D H Froula

List of Publications by Year
in descending order

249	7,119	57758	95266
papers	citations	44 h-index	68 g-index

253	253	253	2680
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Self-Guided Laser Wakefield Acceleration beyond 1ÂGeV Using Ionization-Induced Injection. Physical Review Letters, 2010, 105, 105003.	7.8	338
2	Observation of magnetic field generation via the Weibel instability in interpenetrating plasma flows. Nature Physics, 2015, 11, 173-176.	16.7	236
3	Demonstration of a Narrow Energy Spread,<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mo>â^¼</mml:mo><mml:mn>0.5</mml:mn><mml:mtext>â€‰</mml:mtext><mml:mtext>â€‰</mml:mtext Beam from a Two-Stage Laser Wakefield Accelerator. Physical Review Letters, 2011, 107, 045001.	7.8	213
4	Spatiotemporal control of laser intensity. Nature Photonics, 2018, 12, 262-265.	31.4	149
5	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
6	Crossed-beam energy transfer in direct-drive implosions. Physics of Plasmas, 2012, 19, .	1.9	133
7	Measurements of the Critical Power for Self-Injection of Electrons in a Laser Wakefield Accelerator. Physical Review Letters, 2009, 103, 215006.	7.8	128
8	Self-organized electromagnetic field structures in laser-produced counter-streaming plasmas. Nature Physics, 2012, 8, 809-812.	16.7	118
9	Laboratory evidence of dynamo amplification of magnetic fields in a turbulent plasma. Nature Communications, 2018, 9, 591.	12.8	105
10	Tripled yield in direct-drive laser fusion through statistical modelling. Nature, 2019, 565, 581-586.	27.8	103
11	Characterizing counter-streaming interpenetrating plasmas relevant to astrophysical collisionless shocks. Physics of Plasmas, 2012, 19, .	1.9	101
12	Effects of ion trapping on crossed-laser-beam stimulated Brillouin scattering. Physics of Plasmas, 2004, 11, 231-244.	1.9	87
13	Quenching of the Nonlocal Electron Heat Transport by Large External Magnetic Fields in a Laser-Produced Plasma Measured with Imaging Thomson Scattering. Physical Review Letters, 2007, 98, 135001.	7.8	84
14	Dephasingless Laser Wakefield Acceleration. Physical Review Letters, 2020, 124, 134802.	7.8	82
15	Multiple-beam laserâ€“plasma interactions in inertial confinement fusion. Physics of Plasmas, 2014, 21, .	1.9	79
16	Measurements of Nonlinear Growth of Ion-Acoustic Waves in Two-Ion-Species Plasmas with Thomson Scattering. Physical Review Letters, 2002, 88, 105003.	7.8	78
17	Experiments and multiscale simulations ofÂlaser propagation through ignition-scaleÂplasmas. Nature Physics, 2007, 3, 716-719.	16.7	72
18	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

#	Article	IF	Citations
19	X-ray scattering from solid density plasmas. Physics of Plasmas, 2003, 10, 2433-2441.	1.9	69
20	Three-dimensional modeling of direct-drive cryogenic implosions on OMEGA. Physics of Plasmas, 2016, 23, .	1.9	69
21	Effect of Nonlocal Transport on Heat-Wave Propagation. Physical Review Letters, 2004, 92, 205006.	7.8	68
22	Increasing Hydrodynamic Efficiency by Reducing Cross-Beam Energy Transfer in Direct-Drive-Implosion Experiments. Physical Review Letters, 2012, 108, 125003.	7.8	67
23	Ideal Laser-Beam Propagation through High-Temperature Ignition Hohlraum Plasmas. Physical Review Letters, 2007, 98, 085001.	7.8	59
24	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
25	Experimental Validation of the Two-Plasmon-Decay Common-Wave Process. Physical Review Letters, 2012, 109, 155007.	7.8	57
26	Benchmark Measurements of the Ionization Balance of Non-Local-Thermodynamic-Equilibrium Gold Plasmas. Physical Review Letters, 2007, 99, 195001.	7.8	56
27	Precision Mapping of Laser-Driven Magnetic Fields and Their Evolution in High-Energy-Density Plasmas. Physical Review Letters, 2015, 114, 215003.	7.8	54
28	Thomson-scattering measurements of high electron temperature hohlraum plasmas for laser-plasma interaction studies. Physics of Plasmas, 2006, 13, 052704.	1.9	53
29		1.9	52
30	Raman Amplification with a Flying Focus. Physical Review Letters, 2018, 120, 024801.	7.8	52
31	Ray-based calculations of backscatter in laser fusion targets. Physics of Plasmas, 2008, 15, .	1.9	51
32	Collisionless shock experiments with lasers and observation of Weibel instabilities. Physics of Plasmas, 2015, 22, .	1.9	51
33	Thresholds of absolute instabilities driven by a broadband laser. Physics of Plasmas, 2019, 26, .	1.9	51
34	National direct-drive program on OMEGA and the National Ignition Facility. Plasma Physics and Controlled Fusion, 2017, 59, 014008.	2.1	50
35	Experimental basis for laser-plasma interactions in ignition hohlraums at the National Ignition Facility. Physics of Plasmas, 2010, 17, .	1.9	49
36	Transition from Collisional to Collisionless Regimes in Interpenetrating Plasma Flows on the National Ignition Facility. Physical Review Letters, 2017, 118, 185003.	7.8	49

