Wei Kang

List of Publications by Year
in descending order

63	2,482	361413	197818
papers	citations	20 h-index	49 g-index

64	64	64	3760
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Ferroelectricity and Phase Transitions in Monolayer Group-IV Monochalcogenides. Physical Review Letters, 2016, 117, 097601.	7.8	468
2	The potential application of phosphorene as an anode material in Li-ion batteries. Journal of Materials Chemistry A, 2014, 2, 19046-19052.	10.3	339
3	Gas adsorption on MoS2 monolayer from first-principles calculations. Chemical Physics Letters, 2014, 595-596, 35-42.	2.6	328
4	Quasiparticle and optical properties of rutile and anatase<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:msub><mml:mrow><mml:mtext>TiO</mml:mtext></mml:mrow><mml:mn>2</mml:mn></mml:msu Physical Review B, 2010, 82, .	3.2	192
5	Manipulation of electronic and magnetic properties of M2C (M = Hf, Nb, Sc, Ta, Ti, V, Zr) monolayer by applying mechanical strains. Applied Physics Letters, 2014, 104, .	3.3	139
6	Ion selection of charge-modified large nanopores in a graphene sheet. Journal of Chemical Physics, 2013, 139, 114702.	3.0	95
7	Role of Strain and Concentration on the Li Adsorption and Diffusion Properties on Ti₂C Layer. Journal of Physical Chemistry C, 2014, 118, 14983-14990.	3.1	88
8	Electronic structure and quasiparticle bandgap of silicene structures. Applied Physics Letters, 2013, 102, .	3.3	79
9	MXene nanoribbons. Journal of Materials Chemistry C, 2015, 3, 879-888.	5.5	65
10	Antiferromagnetic FeSe monolayer on SrTiO3: The charge doping and electric field effects. Scientific Reports, 2013, 3, 2213.	3.3	64
11	Extended application of Kohn-Sham first-principles molecular dynamics method with plane wave approximation at high energyâ€"From cold materials to hot dense plasmas. Physics of Plasmas, 2016, 23, .	1.9	54
12	Universality Crossover of the Pinch-Off Shape Profiles of Collapsing Liquid Nanobridges in Vacuum and Gaseous Environments. Physical Review Letters, 2007, 98, 064504.	7.8	46
13	Enhanced static approximation to the electron self-energy operator for efficient calculation of quasiparticle energies. Physical Review B, 2010, 82, .	3.2	42
14	Van der Waals interaction-tuned heat transfer in nanostructures. Nanoscale, 2013, 5, 128-133.	5.6	29
15	Molecular dynamics simulation of strong shock waves propagating in dense deuterium, taking into consideration effects of excited electrons. Physical Review E, 2017, 95, 023201.	2.1	29
16	Nano-architected metamaterials: Carbon nanotube-based nanotrusses. Carbon, 2018, 131, 38-46.	10.3	29
17	Molecular dynamics simulations of microscopic structure of ultra strong shock waves in dense helium. Frontiers of Physics, 2016, 11, 1.	5.0	28
18	Link between<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mi>K</mml:mi></mml:math>absorption edges and thermodynamic properties of warm dense plasmas established by an improved first-principles method. Physical Review B, 2016, 93, .	3.2	28

#	Article	IF	Citations
19	Comparison of electronic energy loss in graphene and BN sheet by means of time-dependent density functional theory. Journal of Physics Condensed Matter, 2015, 27, 025401.	1.8	27
20	Viscous flow simulation in a stenosis model using discrete particle dynamics: a comparison between DPD and CFD. Biomechanics and Modeling in Mechanobiology, 2012, 11, 119-129.	2.8	24
21	Validity boundary of orbital-free molecular dynamics method corresponding to thermal ionization of shell structure. Physical Review B, 2016, 94, .	3.2	20
22	First-Principles Estimation of Electronic Temperature from X-Ray Thomson Scattering Spectrum of Isochorically Heated Warm Dense Matter. Physical Review Letters, 2018, 120, 205002.	7.8	20
23	Parameterizing the Morse potential for coarse-grained modeling of blood plasma. Journal of Computational Physics, 2014, 257, 726-736.	3.8	19
24	Effect of High Order Phonon Scattering on the Thermal Conductivity and Its Response to Strain of a Penta-NiN₂ Sheet. Journal of Physical Chemistry Letters, 2022, 13, 5734-5741.	4.6	16
25	Thermal bending of nanojets: Molecular dynamics simulations of an asymmetrically heated nozzle. Applied Physics Letters, 2008, 93, .	3.3	15
26	Finite-temperature infrared and Raman spectra of high-pressure hydrogen from first-principles molecular dynamics. Physical Review B, 2018, 98, .	3.2	14
27	Ubiquitous thermal rectification induced by non-diffusive weak scattering at low temperature in one-dimensional materials: Revealed with a non-reflective heat reservoir. Europhysics Letters, 2014, 105, 16004.	2.0	12
28	Electronic and optical properties of (U,Th)O 2 compound from screened hybrid density functional studies. Physics Letters, Section A: General, Atomic and Solid State Physics, 2016, 380, 1481-1486.	2.1	12
29	X-ray absorption of liquid water by advanced ab initio methods. Physical Review B, 2017, 96, .	3.2	11
30	Design of Medium Band Gap Agâ€“Biâ€“Nbâ€“O and Agâ€“Biâ€“Taâ€“O Semiconductors for Driving Direct Water Splitting with Visible Light. Inorganic Chemistry, 2013, 52, 9192-9205.	4.0	9
31	H+ (D+, T+)â€“beryllium collisions studied using time-dependent density functional theory. Physics Letters, Section A: General, Atomic and Solid State Physics, 2015, 379, 319-326.	2.1	9
32	Boron-Functionalized Organic Framework as a High-Performance Metal-Free Catalyst for N₂ Fixation. Journal of Physical Chemistry Letters, 2021, 12, 12142-12149.	4.6	9
33	First-principles calculation of principal Hugoniot and K-shell X-ray absorption spectra for warm dense KCl. Physics of Plasmas, 2015, 22, 062707.	1.9	8
34	Temperature and compression effects on electron heat capacity and electron-phonon coupling in aluminum and beryllium: Insights from ab initio simulations. Physics of Plasmas, 2015, 22, .	1.9	8
35	First-Principles Investigation to Ionization of Argon Under Conditions Close to Typical Sonoluminescence Experiments. Scientific Reports, 2016, 6, 20623.	3.3	8
36	Equations of state of poly- <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mi>Î±</mml:mi></mml:math> -methylstyrene and polystyrene: First-principles calculations versus precision measurements. Physical Review B, 2021, 103, .	3.2	8

