

Nikolay M Zubarev

List of Publications by Year in descending order

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#	ARTICLE	IF	CITATIONS
1	Emission Features and Structure of an Electron Beam versus Gas Pressure and Magnetic Field in a Cold-Cathode Coaxial Diode. <i>Electronics (Switzerland)</i> , 2022, 11, 248.	1.8	4
2	An Ultra-Short Dense Paraxial Bunch of Sub-Relativistic Runaway Electrons. <i>IEEE Electron Device Letters</i> , 2022, 43, 627-630.	2.2	13
3	Three-dimensional direct numerical simulation of free-surface magnetohydrodynamic wave turbulence. <i>Physical Review E</i> , 2022, 105, .	0.8	5
4	Initiation of Explosive Electron Emission and Runaway of Electrons during Pulsed Breakdown of Dense Gases. <i>JETP Letters</i> , 2021, 113, 259-264.	0.4	9
5	Chaotic Dynamics of the Interface between Dielectric Liquids at the Regime of Stabilized Kelvin-Helmholtz Instability by a Tangential Electric Field. <i>Fluids</i> , 2021, 6, 125.	0.8	1
6	Compression of a Runaway Electron Flow in an Air Gap with a Nonuniform Magnetic Field. <i>JETP Letters</i> , 2021, 113, 370-377.	0.4	12
7	Anisotropy of the Runaway Electron Generation Process in Strongly Inhomogeneous Electric Fields. <i>IEEE Transactions on Plasma Science</i> , 2021, 49, 2589-2598.	0.6	3
8	Explosive Parametric Instability of the Free Surface of a Liquid Metal in a Radio Frequency Electric Field. <i>IEEE Transactions on Plasma Science</i> , 2021, 49, 2470-2477.	0.6	4
9	Reflectometry of Picosecond Emission and Discharge Processes in a Gas-Filled High-Voltage Coaxial Line. <i>IEEE Transactions on Plasma Science</i> , 2021, 49, 2516-2523.	0.6	2
10	Runaway electron flows in magnetized coaxial gas diodes. <i>Journal of Physics: Conference Series</i> , 2021, 2064, 012006.	0.3	2
11	Runaway of electrons and initiation of explosive electron emission during pulse breakdown of high-pressure gases. <i>Journal of Physics: Conference Series</i> , 2021, 2064, 012035.	0.3	3
12	Subnanosecond breakdown of air-insulated coaxial line initiated by runaway electrons in the presence of a strong axial magnetic field. <i>Journal of Physics: Conference Series</i> , 2021, 2064, 012003.	0.3	1
13	Exact Solutions to the Problem of Dynamics of a Liquid with a Free Surface between Two Approaching Vertical Walls. <i>Doklady Physics</i> , 2021, 66, 348-352.	0.2	1
14	Features of the secondary runaway electron flow formed in an elongated, atmospheric pressure air gap. <i>Physics of Plasmas</i> , 2020, 27, .	0.7	8
15	Nonlinear conditions for instability of the free surface of a conducting liquid in an external electric field in a confined axisymmetric geometry. <i>Journal of Physics: Conference Series</i> , 2020, 1556, 012015.	0.3	0
16	Explosive instability of the surface of a liquid dielectric in a vertical electric field in confined geometry. <i>IEEE Transactions on Dielectrics and Electrical Insulation</i> , 2020, 27, 1229-1237.	1.8	0
17	Wave breaking on the surface of a dielectric liquid in a horizontal electric field. <i>IEEE Transactions on Dielectrics and Electrical Insulation</i> , 2020, 27, 1222-1228.	1.8	4
18	Space-charge-limited current through conical formations on the surface of a liquid with ionic conductivity. <i>Journal of Electrostatics</i> , 2020, 107, 103478.	1.0	2

#	ARTICLE	IF	CITATIONS
19	Runaway Electrons Emitted by Electron Avalanches in Nanosecond Discharges in Air. Bulletin of the Lebedev Physics Institute, 2020, 47, 209-212.	0.1	6
20	Analysis of the Minimum Duration of the Runaway Electron Flow in an Air Electrode Gap. , 2020, , .		0
21	Formation of the Secondary Runaway Electron Flow in an Elongated Atmospheric Gap. , 2020, , .		0
