

David Meyerhofer

List of Publications by Year in descending order

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70
papers

5,121
citations

76294

40
h-index

95218

68
g-index

71
all docs

71
docs citations

71
times ranked

1993
citing authors

#	ARTICLE	IF	CITATIONS
1	Point design targets, specifications, and requirements for the 2010 ignition campaign on the National Ignition Facility. <i>Physics of Plasmas</i> , 2011, 18, .	0.7	534
2	Direct-drive inertial confinement fusion: A review. <i>Physics of Plasmas</i> , 2015, 22, .	0.7	521
3	Reduction of laser imprinting using polarization smoothing on a solid-state fusion laser. <i>Journal of Applied Physics</i> , 1999, 85, 3444-3447.	1.1	207
4	Early stage of implosion in inertial confinement fusion: Shock timing and perturbation evolution. <i>Physics of Plasmas</i> , 2006, 13, 012702.	0.7	155
5	Improved performance of direct-drive inertial confinement fusion target designs with adiabat shaping using an intensity picket. <i>Physics of Plasmas</i> , 2003, 10, 1906-1918.	0.7	146
6	Streaked optical pyrometer system for laser-driven shock-wave experiments on OMEGA. <i>Review of Scientific Instruments</i> , 2007, 78, 034903.	0.6	143
7	Spatial Coherence Measurement of Soft X-Ray Radiation Produced by High Order Harmonic Generation. <i>Physical Review Letters</i> , 1996, 77, 4756-4759.	2.9	140
8	Polar direct drive on the National Ignition Facility. <i>Physics of Plasmas</i> , 2004, 11, 2763-2770.	0.7	139
9	Improving the hot-spot pressure and demonstrating ignition hydrodynamic equivalence in cryogenic deuterium-tritium implosions on OMEGA. <i>Physics of Plasmas</i> , 2014, 21, .	0.7	139
10	Laser-driven single shock compression of fluid deuterium from 45 to 220 GPa. <i>Physical Review B</i> , 2009, 79, .	1.1	138
11	Crossed-beam energy transfer in direct-drive implosions. <i>Physics of Plasmas</i> , 2012, 19, .	0.7	133
12	Two-dimensional simulations of plastic-shell, direct-drive implosions on OMEGA. <i>Physics of Plasmas</i> , 2005, 12, 032702.	0.7	126
13	High-precision measurements of the equation of state of hydrocarbons at ~ 10 Mbar using laser-driven shock waves. <i>Physics of Plasmas</i> , 2010, 17, .	0.7	119
14	Deceleration phase of inertial confinement fusion implosions. <i>Physics of Plasmas</i> , 2002, 9, 2277-2286.	0.7	118
15	Shock timing experiments on the National Ignition Facility: Initial results and comparison with simulation. <i>Physics of Plasmas</i> , 2012, 19, .	0.7	115
16	Inertial confinement fusion implosions with imposed magnetic field compression using the OMEGA Laser. <i>Physics of Plasmas</i> , 2012, 19, .	0.7	112
17	Demonstration of the Highest Deuterium-Tritium Areal Density Using Multiple-Picket Cryogenic Designs on OMEGA. <i>Physical Review Letters</i> , 2010, 104, 165001.	2.9	111
18	Hot-spot mix in ignition-scale implosions on the NIF. <i>Physics of Plasmas</i> , 2012, 19, .	0.7	107

