

Olga Vaulina

List of Publications by Year in descending order

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104
papers

1,940
citations

257450

24
h-index

276875

41
g-index

104
all docs

104
docs citations

104
times ranked

454
citing authors

#	ARTICLE	IF	CITATIONS
1	Dusty plasma induced by solar radiation under microgravitational conditions: An experiment on board the Mir orbiting space station. Journal of Experimental and Theoretical Physics, 1998, 87, 1087-1097.	0.9	183
2	Charge-fluctuation-induced heating of dust particles in a plasma. Physical Review E, 1999, 60, 5959-5964.	2.1	123
3	Scaling law for the fluid-solid phase transition in Yukawa systems (dusty plasmas). Journal of Experimental and Theoretical Physics, 2000, 90, 287-289.	0.9	110
4	Diffusion and dynamics of macro-particles in a complex plasma. Physics of Plasmas, 2002, 9, 835-840.	1.9	100
5	Dynamical properties of random charge fluctuations in a dusty plasma with different charging mechanisms. Physical Review E, 1999, 59, 6017-6022.	2.1	89
6	Transport of macroparticles in dissipative two-dimensional Yukawa systems. Physica Scripta, 2006, 73, 577-586.	2.5	76
7	Instability of plasma-dust systems with a macroparticle charge gradient. Journal of Experimental and Theoretical Physics, 2000, 91, 1147-1162.	0.9	65
8	Criteria of Phase Transitions in a Complex Plasma. Physical Review Letters, 2002, 88, 245002.	7.8	58
9	Dynamics of macroparticles in a dusty plasma under microgravity conditions (First experiments on Tj ETQq1 1 0.784314 rgBT /Overlo	0.9	54
10	The dynamics of formation of monolayer dust structures in a confining electric field. Physica Scripta, 2009, 79, 035501.	2.5	42
11	Thermodynamic and transport properties of nonideal systems with isotropic pair potentials. Physical Review E, 2010, 82, 056411.	2.1	42
12	Determination of Pair Interaction Forces between Particles in Nonideal Dissipative Systems. Physical Review Letters, 2009, 103, 035003.	7.8	38
13	Formation of vortex dust structures in inhomogeneous gas-discharge plasmas. Plasma Physics Reports, 2004, 30, 918-936.	0.9	34
14	Diffusion in Microgravity of Macroparticles in a Dusty Plasma under Solar Radiation. Physical Review Letters, 2002, 88, 035001.	7.8	31
15	Analysis of macroparticle charging in the near-electrode layer of a high-frequency capacitive discharge. Journal of Experimental and Theoretical Physics, 2003, 96, 1037-1044.	0.9	31
16	Phase state and transport of non-Yukawa interacting macroparticles (complex plasma). Physics of Plasmas, 2004, 11, 3234-3237.	1.9	31
17	Formation of quasi-two-dimensional dust structures in an external electric field. Plasma Physics Reports, 2005, 31, 562-569.	0.9	31
18	Two-Stage Melting in Quasi-Two-Dimensional Dissipative Yukawa Systems. Physical Review Letters, 2006, 97, 195001.	7.8	31

