Stephen A Slutz

List of Publications by Year
in descending order

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47 papers	3,608 citations	147801 31 h-index	233421 45 g-index
47 all docs	47 docs citations	47 times ranked	1086 citing authors

#	Article	IF	Citations
1	Pulsed-power-driven cylindrical liner implosions of laser preheated fuel magnetized with an axial field. Physics of Plasmas, 2010, 17, .	1.9	486
2	Experimental Demonstration of Fusion-Relevant Conditions in Magnetized Liner Inertial Fusion. Physical Review Letters, 2014, 113, 155003.	7.8	332
3	Pulsed-power-driven high energy density physics and inertial confinement fusion research. Physics of Plasmas, 2005, 12, 055503.	1.9	280
4	High-Gain Magnetized Inertial Fusion. Physical Review Letters, 2012, 108, 025003.	7.8	244
5	Magnetically Driven Implosions for Inertial Confinement Fusion at Sandia National Laboratories. IEEE Transactions on Plasma Science, 2012, 40, 3222-3245.	1.3	154
6	Review of pulsed power-driven high energy density physics research on Z at Sandia. Physics of Plasmas, 2020, 27, .	1.9	140
7	Measurements of Magneto-Rayleigh-Taylor Instability Growth during the Implosion of Initially Solid Al Tubes Driven by the 20-MA, 100-ns Z Facility. Physical Review Letters, 2010, 105, 185001.	7.8	132
8	Design of magnetized liner inertial fusion experiments using the Z facility. Physics of Plasmas, 2014, 21, .	1.9	123
9	Production of Thermonuclear Neutrons from Deuterium-Filled Capsule Implosions Driven byZ-Pinch Dynamic Hohlraums. Physical Review Letters, 2004, 93, .	7.8	111
10	Understanding Fuel Magnetization and Mix Using Secondary Nuclear Reactions in Magneto-Inertial Fusion. Physical Review Letters, 2014, 113, 155004.	7.8	105
11	Measurements of magneto-Rayleighâ€“Taylor instability growth during the implosion of initially solid metal liners. Physics of Plasmas, 2011, 18, .	1.9	104
12	Electrothermal instability growth in magnetically driven pulsed power liners. Physics of Plasmas, 2012, 19, .	1.9	102
13	Penetrating Radiography of Imploding and Stagnating Beryllium Liners on the<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mi>Z</mml:mi></mml:math>Accelerator. Physical Review Letters, 2012, 109, 135004.	7.8	102
14	Observations of Modified Three-Dimensional Instability Structure for Imploding<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mi>z</mml:mi></mml:math>-Pinch Liners that are Premagnetized with an Axial Field. Physical Review Letters, 2013, 111, 235005.	7.8	101
15	Beryllium liner implosion experiments on the Z accelerator in preparation for magnetized liner inertial fusion. Physics of Plasmas, 2013, 20, .	1.9	95
16	Experimental Demonstration of the Stabilizing Effect of Dielectric Coatings on Magnetically Accelerated Imploding Metallic Liners. Physical Review Letters, 2016, 116, 065001.	7.8	78
17	Physics of Plasmas, 2015, 22, 056306.	1.9	75
18	Modified helix-like instability structure on imploding z-pinch liners that are pre-imposed with a uniform axial magnetic field. Physics of Plasmas, 2014, 21, .	1.9	69

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19	Scaling magnetized liner inertial fusion on Z and future pulsed-power accelerators. Physics of Plasmas, 2016, 23, .	1.9	65
20	Performance Scaling in Magnetized Liner Inertial Fusion Experiments. Physical Review Letters, 2020, 125, 155002.	7.8	65
21	Target design for high fusion yield with the double Z-pinch-driven hohlraum. Physics of Plasmas, 2007, 14, 056302.	1.9	60
22	Simulations of electrothermal instability growth in solid aluminum rods. Physics of Plasmas, 2013, 20, .	1.9	58
23	Pulsed-coil magnet systems for applying uniform 10â€“30 T fields to centimeter-scale targets on Sandia's Z facility. Review of Scientific Instruments, 2014, 85, 124701.	1.3	47
24	A semi-analytic model of magnetized liner inertial fusion. Physics of Plasmas, 2015, 22, 052708.	1.9	39
25	Effects of magnetization on fusion product trapping and secondary neutron spectra. Physics of Plasmas, 2015, 22, .	1.9	37
26	Origins and effects of mix on magnetized liner inertial fusion target performance. Physics of Plasmas, 2019, 26, .	1.9	37
27		1.9	36
28	Assessing Stagnation Conditions and Identifying Trends in Magnetized Liner Inertial Fusion. IEEE Transactions on Plasma Science, 2019, 47, 2081-2101.	1.3	36
29	An overview of magneto-inertial fusion on the Z machine at Sandia National Laboratories. Nuclear Fusion, 2022, 62, 042015.	3.5	35
30	Enhancing performance of magnetized liner inertial fusion at the Z facility. Physics of Plasmas, 2018, 25, .	1.9	34
31	Diagnosing and mitigating laser preheat induced mix in MagLIF. Physics of Plasmas, 2018, 25, .	1.9	33
32	Minimizing scatter-losses during pre-heat for magneto-inertial fusion targets. Physics of Plasmas, 2018, 25, .	1.9	30
33	Constraining preheat energy deposition in MagLIF experiments with multi-frame shadowgraphy. Physics of Plasmas, 2019, 26, .	1.9	27
34	Exploring magnetized liner inertial fusion with a semi-analytic model. Physics of Plasmas, 2016, 23, .	1.9	22
35	Auto-magnetizing liners for magnetized inertial fusion. Physics of Plasmas, 2017, 24, .	1.9	21
36	Effect of axial magnetic flux compression on the magnetic Rayleigh-Taylor instability (theory). AIP Conference Proceedings, 2014, , .	0.4	17

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37	Deep-learning-enabled Bayesian inference of fuel magnetization in magnetized liner inertial fusion. Physics of Plasmas, 2021, 28, .	1.9	16
38	Scaling of magnetized inertial fusion with drive current rise-time. Physics of Plasmas, 2018, 25, 082707.	1.9	15
39	Megagauss-level magnetic field production in cm-scale auto-magnetizing helical liners pulsed to 500 kA in 125 ns. Physics of Plasmas, 2018, 25, 052703.	1.9	12
40	Estimation of stagnation performance metrics in magnetized liner inertial fusion experiments using Bayesian data assimilation. Physics of Plasmas, 2022, 29, .	1.9	11
41	Implosion of auto-magnetizing helical liners on the Z facility. Physics of Plasmas, 2019, 26, 052705.	1.9	9
42	A pulsed-power implementation of â€œLaser Gateâ€•for increasing laser energy coupling and fusion yield in magnetized liner inertial fusion (MagLIF). Review of Scientific Instruments, 2020, 91, 063507.	1.3	6
43	Fusion gain from cylindrical liner-driven implosions of field reversed configurations. Physics of Plasmas, 2021, 28, .	1.9	4
44	Dense hydrogen layers for high performance MagLIF. Physics of Plasmas, 2022, 29, 022701.	1.9	2
45	Lasergate: A windowless gas target for enhanced laser preheat in magnetized liner inertial fusion. Physics of Plasmas, 2021, 28, 112703.	1.9	1
46	A Platform to Study High-Field FRC Formation on the Maize Linear Transformer Driver *. , 2021, , .		0
47	Increased preheat energy to MagLIF targets with cryogenic cooling. , 2021, , .		0