22	Explosive character of instability development for the free surface of a conducting liquid in an electric field. Journal of Physics: Conference Series, 2020, 1556, 012014.	0.3	0
23	A new class of exact solutions in the planar nonstationary problem of motion of a fluid with a free boundary. Theoretical and Mathematical Physics(Russian Federation), 2020, 202, 344-351.	0.3	1
24	Air Breakdown in the Field of Traveling Tem-Wave Assisted by Runaway Electrons. Russian Physics Journal, 2020, 62, 2005-2010.	0.2	6
25	Application of transport equations for constructing exact solutions for the problem of motion of a fluid with a free boundary. Journal of Fluid Mechanics, 2020, 890, .	1.4	7
26	How short is the runaway electron flow in an air electrode gap?. Applied Physics Letters, 2020, 116, .	1.5	47
27	Mechanism and dynamics of picosecond radial breakdown of a gas-filled coaxial line. Plasma Sources Science and Technology, 2020, 29, 125008.	1.3	29
28	Integrable model of the interaction of counter-propagating weakly nonlinear waves on the fluid boundary in a horizontal electric field. Theoretical and Mathematical Physics(Russian Federation), 2020, 202, 352-362.	0.3	1
29	Explosive Instability of the Surface of a Conducting Fluid in an Electric Field in Confined Axisymmetric Geometry. , 2020, , .		1
30	Influence of Inhomogeneous Electric Field Geometry Factors on Runaway Electrons Generation Conditions. , 2020, , .		4
31	Growth of nonlinear structures on the interface between dielectric liquids in a strong vertical electric field. Journal of Physics: Conference Series, 2019, 1268, 012026.	0.3	0
32	Splashing conditions for a liquid metal in vacuum arcs: Cyclic processes in a cathode spot. Journal of Physics: Conference Series, 2019, 1147, 012125.	0.3	2
33	Saturation Current of a Stationary Cone-Shaped Singularity on the Surface of a Liquid with Ionic Conduction in an Electric Field. Technical Physics Letters, 2019, 45, 395-397.	0.2	2
34	Criteria for the Formation of Liquid-Metal Jets in the Cathode Spot of a Vacuum Arc Discharge. IEEE Transactions on Plasma Science, 2019, 47, 3448-3455.	0.6	2
35	Exact particular solution for the blade-like surface configuration of a conducting liquid in an external electric field. Journal of Physics: Conference Series, 2019, 1147, 012085.	0.3	0
36	Molten Metal Jets Formation in the Cathode Spot of a Vacuum Arc. IEEE Transactions on Plasma Science, 2019, 47, 3456-3461.	0.6	6

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37	Explosive Development of the Kelvin-Helmholtz Quantum Instability on the He-II Free Surface. Journal of Experimental and Theoretical Physics, 2019, 129, 651-658.	0.2	3
38	Algorithm for Constructing Exact Solutions of the Problem of Unsteady Plane Motion of a Fluid with a Free Surface. JETP Letters, 2019, 110, 452-456.	0.4	3
39	Mechanism of Runaway Electron Generation at Gas Pressures from a Few Atmospheres to Several Tens of Atmospheres. Plasma Physics Reports, 2018, 44, 445-452.	0.3	30
40	Formation of liquid-metal jets in a vacuum arc cathode spot: Analogy with drop impact on a solid surface. Journal of Physics: Conference Series, 2018, 946, 012131.	0.3	7
41	Criteria for disintegration of an uncharged conducting liquid jet in a transverse electric field. Journal of Physics: Conference Series, 2018, 946, 012022.	0.3	0
42	Dynamics of Molten Metal Jet Formation in the Cathode Spot of Vacuum Arc Discharge. , 2018, , .		0
43	Jet formation at the interaction of localized waves on the free surface of dielectric liquid in a tangential electric field. Journal of Physics: Conference Series, 2018, 946, 012021.	0.3	5
