Ryan D Mcbride

List of Publications by Year
in descending order

69 papers	2,471 citations	201674 27 h-index	197818 49 g-index
71 all docs	71 docs citations	71 times ranked	951 citing authors

#	Article	IF	Citations
1	Experimental Demonstration of Fusion-Relevant Conditions in Magnetized Liner Inertial Fusion. Physical Review Letters, 2014, 113, 155003.	7.8	332
2	Magnetically Driven Implosions for Inertial Confinement Fusion at Sandia National Laboratories. IEEE Transactions on Plasma Science, 2012, 40, 3222-3245.	1.3	154
3	Review of pulsed power-driven high energy density physics research on Z at Sandia. Physics of Plasmas, 2020, 27, .	1.9	140
4	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
5	Conceptual designs of two petawatt-class pulsed-power accelerators for high-energy-density-physics experiments. Physical Review Special Topics: Accelerators and Beams, 2015, 18, .	1.8	116
6	Understanding Fuel Magnetization and Mix Using Secondary Nuclear Reactions in Magneto-Inertial Fusion. Physical Review Letters, 2014, 113, 155004.	7.8	105
7	Measurements of magneto-Rayleighâ€“Taylor instability growth during the implosion of initially solid metal liners. Physics of Plasmas, 2011, 18, .	1.9	104
8	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
9	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
10	Beryllium liner implosion experiments on the Z accelerator in preparation for magnetized liner inertial fusion. Physics of Plasmas, 2013, 20, .	1.9	95
11	Experimental Demonstration of the Stabilizing Effect of Dielectric Coatings on Magnetically Accelerated Imploding Metallic Liners. Physical Review Letters, 2016, 116, 065001.	7.8	78
12	Physics of Plasmas, 2015, 22, 056306.	1.9	75
13	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
14	A Primer on Pulsed Power and Linear Transformer Drivers for High Energy Density Physics Applications. IEEE Transactions on Plasma Science, 2018, 46, 3928-3967.	1.3	57
15	Solid liner implosions on Z for producing multi-megabar, shockless compressions. Physics of Plasmas, 2012, 19, .	1.9	54
16	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
17	Experimental study of current loss and plasma formation in the <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:mi>Z</mml:mi></mml:mrow></mml:math> machine post-hole convolute. Physical Review Accelerators and Beams, 2017, 20, .	1.6	47
18	Structure of the dense cores and ablation plasmas in the initiation phase of tungsten wire-array Z pinches. Physics of Plasmas, 2007, 14, 012704.	1.9	39

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19	A semi-analytic model of magnetized liner inertial fusion. Physics of Plasmas, 2015, 22, 052708.	1.9	39
20	Tracking an imploding cylinder with photonic Doppler velocimetry. Review of Scientific Instruments, 2013, 84, 055102.	1.3	38
21	Origins and effects of mix on magnetized liner inertial fusion target performance. Physics of Plasmas, 2019, 26, .	1.9	37
22		1.9	36
23	Assessing Stagnation Conditions and Identifying Trends in Magnetized Liner Inertial Fusion. IEEE Transactions on Plasma Science, 2019, 47, 2081-2101.	1.3	36
24	Diagnostics on the COBRA pulsed power generator. Review of Scientific Instruments, 2006, 77, 10F521.	1.3	33
25	Evolution of sausage and helical modes in magnetized thin-foil cylindrical liners driven by a Z-pinch. Physics of Plasmas, 2018, 25, 056307.	1.9	32
26	The Role of Flux Advection in the Development of the Ablation Streams and Precursors of Wire Array Z-pinches. , 2009, , .		29
27	Implosion dynamics and radiation characteristics of wire-array Z pinches on the Cornell Beam Research Accelerator. Physics of Plasmas, 2009, 16, .	1.9	28
28	Displacement current phenomena in the magnetically insulated transmission lines of the refurbished<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mi>Z</mml:mi></mml:math>accelerator. Physical Review Special Topics: Accelerators and Beams, 2010, 13, .	1.8	28
29	Direct measurement of the inertial confinement time in a magnetically driven implosion. Physics of Plasmas, 2017, 24, .	1.9	26
30	Transmission-line-circuit model of an 85-TW, 25-MA pulsed-power accelerator. Physical Review Accelerators and Beams, 2018, 21, .	1.6	26
31	Controlling Rayleigh-Taylor Instabilities in Magnetically Driven Solid Metal Shells by Means of a Dynamic Screw Pinch. Physical Review Letters, 2016, 117, 205001.	7.8	24
32	Exploring magnetized liner inertial fusion with a semi-analytic model. Physics of Plasmas, 2016, 23, .	1.9	22
33	Explicit Brillouin Flow Solutions in Magnetrons, Magnetically Insulated Line Oscillators, and Radial Magnetically Insulated Transmission Lines. IEEE Transactions on Plasma Science, 2021, 49, 3418-3437.	1.3	18
34	Effect of axial magnetic flux compression on the magnetic Rayleigh-Taylor instability (theory). AIP Conference Proceedings, 2014, , .	0.4	17
35	Stabilization of Liner Implosions via a Dynamic Screw Pinch. Physical Review Letters, 2020, 125, 035001.	7.8	15
36	The electro-thermal stability of tantalum relative to aluminum and titanium in cylindrical liner ablation experiments at 550 kA. Physics of Plasmas, 2018, 25, 032701.	1.9	14