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19	Experimental studies of the dynamics of dust grains in gas-discharge plasmas. Plasma Physics Reports, 2003, 29, 642-656.	0.9	30
20	Dusty-Plasma Liquid in the Statistical Theory of the Liquid State. Physical Review Letters, 2008, 101, 195003.	7.8	30
21	Analysis of pair interparticle interaction in nonideal dissipative systems. Journal of Experimental and Theoretical Physics, 2010, 110, 662-674.	0.9	29
22	Solid-hexatic-liquid transition in a two-dimensional system of charged dust particles. Europhysics Letters, 2015, 111, 45002.	2.0	28
23	Role of stochastic fluctuations in the charge on macroscopic particles in dusty plasmas. Journal of Experimental and Theoretical Physics, 1999, 88, 1130-1136.	0.9	27
24	Simulation of the dynamics of strongly interacting macroparticles in a weakly ionized plasma. Journal of Experimental and Theoretical Physics, 2001, 92, 228-234.	0.9	25
25	Three-Particle Correlations in Nonideal Dusty Plasma. Physical Review Letters, 2004, 93, 035004.	7.8	24
26	Formation of chain structures in systems of charged grains interacting via isotropic pair potentials. Plasma Physics Reports, 2013, 39, 394-398.	0.9	22
27	Brownian motion of dust particles in a weakly ionized plasma. JETP Letters, 2013, 97, 322-326.	1.4	21
28	Effect of Stochastic Grain Charge Fluctuation on the Kinetic Energy of the Particles in Dusty Plasma. Physica Scripta, 2000, T84, 229.	2.5	20
29	Determination of the pairwise interaction potential between dust grains in plasma. Plasma Physics Reports, 2007, 33, 278-288.	0.9	20
30	Analysis of mass transfer in dissipative nonideal systems: Experiments on dusty plasmas. Journal of Experimental and Theoretical Physics, 2008, 107, 313-323.	0.9	19
31	Analysis of mass transfer in dissipative nonideal systems: Numerical simulation. Journal of Experimental and Theoretical Physics, 2008, 106, 955-962.	0.9	18
32	Technique for analysis of interparticle interaction in nonideal dissipative systems with isotropic pair potentials. Physics of Plasmas, 2009, 16, 113702.	1.9	18
33	The dynamics of macroparticles in a direct current glow discharge plasma under microgravity conditions. Journal of Experimental and Theoretical Physics, 2002, 95, 673-681.	0.9	17
34	Kinetic temperature and charge of a dust grain in weakly ionized gas-discharge plasmas. Journal of Experimental and Theoretical Physics, 2006, 102, 986-997.	0.9	17
35	Conditions for formation of dusty plasma structures in the near-electrode layer of an rf-discharge. Physica Scripta, 2011, 84, 025503.	2.5	17
36	Influence of inhomogeneous conditions on the kinetic energy of dust macroparticles in plasma. Journal of Experimental and Theoretical Physics, 2016, 122, 193-202.	0.9	17

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37	Energy exchange in systems of particles with nonreciprocal interaction. Journal of Experimental and Theoretical Physics, 2015, 121, 717-726.	0.9	16
38	Transport properties of nonideal systems with isotropic pair interactions between particles. Plasma Physics Reports, 2004, 30, 652-661.	0.9	15
39	Energy density, heat capacity and diffusion constant in non-ideal Yukawa systems. Europhysics Letters, 2010, 89, 35001.	2.0	15
40	Dust-particle charge in weakly ionized gas-discharge plasma. Europhysics Letters, 2012, 97, 55003.	2.0	15
41	Influence of external perturbations on dynamical characteristics of dust clusters (simulation). Journal of Experimental and Theoretical Physics, 2012, 115, 947-952.	0.9	15
42	Influence of external perturbations on the interaction between grains in plasma. New Journal of Physics, 2013, 15, 053004.	2.9	15
43	Empirical approximation for the ion current to the surface of a dust grain in a weakly ionized gas-discharge plasma. Plasma Physics Reports, 2006, 32, 485-488.	0.9	14
44	Two-dimensional phase transition in a strongly nonideal dusty plasma. Journal of Experimental and Theoretical Physics, 2015, 120, 327-332.	0.9	14
45	Self-oscillations of macroparticles in the dust plasma of glow discharge. Journal of Experimental and Theoretical Physics, 2001, 93, 1184-1189.	0.9	12
46	Theory of dust self-organized convection in cylindrical discharges. II. Dust convective structures. Physics of Plasmas, 2006, 13, 032306.	1.9	12
47	Plasma parameters and existence conditions of monolayer dust structures in the electrode sheath of an RF discharge. Plasma Physics Reports, 2011, 37, 1035-1041.	0.9	12
48	Theory of dust self-organized convection in cylindrical discharges. I. The model and stationary nonlinear dust structures. Physics of Plasmas, 2006, 13, 032305.	1.9	11
49	Spectral and Structural Characteristics for Cluster Systems of Charged Brownian Particles. Journal of Experimental and Theoretical Physics, 2018, 127, 350-356.	0.9	11
50	Self-confined particle pairs in complex plasmas. Physical Review E, 2017, 95, 013202.	2.1	10
51	Processes of energy exchange in systems of nonidentical particles with inhomogeneous sources of heat. Journal of Experimental and Theoretical Physics, 2017, 124, 839-844.	0.9	10
52	Formation of ordered structures of charged macroparticles in a photoemission trap. Journal of Experimental and Theoretical Physics, 2000, 91, 307-313.	0.9	9
53	Verifying the reciprocity of interparticle interaction forces in strongly coupled systems. Journal of Experimental and Theoretical Physics, 2017, 124, 678-682.	0.9	9
54	Simulation of mass transfer in systems with isotropic pair correlation of particles. Journal of Experimental and Theoretical Physics, 2004, 99, 510-521.	0.9	8