44	Ionization Processes with Participation of Runaway Electrons in a Gas Diode with a Strongly Nonuniform Electric Field. , 2018, , .		0
45	Model of the Formation of Liquid-Metal Jets in the Cathode Spot of a Vacuum Arc Discharge. , 2018, , .		1
46	Gravity-capillary waves on the free surface of a liquid dielectric in a tangential electric field. IEEE Transactions on Dielectrics and Electrical Insulation, 2018, 25, 1723-1730.	1.8	15
47	Construction of Exact Solutions for Equilibrium Configurations of the Boundary of a Conducting Liquid Deformed By an External Electric Field. Theoretical and Mathematical Physics(Russian) Tj ETQq1 1 0.78431408BT /Overclock 10		
48	Exact Solutions for Nonlinear Development of a Kelvin-Helmholtz Instability for the Counterflow of Superfluid and Normal Components of Helium II. Physical Review Letters, 2018, 120, 204504.	2.9	20
49	Characteristic properties of laser ablation of translucent targets. Laser Physics, 2018, 28, 076002.	0.6	6
50	Formation of Singularities at the Interface of Liquid Dielectrics in a Horizontal Electric Field in the Presence of Tangential Velocity Discontinuity. Technical Physics Letters, 2018, 44, 195-198.	0.2	1
51	Exact Local Solutions for the Formation of Singularities on the Free Surface of an Ideal Fluid. JETP Letters, 2018, 107, 412-417.	0.4	28
52	Experimental and theoretical investigations of the conditions for the generation of runaway electrons in a gas diode with a strongly nonuniform electric field. Journal Physics D: Applied Physics, 2018, 51, 284003.	1.3	40
53	Conditions for runaway electrons in a gas diode with a strongly nonuniform electric field. JETP Letters, 2017, 105, 537-541.	0.4	29
54	Formation of rupture in a conducting fluid layer under the action of an oscillating tangential magnetic field. Journal of Magnetism and Magnetic Materials, 2017, 431, 226-228.	1.0	0

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55	Deformation of the free surface of a conducting fluid in the magnetic field of current-carrying linear conductors. Journal of Magnetism and Magnetic Materials, 2017, 431, 222-225.	1.0	0
56	On the mechanism of deep craters formation under the action of high power ytterbium-fiber laser. Journal of Physics: Conference Series, 2016, 774, 012121.	0.3	1
57	Nonlinear dynamics of the interface between fluids at the suppression of Kelvin-Helmholtz instability by a tangential electric field. JETP Letters, 2016, 104, 275-280.	0.4	14
58	Exact solutions for equilibrium configurations of the surface of a conducting fluid in a nonuniform magnetic field. Theoretical and Mathematical Physics(Russian Federation), 2016, 188, 1394-1400.	0.3	0
59	Model of liquid-metal splashing in the cathode spot of a vacuum arc discharge. Journal of Experimental and Theoretical Physics, 2016, 122, 776-786.	0.2	42
60	The mechanism of liquid metal jet formation in the cathode spot of vacuum arc discharge. Technical Physics Letters, 2016, 42, 852-855.	0.2	26
61	Exact solutions to the problem on the shape of an uncharged conducting liquid jet in a transverse electric field. Journal of Experimental and Theoretical Physics, 2016, 122, 950-955.	0.2	7
62	Exact solutions for the shape of a 2D conducting drop moving through a dielectric medium at an angle to the external electric field. Technical Physics, 2016, 61, 138-141.	0.2	1
63	Equilibrium configurations of a jet of an ideally conducting liquid in an external nonuniform magnetic field. Technical Physics, 2016, 61, 826-834.	0.2	0
64	Characteristics of yttrium oxide ablation by high-power fiber ytterbium laser. , 2016, , .		0
65	Exact solutions for the evolution of a bubble in an ideal liquid in a uniform external electric field. Journal of Experimental and Theoretical Physics, 2015, 120, 155-160.	0.2	0
