Dmitry Sorokin

List of Publications by Year
in descending order

#	Article	IF	Citations
1	Spark discharge formation in an inhomogeneous electric field under conditions of runaway electron generation. Journal of Applied Physics, 2012, 111, .	2.5	60
2	Modes of Generation of Runaway Electron Beams in He, $ hbox{H}_{2}$, Ne, and $hbox{N}_{2}$ at a Pressure of 1â€“760 Torr. IEEE Transactions on Plasma Science, 2010, 38, 2583-2587.	1.3	39
3	Radiative characteristics of nitrogen upon excitation by volume discharge initiated by runaway electron beam. Optics and Spectroscopy (English Translation of Optika I Spektroskopiya), 2009, 107, 33-40.	0.6	33
4	Luminescence of crystals excited by a runaway electron beam and by excilamp radiation with a peak wavelength of 222â€‰nm. Journal of Applied Physics, 2017, 122, 154902.	2.5	29
5	Features of streamer formation in a sharply non-uniform electric field. Journal of Applied Physics, 2019, 125, .	2.5	29
6	Formation of ball streamers at a subnanosecond breakdown of gases at a high pressure in a nonuniform electric field. JETP Letters, 2017, 106, 653-658.	1.4	28
7	Theoretical simulation of the picosecond runaway-electron beam in coaxial diode filled with SF ₆ at atmospheric pressure. Europhysics Letters, 2016, 114, 45001.	2.0	27
8	Breakdown features of a high-voltage nanosecond discharge initiated with runaway electrons at subnanosecond voltage pulse rise time. IEEE Transactions on Dielectrics and Electrical Insulation, 2015, 22, 1833-1840.	2.9	26
9	Effect of gas pressure on amplitude and duration of electron beam current in a gas-filled diode. Technical Physics, 2008, 53, 1560-1564.	0.7	24
10	Measurement of the Dynamic Displacement Current as a New Method of Study of the Dynamics of Formation of a Streamer at a Breakdown of Gases at a High Pressure. JETP Letters, 2018, 107, 606-611.	1.4	22
11	Displacement current during the formation of positive streamers in atmospheric pressure air with a highly inhomogeneous electric field. Physics of Plasmas, 2018, 25, .	1.9	22
12	Effective regimes of runaway electron beam generation in helium, hydrogen, and nitrogen. Technical Physics Letters, 2010, 36, 375-378.	0.7	21
13	Spots on electrodes and images of a gap during pulsed discharges in an inhomogeneous electric field at elevated pressures of air, nitrogen and argon. Plasma Sources Science and Technology, 2014, 23, 054018.	3.1	21
14	Nanosecond discharge in sulfur hexafluoride and the generation of an ultrashort avalanche electron beam. Laser Physics, 2008, 18, 732-737.	1.2	20
15	Generation of super-short avalanche electron beams in SF6. Laser and Particle Beams, 2014, 32, 331-341.	1.0	20
16	Determination of the electron concentration and temperature, as well as the reduced electric field strength, in the plasma of a high-voltage nanosecond discharge initiated in atmospheric-pressure nitrogen by a runaway electron beam. Technical Physics, 2014, 59, 1119-1126.	0.7	18
17	Transition of a diffuse discharge to a spark at nanosecond breakdown of high-pressure nitrogen and air in a nonuniform electric field. Technical Physics, 2013, 58, 1115-1121.	0.7	17
18	Abnormal polarity effect in nanosecond-pulse breakdown of SF6 and nitrogen. Physics Letters, Section A: General, Atomic and Solid State Physics, 2014, 378, 1828-1833.	2.1	17

