T Craig Sangster

List of Publications by Year
in descending order

177 papers	9,302 citations	31976 53 h-index	49909 87 g-index
178 all docs	178 docs citations	178 times ranked	2522 citing authors

#	Article	IF	Citations
1	Electron, photon, and ion beams from the relativistic interaction of Petawatt laser pulses with solid targets. Physics of Plasmas, 2000, 7, 2076-2082.	1.9	920
2	Direct-drive inertial confinement fusion: A review. Physics of Plasmas, 2015, 22, .	1.9	521
3	Progress towards ignition on the National Ignition Facility. Physics of Plasmas, 2013, 20, .	1.9	259
4	Spectrometry of charged particles from inertial-confinement-fusion plasmas. Review of Scientific Instruments, 2003, 74, 975-995.	1.3	214
5	Early stage of implosion in inertial confinement fusion: Shock timing and perturbation evolution. Physics of Plasmas, 2006, 13, 012702.	1.9	155
6	The experimental plan for cryogenic layered target implosions on the National Ignition Facilityâ€"The inertial confinement approach to fusion. Physics of Plasmas, 2011, 18, .	1.9	148
7	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
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	Crossed-beam energy transfer in direct-drive implosions. Physics of Plasmas, 2012, 19, .	1.9	133
11	Two-dimensional simulations of plastic-shell, direct-drive implosions on OMEGA. Physics of Plasmas, 2005, 12, 032702.	1.9	126
12	The National Ignition Facility neutron time-of-flight system and its initial performance (invited). Review of Scientific Instruments, 2010, 81, 10D325.	1.3	121
13	Neutron spectrometryâ€"An essential tool for diagnosing implosions at the National Ignition Facility (invited). Review of Scientific Instruments, 2012, 83, 10D308.	1.3	117
14	Demonstration of the Highest Deuterium-Tritium Areal Density Using Multiple-Picket Cryogenic Designs on OMEGA. Physical Review Letters, 2010, 104, 165001.	7.8	111
15	Progress in direct-drive inertial confinement fusion. Physics of Plasmas, 2008, 15, .	1.9	107
16	Hot-spot mix in ignition-scale implosions on the NIF. Physics of Plasmas, 2012, 19, .	1.9	107
17	Tripled yield in direct-drive laser fusion through statistical modelling. Nature, 2019, 565, 581-586.	27.8	103
18	Multidimensional analysis of direct-drive, plastic-shell implosions on OMEGA. Physics of Plasmas, 2005, 12, 056307.	1.9	95

#	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	Initial experiments on the shock-ignition inertial confinement fusion concept. Physics of Plasmas, 2008, 15, .	1.9	86
22	Core performance and mix in direct-drive spherical implosions with high uniformity. Physics of Plasmas, 2001, 8, 2251-2256.	1.9	84
23	Development of nuclear diagnostics for the National Ignition Facility (invited). Review of Scientific Instruments, 2006, 77, 10E715.	1.3	84
24	Demonstration of the shock-timing technique for ignition targets on the National Ignition Facility. Physics of Plasmas, 2009, 16, .	1.9	82
25	Initial cone-in-shell fast-ignition experiments on OMEGA. Physics of Plasmas, 2011, 18, .	1.9	82
26	Performance of 1-THz-bandwidth, two-dimensional smoothing by spectral dispersion and polarization smoothing of high-power, solid-state laser beams. Journal of the Optical Society of America B: Optical Physics, 2005, 22, 998.	2.1	80
27	First measurements of the absolute neutron spectrum using the magnetic recoil spectrometer at OMEGA (invited). Review of Scientific Instruments, 2008, 79, 10E502.	1.3	78
28	Spherical shock-ignition experiments with the 40 + 20-beam configuration on OMEGA. Physics of Plasmas, 2012, 19, .	1.9	78
29	Prototypes of National Ignition Facility neutron time-of-flight detectors tested on OMEGA. Review of Scientific Instruments, 2004, 75, 3559-3562.	1.3	77
30	Exploration of the Transition from the Hydrodynamiclike to the Strongly Kinetic Regime in Shock-Driven Implosions. Physical Review Letters, 2014, 112, 185001.	7.8	77
31	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
32	Role of Hot-Electron Preheating in the Compression of Direct-Drive Imploding Targets with Cryogenic<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:msub><mml:mi mathvariant="normal">D</mml:mi><mml:mn>2</mml:mn></mml:msub></mml:math>Ablators. Physical Review Letters, 2008, 100, 185005.	7.8	69
33	Three-dimensional modeling of direct-drive cryogenic implosions on OMEGA. Physics of Plasmas, 2016, 23, .	1.9	69
34	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
35	Increasing Hydrodynamic Efficiency by Reducing Cross-Beam Energy Transfer in Direct-Drive-Implosion Experiments. Physical Review Letters, 2012, 108, 125003.	7.8	67
36	Ion Thermal Decoupling and Species Separation in Shock-Driven Implosions. Physical Review Letters, 2015, 114, 025001.	7.8	67