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37	Improving cryogenic deuteriumâ€“tritium implosion performance on OMEGA. Physics of Plasmas, 2013, 20, .	1.9	48
38	Thomson-scattering techniques to diagnose local electron and ion temperatures, density, and plasma wave amplitudes in laser produced plasmas (invited). Review of Scientific Instruments, 2006, 77, 10E522.	1.3	47
39	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
40	Fast-electron generation in long-scale-length plasmas. Physics of Plasmas, 2012, 19, .	1.9	46
41	Scaled laboratory experiments explain the kink behaviour of the Crab Nebula jet. Nature Communications, 2016, 7, 13081.	12.8	46
42	Observation of the Parametric Two-Ion Decay Instability with Thomson Scattering. Physical Review Letters, 2004, 93, 045004.	7.8	45
43	Radiation-Driven Hydrodynamics of High-ZHohlraums on the National Ignition Facility. Physical Review Letters, 2005, 95, 215004.	7.8	45
44	Use of external magnetic fields in hohlraum plasmas to improve laser-coupling. Physics of Plasmas, 2015, 22, .	1.9	45
45	Suppression of Stimulated Brillouin Scattering by Increased Landau Damping in Multiple-Ion-Species Hohlraum Plasmas. Physical Review Letters, 2008, 100, 105001.	7.8	43
46	Lorentz Mapping of Magnetic Fields in Hot Dense Plasmas. Physical Review Letters, 2009, 103, 085001.	7.8	43
47	Magnetic Field Generation by the Rayleigh-Taylor Instability in Laser-Driven Planar Plastic Targets. Physical Review Letters, 2012, 109, 115001.	7.8	42
48	Photon Acceleration in a Flying Focus. Physical Review Letters, 2019, 123, 124801.	7.8	42
49	Modeling the nonlinear saturation of stimulated Brillouin backscatter in laser heated plasmas. Physics of Plasmas, 2003, 10, 1822-1828.	1.9	41
50	Observation of Relativistic Effects in Collective Thomson Scattering. Physical Review Letters, 2010, 104, 105001.	7.8	41
51	Plasma characterization using ultraviolet Thomson scattering from ion-acoustic and electron plasma waves (invited). Review of Scientific Instruments, 2016, 87, 11E401.	1.3	41
52	A wave-based model for cross-beam energy transfer in direct-drive inertial confinement fusion. Physics of Plasmas, 2017, 24, .	1.9	40
53	Full-aperture backscatter measurements on the National Ignition Facility. Review of Scientific Instruments, 2004, 75, 4168-4170.	1.3	39
54	Ionization waves of arbitrary velocity driven by a flying focus. Physical Review A, 2018, 97, .	2.5	39

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55	Ionization Waves of Arbitrary Velocity. Physical Review Letters, 2018, 120, 225001.	7.8	39
56	Implementation of a high energy 4Ï‰ probe beam on the Omega laser. Review of Scientific Instruments, 2004, 75, 3906-3908.	1.3	38
57	Understanding the effects of laser imprint on plastic-target implosions on OMEGA. Physics of Plasmas, 2016, 23, .	1.9	38
58	Impact of the Langdon effect on crossed-beam energy transfer. Nature Physics, 2020, 16, 181-185.	16.7	37
59	High magnetic field generation for laser-plasma experiments. Review of Scientific Instruments, 2006, 77, 114703.	1.3	36
60	Thomson-scattering measurements in the collective and noncollective regimes in laser produced plasmas (invited). Review of Scientific Instruments, 2010, 81, 10D523.	1.3	36
61	A reflective optical transport system for ultraviolet Thomson scattering from electron plasma waves on OMEGA. Review of Scientific Instruments, 2012, 83, 10E349.	1.3	36
62	Shell trajectory measurements from direct-drive implosion experiments. Review of Scientific Instruments, 2012, 83, 10E530.	1.3	36
63	Visualizing electromagnetic fields in laser-produced counter-streaming plasma experiments for collisionless shock laboratory astrophysics. Physics of Plasmas, 2013, 20, .	1.9	36
64	Direct drive: Simulations and results from the National Ignition Facility. Physics of Plasmas, 2016, 23, 056305.	1.9	36
65	Suppressing Two-Plasmon Decay with Laser Frequency Detuning. Physical Review Letters, 2018, 120, 135005.	7.8	36
66	Observation of Nonlocal Heat Flux Using Thomson Scattering. Physical Review Letters, 2018, 121, 125001.	7.8	36
67	Mitigation of cross-beam energy transfer: Implication of two-state focal zooming on OMEGA. Physics of Plasmas, 2013, 20, 082704.	1.9	35
68	Structure and Dynamics of Colliding Plasma Jets. Physical Review Letters, 2013, 111, 235003.	7.8	35
69	Hydrodynamic simulations of long-scale-length two-plasmonâ€“decay experiments at the Omega Laser Facility. Physics of Plasmas, 2013, 20, .	1.9	35
70	Measurement of Radiative Shock Properties by X-Ray Thomson Scattering. Physical Review Letters, 2012, 108, 145001.	7.8	34
71	Picosecond time-resolved measurements of dense plasma line shifts. Physical Review E, 2017, 95, 063204.	2.1	34
72	Demonstration of the Improved Rocket Efficiency in Direct-Drive Implosions Using Different Ablator Materials. Physical Review Letters, 2013, 111, 245005.	7.8	33