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55	Influence of thermal fluctuations on dynamics of charged particles in electromagnetic fields. <i>Physics of Plasmas</i> , 2017, 24, .	1.9	8
56	Formation Conditions and Stability Criteria for Small-Size Cluster Systems. <i>Plasma Physics Reports</i> , 2018, 44, 270-277.	0.9	8
57	Transport properties of quasi-two-dimensional dissipative systems with a screened Coulomb potential. <i>Plasma Physics Reports</i> , 2007, 33, 494-502.	0.9	7
58	Numerical simulation of the dynamics of cylindrical dust grains in an external electric field. <i>Plasma Physics Reports</i> , 2008, 34, 413-421.	0.9	7
59	Orientalional order and formation of topological defects in two-dimensional systems. <i>Journal of Experimental and Theoretical Physics</i> , 2013, 117, 169-176.	0.9	7
60	Correlational approach to study interactions between dust Brownian particles in a plasma. <i>Physics of Plasmas</i> , 2018, 25, .	1.9	7
61	Spectral Characteristics of Stochastic Motion in the System of Two Interacting Particles. <i>Journal of Experimental and Theoretical Physics</i> , 2020, 130, 463-470.	0.9	7
62	Simulations of mass-transport processes on short observation time scales in nonideal dissipative systems. <i>Journal of Experimental and Theoretical Physics</i> , 2005, 100, 1018-1028.	0.9	6
63	Processes of diffusion in a limited ensemble of charged particles in a static magnetic field. <i>Journal of Experimental and Theoretical Physics</i> , 2017, 125, 976-983.	0.9	6
64	Spectral Characteristics of Small Cluster Systems (Chain Structures). <i>Plasma Physics Reports</i> , 2020, 46, 419-429.	0.9	6
65	Contactless methods for studying interactions between dust particles in a gas-discharge plasma. <i>Plasma Physics and Controlled Fusion</i> , 2013, 55, 124022.	2.1	5
66	Influence of grain charge gradients on the dynamics of macroparticles in an electrostatic trap. <i>Plasma Physics Reports</i> , 2017, 43, 354-362.	0.9	5
67	Analysis of pair correlation functions for macroscopic particles in dusty plasmas: Numerical simulation and experiment. <i>Journal of Experimental and Theoretical Physics</i> , 2004, 98, 515-526.	0.9	4
68	Physics and theory of dust convection in a complex plasma. <i>AIP Conference Proceedings</i> , 2005, , .	0.4	4
69	Heat transfer in dust structures in an RF discharge plasma. <i>Plasma Physics Reports</i> , 2006, 32, 323-331.	0.9	4
70	Quasi-two-dimensional dissipative systems with yukawa interaction: the equations of state. <i>European Physical Journal D</i> , 2006, 56, B591-B595.	0.4	4
71	Influence of topological defects on mass transfer processes in two-dimensional nonideal systems. <i>Europhysics Letters</i> , 2014, 106, 65001.	2.0	4
72	Spectral Characteristics of Charged Particles in Limited Chain Structures. <i>Journal of Experimental and Theoretical Physics</i> , 2020, 131, 361-373.	0.9	4