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37	Nuclear imaging of the fuel assembly in ignition experiments. Physics of Plasmas, 2013, 20, 056320.	1.9	65
38	First Observation of Cross-Beam Energy Transfer Mitigation for Direct-Drive Inertial Confinement Fusion Implosions Using Wavelength Detuning at the National Ignition Facility. Physical Review Letters, 2018, 120, 085001.	7.8	65
39	Time-resolved absorption in cryogenic and room-temperature direct-drive implosions. Physics of Plasmas, 2008, 15, .	1.9	64
40	Measurements of Ion Stopping Around the Bragg Peak in High-Energy-Density Plasmas. Physical Review Letters, 2015, 115, 205001.	7.8	64
41	Evidence for Stratification of Deuterium-Tritium Fuel in Inertial Confinement Fusion Implosions. Physical Review Letters, 2012, 108, 075002.	7.8	61
42	Tests of the hydrodynamic equivalence of direct-drive implosions with different D2 and He3 mixtures. Physics of Plasmas, 2006, 13, 052702.	1.9	60
43	Charged-particle acceleration and energy loss in laser-produced plasmas. Physics of Plasmas, 2000, 7, 5106-5117.	1.9	59
44	The magnetic recoil spectrometer for measurements of the absolute neutron spectrum at OMEGA and the NIF. Review of Scientific Instruments, 2013, 84, 043506.	1.3	59
45	Monoenergetic proton backlighter for measuring E and B fields and for radiographing implosions and high-energy density plasmas (invited). Review of Scientific Instruments, 2006, 77, 10E725.	1.3	58
46	Polar-direct-drive simulations and experiments. Physics of Plasmas, 2006, 13, 056311.	1.9	58
47	High-Power, Kilojoule Class Laser Channeling in Millimeter-Scale Underdense Plasma. Physical Review Letters, 2011, 106, 105002.	7.8	58
48	Using high-intensity laser-generated energetic protons to radiograph directly driven implosions. Review of Scientific Instruments, 2012, 83, 013511.	1.3	58
49	First Observations of Nonhydrodynamic Mix at the Fuel-Shell Interface in Shock-Driven Inertial Confinement Implosions. Physical Review Letters, 2014, 112, 135001.	7.8	58
50	Inertial confinement fusion neutron images. Physics of Plasmas, 2006, 13, 056317.	1.9	56
51	Cryogenic DT and D2 targets for inertial confinement fusion. Physics of Plasmas, 2007, 14, 058101.	1.9	55
52	Dâ€“3He proton spectra for diagnosing shell ïR and fuel Ti of imploded capsules at OMEGA. Physics of Plasmas, 2000, 7, 2578-2584.	1.9	54
53	High-resolution spectroscopy used to measure inertial confinement fusion neutron spectra on Omega (invited). Review of Scientific Instruments, 2012, 83, 10D919.	1.3	54
54	Effects of Fuel-Shell Mix upon Direct-Drive, Spherical Implosions on OMEGA. Physical Review Letters, 2002, 89, 165002.	7.8	53