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73	Measurements of electron density profiles using an angular filter refractometer. Physics of Plasmas, 2014, 21, .	1.9	33
74	Observation of the Density Threshold Behavior for the Onset of Stimulated Raman Scattering in High-Temperature Hohlraum Plasmas. Physical Review Letters, 2009, 103, 045006.	7.8	32
75	Thresholds of absolute two-plasmon-decay and stimulated Raman scattering instabilities driven by multiple broadband lasers. Physics of Plasmas, 2021, 28, .	1.9	32
76	Collisionless shock acceleration of narrow energy spread ion beams from mixed species plasmas using <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:mn>1</mml:mn><mml:mtext>â€‰</mml:mtext><mml:mtext>â€‰</mml:mtext><mml:mi>Î¼</mml:mi><mathvariant="normal">m</mml:mi></mml:mrow></mml:math> lasers. Physical Review Accelerators and Beams, 2018, 21, .	1.6	32
77	Temporal dispersion of a spectrometer. Review of Scientific Instruments, 2008, 79, 10F545.	1.3	31
78	Laserâ€“plasma interactions in direct-drive ignition plasmas. Plasma Physics and Controlled Fusion, 2012, 54, 124016.	2.1	31
79	Laser-Beam Zooming to Mitigate Crossed-Beam Energy Losses in Direct-Drive Implosions. Physical Review Letters, 2013, 110, 145001.	7.8	31
80	Numerical modeling of laser-driven experiments aiming to demonstrate magnetic field amplification via turbulent dynamo. Physics of Plasmas, 2017, 24, .	1.9	31
81	Measurements of the divergence of fast electrons in laser-irradiated spherical targets. Physics of Plasmas, 2013, 20, 092706.	1.9	30
82	Observation of Self-Similarity in the Magnetic Fields Generated by the Ablative Nonlinear Rayleigh-Taylor Instability. Physical Review Letters, 2013, 110, 185003.	7.8	30
83	Mitigation of cross-beam energy transfer in symmetric implosions on OMEGA using wavelength detuning. Physics of Plasmas, 2017, 24, 062706.	1.9	30
84	Stimulated Brillouin scattering in the saturated regime. Physics of Plasmas, 2003, 10, 1846-1853.	1.9	29
85	Measurement of the Dispersion of Thermal Ion-Acoustic Fluctuations in High-Temperature Laser Plasmas Using Multiple-Wavelength Thomson Scattering. Physical Review Letters, 2005, 95, 195005.	7.8	29
86	Implementation of imaging Thomson scattering on the Omega Laser. Review of Scientific Instruments, 2006, 77, 10E520.	1.3	29
87	High KÎ± x-ray conversion efficiency from extended source gas jet targets irradiated by ultra short laser pulses. Applied Physics Letters, 2008, 92, .	3.3	29
88	Nonuniformly Driven Two-Plasmon-Decay Instability in Direct-Drive Implosions. Physical Review Letters, 2014, 112, 145001.	7.8	29
89	Laser wakefield acceleration at reduced density in the self-guided regime. Physics of Plasmas, 2010, 17, 056709.	1.9	28
90	Polar-drive implosions on OMEGA and the National Ignition Facility. Physics of Plasmas, 2013, 20, .	1.9	28