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73	Redistribution of Stochastic Kinetic Energy in Ensembles of Non-Identical Charged Particles. Plasma Physics Reports, 2020, 46, 791-799.	0.9	4
74	Levitation of charged macroparticles in the anode region of a glow discharge. Journal of Experimental and Theoretical Physics, 2000, 91, 106-110.	0.9	3
75	Transport Processes in Dusty Plasma Fluid. Contributions To Plasma Physics, 2005, 45, 204-212.	1.1	3
76	Thermodynamic properties of two-dimensional nonideal structures with isotropic pair potential. Plasma Physics Reports, 2009, 35, 385-393.	0.9	3
77	Formation of chain structures with an anisotropic pairwise interaction between grains. Plasma Physics Reports, 2014, 40, 713-722.	0.9	3
78	Amplitude instability in the mass-transfer theory for Yukawa systems. Physics of Plasmas, 2017, 24, 113705.	1.9	3
79	Redistribution of the Stochastic Kinetic Energy in Bilayer Systems of Nonidentical Charged Particles. Journal of Experimental and Theoretical Physics, 2020, 131, 1026-1031.	0.9	3
80	Spectral Characteristics of Small-Sized Quasi-Two-Dimensional Clusters. Plasma Physics Reports, 2020, 46, 1210-1219.	0.9	3
81	Diffraction of optical radiation on spatially ordered structures of macroparticles in a strongly nonideal thermal plasma. Journal of Experimental and Theoretical Physics, 2000, 90, 470-473.	0.9	2
82	Analysis of the formation of ordered dust-grain structures in a thermal plasma. Plasma Physics Reports, 2000, 26, 586-591.	0.9	2
83	Transport properties of macroparticles in dust plasma induced by solar radiation. Journal of Experimental and Theoretical Physics, 2001, 92, 979-985.	0.9	2
84	The diffusion of macroparticles and criteria of phase transitions for dust structures in weakly ionized plasma. Journal of Experimental and Theoretical Physics, 2002, 94, 26-36.	0.9	2
85	Hexatic phase in two-dimensional Yukawa systems: Existence and properties. Journal of Physics: Conference Series, 2015, 653, 012103.	0.4	2
86	Formation dynamics of jumps in systems of charged particles. Journal of Experimental and Theoretical Physics, 2017, 125, 364-368.	0.9	2
87	Amplitude Instability in Two-Dimensional Hexagonal Clusters. Journal of Experimental and Theoretical Physics, 2018, 127, 503-507.	0.9	2
88	Redistribution of Kinetic Energy in Three-Dimensional Clouds of Charged Dust Grains. Plasma Physics Reports, 2022, 48, 33-36.	0.9	2
89	Title is missing!. Cosmic Research, 2001, 39, 347-350.	0.6	1
90	Dynamics of dust grains in a two-component dusty plasma induced by solar radiation under microgravity conditions. Plasma Physics Reports, 2003, 29, 31-41.	0.9	1

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91	Pair correlation of particles in strongly nonideal systems. Journal of Experimental and Theoretical Physics, 2012, 114, 529-534.	0.9	1
92	The evolution of the mass-transfer functions in liquid Yukawa systems. Journal of Experimental and Theoretical Physics, 2016, 123, 540-549.	0.9	1
93	Processes of Energy Exchange in Layered Systems of Non-Identical Charged Particles. Plasma Physics Reports, 2021, 47, 832-839.	0.9	1
94	Dynamical Phenomena in Strongly Coupled Dusty Plasma Under Microgravity Conditions. AIP Conference Proceedings, 2002, , .	0.4	0
95	Influence of Charge Variations on Dust Dynamics in a Planar rf Discharge. AIP Conference Proceedings, 2002, , .	0.4	0
96	Charge Variations in Planar RF Discharge. AIP Conference Proceedings, 2003, , .	0.4	0
97	Formation of dust layers in the near-electrode area of RF-discharge. European Physical Journal D, 2004, 54, C557-C562.	0.4	0
98	Experimental Study of Heat Transfer Processes for Macroparticles in a Dusty Plasma. JETP Letters, 2005, 82, 492.	1.4	0
99	Thermal fluctuations of pair interaction forces in liquid Yukawa systems. Plasma Physics Reports, 2017, 43, 62-66.	0.9	0
100	Effect of Magnetic Field on the Dynamics of Movement of Charged Particles in Cluster Systems. Journal of Experimental and Theoretical Physics, 2019, 128, 808-815.	0.9	0
101	Effect of Magnetic Field on the Spectral Characteristics of Thermal Motion of Charged Particles in an Isotropic Trap. Plasma Physics Reports, 2019, 45, 237-245.	0.9	0
102	Amplitude Instability of Charged Particles in a Body-Centered Cubic Cell. Journal of Experimental and Theoretical Physics, 2019, 129, 478-483.	0.9	0
103	Redistribution of the Stochastic Energy in an Ensemble of Charged Particles in a Magnetic Field. Journal of Experimental and Theoretical Physics, 2020, 130, 148-152.	0.9	0
104	Energy exchange in two-fraction systems of charged dust particles. Physics of Plasmas, 2021, 28, 083706.	1.9	0