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55	Rayleigh-Taylor Growth Measurements in the Acceleration Phase of Spherical Implosions on OMEGA. Physical Review Letters, 2009, 103, 105001.	7.8	52
56		1.9	52
57	A neutron spectrometer for precise measurements of DT neutrons from 10 to 18 MeV at OMEGA and the National Ignition Facility. Review of Scientific Instruments, 2001, 72, 854-858.	1.3	50
58	High-Current, Relativistic Electron-Beam Transport in Metals and the Role of Magnetic Collimation. Physical Review Letters, 2009, 102, 235004.	7.8	50
59	Time-resolved compression of a capsule with a cone to high density for fast-ignition laser fusion. Nature Communications, 2014, 5, 5785.	12.8	50
60	National direct-drive program on OMEGA and the National Ignition Facility. Plasma Physics and Controlled Fusion, 2017, 59, 014008.	2.1	50
61	First results from cryogenic target implosions on OMEGA. Physics of Plasmas, 2002, 9, 2195-2201.	1.9	49
62	High-Areal-Density Fuel Assembly in Direct-Drive Cryogenic Implosions. Physical Review Letters, 2008, 100, 185006.	7.8	49
63	Using secondary-proton spectra to study the compression and symmetry of deuterium-filled capsules at OMEGA. Physics of Plasmas, 2002, 9, 2725-2737.	1.9	48
64	Inference of mix in direct-drive implosions on OMEGA. Physics of Plasmas, 2002, 9, 2208-2213.	1.9	48
65	Improving cryogenic deuteriumâ€“tritium implosion performance on OMEGA. Physics of Plasmas, 2013, 20, .	1.9	48
66	Shell Mix in the Compressed Core of Spherical Implosions. Physical Review Letters, 2002, 89, 085003.	7.8	47
67	D3He-proton emission imaging for inertial-confinement-fusion experiments (invited). Review of Scientific Instruments, 2004, 75, 3520-3525.	1.3	46
68	Shock ignition of thermonuclear fuel with high areal densities. Journal of Physics: Conference Series, 2008, 112, 022024.	0.4	45
69	The effects of target mounts in direct-drive implosions on OMEGA. Physics of Plasmas, 2009, 16, .	1.9	45
70	Atomic mix in directly driven inertial confinement implosions. Physics of Plasmas, 2011, 18, .	1.9	44
71	Two-dimensional simulations of the neutron yield in cryogenic deuterium-tritium implosions on OMEGA. Physics of Plasmas, 2010, 17, 102706.	1.9	43
72	Measurements of the Differential Cross Sections for the Elastic<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mi>n</mml:mi><mml:mtext mathvariant="normal">â^'</mml:mtext><mml:mmultiscripts><mml:mi mathvariant="normal">H</mml:mi><mml:mprescripts /><mml:none /><mml:mn>3</mml:mn></mml:mmultiscripts></mml:math>and<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mi>n</mml:mi><mml:mtext	7.8	43

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73	Validation of Thermal-Transport Modeling with Direct-Drive, Planar-Foil Acceleration Experiments on OMEGA. Physical Review Letters, 2008, 101, 055002.	7.8	42
74	Effects of local defect growth in direct-drive cryogenic implosions on OMEGA. Physics of Plasmas, 2013, 20, .	1.9	42
75	Measurements of collective fuel velocities in deuterium-tritium exploding pusher and cryogenically layered deuterium-tritium implosions on the NIF. Physics of Plasmas, 2013, 20, .	1.9	42
76	Measuring shock-bang timing and ïR evolution of D3He implosions at OMEGA. Physics of Plasmas, 2004, 11, 2798-2805.	1.9	41
77	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
78	Advances in compact proton spectrometers for inertial-confinement fusion and plasma nuclear science. Review of Scientific Instruments, 2012, 83, 10D908.	1.3	41
79	CVD diamond as a high bandwidth neutron detector for inertial confinement fusion diagnostics. Review of Scientific Instruments, 2003, 74, 1828-1831.	1.3	40
80	Wavelength-detuning cross-beam energy transfer mitigation scheme for direct drive: Modeling and evidence from National Ignition Facility implosions. Physics of Plasmas, 2018, 25, 056314.	1.9	40
81	Measuring Implosion Dynamics throughïREvolution in Inertial-Confinement Fusion Experiments. Physical Review Letters, 2003, 90, 095002.	7.8	39
82	Direct-drive cryogenic target implosion performance on OMEGA. Physics of Plasmas, 2004, 11, 2790-2797.	1.9	39
83	Implosion Experiments using Glass Ablators for Direct-Drive Inertial Confinement Fusion. Physical Review Letters, 2010, 104, 165002.	7.8	39
84	Rayleigh-Taylor Growth Stabilization in Direct-Drive Plastic Targets at Laser Intensities of<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mo>â^¼</mml:mo><mml:mn>1</mml:mn><mml:mo>Ã—</mml:mo><mml:msup><mml:mn>10</mml:mn><mml:mn><mml:mathvariant="normal">W</mml:mi><mml:mo>/</mml:mo><mml:msup><mml:mi>cm</mml:mi><mml:mn>2</mml:mn></mml:msup></ Physical Review Letters, 2008, 101, 025002.	7.8	38
85	Charged-particle spectroscopy for diagnosing shock ïR and strength in NIF implosions. Review of Scientific Instruments, 2012, 83, 10D901.	1.3	38
86	A novel particle time of flight diagnostic for measurements of shock- and compression-bang times in D3He and DT implosions at the NIF. Review of Scientific Instruments, 2012, 83, 10D902.	1.3	38
87	Approximate models for the ion-kinetic regime in inertial-confinement-fusion capsule implosions. Physics of Plasmas, 2015, 22, 052707.	1.9	38
88	Effects of Nonuniform Illumination on Implosion Asymmetry in Direct-Drive Inertial Confinement Fusion. Physical Review Letters, 2004, 92, 205001.	7.8	37
89	Direct drive: Simulations and results from the National Ignition Facility. Physics of Plasmas, 2016, 23, 056305.	1.9	36
90	Measuring the absolute deuteriumâ€“tritium neutron yield using the magnetic recoil spectrometer at OMEGA and the NIF. Review of Scientific Instruments, 2012, 83, 10D912.	1.3	35