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91	Laboratory observation of secondary shock formation ahead of a strongly radiative blast wave. Physics of Plasmas, 2006, 13, 022105.	1.9	27
92	Green Frequency-Doubled Laser-Beam Propagation in High-Temperature Hohlraum Plasmas. Physical Review Letters, 2008, 100, 045002.	7.8	27
93	Direct Measurements of an Increased Threshold for Stimulated Brillouin Scattering with Polarization Smoothing in Ignition Hohlraum Plasmas. Physical Review Letters, 2008, 101, 115002.	7.8	27
94	Two-Plasmon Decay Mitigation in Direct-Drive Inertial-Confinement-Fusion Experiments Using Multilayer Targets. Physical Review Letters, 2016, 116, 155002.	7.8	27
95	Hot-electron generation at direct-drive ignition-relevant plasma conditions at the National Ignition Facility. Physics of Plasmas, 2020, 27, .	1.9	27
96	Intensity Limits for Propagation of0.527â€‰â€‰Î¼mLaser Beams through Large-Scale-Length Plasmas for Inertial Confinement Fusion. Physical Review Letters, 2005, 94, 085005.	7.8	26
97	Plasma filling in reduced-scale hohlraums irradiated with multiple beam cones. Physics of Plasmas, 2006, 13, 112701.	1.9	26
98	Energetics of multiple-ion species hohlraum plasmas. Physics of Plasmas, 2008, 15, .	1.9	26
99	Measurements of Non-Maxwellian Electron Distribution Functions and Their Effect on Laser Heating. Physical Review Letters, 2021, 127, 015001.	7.8	26
100	Laser beam propagation through inertial confinement fusion hohlraum plasmas. Physics of Plasmas, 2007, 14, 055705.	1.9	25
101	Direct Observation of the Saturation of Stimulated Brillouin Scattering by Ion-Trapping-Induced Frequency Shifts. Physical Review Letters, 2004, 93, 035001.	7.8	24
102	Role of hydrodynamics simulations in laser-plasma interaction predictive capability. Physics of Plasmas, 2007, 14, 056304.	1.9	24
103	Simulations and measurements of hot-electron generation driven by the multibeam two-plasmon-decay instability. Physics of Plasmas, 2017, 24, .	1.9	24
104	Laser coupling to reduced-scale hohlraum targets at the Early Light Program of the National Ignition Facility. Physics of Plasmas, 2005, 12, 056305.	1.9	23
105	Highly Resolved Measurements of a Developing Strong Collisional Plasma Shock. Physical Review Letters, 2018, 120, 095001.	7.8	23
106	Flying focus: Spatial and temporal control of intensity for laser-based applications. Physics of Plasmas, 2019, 26, .	1.9	23
107	Characterization of single and colliding laser-produced plasma bubbles using Thomson scattering and proton radiography. Physical Review E, 2012, 86, 056407.	2.1	22
108	StarDriver: A Flexible Laser Driver for Inertial Confinement Fusion and High Energy Density Physics. Journal of Fusion Energy, 2014, 33, 476-488.	1.2	22

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109	Anomalous Absorption by the Two-Plasmon Decay Instability. Physical Review Letters, 2020, 124, 185001.	7.8	22
110	Towards the optimisation of direct laser acceleration. New Journal of Physics, 2021, 23, 023031.	2.9	22
111	Polarization smoothing on the national ignition facility. European Physical Journal Special Topics, 2006, 133, 717-720.	0.2	21
112	Fully relativistic form factor for Thomson scattering. Physical Review E, 2010, 81, 036411.	2.1	21
113	Experimental demonstration of laser imprint reduction using underdense foams. Physics of Plasmas, 2016, 23, 042701.	1.9	21
114	Direct observation of the two-plasmon-decay common plasma wave using ultraviolet Thomson scattering. Physical Review E, 2015, 91, 031104.	2.1	20
115	Full-wave and ray-based modeling of cross-beam energy transfer between laser beams with distributed phase plates and polarization smoothing. Physics of Plasmas, 2017, 24, .	1.9	20
116	LPSE: A 3-D wave-based model of cross-beam energy transfer in laser-irradiated plasmas. Journal of Computational Physics, 2019, 399, 108916.	3.8	20
117	Direct-drive laser fusion: status, plans and future. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2021, 379, 20200011.	3.4	20
118	Time-resolved turbulent dynamo in a laser plasma. Proceedings of the National Academy of Sciences of the United States of America, 2021, 118, .	7.1	20
119	Three-dimensional modeling of laser-plasma interaction: Benchmarking our predictive modeling tools versus experiments. Physics of Plasmas, 2008, 15, 056313.	1.9	19
120	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
121	Simulated performance of the optical Thomson scattering diagnostic designed for the National Ignition Facility. Review of Scientific Instruments, 2016, 87, 11E510.	1.3	19
122	Resonance absorption of a broadband laser pulse. Physics of Plasmas, 2018, 25, .	1.9	19
123	Evolution of the Electron Distribution Function in the Presence of Inverse Bremsstrahlung Heating and Collisional Ionization. Physical Review Letters, 2020, 124, 025001.	7.8	19
124	Cross-Beam Energy Transfer Saturation by Ion Heating. Physical Review Letters, 2021, 126, 075002.	7.8	19
125	Observation of ion heating by stimulated-Brillouin-scattering-driven ion-acoustic waves using Thomson scattering. Physics of Plasmas, 2002, 9, 4709-4718.	1.9	18
126	First laserâ€“plasma interaction and hohlraum experiments on the National Ignition Facility. Plasma Physics and Controlled Fusion, 2005, 47, B405-B417.	2.1	18

