in anomalous heat diffusion. New Journal of Physics, 2019, 21, 083019.	1.2	6
36	Long-range correlation and predictability of Chinese stock prices. Physica A: Statistical Mechanics and Its Applications, 2020, 549, 124384.	1.2	6

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37	Strict derivation of mean field equation for one-dimensional traffic flow model. Acta Physica Sinica (overseas Edition), 1997, 6, 829-836.	0.1	5
38	Frequency response of a thermal diode. Physical Review E, 2014, 89, 012119.	0.8	5
39	Cellular Automaton Model for One Dimensional Traffic Flow with Gradual Acceleration and Stochastic Delay: Analytical Approach. International Journal of Nonlinear Sciences and Numerical Simulation, 2000, 1, .	0.4	4
40	Traffic Flow CA Model in Which Only the Cars Following the Trail of the Ahead Car Can Be Delayed. International Journal of Nonlinear Sciences and Numerical Simulation, 2003, 4, .	0.4	4
41	HEAT SWITCH AND MODULATOR: A MODEL OF THERMAL TRANSISTOR. International Journal of Modern Physics B, 2007, 21, 4017-4020.	1.0	4
42	Dual Fractal Dimension and Long-Range Correlation of Chinese Stock Prices. Journal of the Physical Society of Japan, 2012, 81, 034801.	0.7	4
43	Mechanism of large tunable thermal transport in graphene with oxygen functional groups. Journal of Applied Physics, 2018, 124, 175108.	1.1	4
44	Green-Kubo algorithm in the calculation of anomalous heat conduction for models with and without sound mode. European Physical Journal B, 2020, 93, 1.	0.6	3
45	Phononics: A New Science and Technology of Controlling Heat Flow and Processing Information by Phonons. , 2010, , .		2
46	Deviation from the Maxwell-Cattaneo law: Role of asymmetric interparticle interactions. Physical Review E, 2015, 92, 042136.	0.8	2
47	Simulation of Heat Transport in Low-Dimensional Oscillator Lattices. Lecture Notes in Physics, 2016, , 239-274.	0.3	2
48	Scaling property of the heat-current flows across a weak interface. Physical Review E, 2018, 98, .	0.8	2
49	Self-adaptive near-filed thermal stabilizer. International Journal of Heat and Mass Transfer, 2022, 191, 122824.	2.5	2
50	Correlation functions and their universal connection during an extremely slow equilibration process. Physical Review E, 2022, 105, .	0.8	2
51	Heat and particle transport in a one-dimensional hard-point gas model with on-site potential. AIP Advances, 2015, 5, 053201.	0.6	1
52	Average number of fixed points and attractors in Hopfield neural networks. International Journal of Modern Physics C, 2018, 29, 1850076.	0.8	1
53	Heat current flows across an interface in two-dimensional lattices. Physical Review E, 2021, 103, 052141.	0.8	1
54	Nonequilibrium properties of the one-dimensional hard-point gas system. Physical Review E, 2006, 74, 037201.	0.8	0

#	Article	IF	Citations
55	Projective-truncation-approximation study of the one-dimensional <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:msup><mml:mi>Ï•</mml:mi><mml:mn>4</mml:mn><mml:msup></mml:msup></mml:msup></mml:m lattice model. Physical Review E, 2022, 106, .		