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91	Advanced-ignition-concept exploration on OMEGA. Plasma Physics and Controlled Fusion, 2009, 51, 124052.	2.1	33
92	Shock-tuned cryogenic-deuterium-tritium implosion performance on Omega. Physics of Plasmas, 2010, 17, 056312.	1.9	33
93	Investigation of ion kinetic effects in direct-drive exploding-pusher implosions at the NIF. Physics of Plasmas, 2014, 21, 122712.	1.9	33
94	Neutron temporal diagnostic for high-yield deuteriumâ€“tritium cryogenic implosions on OMEGA. Review of Scientific Instruments, 2016, 87, 053501.	1.3	33
95	Direct-drive cryogenic target implosion performance on OMEGA. Physics of Plasmas, 2003, 10, 1937-1945.	1.9	32
96	Triple-picket warm plastic-shell implosions on OMEGA. Physics of Plasmas, 2011, 18, 012705.	1.9	32
97	Laserâ€“plasma interactions in direct-drive ignition plasmas. Plasma Physics and Controlled Fusion, 2012, 54, 124016.	2.1	31
98	Laser-Beam Zooming to Mitigate Crossed-Beam Energy Losses in Direct-Drive Implosions. Physical Review Letters, 2013, 110, 145001.	7.8	31
99	Ten-inch manipulator-based neutron temporal diagnostic for cryogenic experiments on OMEGA. Review of Scientific Instruments, 2003, 74, 1713-1716.	1.3	30
100	Systematic study of Rayleighâ€“Taylor growth in directly driven plastic targets in a laser-intensity range from â^¼2Ã—1014toâ^¼1.5Ã—1015Wâ•cm2. Physics of Plasmas, 2008, 15, .	1.9	30
101	Core conditions for alpha heating attained in direct-drive inertial confinement fusion. Physical Review E, 2016, 94, 011201.	2.1	30
102	Dependence of Shell Mix on Feedthrough in Direct Drive Inertial Confinement Fusion. Physical Review Letters, 2004, 92, 185002.	7.8	29
103	Improved target stability using picket pulses to increase and shape the ablator adiabat. Physics of Plasmas, 2005, 12, 056306.	1.9	29
104	X-ray preheating of window materials in direct-drive shock-wave timing experiments. Physics of Plasmas, 2006, 13, 122702.	1.9	29
105	A gated liquid-scintillator-based neutron detector for fast-ignitor experiments and down-scattered neutron measurements. Review of Scientific Instruments, 2010, 81, 10D302.	1.3	29
106	The National Ignition Facility Diagnostic Set at the Completion of the National Ignition Campaign, September 2012. Fusion Science and Technology, 2016, 69, 420-451.	1.1	29
107	A framed, 16-image Kirkpatrickâ€“Baez x-ray microscope. Review of Scientific Instruments, 2017, 88, 093702.	1.3	29
108	Polar-drive implosions on OMEGA and the National Ignition Facility. Physics of Plasmas, 2013, 20, .	1.9	28