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127	Progress in indirect and direct-drive planar experiments on hydrodynamic instabilities at the ablation front. Physics of Plasmas, 2014, 21, 122702.	1.9	18
128	Supersonic gas-jet characterization with interferometry and Thomson scattering on the OMEGA Laser System. Review of Scientific Instruments, 2018, 89, 10C103.	1.3	18
129	Vacuum acceleration of electrons in a dynamic laser pulse. Physical Review E, 2020, 102, 043207.	2.1	18
130	Nonlinear spatiotemporal control of laser intensity. Optics Express, 2020, 28, 38516.	3.4	18
131	Full aperture backscatter station measurement system on the National Ignition Facility. Review of Scientific Instruments, 2004, 75, 4177-4179.	1.3	17
132	Magnetically controlled plasma waveguide for laser wakefield acceleration. Plasma Physics and Controlled Fusion, 2009, 51, 024009.	2.1	17
133	Crossed-beam energy transfer: polarization effects and evidence of saturation. Plasma Physics and Controlled Fusion, 2018, 60, 054017.	2.1	17
134	Study of a magnetically driven reconnection platform using ultrafast proton radiography. Physics of Plasmas, 2019, 26, .	1.9	17
135	Microcoulomb (0.7 Â± $$rac{0.4}{0.2}$$ Î¼C) laser plasma accelerator on OMEGA EP. Scientific Reports, 2021, 11, 7498.	3.3	17
136	Spatiotemporal control of laser intensity through cross-phase modulation. Optics Express, 2022, 30, 9878.	3.4	17
137	Measurement of the shell decompression in direct-drive inertial-confinement-fusion implosions. Physical Review E, 2017, 95, 051202.	2.1	16
138	Ray-based modeling of cross-beam energy transfer at caustics. Physical Review E, 2018, 98, .	2.1	16
139	Nonlinear Thomson scattering with ponderomotive control. Physical Review E, 2022, 105, .	2.1	16
140	Measurements of hot-electron temperature in laser-irradiated plasmas. Physics of Plasmas, 2016, 23, .	1.9	15
141	Plasma Density Measurements of the Inner Shell Release. Physical Review Letters, 2019, 123, 235001.	7.8	15
142	Direct Observation of Stimulated-Brillouin-Scattering Detuning by a Velocity Gradient. Physical Review Letters, 2003, 90, 155003.	7.8	14
143	Optical diagnostic suite (schlieren, interferometry, and grid image refractometry) on OMEGA EP using a 10-ps, 263-nm probe beam. Review of Scientific Instruments, 2012, 83, 10E523.	1.3	14
144	Beyond the gain exponent: Effect of damping, scale length, and speckle length on stimulated scatter. Physical Review E, 2015, 91, 031103.	2.1	14

