

# Xiaobing Zou

## List of Publications by Year in descending order

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82  
papers

505  
citations

687363

13  
h-index

794594

19  
g-index

82  
all docs

82  
docs citations

82  
times ranked

325  
citing authors

#	ARTICLE	IF	CITATIONS
1	A pulsed power generator for x-pinch experiments. <i>Laser and Particle Beams</i> , 2006, 24, 503-509.	1.0	53
2	Similarity of gas discharge in low-pressure argon gaps between two plane-parallel electrodes. <i>High Voltage</i> , 2016, 1, 86-89.	4.7	30
3	Effect of distribution of electric field on low-pressure gas breakdown. <i>Physics of Plasmas</i> , 2017, 24, .	1.9	29
4	Intersection of Paschen's curves for argon. <i>Physics of Plasmas</i> , 2016, 23, .	1.9	26
5	Evolution of the electrically exploding wire observed with a Mach-Zehnder interferometer. <i>Applied Physics Letters</i> , 2009, 94, .	3.3	24
6	X-Ray Backlighting of Developments of $X$ -pinches and Wire-Array $Z$ -pinches Using an $X$ -pinch. <i>IEEE Transactions on Plasma Science</i> , 2010, 38, 646-651.	1.3	24
7	Comparison of Nonuniform Transmission Lines With Gaussian and Exponential Impedance Profiles for $Z$ -Pinch. <i>IEEE Transactions on Plasma Science</i> , 2012, 40, 3395-3398.	1.3	20
8	Fully vaporized electrical explosion of bare tungsten wire in vacuum. <i>Applied Physics Letters</i> , 2016, 109, .	3.3	19
9	Recovery of gas density in a nitrogen gap after breakdown. <i>Applied Physics Letters</i> , 2010, 97, .	3.3	16
10	Cathode fall thickness of abnormal glow discharges between parallel-plane electrodes in different radii at low pressure. <i>Physics of Plasmas</i> , 2015, 22, .	1.9	14
11	Underwater electrical wire explosion: Shock wave from melting being overtaken by shock wave from vaporization. <i>Physics of Plasmas</i> , 2018, 25, 053502.	1.9	14
12	Analytical Solution of Nonuniform Transmission Lines for Z-Pinch. <i>IEEE Transactions on Plasma Science</i> , 2014, 42, 2092-2097.	1.3	13
13	Effect of Deposition Energy on Underwater Electrical Wire Explosion. <i>IEEE Transactions on Plasma Science</i> , 2018, 46, 3444-3449.	1.3	13
14	Determination of the cathode layer thickness in the normal glow discharge. <i>Physics of Plasmas</i> , 2017, 24, .	1.9	11
15	Enhancement of Shock Wave Generated by Underwater Electrical Wire-Array Explosion at a Fixed Energy and Mass of Wire-Array. <i>IEEE Transactions on Plasma Science</i> , 2020, 48, 3373-3377.	1.3	11
16	Breakdown, discharge modes, and gaseous recovery of atmospheric air with repetitive 10 ns pulses. <i>Physics of Plasmas</i> , 2021, 28, .	1.9	11
17	A three-frame Mach-Zehnder interferometer for measuring dense magnetized plasmas. <i>Review of Scientific Instruments</i> , 2003, 74, 1328-1331.	1.3	10
18	Avoiding Current Loss in an X-Pinch by Shortening the Gap between Anode and Cathode. <i>IEEE Transactions on Plasma Science</i> , 2010, 38, 540-544.	1.3	9