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19	Performance of direct-drive cryogenic targets on OMEGA. <i>Physics of Plasmas</i> , 2008, 15, .	0.7	92
20	Probing high areal-density cryogenic deuterium-tritium implosions using downscattered neutron spectra measured by the magnetic recoil spectrometer. <i>Physics of Plasmas</i> , 2010, 17, .	0.7	91
21	Shock compression of quartz in the high-pressure fluid regime. <i>Physics of Plasmas</i> , 2005, 12, 082702.	0.7	89
22	Demonstration of the shock-timing technique for ignition targets on the National Ignition Facility. <i>Physics of Plasmas</i> , 2009, 16, .	0.7	82
23	A model of laser imprinting. <i>Physics of Plasmas</i> , 2000, 7, 2062-2068.	0.7	81
24	Demonstration of Fuel Hot-Spot Pressure in Excess of 50ÅGbar for Direct-Drive, Layered Deuterium-Tritium Implosions on OMEGA. <i>Physical Review Letters</i> , 2016, 117, 025001.	2.9	72
25	Mitigating Laser Imprint in Direct-Drive Inertial Confinement Fusion Implosions with High- Z Dopants. <i>Physical Review Letters</i> , 2012, 108, 195003.	2.9	70
26	A polar-drive ignition design for the National Ignition Facility. <i>Physics of Plasmas</i> , 2012, 19, .	0.7	70
27	Theory of hydro-equivalent ignition for inertial fusion and its applications to OMEGA and the National Ignition Facility. <i>Physics of Plasmas</i> , 2014, 21, .	0.7	68
28	Time-Resolved Measurements of Hot-Electron Equilibration Dynamics in High-Intensity Laser Interactions with Thin-Foil Solid Targets. <i>Physical Review Letters</i> , 2012, 108, 085002.	2.9	59
29	Properties of fluid deuterium under double-shock compression to several Mbar. <i>Physics of Plasmas</i> , 2004, 11, L49-L52.	0.7	58
30	Polar-direct-drive simulations and experiments. <i>Physics of Plasmas</i> , 2006, 13, 056311.	0.7	58
31	Bulk heating of solid-density plasmas during high-intensity-laser plasma interactions. <i>Physical Review E</i> , 2009, 79, 016406.	0.8	54
32	Velocity and Timing of Multiple Spherically Converging Shock Waves in Liquid Deuterium. <i>Physical Review Letters</i> , 2011, 106, 195005.	2.9	54
33		0.7	52
34	First results from cryogenic target implosions on OMEGA. <i>Physics of Plasmas</i> , 2002, 9, 2195-2201.	0.7	49
35	Scaling Hot-Electron Generation to High-Power, Kilojoule-Class Laser-Solid Interactions. <i>Physical Review Letters</i> , 2010, 105, 235001.	2.9	49
36	Improving cryogenic deuterium-tritium implosion performance on OMEGA. <i>Physics of Plasmas</i> , 2013, 20, .	0.7	48

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37	Two-dimensional simulations of the neutron yield in cryogenic deuterium-tritium implosions on OMEGA. <i>Physics of Plasmas</i> , 2010, 17, 102706.	0.7	43
38	Effects of local defect growth in direct-drive cryogenic implosions on OMEGA. <i>Physics of Plasmas</i> , 2013, 20, .	0.7	42
39	Experimental reduction of laser imprinting and Rayleighâ€“Taylor growth in spherically compressed, medium-Z-doped plastic targets. <i>Physics of Plasmas</i> , 2012, 19, 062704.	0.7	41
40	Precision equation-of-state measurements on National Ignition Facility ablator materials from 1 to 12 Mbar using laser-driven shock waves. <i>Journal of Applied Physics</i> , 2012, 111, .	1.1	40
41	Measurements of core and pusher conditions in surrogate capsule implosions on the OMEGA laser system. <i>Physics of Plasmas</i> , 1998, 5, 1870-1879.	0.7	36
42	Direct drive: Simulations and results from the National Ignition Facility. <i>Physics of Plasmas</i> , 2016, 23, 056305.	0.7	36
43	Multiple spherically converging shock waves in liquid deuterium. <i>Physics of Plasmas</i> , 2011, 18, 092706.	0.7	34
44	Shock-tuned cryogenic-deuterium-tritium implosion performance on Omega. <i>Physics of Plasmas</i> , 2010, 17, 056312.	0.7	33
45	Triple-picket warm plastic-shell implosions on OMEGA. <i>Physics of Plasmas</i> , 2011, 18, 012705.	0.7	32
46	Hugoniot and release measurements in diamond shocked up to 26 Mbar. <i>Physical Review B</i> , 2017, 95, .	1.1	32
47	Optical and plasma smoothing of laser imprinting in targets driven by lasers with SSD bandwidths up to 1 THz. <i>Physics of Plasmas</i> , 2001, 8, 2331-2337.	0.7	31
48	Laser-Beam Zooming to Mitigate Crossed-Beam Energy Losses in Direct-Drive Implosions. <i>Physical Review Letters</i> , 2013, 110, 145001.	2.9	31
49	Polar-drive implosions on OMEGA and the National Ignition Facility. <i>Physics of Plasmas</i> , 2013, 20, .	0.7	28
50	Direct-drive, cryogenic target implosions on OMEGA. <i>Physics of Plasmas</i> , 2005, 12, 056302.	0.7	27
51	Shock-wave equation-of-state measurements in fused silica up to 1600â€“GPa. <i>Journal of Applied Physics</i> , 2016, 119, .	1.1	26
52	OMEGA polar-drive target designs. <i>Physics of Plasmas</i> , 2012, 19, .	0.7	25
53	Nonlinear evolution of broad-bandwidth, laser-imprinted nonuniformities in planar targets accelerated by 351-nm laser light. <i>Physics of Plasmas</i> , 1999, 6, 4022-4036.	0.7	22
54	Monochromatic backlighting of direct-drive cryogenic DT implosions on OMEGA. <i>Physics of Plasmas</i> , 2017, 24, .	0.7	21