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145	Mitigation of hot electrons from laser-plasma instabilities in high-Z, highly ionized plasmas. Physics of Plasmas, 2017, 24, .	1.9	14
146	Experimental signatures of direct-laser-acceleration-assisted laser wakefield acceleration. Plasma Physics and Controlled Fusion, 2018, 60, 044012.	2.1	14
147	Impact of non-Maxwellian electron velocity distribution functions on inferred plasma parameters in collective Thomson scattering. Physics of Plasmas, 2019, 26, .	1.9	14
148	Suppressing the enhancement of stimulated Raman scattering in inhomogeneous plasmas by tuning the modulation frequency of a broadband laser. Physics of Plasmas, 2021, 28, .	1.9	14
149	Measurement and control of large diameter ionization waves of arbitrary velocity. Optics Express, 2019, 27, 31978.	3.4	14
150	3Ï‰ transmitted beam diagnostic at the Omega Laser Facility. Review of Scientific Instruments, 2006, 77, 10E507.	1.3	13
151	Pushing the Limits of Plasma Length in Inertial-Fusion Laser-Plasma Interaction Experiments. Physical Review Letters, 2008, 100, 015002.	7.8	13
152	Optimization of plasma amplifiers. Physical Review E, 2017, 95, 053211.	2.1	13
153	Measuring heat flux from collective Thomson scattering with non-Maxwellian distribution functions. Physics of Plasmas, 2019, 26, .	1.9	13
154	A pulsed-laser calibration system for the laser backscatter diagnostics at the Omega laser. Review of Scientific Instruments, 2008, 79, 10F548.	1.3	12
155	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
156	The National Direct-Drive Program: OMEGA to the National Ignition Facility. Fusion Science and Technology, 2018, 73, 89-97.	1.1	12
157	Picosecond Thermodynamics in Underdense Plasmas Measured with Thomson Scattering. Physical Review Letters, 2019, 122, 155001.	7.8	12
158	Mega-Gauss Plasma Jet Creation Using a Ring of Laser Beams. Astrophysical Journal Letters, 2019, 873, L11.	8.3	12
159	Flying focus and its application to plasma-based laser amplifiers. Plasma Physics and Controlled Fusion, 2019, 61, 014022.	2.1	12
160	Laser-driven collisionless shock acceleration of ions from near-critical plasmas. Physics of Plasmas, 2020, 27, .	1.9	12
161	Calibration of initial measurements from the full aperture backscatter system on the National Ignition Facility. Review of Scientific Instruments, 2004, 75, 4174-4176.	1.3	11
162	Thomson scattering from a shock front. Review of Scientific Instruments, 2006, 77, 10E504.	1.3	11

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163	The first target experiments on the National Ignition Facility. European Physical Journal D, 2007, 44, 273-281.	1.3	11
164	Ultraviolet Thomson scattering measurements of the electron and ion features with an energetic 263 nm probe. Journal of Instrumentation, 2011, 6, P08004-P08004.	1.2	11
165	Laboratory astrophysical collisionless shock experiments on Omega and NIF. Journal of Physics: Conference Series, 2016, 688, 012084.	0.4	11
166	The preliminary design of the optical Thomson scattering diagnostic for the National Ignition Facility. Journal of Physics: Conference Series, 2016, 717, 012089.	0.4	11
167	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
168	Nonuniform Absorption and Scattered Light in Direct-Drive Implosions Driven by Polarization Smoothing. Physical Review Letters, 2021, 127, 075001.	7.8	11
169	Advanced laser development and plasma-physics studies on the multiterawatt laser. Applied Optics, 2021, 60, 11104.	1.8	11
170	Strong suppression of heat conduction in a laboratory replica of galaxy-cluster turbulent plasmas. Science Advances, 2022, 8, eabj6799.	10.3	11
171	Laboratory Simulations of Supernova Shockwave Propagation. Astrophysics and Space Science, 2005, 298, 61-67.	1.4	10
172	Three-Dimensional Modeling of Stimulated Brillouin Scattering in Ignition-Scale Experiments. Physical Review Letters, 2008, 100, 255001.	7.8	10
173	Total energy loss to fast ablator-ions and target capacitance of direct-drive implosions on OMEGA. Applied Physics Letters, 2012, 101, 114102.	3.3	10
174	Channeling of multikilojoule high-intensity laser beams in an inhomogeneous plasma. Physical Review E, 2015, 91, 051101.	2.1	10
175	A pulse-front-tiltâ€“compensated streaked optical spectrometer with high throughput and picosecond time resolution. Review of Scientific Instruments, 2016, 87, 11E535.	1.3	10
176	Mitigation of self-focusing in Thomson scattering experiments. Physics of Plasmas, 2019, 26, .	1.9	10
177	Numerical simulation of magnetized jet creation using a hollow ring of laser beams. Physics of Plasmas, 2019, 26, .	1.9	10
178	Impact of spatiotemporal smoothing on the two-plasmonâ€“decay instability. Physics of Plasmas, 2020, 27, .	1.9	10
179	Multibeam absolute stimulated Raman scattering and two-plasmon decay. Physical Review E, 2020, 101, 043214.	2.1	10
180	Statistical analysis of non-Maxwellian electron distribution functions measured with angularly resolved Thomson scattering. Physics of Plasmas, 2021, 28, .	1.9	10