#	Article	IF	Citations
19	Runaway electrons during subnanosecond breakdowns in highâ€pressure gases. High Voltage, 2016, 1, 181-191.	4.7	16
20	Enhancement of hydrogen radical density in atmospheric pressure plasma jet by a burst of nanosecond pulses at 1 MHz. Plasma Sources Science and Technology, 2022, 31, 025019.	3.1	16
21	Generation of runaway electrons in plasma after a breakdown of a gap with a sharply non-uniform electric field strength distribution. Journal Physics D: Applied Physics, 2021, 54, 304001.	2.8	15
22	Inverted Polarity Effect at the Subnanosecond High-Voltage Breakdown of Air. IEEE Transactions on Plasma Science, 2015, 43, 3808-3814.	1.3	14
23	Two-component structure of the current pulse of a ranaway electron beam generated during electric breakdown of elevated-pressure nitrogen. Plasma Physics Reports, 2012, 38, 922-929.	0.9	13
24	Ionization Waves During the Subnanosecond Breakdown Initiated by Runaway Electrons in High-Pressure Nitrogen and Air. Russian Physics Journal, 2017, 60, 1308-1313.	0.4	13
25	On the initiation of a spark discharge upon the breakdown of nitrogen and air in a nonuniform electric field. Technical Physics, 2010, 55, 904-907.	0.7	12
26	On the parameters of runaway electron beams and on electrons with an â€œanomalousâ€•energy at a subnanosecond breakdown of gases at atmospheric pressure. JETP Letters, 2015, 102, 350-354.	1.4	12
27	Blue and green jets in laboratory discharges initiated by runaway electrons. Journal of Physics: Conference Series, 2015, 652, 012012.	0.4	12
28	Bent paths of a positive streamer and a cathode-directed spark leader in diffuse discharges preionized by runaway electrons. Physics of Plasmas, 2015, 22, .	1.9	12
29	Generation of runaway electrons and X rays in an inhomogeneous electric field at high gas pressures. Laser and Particle Beams, 2016, 34, 748-763.	1.0	12
30	X-ray radiation and runaway electron beams generated during discharges in atmospheric-pressure air at rise times of voltage pulse of 500 and 50 ns. Laser and Particle Beams, 2018, 36, 186-194.	1.0	12
31	Generation and registration of runaway electron beams during the breakdown of highly overvoltaged gaps filled with dense gases. Journal Physics D: Applied Physics, 2018, 51, 424001.	2.8	11
32	Gas lasers pumped by runaway electrons preionized diffuse discharge. Progress in Quantum Electronics, 2021, 76, 100314.	7.0	11
33	Spectral and amplitudeâ€"time characteristics of radiation of plasma of a repetitively pulsed discharge initiated by runaway electrons. Optics and Spectroscopy (English Translation of Optika I) Tj ETQq1 1 0.784314 rgBT /Overlock 10 Tf 50	0.6	10
34	Influence of electrode spacing and gas pressure on parameters of a runaway electron beam generating during the nanosecond breakdown in SF ₆ and nitrogen. High Voltage, 2017, 2, 49-55.	4.7	10
35	Experimental Determination of the Generation Moment of Runaway Electrons. IEEE Transactions on Plasma Science, 2019, 47, 4521-4524.	1.3	10
36	Measuring and Modeling Streamer Velocity at an Air Discharge in a Highly Inhomogeneous Electric Field. Plasma Physics Reports, 2020, 46, 320-327.	0.9	9

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37	Neutron emission during a nanosecond discharge in deuterium in a nonuniform electric field. Technical Physics, 2012, 57, 124-130.	0.7	8
38	Main modes of runaway electron generation during a breakdown of high-pressure gases in an inhomogeneous electric field. Applied Physics Letters, 2021, 118, .	3.3	8
39	On the Mechanism of the Generation of Runaway Electrons after a Breakdown of a Gap. JETP Letters, 2021, 113, 129-134.	1.4	8
40	Generators of Atmospheric Pressure Diffuse Discharge Plasma and Their Use for Surface Modification. Plasma, 2019, 2, 27-38.	1.8	7
41	E-beam generation in discharges initiated by voltage pulses with a rise time of 200 ns at an air pressure of 12.5â€“100 kPa. Plasma Science and Technology, 2019, 21, 044007.	1.5	7
42	Corona discharge in atmospheric pressure air when using modulated voltage pulses. Atmospheric and Oceanic Optics, 2014, 27, 582-586.	1.3	6
43	Generation of dual pulses of the runaway electron beam current during the subnanosecond breakdown of atomic and molecular gases. Technical Physics, 2016, 61, 1551-1560.	0.7	6
44	Spectral and amplitude-time characteristics of crystals excited by a runaway electron beam. Matter and Radiation at Extremes, 2019, 4, .	3.9	6
45	Formation of superpower volume discharges and their applications. Guangxue Jingmi Gongcheng/Optics and Precision Engineering, 2011, 19, 273-283.	0.5	6
46	Influence of Nanoparticles and Metal Vapors on the Color of Laboratory and Atmospheric Discharges. Nanomaterials, 2022, 12, 652.	4.1	6
47	A Compact Setup Based on a Gas Diode for Studying of Cathodoluminescence. Instruments and Experimental Techniques, 2018, 61, 262-267.	0.5	5
48	High-Pressure Diffuse and Spark Discharge in Nitrogen and Air in a Spatially Nonuniform Electric Field of High Intensity. IEEE Transactions on Plasma Science, 2011, 39, 2088-2089.	1.3	4
49	Initial stage of breakdown of a point-plane gap filled with high-pressure nitrogen and SF6. Atmospheric and Oceanic Optics, 2014, 27, 324-328.	1.3	4
50	Anode and Cathode Spots in High-Voltage Nanosecond-Pulse Discharge Initiated by Runaway Electrons in Air. Chinese Physics Letters, 2014, 31, 085201.	3.3	4
51	Formation of a Negative Streamer in a Sharply Nonuniform Electric Field and the Time of Generation of Runaway Electrons. Russian Physics Journal, 2020, 62, 1967-1975.	0.4	4
52	Wide Emission Bands of Plasma of a Sub-Nanosecond Discharge in Xenon and Inaccuracies in Their Measurements. IEEE Transactions on Plasma Science, 2021, 49, 1614-1620.	1.3	4
53	Generation of neutrons in a nanosecond low-pressure discharge in deuterium. Technical Physics, 2015, 60, 628-630.	0.7	3
54	Light Emission from Crystals Excited by a 110-ps Pulsed Electron Beam. Russian Physics Journal, 2018, 61, 1361-1362.	0.4	3

