

Alexander S Zhigalin

List of Publications by Year in descending order

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54
papers

402
citations

759233

12
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54
all docs

54
docs citations

54
times ranked

171
citing authors

#	ARTICLE	IF	CITATIONS
1	Effect of the axial magnetic field on a metallic gas-puff pinch implosion. <i>Physics of Plasmas</i> , 2016, 23, .	1.9	33
2	Use of vacuum arc plasma guns for a metal puff Z-pinch system. <i>Physics of Plasmas</i> , 2011, 18, .	1.9	32
3	Stratification in Al and Cu foils exploded in vacuum. <i>Physics of Plasmas</i> , 2015, 22, .	1.9	30
4	Study of the stability of Z-pinch implosions with different initial density profiles. <i>Physics of Plasmas</i> , 2014, 21, 052701.	1.9	27
5	Small-sized vacuum-arc-discharge x-ray radiograph. <i>Plasma Sources Science and Technology</i> , 2011, 20, 035011.	3.1	19
6	Metastable states and their disintegration at pulse liquid heating and electrical explosion of conductors. <i>Journal of Engineering Thermophysics</i> , 2011, 20, 240-248.	1.4	17
7	A double-frame nanosecond soft X-ray backlighting system based on X-pinch. <i>Instruments and Experimental Techniques</i> , 2013, 56, 66-71.	0.5	16
8	Multiply charged metal ions in high current pulsed vacuum arcs. <i>Physics of Plasmas</i> , 2017, 24, .	1.9	16
9	Energy balance in a Z pinch with suppressed Rayleigh-Taylor instability. <i>Plasma Physics and Controlled Fusion</i> , 2018, 60, 035015.	2.1	16
10	A synchronized X-pinch driver. <i>Instruments and Experimental Techniques</i> , 2014, 57, 461-474.	0.5	15
11	Measuring the compression velocity of a Z pinch in an axial magnetic field. <i>Physics of Plasmas</i> , 2017, 24, .	1.9	15
12	Multichannel vacuum arc discharge used for Z-pinch formation. <i>Plasma Physics Reports</i> , 2012, 38, 595-607.	0.9	14
13	X-pinch dynamics: Neck formation and implosion. <i>Physics of Plasmas</i> , 2014, 21, 102711.	1.9	13
14	Radiographic Investigation of Metal-Puff Plasma Jets Generated by Vacuum Arcs. <i>IEEE Transactions on Plasma Science</i> , 2018, 46, 3487-3492.	1.3	11
15	Disintegration of metastable liquid during electrical explosion of aluminum foil. <i>Journal of Engineering Thermophysics</i> , 2013, 22, 288-297.	1.4	10
16	Thermal filamentation instabilities developing in imploding plasma liners. <i>Plasma Physics and Controlled Fusion</i> , 2020, 62, 035016.	2.1	10
17	Compact X-ray radiograph based on a plasma gun. <i>Technical Physics</i> , 2010, 55, 1619-1627.	0.7	8
18	Experimental research of the fine foil explosion dynamics. <i>Journal of Physics: Conference Series</i> , 2014, 552, 012027.	0.4	8

