Zh A Moldabekov

List of Publications by Year
in descending order

86	1,672	279798	330143
papers	citations	23 h-index	37 g-index

86	86	86	420
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Theoretical foundations of quantum hydrodynamics for plasmas. Physics of Plasmas, 2018, 25, .	1.9	119
2	Ab initio simulation of warm dense matter. Physics of Plasmas, 2020, 27, .	1.9	114
3	Statically screened ion potential and Bohm potential in a quantum plasma. Physics of Plasmas, 2015, 22, .	1.9	94
4	Quantum hydrodynamics for plasmasâ€"Quo vadis?. Physics of Plasmas, 2019, 26, .	1.9	76
5	The static local field correction of the warm dense electron gas: An ab initio path integral Monte Carlo study and machine learning representation. Journal of Chemical Physics, 2019, 151, 194104.	3.0	64
6	Pseudopotentials of the particles interactions in complex plasmas. Physics of Plasmas, 2011, 18, 103705.	1.9	62
7	Fermionic path-integral Monte Carlo results for the uniform electron gas at finite temperature. Physical Review E, 2015, 91, 033108.	2.1	60
8	Effective potentials of interactions and thermodynamic properties of a nonideal two-temperature dense plasma. Physical Review E, 2015, 92, 023104.	2.1	55
9	Structural characteristics of strongly coupled ions in a dense quantum plasma. Physical Review E, 2018, 98, 023207.	2.1	51
10	Dynamic properties of the warm dense electron gas based on abÂinitio path integral Monte Carlo simulations. Physical Review B, 2020, 102, .	3.2	42
11	Dynamical structure factor of strongly coupled ions in a dense quantum plasma. Physical Review E, 2019, 99, 053203.	2.1	37
12	Ion potential in warm dense matter: Wake effects due to streaming degenerate electrons. Physical Review E, 2015, 91, 023102.	2.1	35
13	Density response of the warm dense electron gas beyond linear response theory: Excitation of harmonics. Physical Review Research, 2021, 3, .	3.6	35
14	Ab initio results for the plasmon dispersion and damping of the warm dense electron gas. Contributions To Plasma Physics, 2020, 60, e202000147.	1.1	31
15	Analytical representation of the local field correction of the uniform electron gas within the effective static approximation. Physical Review B, 2021, 103, .	3.2	31
16	Dynamical Screening and Wake Effects in Classical, Quantum, and Ultrarelativistic Plasmas. Contributions To Plasma Physics, 2015, 55, 186-191.	1.1	30
17	Interaction potentials and thermodynamic properties of two component semiclassical plasma. Physics of Plasmas, 2014, 21, 012706.	1.9	29
18	Gradient correction and Bohm potential for twoâ€•and oneâ€•dimensional electron gases at a finite temperature. Contributions To Plasma Physics, 2017, 57, 499-505.	1.1	28

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19	Ab initio path integral monte carlo simulation of the uniform electron gas in the high energy density regime. Plasma Physics and Controlled Fusion, 2020, 62, 075003.	2.1	28
20	Non-Maxwellian and magnetic field effects in complex plasma wakes. European Physical Journal D, 2018, 72, 1.	1.3	27
21	Multipole expansion in plasmas: Effective interaction potentials between compound particles. Physical Review E, 2016, 93, 053204.	2.1	26
22	Ion potential in nonâ€ideal dense quantum plasmas. Contributions To Plasma Physics, 2017, 57, 532-538.	1.1	26
23	Nonlinear density response from imaginary-time correlation functions: Ab initio path integral Monte Carlo simulations of the warm dense electron gas. Journal of Chemical Physics, 2021, 155, 054110.	3.0	26
24	The relevance of electronic perturbations in the warm dense electron gas. Journal of Chemical Physics, 2021, 155, 124116.	3.0	25
25	Ion energy-loss characteristics and friction in a free-electron gas at warm dense matter and nonideal dense plasma conditions. Physical Review E, 2020, 101, 053203.	2.1	24
26	Dynamical properties of non-ideal plasma on the basis of effective potentials. Physics of Plasmas, 2013, 20, .	1.9	23
27	Effect of dust particle polarization on scattering processes in complex plasmas. Physics of Plasmas, 2015, 22, 063703.	1.9	22
28	Investigation of Coulomb Logarithm and Relaxation Processes in Dense Plasma on the Basis of Effective Potentials. Contributions To Plasma Physics, 2015, 55, 271-276.	1.1	21
29	Screening of a test charge in a freeâ€electron gas at warm dense matter and dense nonâ€ideal plasma conditions. Contributions To Plasma Physics, 2022, 62, e202000176.	1.1	21
30	Effective electronic forces and potentials from ab initio path integral Monte Carlo simulations. Journal of Chemical Physics, 2022, 156, .	3.0	20
31	Notes on Anomalous Quantum Wake Effects. Contributions To Plasma Physics, 2016, 56, 442-447.	1.1	19
32	Classical scattering and stopping power in dense plasmas: the effect of diffraction and dynamic screening. Laser and Particle Beams, 2016, 34, 457-466.	1.0	19
33	Path integral Monte Carlo approach to the structural properties and collective excitations of liquid $$^3{ext {He}}$$ without fixed nodes. Scientific Reports, 2022, 12, 708.	3.3	18
34	Relaxation of non-isothermal hot dense plasma parameters. Matter and Radiation at Extremes, 2018, 3, 40-49.	3.9	17
35	Benchmarking exchange-correlation functionals in the spin-polarized inhomogeneous electron gas under warm dense conditions. Physical Review B, 2022, 105, .	3.2	17
36	Density Functional Theory Perspective on the Nonlinear Response of Correlated Electrons across Temperature Regimes. Journal of Chemical Theory and Computation, 2022, 18, 2900-2912.	5.3	17

