David Meyerhofer

List of Publications by Year
in descending order

70	5,121	76326	95266
papers	citations	40 h-index	68 g-index

71	71	71	1993
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Point design targets, specifications, and requirements for the 2010 ignition campaign on the National Ignition Facility. Physics of Plasmas, 2011, 18, .	1.9	534
2	Direct-drive inertial confinement fusion: A review. Physics of Plasmas, 2015, 22, .	1.9	521
3	Reduction of laser imprinting using polarization smoothing on a solid-state fusion laser. Journal of Applied Physics, 1999, 85, 3444-3447.	2.5	207
4	Early stage of implosion in inertial confinement fusion: Shock timing and perturbation evolution. Physics of Plasmas, 2006, 13, 012702.	1.9	155
5	Improved performance of direct-drive inertial confinement fusion target designs with adiabat shaping using an intensity picket. Physics of Plasmas, 2003, 10, 1906-1918.	1.9	146
6	Streaked optical pyrometer system for laser-driven shock-wave experiments on OMEGA. Review of Scientific Instruments, 2007, 78, 034903.	1.3	143
7	Spatial Coherence Measurement of Soft X-Ray Radiation Produced by High Order Harmonic Generation. Physical Review Letters, 1996, 77, 4756-4759.	7.8	140
8	Polar direct drive on the National Ignition Facility. Physics of Plasmas, 2004, 11, 2763-2770.	1.9	139
9	Improving the hot-spot pressure and demonstrating ignition hydrodynamic equivalence in cryogenic deuteriumâ€“tritium implosions on OMEGA. Physics of Plasmas, 2014, 21, .	1.9	139
10	Laser-driven single shock compression of fluid deuterium from 45 to 220 GPa. Physical Review B, 2009, 79, .	3.2	138
11	Crossed-beam energy transfer in direct-drive implosions. Physics of Plasmas, 2012, 19, .	1.9	133
12	Two-dimensional simulations of plastic-shell, direct-drive implosions on OMEGA. Physics of Plasmas, 2005, 12, 032702.	1.9	126
13	High-precision measurements of the equation of state of hydrocarbons at 1â€“10 Mbar using laser-driven shock waves. Physics of Plasmas, 2010, 17, .	1.9	119
14	Deceleration phase of inertial confinement fusion implosions. Physics of Plasmas, 2002, 9, 2277-2286.	1.9	118
15	Shock timing experiments on the National Ignition Facility: Initial results and comparison with simulation. Physics of Plasmas, 2012, 19, .	1.9	115
16	Inertial confinement fusion implosions with imposed magnetic field compression using the OMEGA Laser. Physics of Plasmas, 2012, 19, .	1.9	112
17	Demonstration of the Highest Deuterium-Tritium Areal Density Using Multiple-Picket Cryogenic Designs on OMEGA. Physical Review Letters, 2010, 104, 165001.	7.8	111
18	Hot-spot mix in ignition-scale implosions on the NIF. Physics of Plasmas, 2012, 19, .	1.9	107

#	Article	IF	Citations
19	Performance of direct-drive cryogenic targets on OMEGA. Physics of Plasmas, 2008, 15, .	1.9	92
20	Probing high areal-density cryogenic deuterium-tritium implosions using downscattered neutron spectra measured by the magnetic recoil spectrometer. Physics of Plasmas, 2010, 17, .	1.9	91
21	Shock compression of quartz in the high-pressure fluid regime. Physics of Plasmas, 2005, 12, 082702.	1.9	89
22	Demonstration of the shock-timing technique for ignition targets on the National Ignition Facility. Physics of Plasmas, 2009, 16, .	1.9	82
23	A model of laser imprinting. Physics of Plasmas, 2000, 7, 2062-2068.	1.9	81
24	Demonstration of Fuel Hot-Spot Pressure in Excess of 50ÂGbar for Direct-Drive, Layered Deuterium-Tritium Implosions on OMEGA. Physical Review Letters, 2016, 117, 025001.	7.8	72
25	Mitigating Laser Imprint in Direct-Drive Inertial Confinement Fusion Implosions with High-<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mi>Z</mml:mi></mml:math>Dopants. Physical Review Letters, 2012, 108, 195003.	7.8	70
26	A polar-driveâ€“ignition design for the National Ignition Facility. Physics of Plasmas, 2012, 19, .	1.9	70
27	Theory of hydro-equivalent ignition for inertial fusion and its applications to OMEGA and the National Ignition Facility. Physics of Plasmas, 2014, 21, .	1.9	68
28	Time-Resolved Measurements of Hot-Electron Equilibration Dynamics in High-Intensity Laser Interactions with Thin-Foil Solid Targets. Physical Review Letters, 2012, 108, 085002.	7.8	59
29	Properties of fluid deuterium under double-shock compression to several Mbar. Physics of Plasmas, 2004, 11, L49-L52.	1.9	58
30	Polar-direct-drive simulations and experiments. Physics of Plasmas, 2006, 13, 056311.	1.9	58
31	Bulk heating of solid-density plasmas during high-intensity-laser plasma interactions. Physical Review E, 2009, 79, 016406.	2.1	54
32	Velocity and Timing of Multiple Spherically Converging Shock Waves in Liquid Deuterium. Physical Review Letters, 2011, 106, 195005.	7.8	54
33		1.9	52
34	First results from cryogenic target implosions on OMEGA. Physics of Plasmas, 2002, 9, 2195-2201.	1.9	49
35	Scaling Hot-Electron Generation to High-Power, Kilojoule-Class Laser-Solid Interactions. Physical Review Letters, 2010, 105, 235001.	7.8	49
36	Improving cryogenic deuteriumâ€“tritium implosion performance on OMEGA. Physics of Plasmas, 2013, 20, .	1.9	48