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55	Streamer Breakdown of Atmospheric-Pressure Air in a Non-Uniform Electric Field at High Overvoltages. Russian Physics Journal, 2018, 61, 1135-1142.	0.4	3
56	Streamers at the Subnanosecond Breakdown of Argon and Nitrogen in Nonuniform Electric Field at Both Polarities. Technical Physics, 2018, 63, 793-800.	0.7	3
57	Streamer Breakdown with Runaway Electrons Forming Diffuse Discharges in an Inhomogeneous Electric Field. Russian Physics Journal, 2019, 62, 1171-1180.	0.4	3
58	Positive column dynamics of a low-current atmospheric pressure discharge in flowing argon. Plasma Sources Science and Technology, 2022, 31, 015009.	3.1	3
59	Generation of Two Pulses of Runaway Electron Beam Current. Technical Physics, 2021, 66, 548-559.	0.7	3
60	Emission of cyan upon excitation of nitrogen, air, and N2-CH4 mixture by discharge pulses in an inhomogeneous electric field. Optics and Spectroscopy (English Translation of Optika I) Tj ETQq0 0 0 rgBT /Overlock 1 0 Tf 50 2537 Td (Sp	0.6	2
61	Electrode material splashing during a high-voltage nanosecond discharge in low pressure deuterium, hydrogen, helium, and argon. Atmospheric and Oceanic Optics, 2014, 27, 454-457.	1.3	2
62	ICCD-imaging of a plasma glow during the prebreakdown stage of nanosecond discharges at both polarities in nitrogen, air, and argon. Journal of Physics: Conference Series, 2017, 927, 012010.	0.4	2
63	Luminescence of Ga2O3 Crystals Excited with a Runaway Electron Beam. Optics and Spectroscopy (English Translation of Optika I Spektroskopiya), 2017, 123, 867-870.	0.6	2
64	Experimental Study and Numerical Simulation of Breakdown of a Gap with a Sharply Inhomogeneous Electric Field Distribution. Russian Physics Journal, 2021, 64, 340.	0.4	2
65	Measurement of the duration of runaway current pulses using measuring equipment with bandwidths up to 50 GHz. Journal of Physics: Conference Series, 2021, 2064, 012009.	0.4	2
66	<title>Runaway electrons preionized diffuse discharges at high pressure</title>. Proceedings of SPIE, 2010, , .	0.8	1
67	Neutron generation during pulsed discharge in deuterium. Technical Physics Letters, 2011, 37, 646-649.	0.7	1
68	Effect of gas heating on the generation of an ultrashort avalanche electron beam in the pulse-periodic regime. Technical Physics, 2015, 60, 975-980.	0.7	1
69	The optical emission spectroscopy of pulsed and pulse- periodic discharges initiated with runaway electrons. Journal of Physics: Conference Series, 2015, 652, 012033.	0.4	1
70	Parameters of REP DD's plasma formed during the pulse and pulse-periodic modes in dense gases. Proceedings of SPIE, 2015, , .	0.8	1
71	Neutrons in a nanosecond low-pressure discharge in deuterium. Matter and Radiation at Extremes, 2016, 1, 207-212.	3.9	1
72	VUV radiation of heteronuclear dimers and its amplification in the plasma of high-voltage nanosecond discharges initiated by runaway electrons in Arâ€“Xe mixture. Atmospheric and Oceanic Optics, 2016, 29, 471-476.	1.3	1