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37	Ultracold ions wake in dusty plasmas. New Journal of Physics, 2020, 22, 033028.	2.9	16
38	Nonlinear Density Response and Higher Order Correlation Functions in Warm Dense Matter. Journal of the Physical Society of Japan, 2021, 90, 104002.	1.6	15
39	Thermal excitation signals in the inhomogeneous warm dense electron gas. Scientific Reports, 2022, 12, 1093.	3.3	15
40	Pair Interaction Potential of Particles for Twoâ€Component Plasma. Contributions To Plasma Physics, 2012, 52, 207-210.	1.1	14
41	Towards a quantum fluid theory of correlated many-fermion systems from first principles. SciPost Physics, 2022, 12, .	4.9	14
42	MD Simulation of Charged Dust Particles With Dipole Moments. IEEE Transactions on Plasma Science, 2015, 43, 4187-4189.	1.3	13
43	Manipulation of Dusty Plasma Properties via Driving Voltage Waveform Tailoring in a Capacitive Radiofrequency Discharge. IEEE Transactions on Plasma Science, 2016, 44, 545-548.	1.3	13
44	Charging of a Dust Particle in a Magnetized Gas Discharge Plasma. IEEE Transactions on Plasma Science, 2019, 47, 3052-3056.	1.3	13
45	Rotation of Dust Structures in a Magnetic Field in a DC Glow Discharge. IEEE Transactions on Plasma Science, 2019, 47, 3036-3040.	1.3	13
46	Spin-resolved density response of the warm dense electron gas. Physical Review Research, 2022, 4, .	3.6	12
47	Plasma-grain interaction mediated by streaming non-Maxwellian ions. Physical Review E, 2019, 99, 063202.	2.1	11
48	Experimental investigations of strongly coupled Coulomb systems of diamagnetic dust particles in a magnetic trap under microgravity conditions. Europhysics Letters, 2016, 116, 45001.	2.0	10
49	Momentum distribution of the uniform electron gas at finite temperature: Effects of spin polarization. Physical Review E, 2021, 104, 055206.	2.1	10
50	Investigation an Effective Interaction Potential of Dust Particles in Nonideal Dusty Plasma. Contributions To Plasma Physics, 2011, 51, 514-518.	1.1	9
51	Effect of the dynamical collision frequency on quantum wakefields. Contributions To Plasma Physics, 2019, 59, e201800161.	1.1	9
52	Nonlinear electronic density response of the ferromagnetic uniform electron gas at warm dense matter conditions. Contributions To Plasma Physics, 2021, 61, e202100098.	1.1	9
53	Oblique magnetic field influence on the wakefield in complex plasmas. Plasma Physics and Controlled Fusion, 2020, 62, 105018.	2.1	8
54	Grain surface heating in cryogenic environment. Physics of Plasmas, 2017, 24, 050701.	1.9	6