#	ARTICLE	IF	CITATIONS
19	Estimation of the initial density distribution in plasmaâ€œmetal liners. Technical Physics, 2016, 61, 676-682.	0.7	8
20	Formation of double shell during implosion of plasma metal puff Z-pinches. Physics of Plasmas, 2020, 27, .	1.9	7
21	Effect of tailored density profiles on the stability of imploding Z-pinches at microsecond rise time megaampere currents. Plasma Physics and Controlled Fusion, 2022, 64, 015011.	2.1	7
22	Suppression of Rayleigh-Taylor instabilities in Z-pinches. Technical Physics Letters, 2015, 41, 554-556.	0.7	6
23	Metastable Fluid Decay During Electric Explosion of Metallic Foils. Russian Physics Journal, 2017, 60, 1400-1407.	0.4	6
24	X-ray radiography of aluminum cathodes eroded in high-current vacuum arcs. Current Applied Physics, 2019, 19, 704-708.	2.4	6
25	Studies on the implosion of pinches with tailored density profiles. Plasma Physics and Controlled Fusion, 2021, 63, 045022.	2.1	6
26	Use of a probing pulsed magnetic field for determining plasma parameters. Physics of Plasmas, 2016, 23, 113507.	1.9	5
27	Small-Size High-Current Generators for X-Ray Backlighting. Russian Physics Journal, 2017, 60, 1408-1412.	0.4	5
28	Foil explosion and decay of metastable state. Physics of Plasmas, 2019, 26, .	1.9	5
29	Magnetic Field Effect on the Initial Parameters of an Imploding Z-Pinch. IEEE Transactions on Plasma Science, 2018, 46, 3849-3854.	1.3	4
30	Expansion velocity of plasma corona surrounding exploding aluminum foil. Physics of Plasmas, 2020, 27, 033505.	1.9	4
31	Experimental studies of the shunting discharge developing during a foil explosion in vacuum. Physics of Plasmas, 2020, 27, 043510.	1.9	4
32	A study of the foil explosion in vacuum using spectral streak camera diagnostics. Physics of Plasmas, 2021, 28, .	1.9	4
33	Study of the strata formation during the explosion of foils in vacuum. Journal of Physics: Conference Series, 2015, 653, 012146.	0.4	3
34	Determination of plasma parameters with a probing magnetic field pulse. Technical Physics Letters, 2016, 42, 223-226.	0.7	3
35	Estimation of the Al Metal-Puff Density Profile on the Generator GIT-12. , 2020, , .		3
36	Experimental study of the neck formation in an X pinch. Journal of Physics: Conference Series, 2014, 552, 012011.	0.4	2

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37	Study of thin metallic film explosion in vacuum. Journal of Physics: Conference Series, 2017, 830, 012033.	0.4	1
38	Study of foil explosion using the soft x-ray radiography. Journal of Physics: Conference Series, 2020, 1556, 012055.	0.4	1
39	Filamentation of Current-Carrying Plasma Shells. Russian Physics Journal, 2020, 62, 2063-2068.	0.4	1
40	Determination of the voltage drop on a high-current vacuum arc discharge under conditions of a limited cross-section of the plasma flow. Journal of Physics: Conference Series, 2021, 2064, 012019.	0.4	1
41	Wire explosion in vacuum: velocity of current-carryng corona. , 2009, , .		0
42	Metal double puff Z-pinch implosions. , 2013, , .		0
43	Metal-puff Z-pinch implosions on generator MIG with current level up to 2.3 MA. , 2015, , .		0
44	Capacitive energy stores with nanosecond energy transfer. , 2015, , .		0
45	Effect of the axial magnetic field on a radiating z-pinch plasma. , 2015, , .		0
46	The research and application an X-pinch on compact pulsed power generators. , 2015, , .		0
47	Radiographic research of the Bi plasma jet formed by the vacuum arc discharge. Journal of Physics: Conference Series, 2017, 830, 012038.	0.4	0
48	Radiographic research of the metal-puff plasma jets formed by the vacuum arc discharge. , 2017, , .		0
49	Using of B-dot probe for z-pinch plasma diagnostics. Journal of Physics: Conference Series, 2018, 1115, 022012.	0.4	0
50	Delayed growth of large-scale instabilities on the surface of double-layer (Cu + Ti) conductors in strong magnetic fields. Journal of Physics: Conference Series, 2018, 1115, 022011.	0.4	0
51	Comparative Analysis of the Rayleigh-Taylor Instability Suppression During Compression of Metallic Gas-Puff Z Pinch at the MIG and GIT-12 Facilities. , 2020, , .		0
52	â€œZipperingâ€•Effect at Aluminum Metal-Puff Liner Implosions on the GIT-12 Pulse Power Generator. , 2020, , .		0
53	Investigation of the aluminum electrodes erosion of a plasma gun during the operation of a high-current vacuum arc discharge. Journal of Physics: Conference Series, 2021, 2064, 012016.	0.4	0
54	On Double Shell Formation Mechanism During Implosion of Plasma Puff Z-Pinches. , 2020, , .		0