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73	Positive streamers in a point-to-plane gap filled with air and nitrogen at low and high voltages. Journal of Physics: Conference Series, 2018, 1094, 012025.	0.4	1
74	Different modes of runaway electron beams generated in high-pressure gases. Journal of Physics: Conference Series, 2021, 2064, 012001.	0.4	1
75	High-Voltage Nanosecond Discharge as a Means of Fast Energy Switching. Energies, 2021, 14, 8449.	3.1	1
76	High power UV and VUV pulsed excilamp. , 2009, , .		0
77	Modes of generation of runaway electron beams in gases at a pressure of 1–760 Torr. , 2010, , .		0
78	Generation of a supershort avalanche electron beam in a subnanosecond breakdown in different gases at pressures from 1 torr to 15 atm. , 2011, , .		0
79	The neutrons emission during the nanosecond discharge in deuterium with inhomogeneous electric field distribution. , 2011, , .		0
80	Excilamps based on inert gases and their mixtures, excited by a volume discharge induced by a beam of runaway electrons. Journal of Optical Technology (A Translation of Opticheskii Zhurnal), 2012, 79, 494.	0.4	0
81	Change of the e-beam generation mode at transition from the vacuum to the gas-filled diode. , 2012, , .		0
82	Nanosecond discharges with runaway electrons and X-rays in atmospheric pressure air, nitrogen, CH<inf>4</inf>, SF<inf>6</inf>, xenon, krypton, argon and helium. , 2013, , .		0
83	Radiative Characteristics of the Pulse-Periodic Discharge Plasma Initiated by Runaway Electrons. Russian Physics Journal, 2016, 59, 374-379.	0.4	0
84	Influence of field ionization on the efficiency of neutron generation. Journal of Surface Investigation, 2016, 10, 375-380.	0.5	0
85	Laser action in the IR, UV and VUV in runaway electron preionized discharges. , 2017, , .		0
86	Parameters of runaway electron beam generated during excitation by nanosecond voltage pulses in short gaps filled with nitrogen. Journal of Physics: Conference Series, 2017, 830, 012007.	0.4	0
87	The physical nature of electrons with â€œanomalousâ€• energies in fast atmospheric discharges. , 2017, , .		0
88	Excitation of Diamonds by a Subnanosecond Runaway Electron Beam with an Electron Energy of Up to 200 keV Generated in a Nanosecond Gas Discharge. , 2018, , .		0
89	Subnanosecond Breakdown in the Strongly Overvoltaged Gap: Simulation and Experiment. , 2018, , .		0
90	Simulation of the Subnanosecond Runaway Electron Source for Low-Dose Industrial Radiography. , 2018, , .		0

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91	Generation of direct and reverse runaway electron beams in atmospheric air using anodes made of different metals. Journal of Physics: Conference Series, 2019, 1393, 012031.	0.4	0
92	Water Treatment with the Cold Plasma of a Diffuse Nanosecond Discharge in Air at Atmospheric Pressure. Russian Physics Journal, 2020, 63, 818-823.	0.4	0
93	VUV radiation in the plasma of nanosecond discharges initiated by runaway electrons. Proceedings of SPIE, 2017, , .	0.8	0
94	Time behavior of an electron beam current pulse in the axial and peripheral zones of an anode in vacuum and gas-filled diodes. Journal of Physics: Conference Series, 2021, 2064, 012031.	0.4	0
95	Generation mode of runaway electron beams with high amplitude in atmospheric pressure air. , 2021, , .		0
96	Formation and Transition of Wide Streamer Into Diffuse Discharge During Breakdown in Argon and Nitrogen. Russian Physics Journal, 0, , .	0.4	0