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55	On the induced charge density distribution in streaming plasmas. Physical Sciences and Technology, 2018, 5, 10-15.	0.2	6
56	Nonlinear interaction of external perturbations in warm dense matter. Contributions To Plasma Physics, 0, , .	1.1	6
57	Interaction between ions in hot dense plasma via screened Cornell potential. Physics of Plasmas, 2016, 23, .	1.9	5
58	Sound speed and diffusion in <scp>2D</scp> Yukawa liquids: Effect of dipoleâ€“dipole interaction. Contributions To Plasma Physics, 2017, 57, 458-462.	1.1	5
59	Structure of a Coulomb cluster in the cusp magnetic trap under microgravity conditions. Contributions To Plasma Physics, 2018, 58, 940-945.	1.1	5
60	Plasmaâ€“grain interaction in ultracold complex plasmas. Physics of Plasmas, 2020, 27, 033701.	1.9	5
61	Effect of Dipoleâ€Dipole Interaction on the Compressional Oscillations in Twoâ€Dimensional Yukawa liquids. Contributions To Plasma Physics, 2016, 56, 391-396.	1.1	4
62	Impact of quantum nonâ€locality and electronic nonâ€ideality on eâ€“He scattering in a dense plasma. Contributions To Plasma Physics, 2018, 58, 155-163.	1.1	4
63	Subdiffusion of dust particles in cryogenic plasmas. Japanese Journal of Applied Physics, 2020, 59, SHHE02.	1.5	4
64	Melting, freezing, and dynamics of two-dimensional dipole systems in screening bulk media. Physical Review E, 2020, 102, 033205.	2.1	4
65	Plasma with carbon nanoparticles: advances and application. Nanotechnology, 2021, 32, 455602.	2.6	3
66	Higher harmonics in complex plasmas with alternating screening. Physical Review Research, 2021, 3, .	3.6	3
67	Effective Potentials for Chargeâ€Helium and Chargeâ€Singlyâ€Ionized Helium Interactions in a Dense Plasma. Contributions To Plasma Physics, 2016, 56, 411-418.	1.1	2
68	Scattering of Dust Particles With Nonzero Dipole Moments. IEEE Transactions on Plasma Science, 2016, 44, 568-570.	1.3	2
69	Impacts of neutral shadowing force on dust particle dynamics in cryogenic plasma. Contributions To Plasma Physics, 2019, 59, e201800175.	1.1	2
70	Surface Waves in a Collisional Quark-Gluon Plasma. Physics of Particles and Nuclei Letters, 2020, 17, 803-808.	0.4	2
71	Collision between a charged particle and a polarizable neutral particle in plasmas. Physics of Plasmas, 2020, 27, 044502.	1.9	2
72	Effective Interaction Potentials Between Compound Particles In Dusty Plasmas. AIP Conference Proceedings, 2011, , .	0.4	1

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73	The Modern Information Technologies and Visualization Methods for Analysis of Computer Simulation Results for Complex Plasma. Communications in Computational Physics, 2014, 15, 981-995.	1.7	1
74	Total and correlation energy of the uniform polarized electron gas at finite temperature: Direct path integral simulations. Journal of Physics: Conference Series, 2015, 653, 012113.	0.4	1
75	Equation of state of a dense plasma: Analytical results on the basis of quantum pair interaction potentials in the random phase approximation. Journal of Physics: Conference Series, 2016, 774, 012144.	0.4	1
76	Classical ionâ€“grain scattering in plasmas: Image force correction. Contributions To Plasma Physics, 2018, 58, 198-202.	1.1	1
77	Impact of single particle oscillations on screening of a test charge. European Physical Journal D, 2018, 72, 1.	1.3	1
78	Neutral Shadowing Force Effect on Structural Properties and Oscillations of Dust Particles in Cryogenic Environment. IEEE Transactions on Plasma Science, 2019, 47, 3063-3068.	1.3	1
79	Destruction of a dust particle in the white dwarf atmosphere. Japanese Journal of Applied Physics, 2020, 59, SHHA04.	1.5	1
80	Dynamical collision frequency and conductivity of dense plasmas. Physical Sciences and Technology, 2015, 2, 53-57.	0.2	1
81	Dynamical Properties And Interaction Models Of Dusty Particles In Complex Plasma. , 2011, , .		0
82	Computer Simulation of Two Component Dense Plasma by Molecular Dynamics Method. Communications in Computational Physics, 2014, 15, 1159-1166.	1.7	0
83	Over the barrier electron transfer from a micron sized charged dust particle to an ion in gas discharge plasmas. Physics of Plasmas, 2017, 24, 064501.	1.9	0
84	Software development for the calculation of dynamic properties of dense plasmas: Coulomb logarithm, relaxation and transport properties. Journal of Physics: Conference Series, 2017, 905, 012023.	0.4	0
85	Formalism of compound particles for simulation of the heavy ions in a stationary nonequilibrium warm dense matter. Journal of Physics: Conference Series, 2017, 905, 012021.	0.4	0
86	Dense plasmas with partially degenerate semiclassical ions: screening and structural properties. Japanese Journal of Applied Physics, 2020, 59, SHHA10.	1.5	0