66	The Rayleigh-Plateau instability and jet formation during the extrusion of liquid metal from craters in a vacuum arc cathode spot. Journal of Applied Physics, 2015, 117, .	1.1	41
67	Nonlinear waves on the free surface of a dielectric liquid in an oblique electric field. Journal of Experimental and Theoretical Physics, 2015, 121, 553-558.	0.2	1
68	Interaction of strongly nonlinear waves on the free surface of a dielectric liquid in a horizontal electric field. JETP Letters, 2014, 99, 627-631.	0.4	15
69	Singularity formation on a fluid interface during the Kelvin-Helmholtz instability development. Journal of Experimental and Theoretical Physics, 2014, 119, 169-178.	0.2	27
70	Model of a wedge-electrode corona discharge under saturation: Exact solutions. Technical Physics, 2014, 59, 366-372.	0.2	0
71	Three-dimensional nonlinear waves at the interface between dielectric fluid in an external horizontal electric field. Journal of Applied Mechanics and Technical Physics, 2013, 54, 212-217.	0.1	12
72	Equilibrium configurations of the surface of a perfectly conducting fluid in the magnetic field of a current-carrying linear conductor. Journal of Applied Mechanics and Technical Physics, 2013, 54, 1-9.	0.1	4

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73	Hydrodynamics of the molten metal in a vacuum arc cathode spot at near-threshold currents. Journal of Applied Physics, 2013, 113, .	1.1	30
74	Formation of curvature singularities on the interface between dielectric liquids in a strong vertical electric field. Physical Review E, 2013, 88, 023014.	0.8	20
75	Reduced equations of motion of the interface of dielectric liquids in vertical electric and gravitational fields. Physics of Fluids, 2012, 24, .	1.6	12
76	Two-parametric family of exact solutions for the profile of the surface of a conducting liquid in a nonuniform electric field. Technical Physics, 2012, 57, 1739-1741.	0.2	5
77	Analytical model of a corona discharge from a conical electrode under saturation. Technical Physics, 2012, 57, 1493-1502.	0.2	5
78	Tangential interaction of elastic spherical particles in contact. International Journal of Solids and Structures, 2012, 49, 2107-2114.	1.3	10
79	Exact solutions for the shape of a two-dimensional conducting liquid drop in a non-uniform electric field. Physica D: Nonlinear Phenomena, 2012, 241, 921-928.	1.3	6
80	Model of corona discharge from a thin point in a space-charge-limited current regime. Technical Physics Letters, 2012, 38, 365-367.	0.2	2
81	Nonlinear dynamics of interface between dielectric liquids in vertical electric and gravity fields. Technical Physics Letters, 2011, 37, 974-976.	0.2	0
82	Equilibrium configurations of the conducting liquid surface in a nonuniform electric field. Technical Physics, 2011, 56, 38-48.	0.2	2
83	Exact partial solutions for the surface dynamics of a dielectric liquid with a charged surface in the gravitational field. Technical Physics, 2010, 55, 1068-1070.	0.2	0
84	Equilibrium surface configurations of a conducting liquid in external spatially periodic electric field. Technical Physics Letters, 2010, 36, 417-419.	0.2	3
85	Propagation of large-amplitude waves on dielectric liquid sheets in a tangential electric field: Exact solutions in three-dimensional geometry. Physical Review E, 2010, 82, 046301.	0.8	7
86	10.1007/s11455-008-2003-9. , 2010, 34, 97.		0
87	Nonlinear waves on the surface of a dielectric liquid in a horizontal electric field in 3D geometry: Exact solutions. JETP Letters, 2009, 89, 271-274.	0.4	23