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55	Target-heating effects on the K α 1,2-emission spectrum from solid targets heated by laser-generated hot electrons. <i>Physics of Plasmas</i> , 2011, 18, 042702.	0.7	17
56	Hugoniot, sound velocity, and shock temperature of MgO to 2300 GPa. <i>Physical Review B</i> , 2019, 100, .	1.1	17
57	Scaling hot-electron generation to long-pulse, high-intensity laser-solid interactions. <i>Physics of Plasmas</i> , 2011, 18, 056703.	0.7	15
58	Measurements of the sound velocity of shock-compressed liquid silica to 1100 GPa. <i>Journal of Applied Physics</i> , 2016, 120, .	1.1	14
59	Measurements of the Conduction-Zone Length and Mass Ablation Rate in Cryogenic Direct-Drive Implosions on OMEGA. <i>Physical Review Letters</i> , 2015, 114, 155002.	2.9	12
60	The National Direct-Drive Program: OMEGA to the National Ignition Facility. <i>Fusion Science and Technology</i> , 2018, 73, 89-97.	0.6	12
61	Time-resolved K α spectroscopy measurements of hot-electron equilibration dynamics in thin-foil solid targets: collisional and collective effects. <i>Journal of Physics B: Atomic, Molecular and Optical Physics</i> , 2015, 48, 224001.	0.6	9
62	Optical smoothing of laser imprinting in planar-target experiments on OMEGA EP using multi-FM 1-D smoothing by spectral dispersion. <i>Physics of Plasmas</i> , 2016, 23, .	0.7	9
63	Measurement of the sound velocity and Grüneisen parameter of polystyrene at inertial confinement fusion conditions. <i>Physical Review B</i> , 2020, 102, .	1.1	9
64	Laser beam smoothing caused by the small-spatial-scale B integral. <i>Journal of the Optical Society of America B: Optical Physics</i> , 2002, 19, 7.	0.9	8
65	A high-resolving-power x-ray spectrometer for the OMEGA EP Laser (invited). <i>Review of Scientific Instruments</i> , 2016, 87, 11D504.	0.6	7
66	The effect of condensates and inner coatings on the performance of vacuum hohlraum targets. <i>Physics of Plasmas</i> , 2010, 17, 032701.	0.7	6
67	Observations of modulated shock waves in solid targets driven by spatially modulated laser beams. <i>Journal of Applied Physics</i> , 2002, 92, 1212-1215.	1.1	5
68	Polar-direct-drive experiments at the National Ignition Facility. <i>Journal of Physics: Conference Series</i> , 2016, 717, 012009.	0.3	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