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181	Optical shock-enhanced self-photon acceleration. Physical Review A, 2021, 104, .	2.5	10
182	Implosion dynamics in direct-drive experiments. Plasma Physics and Controlled Fusion, 2015, 57, 014023.	2.1	9
183	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
184	Channel optimization of high-intensity laser beams in millimeter-scale plasmas. Physical Review E, 2018, 97, 043208.	2.1	9
185	Implementation of a Wollaston interferometry diagnostic on OMEGA EP. Review of Scientific Instruments, 2018, 89, 10B107.	1.3	9
186	Novel Hot-Spot Ignition Designs for Inertial Confinement Fusion with Liquid-Deuterium-Tritium Spheres. Physical Review Letters, 2020, 125, 065001.	7.8	9
187	Laser-plasma acceleration beyond wave breaking. Physics of Plasmas, 2021, 28, .	1.9	9
188	Multicentimeter long high density magnetic plasmas for optical guiding. Review of Scientific Instruments, 2008, 79, 10F550.	1.3	8
189	Control of 2Ï‰ (527â€‚nm) stimulated Raman scattering in a steep density gradient plasma. Physics of Plasmas, 2009, 16, 062704.	1.9	8
190	A reflective image-rotating periscope for spatially resolved Thomson-scattering experiments on OMEGA. Journal of Instrumentation, 2013, 8, C12009-C12009.	1.2	8
191	Demonstrating ignition hydrodynamic equivalence in direct-drive cryogenic implosions on OMEGA. Journal of Physics: Conference Series, 2016, 717, 012008.	0.4	8
192	Optimization of high energy x ray production through laser plasma interaction. High Energy Density Physics, 2019, 31, 13-18.	1.5	8
193	Transport of High-energy Charged Particles through Spatially Intermittent Turbulent Magnetic Fields. Astrophysical Journal, 2020, 892, 114.	4.5	8
194	Laboratory Observation of Secondary Shock Formation Ahead of a Strongly Radiative Blast Wave. Astrophysics and Space Science, 2007, 307, 219-225.	1.4	7
195	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
196	Observation of collisionless-to-collisional transition in colliding plasma jets with optical Thomson scattering. Physics of Plasmas, 2019, 26, .	1.9	7
197	Cross-beam energy transfer saturation by ion trapping-induced detuning. Physics of Plasmas, 2021, 28, 082705.	1.9	7
198	A high-resolving-power x-ray spectrometer for the OMEGA EP Laser (invited). Review of Scientific Instruments, 2016, 87, 11D504.	1.3	7

#	Article	IF	Citations
199	Tunable UV upgrade on OMEGA EP. , 2019, , .		7
200	Methodology for designing grism stretchers for idler-based optical parametric chirped-pulse-amplification systems. Journal of the Optical Society of America B: Optical Physics, 2019, 36, 2325.	2.1	7
201	Secondary shock formation in xenon-nitrogen mixtures. Physics of Plasmas, 2006, 13, 112101.	1.9	6
202	Mitigation of stimulated Raman scattering in hohlraum plasmas. Journal of Physics: Conference Series, 2008, 112, 022030.	0.4	6
203	The design of the optical Thomson scattering diagnostic for the National Ignition Facility. Review of Scientific Instruments, 2016, 87, 11E549.	1.3	6
204	Implementation of a Faraday rotation diagnostic at the OMEGA laser facility. High Power Laser Science and Engineering, 2018, 6, .	4.6	6
205	Beam Spray Thresholds in ICF-Relevant Plasmas. Physical Review Letters, 2022, 129, .	7.8	6
206	Noncollective Scattering. , 2011, , 69-102.		5
207	Magnetic-field generation by the ablative nonlinear Rayleighâ€“Taylor instability. Journal of Plasma Physics, 2015, 81, .	2.1	5
208	The Scattered Light Time-history Diagnostic suite at the National Ignition Facility. Review of Scientific Instruments, 2021, 92, 033511.	1.3	5
209	A transmitted-beam diagnostic for the wavelength-tunable UV drive beam on OMEGA. Review of Scientific Instruments, 2021, 92, 033526.	1.3	5
210	Optical transmission of glass for the National Ignition Facility near backscatter imagers under x-ray exposure. Review of Scientific Instruments, 2008, 79, 10F549.	1.3	4
211	High-power laser experiments to study collisionless shock generation. EPJ Web of Conferences, 2013, 59, 15001.	0.3	4
212	Direct-drive implosion physics: Results from OMEGA and the National Ignition Facility. Journal of Physics: Conference Series, 2016, 688, 012006.	0.4	4
213	Robustness of raman plasma amplifiers and their potential for attosecond pulse generation. High Energy Density Physics, 2017, 23, 212-216.	1.5	4
214	Angular filter refractometry analysis using simulated annealing. Review of Scientific Instruments, 2017, 88, 103510.	1.3	4
215	Cross-beam energy transfer saturation: ion heating and pump depletion. Plasma Physics and Controlled Fusion, 2022, 64, 034003.	2.1	4
216	Polarimetry diagnostic on OMEGA EP using a 10-ps, 263-nm probe beam. Review of Scientific Instruments, 2014, 85, 11E611.	1.3	3