88	Exact solutions for equilibrium surface configurations of a conducting liquid in the electric field of a charged straight filament. Technical Physics Letters, 2009, 35, 967-969.	0.2	9
89	Stability of nonlinear waves on the ideal liquid surface in a tangential electric field. Technical Physics Letters, 2008, 34, 535-537.	0.2	3
90	Electron emission in a flat cathode-curved anode system in the space-charge-limited current regime. Technical Physics Letters, 2008, 34, 934-936.	0.2	1

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91	Singularity in the current density distribution at the boundary of emitting region on a flat cathode surface. <i>Technical Physics Letters</i> , 2008, 34, 1041-1043.	0.2	0
92	Formation of singularities on the charged surface of a liquid-helium layer with a finite depth. <i>Journal of Experimental and Theoretical Physics</i> , 2008, 107, 668-678.	0.2	10
93	Space charge influence on the angle of conical spikes developing on a liquid-metal anode. <i>Physical Review E</i> , 2008, 77, 056607.	0.8	14
94	Exact solutions for shapes of two-dimensional bubbles in a corner flow. <i>Physics of Fluids</i> , 2007, 19, 102110.	1.6	6
95	Equilibrium configurations of uncharged conducting liquid jets in a transverse electric field. <i>Physica A: Statistical Mechanics and Its Applications</i> , 2007, 385, 35-45.	1.2	15
96	A model of electron emission from a wedge in the space-charge-limited current regime. <i>Technical Physics Letters</i> , 2007, 33, 909-911.	0.2	2
97	Nonlinear dynamics of the interface of dielectric liquids in a strong electric field: Reduced equations of motion. <i>Physics of Fluids</i> , 2006, 18, 028103.	1.6	25
98	Nondispersive propagation of waves with finite amplitudes on the surface of a dielectric liquid in a tangential electric field. <i>Technical Physics Letters</i> , 2006, 32, 886-888.	0.2	16
99	Nonlinear dispersion relation for electrocapillary waves on the surface of a dielectric liquid. <i>Technical Physics Letters</i> , 2006, 32, 1027-1029.	0.2	4
100	Nonlinear Dynamics of the Interface of Dielectric Liquids in a Strong External Electric Field. <i>AIP Conference Proceedings</i> , 2006, , .	0.3	0
101	Influence of the space charge on the configuration of conical spikes on a liquid-metal surface. <i>Europhysics Letters</i> , 2006, 76, 36-41.	0.7	7
102	An Exact Particular Solution for an Equilibrium Uncharged Conducting Jet Configuration in a Transverse Electric Field. <i>Technical Physics Letters</i> , 2005, 31, 862.	0.2	9
103	Modeling the Instability of the Boundary of a Dielectric Liquid with a Free Surface Charge. <i>Technical Physics Letters</i> , 2005, 31, 919.	0.2	0
104	Exact solutions for equilibrium configurations of charged conducting liquid jets. <i>Physical Review E</i> , 2005, 71, 016307.	0.8	22
105	Formation of the Taylor cone on the surface of liquid metal in the presence of an electric field. <i>Journal Physics D: Applied Physics</i> , 2004, 37, 289-297.	1.3	54
106	An analysis of the equilibrium configurations of charged cylindrical jets of a conducting liquid. <i>Technical Physics Letters</i> , 2004, 30, 23-25.	0.2	6
107	Equilibrium configurations of the charged surface of a conducting liquid at a finite interelectrode distance. <i>Technical Physics Letters</i> , 2004, 30, 905-907.	0.2	3
108	Nonlinear waves on the surface of a dielectric liquid in a strong tangential electric field. <i>Physics Letters, Section A: General, Atomic and Solid State Physics</i> , 2004, 333, 284-288.	0.9	30

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109	Exact solutions of the equations of motion of liquid helium with a charged free surface. Journal of Experimental and Theoretical Physics, 2002, 94, 534-544.	0.2	21
