David Michel

List of Publications by Year
in descending order

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64 papers	2,391 citations	236925 25 h-index	206112 48 g-index
64 all docs	64 docs citations	64 times ranked	1220 citing authors

#	Article	IF	Citations
1	Direct-drive inertial confinement fusion: A review. Physics of Plasmas, 2015, 22, .	1.9	521
2	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
3	Crossed-beam energy transfer in direct-drive implosions. Physics of Plasmas, 2012, 19, .	1.9	133
4	Tripled yield in direct-drive laser fusion through statistical modelling. Nature, 2019, 565, 581-586.	27.8	103
5	Gigabar Spherical Shock Generation on the OMEGA Laser. Physical Review Letters, 2015, 114, 045001.	7.8	100
6	Multiple-beam laserâ€“plasma interactions in inertial confinement fusion. Physics of Plasmas, 2014, 21, .	1.9	79
7	Laser Smoothing and Imprint Reduction with a Foam Layer in the Multikilojoule Regime. Physical Review Letters, 2009, 102, 195005.	7.8	73
8	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
9	Increasing Hydrodynamic Efficiency by Reducing Cross-Beam Energy Transfer in Direct-Drive-Implosion Experiments. Physical Review Letters, 2012, 108, 125003.	7.8	67
10	Saturation of the Two-Plasmon Decay Instability in Long-Scale-Length Plasmas Relevant to Direct-Drive Inertial Confinement Fusion. Physical Review Letters, 2012, 108, 165003.	7.8	58
11	Experimental Validation of the Two-Plasmon-Decay Common-Wave Process. Physical Review Letters, 2012, 109, 155007.	7.8	57
12		1.9	52
13	National direct-drive program on OMEGA and the National Ignition Facility. Plasma Physics and Controlled Fusion, 2017, 59, 014008.	2.1	50
14	Spherical strong-shock generation for shock-ignition inertial fusion. Physics of Plasmas, 2015, 22, .	1.9	49
15	Improving cryogenic deuteriumâ€“tritium implosion performance on OMEGA. Physics of Plasmas, 2013, 20, .	1.9	48
16	Measured hot-electron intensity thresholds quantified by a two-plasmon-decay resonant common-wave gain in various experimental configurations. Physics of Plasmas, 2013, 20, .	1.9	47
17	Understanding the effects of laser imprint on plastic-target implosions on OMEGA. Physics of Plasmas, 2016, 23, .	1.9	38
18	Shell trajectory measurements from direct-drive implosion experiments. Review of Scientific Instruments, 2012, 83, 10E530.	1.3	36

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19	Direct drive: Simulations and results from the National Ignition Facility. Physics of Plasmas, 2016, 23, 056305.	1.9	36
20	Hydrodynamic simulations of long-scale-length two-plasmonâ€“decay experiments at the Omega Laser Facility. Physics of Plasmas, 2013, 20, .	1.9	35
21	Demonstration of the Improved Rocket Efficiency in Direct-Drive Implosions Using Different Ablator Materials. Physical Review Letters, 2013, 111, 245005.	7.8	33
22	Laserâ€“plasma interactions in direct-drive ignition plasmas. Plasma Physics and Controlled Fusion, 2012, 54, 124016.	2.1	31
23	Laser-Beam Zooming to Mitigate Crossed-Beam Energy Losses in Direct-Drive Implosions. Physical Review Letters, 2013, 110, 145001.	7.8	31
24	Two-Plasmon Decay Mitigation in Direct-Drive Inertial-Confinement-Fusion Experiments Using Multilayer Targets. Physical Review Letters, 2016, 116, 155002.	7.8	27
25	Three-dimensional hydrodynamic simulations of OMEGA implosions. Physics of Plasmas, 2017, 24, .	1.9	26
26	From ICF to laboratory astrophysics: ablative and classical Rayleighâ€“Taylor instability experiments in turbulent-like regimes. Nuclear Fusion, 2019, 59, 032002.	3.5	25
27	Simulations and measurements of hot-electron generation driven by the multibeam two-plasmon-decay instability. Physics of Plasmas, 2017, 24, .	1.9	24
28	Exploring the Saturation Levels of Stimulated Raman Scattering in the Absolute Regime. Physical Review Letters, 2010, 104, 255001.	7.8	22
29	Systematic Fuel Cavity Asymmetries in Directly Driven Inertial Confinement Fusion Implosions. Physical Review Letters, 2017, 118, 135001.	7.8	22
30	Experimental demonstration of laser imprint reduction using underdense foams. Physics of Plasmas, 2016, 23, 042701.	1.9	21
31	Monochromatic backlighting of direct-drive cryogenic DT implosions on OMEGA. Physics of Plasmas, 2017, 24, .	1.9	21
32	Effect of the Laser Wavelength on the Saturated Level of Stimulated Brillouin Scattering. Physical Review Letters, 2009, 103, 115001.	7.8	20
33	Direct observation of the two-plasmon-decay common plasma wave using ultraviolet Thomson scattering. Physical Review E, 2015, 91, 031104.	2.1	20
34	Isolating and quantifying cross-beam energy transfer in direct-drive implosions on OMEGA and the National Ignition Facility. Physics of Plasmas, 2016, 23, .	1.9	19
35	Enhanced hot-electron production and strong-shock generation in hydrogen-rich ablators for shock ignition. Physics of Plasmas, 2017, 24, .	1.9	19
36	Experimental investigation of the stimulated Brillouin scattering growth and saturation at 526 and 351â€‰nm for direct drive and shock ignition. Physics of Plasmas, 2012, 19, 012705.	1.9	18