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37	The Electrothermal Instability on Pulsed Power Ablations of Thin Foils. IEEE Transactions on Plasma Science, 2018, 46, 3753-3765.	1.3	14
38	HFSS and CST Simulations of a GW-Class MILO. IEEE Transactions on Plasma Science, 2020, 48, 1894-1901.	1.3	14
39	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
40	Theory, simulation, and experiments on a magnetically insulated line oscillator (MILO) at 10 kA, 240 kV near Hull cutoff condition. Physics of Plasmas, 2021, 28, .	1.9	11
41	Diagnostic and Power Feed Upgrades to the MAIZE Facility. IEEE Transactions on Plasma Science, 2018, 46, 3973-3981.	1.3	9
42	A novel, magnetically driven convergent Richtmyerâ€“Meshkov platform. Physics of Plasmas, 2020, 27, .	1.9	7
43	A new time and space resolved transmission spectrometer for research in inertial confinement fusion and radiation source development. Review of Scientific Instruments, 2017, 88, 013504.	1.3	6
44	A semi-analytic model of gas-puff liner-on-target magneto-inertial fusion. Physics of Plasmas, 2019, 26, 032708.	1.9	6
45	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
46	Liner implosion experiments driven by a dynamic screw pinch. Physics of Plasmas, 2021, 28, .	1.9	5
47	Voltage measurements at the vacuum post-hole convolute of the<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:mi>Z</mml:mi></mml:mrow></mml:math>pulsed-power accelerator. Physical Review Special Topics: Accelerators and Beams, 2014, 17, .	1.8	4
48	Reduction of ablated surface expansion in pulsed-power-driven experiments using an aerosol dielectric coating. Physics of Plasmas, 2019, 26, 070704.	1.9	4
49	Extended magnetohydrodynamics simulations of thin-foil Z-pinch implosions with comparison to experiments. Physics of Plasmas, 2020, 27, .	1.9	4
50	Studies of Implosion and Radiative Properties of Tungsten Planar Wire Arrays on Michiganâ€™s Linear Transformer Driver Pulsed-Power Generator. IEEE Transactions on Plasma Science, 2018, 46, 3778-3788.	1.3	3
51	Optimization of switch diagnostics on the MAIZE linear transformer driver. Review of Scientific Instruments, 2019, 90, 124707.	1.3	3
52	Additively manufactured electrodes for plasma and power-flow studies in high-power transmission lines on the 1-MA MAIZE facility. Review of Scientific Instruments, 2021, 92, 053550.	1.3	3
53	Multicavity linear transformer driver facility for <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:mi>Z</mml:mi></mml:mrow></mml:math> -pinch and high-power microwave research. Physical Review Accelerators and Beams, 2021, 24, .	1.6	3
54	Anodeâ€“Cathode Asymmetry in a Wire-Array Z-Pinch: Highly Resolved Axial-Shear-Flow Structure Observed on the Outer Edges of Ablating Wires. IEEE Transactions on Plasma Science, 2011, 39, 2430-2431.	1.3	2

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55	Load dynamics of double planar foil liners and double planar wire arrays on the UM MAIZE LTD generator. Physics of Plasmas, 2021, 28, 082702.	1.9	2
56	Scaling pulser output parameters for standard and dry brick configurations. Physical Review Accelerators and Beams, 2020, 23, .	1.6	2
57	Sodium tracer measurements of an expanded dense aluminum plasma from e-beam isochoric heating. Physics of Plasmas, 2021, 28, .	1.9	1
58	Understanding Electrode Plasma Formation on Wires and Thin Foils Via Vacuum Ultraviolet Spectroscopy of Desorbed Surface Contaminants. , 2021, , .		1
59	Progress on the 4-cavity BLUE LTD System at the University of Michigan. , 2021, , .		1
60	Experimental Investigation of Magnetized Liner Implosions on A 1-MA Linear Transformer Driver*. , 2017, , .		0
61	Design of a Pulsed-Power Magnetized Plasma Flow Experiment for the Study of Star Formation and Astrophysical Bow Shocks. , 2018, , .		0
62	Simulations and Experiments on Magnetically Insulated Line Oscillators at the University of Michigan. , 2020, , .		0
63	Driving a Magnetically Insulated Line Oscillator with a Linear Transformer Driver. , 2021, , .		0
64	Pulsed-Power Magnetized Jets for the Study of Star Formation. , 2020, , .		0
65	Design and Development of Laser Optical Imaging Diagnostics for Investigation of Low-Density Plasmas for Maglif Experiments. , 2022, , .		0
66	Pre-Ionization Considerations for FRC Formation at High Field and High Density. , 2022, , .		0
67	Beryllium Probe Neutron Diagnostic for a Gas-Puff Z-Pinch Neutron Source on a 1MA, 100-NS Linear Transformer Driver. , 2022, , .		0
68	Simulations of Thin-Foil Liner Implosions Driven by a Dynamic Screw Pinch. , 2022, , .		0
69	Dual Recirculating Planar Crossed-Field Amplifier Design. , 2022, , .		0