110	On the problem of the existence of a singular stationary profile for the charged surface of a conducting liquid. Technical Physics Letters, 2001, 27, 217-219.	0.2	2
111	Axisymmetric solutions for the equations of motion of a dielectric liquid with a free charged surface. Technical Physics Letters, 2001, 27, 311-312.	0.2	1
112	Formation of conic cusps at the surface of liquid metal in electric field. JETP Letters, 2001, 73, 544-548.	0.4	39
113	Dynamics of the free surface of a conducting liquid in a near-critical electric field. Technical Physics, 2001, 46, 806-814.	0.2	15
114	A model of weakly nonlinear stages for the periodic structure formation on the charged surface of a conducting liquid. Technical Physics Letters, 2001, 27, 579-580.	0.2	1
115	The wave collapse analyzed for the nonlinear Klein-Gordon equation with periodic boundary conditions. Technical Physics Letters, 2001, 27, 635-637.	0.2	0
116	A nonlinear dispersion relationship for electrocapillary waves on the charged surface of a dielectric liquid. Technical Physics Letters, 2001, 27, 689-691.	0.2	1
117	Large-scale magnetohydrodynamic instability of a conducting liquid surface. Technical Physics Letters, 2001, 27, 949-951.	0.2	0
118	Criteria of rigid instability on a flat surface of dielectric fluid in external electric field. Technical Physics Letters, 2000, 26, 389-391.	0.2	3
119	Charged-surface instability development in liquid helium: An exact solution. JETP Letters, 2000, 71, 367-369.	0.4	18
120	Sufficient integral criteria for instability of the free charged surface of an ideal liquid. Physics Letters, Section A: General, Atomic and Solid State Physics, 2000, 272, 119-123.	0.9	8
121	The analogy between a problem of magnetohydrodynamics and the Benard problem in the Boussinesq approximation. Technical Physics Letters, 1999, 25, 380-381.	0.2	2
122	Explosive growth of perturbations of the surface of a conducting liquid in an electric field. Technical Physics Letters, 1999, 25, 872-873.	0.2	3
123	Exact solution for the steady-state surface profile of a liquid metal in an external electric field. Technical Physics Letters, 1999, 25, 920-921.	0.2	24
124	Exact solution of the problem of an equilibrium configuration of a two-dimensional charged liquid-metal droplet. Technical Physics Letters, 1999, 25, 950-952.	0.2	2
125	Exact solution of the problem of the equilibrium configuration of the charged surface of a liquid metal. Journal of Experimental and Theoretical Physics, 1999, 89, 1078-1085.	0.2	14
126	Nonlinear dynamics of the free surface of a conducting liquid in an electric field. Technical Physics Letters, 1998, 24, 465-466.	0.2	0

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127	Formation of singularities on the surface of a liquid metal in a strong electric field. Journal of Experimental and Theoretical Physics, 1998, 87, 1110-1115.	0.2	26
128	Formation of root singularities on the free surface of a conducting fluid in an electric field. Physics Letters, Section A: General, Atomic and Solid State Physics, 1998, 243, 128-131.	0.9	32
129	Variational principles for constructing few-mode models of the laminar-to-turbulent transition. Technical Physics, 1997, 42, 455-459.	0.2	0
130	Repeated interruption and restoration of current in liquid metals as a nonlinear phenomenon. Physica D: Nonlinear Phenomena, 1997, 109, 315-324.	1.3	3
131	A model of the stratification of a liquid current-carrying conductor. Physics Letters, Section A: General, Atomic and Solid State Physics, 1996, 217, 330-334.	0.9	12
132	The large-scale vortex structures in plasma-like media and the electric explosion of conductors. Chaos, 1996, 6, 568-578.	1.0	2