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37	Progress in indirect and direct-drive planar experiments on hydrodynamic instabilities at the ablation front. Physics of Plasmas, 2014, 21, 122702.	1.9	18
38	Interaction physics for the shock ignition scheme of inertial confinement fusion targets. Plasma Physics and Controlled Fusion, 2011, 53, 124034.	2.1	16
39	Measurement of the shell decompression in direct-drive inertial-confinement-fusion implosions. Physical Review E, 2017, 95, 051202.	2.1	16
40	Impact of asymmetries on fuel performance in inertial confinement fusion. Physical Review E, 2018, 98, .	2.1	16
41	Impact of imposed mode 2 laser drive asymmetry on inertial confinement fusion implosions. Physics of Plasmas, 2019, 26, .	1.9	15
42	Impact of stalk on directly driven inertial confinement fusion implosions. Physics of Plasmas, 2020, 27, 032704.	1.9	15
43	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
44	The National Direct-Drive Program: OMEGA to the National Ignition Facility. Fusion Science and Technology, 2018, 73, 89-97.	1.1	12
45	Subpercent-Scale Control of 3D Low Modes of Targets Imploded in Direct-Drive Configuration on OMEGA. Physical Review Letters, 2018, 120, 125001.	7.8	11
46	Implosion dynamics in direct-drive experiments. Plasma Physics and Controlled Fusion, 2015, 57, 014023.	2.1	9
47	Onboard wake vortex localization with a coherent 15 Âµm Doppler LIDAR for aircraft in formation flight configuration. Optics Express, 2020, 28, 14374.	3.4	9
48	Overview of on-going LIL experiments. Plasma Physics and Controlled Fusion, 2008, 50, 124017.	2.1	8
49	Demonstrating ignition hydrodynamic equivalence in direct-drive cryogenic implosions on OMEGA. Journal of Physics: Conference Series, 2016, 717, 012008.	0.4	8
50	3D xRAGE simulation of inertial confinement fusion implosion with imposed mode 2 laser drive asymmetry. High Energy Density Physics, 2020, 36, 100825.	1.5	8
51	X-ray self-emission imaging used to diagnose 3-D nonuniformities in direct-drive ICF implosions. Review of Scientific Instruments, 2016, 87, 11E340.	1.3	7
52	Development of a directly driven multi-shell platform: Laser drive energetics. Physics of Plasmas, 2020, 27, 022706.	1.9	7
53	Time history prediction of direct-drive implosions on the Omega facility. Physics of Plasmas, 2016, 23, .	1.9	6
54	Effect of cross-beam energy transfer on target-offset asymmetry in direct-drive inertial confinement fusion implosions. Physics of Plasmas, 2020, 27, 112713.	1.9	6

#	Article	IF	Citations
55	Laser-plasma interaction physics in multi kilojoule experiments. Journal of Physics: Conference Series, 2010, 244, 022021.	0.4	4
56	Direct-drive implosion physics: Results from OMEGA and the National Ignition Facility. Journal of Physics: Conference Series, 2016, 688, 012006.	0.4	4
57	Optimization of some laser and target features for laser-plasma interaction in the context of fusion. Journal of Physics: Conference Series, 2008, 112, 022041.	0.4	3
58	Saturation of Raman instability in gas jet plasma in LULI 2000 laser experiments. Journal of Physics: Conference Series, 2010, 244, 022022.	0.4	2
59	Update on recent results of LIL experiments. Journal of Physics: Conference Series, 2010, 244, 032042.	0.4	2
60	Mass-ablation-rate measurements in direct-drive cryogenic implosions using x-ray self-emission images. Review of Scientific Instruments, 2014, 85, 11D616.	1.3	2
61	Properties of hot-spot emission in a warm plastic-shell implosion on the OMEGA laser system. Physical Review E, 2018, 98, .	2.1	2
62	Polar-direct-drive experiments at the National Ignition Facility. Journal of Physics: Conference Series, 2016, 717, 012009.	0.4	1
63	Progress in direct-drive inertial confinement fusion. EPJ Web of Conferences, 2013, 59, 01004.	0.3	0
64	Direct-drive implosion physics: Results from OMEGA and the National Ignition Facility. , 2016, , 457-462.		0