#	Article	IF	Citations
217	Study of shock waves and related phenomena motivated by astrophysics. Journal of Physics: Conference Series, 2016, 688, 012016.	0.4	3
218	A streaked X-ray spectroscopy platform for rapidly heated, near-solid density plasmas. Review of Scientific Instruments, 2016, 87, 11E312.	1.3	3
219	Evolution of the Design and Fabrication of Astrophysics Targets for Turbulent Dynamo (TDYNO) Experiments on OMEGA. Fusion Science and Technology, 2018, 73, 434-445.	1.1	3
220	Unabsorbed light beamlets for diagnosing cross-beam energy transfer. Review of Scientific Instruments, 2018, 89, 10E101.	1.3	3
221	Investigation of picosecond thermodynamics in a laser-produced plasma using Thomson scattering. Plasma Physics and Controlled Fusion, 2020, 62, 014012.	2.1	3
222	Hot Raman amplification. Physics of Plasmas, 2021, 28, 062311.	1.9	3
223	X-ray flux and X-ray burnthrough experiments on reduced-scale targets at the NIF and OMEGA lasers. European Physical Journal Special Topics, 2006, 133, 1205-1208.	0.2	3
224	Insensitivity of a turbulent laser-plasma dynamo to initial conditions. Matter and Radiation at Extremes, 2022, 7, .	3.9	3
225	Experiments on the Scaling of Ionization Balance vs. Electron and Radiation Temperature in Non-LTE Gold Plasmas. AIP Conference Proceedings, 2004, , .	0.4	2
226	Laser light backscatter from intermediate and high Z plasmas. Physics of Plasmas, 2006, 13, 092702.	1.9	2
227	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
228	Initial experimental demonstration of the principles of a xenon gas shield designed to protect optical components from soft x-ray induced opacity (blanking) in high energy density experiments. Physics of Plasmas, 2017, 24, 032705.	1.9	2
229	Single-shot frequency-resolved optical gating for retrieving the pulse shape of high energy picosecond pulses. Review of Scientific Instruments, 2018, 89, 103509.	1.3	2
230	Unabsorbed light beamlets for diagnosing coronal density profiles and absorption nonuniformity in direct-drive implosions on OMEGA. Review of Scientific Instruments, 2021, 92, 043525.	1.3	2
231	Density evolution after shock release from laser-driven polystyrene (CH) targets in inertial confinement fusion. Physics of Plasmas, 2021, 28, .	1.9	2
232	Independent-hot-spot approach to multibeam laser-plasma instabilities. Physical Review E, 2022, 105, .	2.1	2
233	Laser-plasma interaction in ignition relevant plasmas: benchmarking our 3d modelling capabilities versus recent experiments. Journal of Physics: Conference Series, 2008, 112, 022032.	0.4	1
234	Study of x-ray radiation from a laser wakefield accelerator. , 2009, , .		1

#	Article	IF	Citations
235	Polar-direct-drive experiments at the National Ignition Facility. Journal of Physics: Conference Series, 2016, 717, 012009.	0.4	1
236	Design of an extreme ultraviolet spectrometer suite to characterize rapidly heated solid matter. Review of Scientific Instruments, 2016, 87, 11E538.	1.3	1
237	Laser-plasma interaction in direct-drive inertial confinement fusion. Journal of Physics: Conference Series, 2016, 717, 012040.	0.4	1
238	The first experiments on the national ignition facility. European Physical Journal Special Topics, 2006, 133, 43-45.	0.2	1
239	Laboratory simulations of supernova shockwaves: Formation of a second shock ahead of a radiative shock. AIP Conference Proceedings, 2005, , .	0.4	0
240	Magnetically Controlled Optical Plasma Waveguide for Electron Acceleration. , 2009, , .		0
241	Direct Acceleration of Electrons in a Corrugated Plasma Channel. , 2009, , .		0
242	Measurements of radiative shock properties using X-ray thomson scattering. , 2009, , .		0
243	Plasma Refractometry Using Angular Spectral Filters on OMEGA EP. , 2013, , .		0
244	Efficient coupling of 527â€‰nm laser beam power to a long scalelength plasma. European Physical Journal Special Topics, 2006, 133, 321-324.	0.2	0
245	Laser coupling to reduced-scale targets at NIF Early Light. European Physical Journal Special Topics, 2006, 133, 237-241.	0.2	0
246	Acceleration of Electrons by A Laser Wakefield Accelerator (LWFA) Operating in the Self-Guided Regime. , 2010, , .		0
247	A methodology for designing grism stretchers for idler-based optical parametric chirped-pulse amplification systems. , 2019, , .		0
248	Application of Near-Field and Far-Field Beam Shaping Techniques for High-Power Lasers. , 2020, , .		0
249	Laboratory Observation of Secondary Shock Formation Ahead of a Strongly Radiative Blast Wave. , 2006, , 219-225.		0