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37	Chaoslike behavior in nonchaotic systems at finite computation precision. Physical Review E, 2001, 63, 046310.	2.1	7
38	Generalized Lenard-Balescu calculations of electron-ion temperature relaxation in beryllium plasma. Physical Review E, 2015, 92, 033103.	2.1	7
39	Dynamic properties of the energy loss of multi-MeV charged particles traveling in two-component warm dense plasmas. Physical Review E, 2016, 94, 063203.	2.1	7
40	First-principles method for x-ray Thomson scattering including both elastic and inelastic features in warm dense matter. Physical Review B, 2020, 102, .	3.2	6
41	Recent progresses on numerical investigations of microscopic structure of strong shock waves in fluid. Scientia Sinica: Physica, Mechanica Et Astronomica, 2017, 47, 070003.	0.4	6
42	Heat transfer in heterogeneous nanostructures can be described by a simple chain model. Physical Chemistry Chemical Physics, 2014, 16, 16914-16918.	2.8	5
43	Thermal conductance of one-dimensional materials calculated with typical lattice models. Physical Review E, 2016, 94, 052131.	2.1	5
44	Stopping power of hot dense deuterium-tritium plasmas mixed with impurities to charged particles. Physical Review E, 2020, 101, 053209.	2.1	5
45	First-Principles Study of the Structural, Electronic, and Enhanced Optical Properties of SnS/TaS₂ Heterojunction. ACS Applied Materials & Interfaces, 2022, 14, 2177-2184.	8.0	5
46	Thermodynamic second law in irreversible processes of chaotic few-body systems. Physical Review E, 2001, 64, 045102.	2.1	4
47	Determination of concerted or stepwise mechanism of hydrogen tunneling from isotope effects: Departure between experiment and theory. Journal of Chemical Physics, 2022, 156, 124304.	3.0	4
48	Transport properties of hydrogen-helium mixtures at extreme density and temperature conditions. Physical Review E, 2015, 92, 043108.	2.1	3
49	Temperature effect on the phase stability of hydrogen C2/c phase from first-principles molecular dynamics calculations. Journal of Physics Condensed Matter, 2020, 32, 405404.	1.8	3
50	Coupling effects and thin-shell corrections for surface instabilities of cylindrical fluid shells. Physical Review E, 2020, 101, 023108.	2.1	3
51	Dynamics of particles near the surface of a medium under ultra-strong shocks. Matter and Radiation at Extremes, 2021, 6, .	3.9	3
52	Phonon Transport and Thermoelectric Properties of Imidazole-Graphyne. Materials, 2021, 14, 5604.	2.9	3
53	Finite-temperature phonon dispersion and vibrational dynamics of BaTiO3 from first-principles molecular dynamics. Physical Review B, 2022, 105, .	3.2	3
54	First-principles calculations of K-shell X-ray absorption spectra for warm dense nitrogen. Physics of Plasmas, 2016, 23, 053304.	1.9	2

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55	Theoretical study on electronâ€“phonon coupling factor and electronâ€“ion nonequilibrium process in uranium. Physics of Plasmas, 2017, 24, 022703.	1.9	2
56	Impact of isotopic disorders on thermal transport properties of nanotubes and nanowires. Journal of Applied Physics, 2015, 117, 035101.	2.5	1
57	First-principles calculations of X-ray absorption spectra for warm dense methane. Physics of Plasmas, 2017, 24, 092705.	1.9	1
58	Measurement of ionic structure in isochorically heated graphite from X-ray Thomson scattering. Physics of Plasmas, 2019, 26, 022702.	1.9	1
59	Dynamics of bond breaking and formation in polyethylene near shock front. Physical Review E, 2020, 102, 023207.	2.1	1
60	Inverting shock-wave temperatures via artificial neural networks. Journal of Applied Physics, 2020, 127, 125901.	2.5	1
61	First-principles calculations of K-shell x-ray absorption spectra for warm dense ammonia*. Chinese Physics B, 2021, 30, 057102.	1.4	1
62	High-energy-density physics based on HIAF. Scientia Sinica: Physica, Mechanica Et Astronomica, 2020, 50, 112004.	0.4	1
63	Transition of the generation mechanism of high-order harmonics in an extended neon system. Matter and Radiation at Extremes, 2022, 7, 044403.	3.9	1