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37	Two-dimensional simulations of the neutron yield in cryogenic deuterium-tritium implosions on OMEGA. Physics of Plasmas, 2010, 17, 102706.	1.9	43
38	Effects of local defect growth in direct-drive cryogenic implosions on OMEGA. Physics of Plasmas, 2013, 20, .	1.9	42
39	Experimental reduction of laser imprinting and Rayleighâ€“Taylor growth in spherically compressed, medium-Z-doped plastic targets. Physics of Plasmas, 2012, 19, 062704.	1.9	41
40	Precision equation-of-state measurements on National Ignition Facility ablator materials from 1 to 12 Mbar using laser-driven shock waves. Journal of Applied Physics, 2012, 111, .	2.5	40
41	Measurements of core and pusher conditions in surrogate capsule implosions on the OMEGA laser system. Physics of Plasmas, 1998, 5, 1870-1879.	1.9	36
42	Direct drive: Simulations and results from the National Ignition Facility. Physics of Plasmas, 2016, 23, 056305.	1.9	36
43	Multiple spherically converging shock waves in liquid deuterium. Physics of Plasmas, 2011, 18, 092706.	1.9	34
44	Shock-tuned cryogenic-deuterium-tritium implosion performance on Omega. Physics of Plasmas, 2010, 17, 056312.	1.9	33
45	Triple-picket warm plastic-shell implosions on OMEGA. Physics of Plasmas, 2011, 18, 012705.	1.9	32
46	Hugoniot and release measurements in diamond shocked up to 26 Mbar. Physical Review B, 2017, 95, .	3.2	32
47	Optical and plasma smoothing of laser imprinting in targets driven by lasers with SSD bandwidths up to 1 THz. Physics of Plasmas, 2001, 8, 2331-2337.	1.9	31
48	Laser-Beam Zooming to Mitigate Crossed-Beam Energy Losses in Direct-Drive Implosions. Physical Review Letters, 2013, 110, 145001.	7.8	31
49	Polar-drive implosions on OMEGA and the National Ignition Facility. Physics of Plasmas, 2013, 20, .	1.9	28
50	Direct-drive, cryogenic target implosions on OMEGA. Physics of Plasmas, 2005, 12, 056302.	1.9	27
51	Shock-wave equation-of-state measurements in fused silica up to 1600â€‰GPa. Journal of Applied Physics, 2016, 119, .	2.5	26
52	OMEGA polar-drive target designs. Physics of Plasmas, 2012, 19, .	1.9	25
53	Nonlinear evolution of broad-bandwidth, laser-imprinted nonuniformities in planar targets accelerated by 351-nm laser light. Physics of Plasmas, 1999, 6, 4022-4036.	1.9	22
54	Monochromatic backlighting of direct-drive cryogenic DT implosions on OMEGA. Physics of Plasmas, 2017, 24, .	1.9	21

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55	Target-heating effects on the KÎ±1,2-emission spectrum from solid targets heated by laser-generated hot electrons. Physics of Plasmas, 2011, 18, 042702.	1.9	17
56	Hugoniot, sound velocity, and shock temperature of MgO to 2300ÂGPa. Physical Review B, 2019, 100, .	3.2	17
57	Scaling hot-electron generation to long-pulse, high-intensity laserâ€“solid interactions. Physics of Plasmas, 2011, 18, 056703.	1.9	15
58	Measurements of the sound velocity of shock-compressed liquid silica to 1100â€‰GPa. Journal of Applied Physics, 2016, 120, .	2.5	14
59	Measurements of the Conduction-Zone Length and Mass Ablation Rate in Cryogenic Direct-Drive Implosions on OMEGA. Physical Review Letters, 2015, 114, 155002.	7.8	12
60	The National Direct-Drive Program: OMEGA to the National Ignition Facility. Fusion Science and Technology, 2018, 73, 89-97.	1.1	12
61	Time-resolved K_{Î±}spectroscopy measurements of hot-electron equilibration dynamics in thin-foil solid targets: collisional and collective effects. Journal of Physics B: Atomic, Molecular and Optical Physics, 2015, 48, 224001.	1.5	9
62	Optical smoothing of laser imprinting in planar-target experiments on OMEGA EP using multi-FM 1-D smoothing by spectral dispersion. Physics of Plasmas, 2016, 23, .	1.9	9
63	Measurement of the sound velocity and GrÃ¼neisen parameter of polystyrene at inertial confinement fusion conditions. Physical Review B, 2020, 102, .	3.2	9
64	Laser beam smoothing caused by the small-spatial-scale B integral. Journal of the Optical Society of America B: Optical Physics, 2002, 19, 7.	2.1	8
65	A high-resolving-power x-ray spectrometer for the OMEGA EP Laser (invited). Review of Scientific Instruments, 2016, 87, 11D504.	1.3	7
66	The effect of condensates and inner coatings on the performance of vacuum hohlraum targets. Physics of Plasmas, 2010, 17, 032701.	1.9	6
67	Observations of modulated shock waves in solid targets driven by spatially modulated laser beams. Journal of Applied Physics, 2002, 92, 1212-1215.	2.5	5
68	Polar-direct-drive experiments at the National Ignition Facility. Journal of Physics: Conference Series, 2016, 717, 012009.	0.4	1
69	Scaling Hot-Electron Generation to High-Power, Kilojoule-Class Laser-Solid Interactions. , 0, .		1
70	High field assisted X-ray source. , 2016, , .		0