Matthew R Weis

List of Publications by Year
in descending order

29 papers	784 citations	516710 16 h-index	526287 27 g-index
31 all docs	31 docs citations	31 times ranked	467 citing authors

#	Article	IF	Citations
1	Review of pulsed power-driven high energy density physics research on Z at Sandia. Physics of Plasmas, 2020, 27, .	1.9	140
2	Performance Scaling in Magnetized Liner Inertial Fusion Experiments. Physical Review Letters, 2020, 125, 155002.	7.8	65
3	Anisotropy and feedthrough in magneto-Rayleigh-Taylor instability. Physical Review E, 2011, 83, 066405.	2.1	53
4	Laser-driven magnetized liner inertial fusion. Physics of Plasmas, 2017, 24, .	1.9	49
5	Coupling of sausage, kink, and magneto-Rayleigh-Taylor instabilities in a cylindrical liner. Physics of Plasmas, 2015, 22, .	1.9	40
6	Origins and effects of mix on magnetized liner inertial fusion target performance. Physics of Plasmas, 2019, 26, .	1.9	37
7	Assessing Stagnation Conditions and Identifying Trends in Magnetized Liner Inertial Fusion. IEEE Transactions on Plasma Science, 2019, 47, 2081-2101.	1.3	36
8	An overview of magneto-inertial fusion on the Z machine at Sandia National Laboratories. Nuclear Fusion, 2022, 62, 042015.	3.5	35
9	Enhancing performance of magnetized liner inertial fusion at the Z facility. Physics of Plasmas, 2018, 25, .	1.9	34
10	Effects of magnetic shear on magneto-Rayleigh-Taylor instability. Physics of Plasmas, 2012, 19, .	1.9	33
11	Laser-driven magnetized liner inertial fusion on OMEGA. Physics of Plasmas, 2017, 24, .	1.9	33
12	Diagnosing and mitigating laser preheat induced mix in MagLIF. Physics of Plasmas, 2018, 25, .	1.9	33
13	Minimizing scatter-losses during pre-heat for magneto-inertial fusion targets. Physics of Plasmas, 2018, 25, .	1.9	30
14	Constraining preheat energy deposition in MagLIF experiments with multi-frame shadowgraphy. Physics of Plasmas, 2019, 26, .	1.9	27
15	Direct measurement of the inertial confinement time in a magnetically driven implosion. Physics of Plasmas, 2017, 24, .	1.9	26
16	Temporal evolution of surface ripples on a finite plasma slab subject to the magneto-Rayleigh-Taylor instability. Physics of Plasmas, 2014, 21, .	1.9	19
17	Scaling laser preheat for MagLIF with the Z-Beamlet laser. Physics of Plasmas, 2021, 28, .	1.9	15
18	A 7.2 keV spherical x-ray crystal backlighter for two-frame, two-color backlighting at Sandiaâ€™s Z Pulsed Power Facility. Review of Scientific Instruments, 2017, 88, 103503.	1.3	12

#	Article	IF	Citations
19	Magnetic field impact on the laser heating in MagLIF. Physics of Plasmas, 2020, 27, .	1.9	12
20	The staged z-pinch as a potential high gain fusion energy source: An independent review, a negative conclusion. Physics of Plasmas, 2018, 25, 102707.	1.9	11
21	Estimation of stagnation performance metrics in magnetized liner inertial fusion experiments using Bayesian data assimilation. Physics of Plasmas, 2022, 29, .	1.9	11
22	Quantification of MagLIF morphology using the Mallat scattering transformation. Physics of Plasmas, 2020, 27, .	1.9	9
23	The effect of laser entrance hole foil thickness on MagLIF-relevant laser preheat. Physics of Plasmas, 2020, 27, .	1.9	8
24	Temperature distributions and gradients in laser-heated plasmas relevant to magnetized liner inertial fusion. Physical Review E, 2020, 102, 023209.	2.1	8
25	Initial surface conditions affecting the formation of plasma on metal conductors driven by a mega-ampere current pulse. Physics of Plasmas, 2020, 27, .	1.9	4
26	Magnetic field effects on laser energy deposition and filamentation in magneto-inertial fusion relevant plasmas. Physics of Plasmas, 2021, 28, .	1.9	3
27	Lasergate: A windowless gas target for enhanced laser preheat in magnetized liner inertial fusion. Physics of Plasmas, 2021, 28, 112703.	1.9	1
28	Measuring mix in MagLIF experiments at the NIF*. , 2021, , .		0
29	Increased preheat energy to MagLIF targets with cryogenic cooling. , 2021, , .		0