#	ARTICLE	IF	CITATIONS
19	Three-dimensional electromagnetic simulation of monolithic radial transmission lines for Z-pinch. <i>Laser and Particle Beams</i> , 2014, 32, 599-603.	1.0	9
20	Improving the tracking and erosion resistance performance of alumina trihydrate-free addition-cure liquid silicone rubber. <i>IEEE Transactions on Dielectrics and Electrical Insulation</i> , 2018, 25, 162-173.	2.9	9
21	Measuring the dynamic polarizability of tungsten atom via electrical wire explosion in vacuum. <i>Physics of Plasmas</i> , 2018, 25, .	1.9	8
22	Load Section Design of a Pulsed Power Generator for X-pinch. <i>IEEE Transactions on Dielectrics and Electrical Insulation</i> , 2007, 14, 889-893.	2.9	7
23	Investigation of Monolithic Radial Transmission Lines for Z-Pinch. <i>IEEE Transactions on Plasma Science</i> , 2017, 45, 2639-2647.	1.3	7
24	Investigation on the similarity law of low-pressure glow discharges based on the light intensity distributions in geometrically similar gaps. <i>Physics of Plasmas</i> , 2017, 24, .	1.9	7
25	Effect of reflection patterns on converging shock waves generated by underwater electrical wire array explosion. <i>Physics of Plasmas</i> , 2020, 27, .	1.9	7
26	Influencing Factors and Error Analysis of Pulse Current Measurement With Air-Core Rogowski Coil. <i>IEEE Transactions on Plasma Science</i> , 2020, 48, 4381-4386.	1.3	7
27	Research of Particle Swarm Optimization algorithm based on Nelder-Mead simplex and its application on partial discharge parameter recognition. , 2010, , .		6
28	A V/n gas switch working in multi-channel discharge mode. <i>IEEE Transactions on Dielectrics and Electrical Insulation</i> , 2011, 18, 971-974.	2.9	6
29	Numerical Simulation of Acoustic Wave Generated by the AC Arc. <i>IEEE Transactions on Plasma Science</i> , 2019, 47, 4136-4141.	1.3	6
30	Measuring the gas flow from a supersonic nozzle used in a 1.5-MA gas puff Z pinch. <i>IEEE Transactions on Plasma Science</i> , 2002, 30, 482-487.	1.3	5
31	Measuring the Evolution of Mass Density Distribution of Wire Explosion. <i>IEEE Transactions on Plasma Science</i> , 2014, 42, 2522-2523.	1.3	5
32	Online Measurement of Pulsed Electric Field of Insulator Surface in Vacuum Based on Kerr Effect. <i>IEEE Transactions on Plasma Science</i> , 2014, 42, 2986-2990.	1.3	5
33	Effect of high-voltage electrode geometry on energy deposition into exploding wire in vacuum. <i>IEEE Transactions on Dielectrics and Electrical Insulation</i> , 2017, 24, 2001-2005.	2.9	5
34	Effect of time interval between pulses on the synthetic sound generated by repetitive nanosecond pulse discharge. <i>Physics of Plasmas</i> , 2021, 28, .	1.9	5
35	Mass Density Evolution of Wire Explosion Observed Using X-Ray Backlight. <i>IEEE Transactions on Plasma Science</i> , 2014, 42, 3221-3225.	1.3	4
36	Field-Circuit Coupling Simulation of Petawatt-Class Z-Pinch Accelerator. <i>IEEE Transactions on Plasma Science</i> , 2019, 47, 2916-2921.	1.3	4

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37	An Indirect Iterative Method to Couple the Generator to the MHD Load for Future Z-Pinch. IEEE Transactions on Plasma Science, 2020, 48, 3418-3423.	1.3	4
38	X-ray backlighting of the initial stage of single-wire and multi-wire Z-pinch. , 2012, , .		3
39	Current division between two paralleled X-pinchs. Laser and Particle Beams, 2014, 32, 437-442.	1.0	3
40	Timing of x-ray burst from X-pinch. Physics of Plasmas, 2015, 22, 063105.	1.9	3
41	Using fast moving electrode to achieve overvoltage breakdown of gas switch stressed with high direct voltages. Review of Scientific Instruments, 2015, 86, 034705.	1.3	3
42	Effect of thickness of insulation coating on temperature of electrically exploded tungsten wires in vacuum. Physics of Plasmas, 2017, 24, 072708.	1.9	3
43	Computation of electron transport and relaxation properties in gases based on improved multi-term approximation of Boltzmann equation. Physics of Plasmas, 2018, 25, .	1.9	3
44	Range and similarity of hollow cathode discharge in argon. High Voltage, 2019, 4, 217-220.	4.7	3
45	Investigation of sound generated by a DC biased rectangular AC current arc in ambient air. Physics of Plasmas, 2020, 27, 023509.	1.9	3
46	Numerical Simulations for Design Optimization of Wire Array in Underwater Electrical Wire Explosion (UEWE). IEEE Transactions on Plasma Science, 2022, 50, 1833-1840.	1.3	3
47	X-Ray Emission From a Tabletop X-Pinch Device. IEEE Transactions on Plasma Science, 2012, 40, 3354-3359.	1.3	2
48	Comparison of underwater electrical wire explosions with large and small capacitors charged to a same energy. Physics of Plasmas, 2020, 27, 063504.	1.9	2
49	Unbalanced distribution of electric current in underwater electrical wire array explosion. Journal Physics D: Applied Physics, 2022, 55, 185205.	2.8	2
50	Measuring the Evolution of Electron Density Profile in a Small Gas-puff z-pinch. IEEE Transactions on Fundamentals and Materials, 2004, 124, 515-518.	0.2	1
51	Experimental study of implosion plasma physical characteristics in a small puff-gas z-pinch. AIP Conference Proceedings, 2006, , .	0.4	1
52	Optimization design of high-voltage electrode contour line. , 2010, , .		1
53	X-ray emission from a table-top X-pinch device. , 2012, , .		1
54	Timing of the x-ray burst from paralleled X-pinchs. , 2012, , .		1

