

Derek Mariscal

List of Publications by Year in descending order

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Version: 2024-02-01

34
papers

700
citations

516710

16
h-index

552781

26
g-index

35
all docs

35
docs citations

35
times ranked

637
citing authors

#	ARTICLE	IF	CITATIONS
1	Design of inertial fusion implosions reaching the burning plasma regime. <i>Nature Physics</i> , 2022, 18, 251-258.	16.7	87
2	Exploring the limits of case-to-capsule ratio, pulse length, and picket energy for symmetric hohlraum drive on the National Ignition Facility Laser. <i>Physics of Plasmas</i> , 2018, 25, .	1.9	79
3	Impact of Localized Radiative Loss on Inertial Confinement Fusion Implosions. <i>Physical Review Letters</i> , 2020, 124, 145001.	7.8	58
4	Achieving record hot spot energies with large HDC implosions on NIF in HYBRID-E. <i>Physics of Plasmas</i> , 2021, 28, .	1.9	55
5	The data-driven future of high-energy-density physics. <i>Nature</i> , 2021, 593, 351-361.	27.8	52
6	First demonstration of ARC-accelerated proton beams at the National Ignition Facility. <i>Physics of Plasmas</i> , 2019, 26, .	1.9	34
7	K α and bremsstrahlung x-ray radiation backlighter sources from short pulse laser driven silver targets as a function of laser pre-pulse energy. <i>Physics of Plasmas</i> , 2014, 21, .	1.9	29
8	Symmetric fielding of the largest diamond capsule implosions on the NIF. <i>Physics of Plasmas</i> , 2020, 27, .	1.9	28
9	Energy transfer between lasers in low-gas-fill-density hohlraums. <i>Physical Review E</i> , 2018, 98, .	2.1	27
10	Computational modeling of proton acceleration with multi-picosecond and high energy, kilojoule, lasers. <i>Physics of Plasmas</i> , 2018, 25, 083109.	1.9	23
11	Modeling laser-driven ion acceleration with deep learning. <i>Physics of Plasmas</i> , 2021, 28, .	1.9	19
12	Application of cross-beam energy transfer to control drive symmetry in ICF implosions in low gas fill <i>hohlraums</i> at the National Ignition Facility. <i>Physics of Plasmas</i> , 2020, 27, .	1.9	18
13	Production of relativistic electrons at subrelativistic laser intensities. <i>Physical Review E</i> , 2020, 101, 031201.	2.1	18
14	Scaling of laser-driven electron and proton acceleration as a function of laser pulse duration, energy, and intensity in the multi-picosecond regime. <i>Physics of Plasmas</i> , 2021, 28, .	1.9	18
15	Measurement of pulsed-power-driven magnetic fields via proton deflectometry. <i>Applied Physics Letters</i> , 2014, 105, .	3.3	17
16	Laser propagation in a subcritical foam: Ion and electron heating. <i>Physics of Plasmas</i> , 2018, 25, .	1.9	17
17	Focussing Protons from a Kilojoule Laser for Intense Beam Heating using Proximal Target Structures. <i>Scientific Reports</i> , 2020, 10, 9415.	3.3	17
18	Accelerating the rate of discovery: toward high-repetition-rate HED science. <i>Plasma Physics and Controlled Fusion</i> , 2021, 63, 104003.	2.1	15

#	ARTICLE	IF	CITATIONS
19	Laser propagation in a subcritical foam: Subgrid model. <i>Physics of Plasmas</i> , 2020, 27, 112710.	1.9	13
20	Development of a deep learning based automated data analysis for step-filter x-ray spectrometers in support of high-repetition rate short-pulse laser-driven acceleration experiments. <i>Review of Scientific Instruments</i> , 2021, 92, 075101.	1.3	10
21	Experimental and calculational investigation of laser-heated additive manufactured foams. <i>Physics of Plasmas</i> , 2021, 28, .	1.9	9
22	Calibration of proton dispersion for the NIF electron positron proton spectrometer (NEPPS) for short-pulse laser experiments on the NIF ARC. <i>Review of Scientific Instruments</i> , 2018, 89, 101145.	1.3	8
23	Measurement of temperature and density using non-collective X-ray Thomson scattering in pulsed power produced warm dense plasmas. <i>Scientific Reports</i> , 2018, 8, 8432.	3.3	8
24	Study of instability formation and EUV emission in thin liners driven with a compact 250 kA, 150 ns linear transformer driver. <i>Physics of Plasmas</i> , 2014, 21, 031208.	1.9	6
25	Laser transport and backscatter in low-density SiO ₂ and Ta ₂ O ₅ foams. <i>Physics of Plasmas</i> , 2021, 28, .	1.9	6
26	Demonstration of TNSA proton radiography on the National Ignition Facility Advanced Radiographic Capability (NIF-ARC) laser. <i>Plasma Physics and Controlled Fusion</i> , 2021, 63, 124006.	2.1	6
27	Simulation studies of the interaction of laser radiation with additively manufactured foams. <i>Plasma Physics and Controlled Fusion</i> , 2021, 63, 055009.	2.1	5
28	Design of flexible proton beam imaging energy spectrometers (PROBIES). <i>Plasma Physics and Controlled Fusion</i> , 2021, 63, 114003.	2.1	5
29	Characterizing the acceleration time of laser-driven ion acceleration with data-informed neural networks. <i>Plasma Physics and Controlled Fusion</i> , 2021, 63, 094005.	2.1	4
30	Experimental Analysis of the Acceleration Region in Tungsten Wire Arrays. <i>IEEE Transactions on Plasma Science</i> , 2012, 40, 3324-3328.	1.3	3
31	Rapid retrieval of first-order spatiotemporal distortions for ultrashort laser pulses. <i>Plasma Physics and Controlled Fusion</i> , 2021, 63, 124005.	2.1	2
32	Experimental verification of TNSA protons and deuterons in the multi-picosecond moderate intensity regime. <i>Physics of Plasmas</i> , 2022, 29, 063106.	1.9	2
33	Demonstration of plasma mirror capability for the OMEGA Extended Performance laser system. <i>Review of Scientific Instruments</i> , 2022, 93, 043006.	1.3	1
34	Study of instability formation in liners driven with a compact linear transformer driver. , 2013, , .		0