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55	Using of fiber-array diagnostic to measure the propagation of fast axial ionization wave during breakdown of electrically exploding tungsten wire in vacuum. Review of Scientific Instruments, 2017, 88, 123505.	1.3	1
56	Note: Measurement of the cathode layer thickness in glow discharges with a Langmuir probe. Review of Scientific Instruments, 2018, 89, 066103.	1.3	1
57	Diagnosis and Analysis of Load Current Divergence in Z-Pinch Experiments. IEEE Transactions on Plasma Science, 2020, 48, 3956-3961.	1.3	1
58	Investigation of the microsecond-pulse acoustic wave generated by a single nanosecond-pulse discharge. Physics of Plasmas, 2022, 29, .	1.9	1
59	Study of Soft X-Ray Spectrum from a Small Gas-Puff Z-Pinch Device. IEEE International Conference on Plasma Science, 2005, , .	0.0	0
60	Analysis of Prepulse in a 500kV/400kA/100ns Z-Pinch Device. IEEE International Conference on Plasma Science, 2005, , .	0.0	0
61	Analyzing the energy spectra of ion beams emitted from x-pinch plasma. , 2006, , .		0
62	A preliminary experiment on x-pinch. , 2006, , .		0
63	Nanosize Powders of Zinc Oxide Produced by Electrical Explosion of Zinc Wires. , 2007, , .		0
64	Arogowski Coil for Measurement of Fast Current Pulse. , 2007, , .		0
65	Numerical simulation of pulsed wire discharge for nano-powder production. , 2008, , .		0
66	X-ray emission from an X-pinch. , 2009, , .		0
67	X-pinch applications in X-ray radiography and design of compact table-top X-pinch device. , 2010, , .		0
68	Evolution of the exploding titanium wire in 5-50 kPa ambient gas. , 2012, , .		0
69	Current division between two paralleled X-pinches. , 2012, , .		0
70	A compact coaxial gas filled switch. , 2012, , .		0
71	Comparison of nonuniform transmission lines with Gaussian and exponential impedance profiles for z-pinch. , 2012, , .		0
72	X-ray backlighting of wire expansion and plasma merging of z-pinch load with 10-40kA/wire. , 2012, , .		0

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73	On-line measurement of pulsed electric-field of insulator surface in vacuum based on Kerr effect. , 2013, , .		0
74	Current distribution between an X-pinch and a current-return rod or parallel X-pinches. , 2013, , .		0
75	Measurement of the mass density evolution of wire explosion using X-ray backlighting. , 2013, , .		0
76	3-D electromagnetic simulation of monolithic radial transmission lines for Z-pinch. , 2014, , .		0
77	A nonuniform transmission line code for pulsed power Z-pinch drivers. , 2014, , .		0
78	3-D electromagnetic simulation of monolithic radial transmission lines for Z-pinch. , 2014, , .		0
79	A nonuniform transmission line code for pulsed power Z-pinch drivers. , 2014, , .		0
80	Distortion of the Electric Field Near Insulator Surface Observed With Electro-Optical Technique Measuring Kerr Effect. IEEE Transactions on Plasma Science, 2014, 42, 2574-2575.	1.3	0
81	Modification of Paschen's law for the nonuniform electric field between two plane-parallel electrodes. , 2015, , .		0
82	Comparison between experiment and 3-dimensional electromagnetic simulation of monolithic radial transmission lines for Z-pinch. , 2015, , .		0