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109	Measurements of ÏR asymmetries at burn time in inertial-confinement-fusion capsules. Physics of Plasmas, 2002, 9, 3558-3566.	1.9	27
110	Direct-drive, cryogenic target implosions on OMEGA. Physics of Plasmas, 2005, 12, 056302.	1.9	27
111	Neutron yield study of direct-drive, low-adiabat cryogenic D2 implosions on OMEGA laser system. Physics of Plasmas, 2009, 16, 112706.	1.9	27
112	National Ignition Facility neutron time-of-flight measurements (invited). Review of Scientific Instruments, 2010, 81, 10D319.	1.3	27
113	The coincidence counting technique for orders of magnitude background reduction in data obtained with the magnetic recoil spectrometer at OMEGA and the NIF. Review of Scientific Instruments, 2011, 82, 073502.	1.3	27
114	Measurements of the<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mi mathvariant="bold">T</mml:mi><mml:mo stretchy="false">(</mml:mo><mml:mi>t</mml:mi><mml:mo>,</mml:mo><mml:mn>2</mml:mn><mml:mi>n</mml:mi><mml:mo) Tj ET /><mml:none /><mml:mn>4</mml:mn></mml:mmultiscripts></mml:math>Neutron Spectrum at Low Reactant Energies from Inertial Confinement Implosions. Physical Review Letters, 2012, 109, 025003.	7.8	27
115	Assessment of ion kinetic effects in shock-driven inertial confinement fusion implosions using fusion burn imaging. Physics of Plasmas, 2015, 22, .	1.9	27
116	Using Inertial Fusion Implosions to Measure the<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:mi mathvariant="normal">T</mml:mi><mml:mo>+</mml:mo><mml:mrow><mml:mmultiscripts><mml:mrow><mml:mi>He</mml:mi></mm /><mml:none /><mml:mrow><mml:mn>3</mml:mn></mml:mrow></mml:mmultiscripts></mml:mrow></mml:mrow></mml:math>Fusion Cross Section at Nucleosynthesis-Relevant Energies. Physical Review Letters, 2016, 117, 035002.	7.8	27
117	Three-dimensional hydrodynamic simulations of OMEGA implosions. Physics of Plasmas, 2017, 24, .	1.9	26
118	The single-line-of-sight, time-resolved x-ray imager diagnostic on OMEGA. Review of Scientific Instruments, 2018, 89, 10G117.	1.3	26
119	OMEGA polar-drive target designs. Physics of Plasmas, 2012, 19, .	1.9	25
120	South pole bang-time diagnostic on the National Ignition Facility (invited). Review of Scientific Instruments, 2012, 83, 10E119.	1.3	25
121	Time-Dependent Nuclear Measurements of Mix in Inertial Confinement Fusion. Physical Review Letters, 2007, 98, 215002.	7.8	24
122	Soft x-ray backlighting of cryogenic implosions using a narrowband crystal imaging system (invited). Review of Scientific Instruments, 2014, 85, 11E501.	1.3	24
123	In-flight observations of low-mode <i>Ï<</i>R asymmetries in NIF implosions. Physics of Plasmas, 2015, 22, .	1.9	24
124	A new neutron time-of-flight detector for fuel-areal-density measurements on OMEGA. Review of Scientific Instruments, 2014, 85, 11E102.	1.3	23
125	Spherical Rayleighâ€“Taylor growth of three-dimensional broadband perturbations on OMEGA. Physics of Plasmas, 2009, 16, 112701.	1.9	22
126	A Particle X-ray Temporal Diagnostic (PXTD) for studies of kinetic, multi-ion effects, and ion-electron equilibration rates in Inertial Confinement Fusion plasmas at OMEGA (invited). Review of Scientific Instruments, 2016, 87, 11D701.	1.3	22

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127	Rayleighâ€“Taylor instability in the deceleration phase of spherical implosion experiments. Physics of Plasmas, 2002, 9, 2738-2744.	1.9	21
128	Monochromatic backlighting of direct-drive cryogenic DT implosions on OMEGA. Physics of Plasmas, 2017, 24, .	1.9	21
129	Calibration of a neutron time-of-flight detector with a rapid instrument response function for measurements of bulk fluid motion on OMEGA. Review of Scientific Instruments, 2018, 89, 101131.	1.3	21
130	Tests and calibration of NIF neutron time of flight detectors. Review of Scientific Instruments, 2008, 79, 10E527.	1.3	20
131	The effect of shock dynamics on compressibility of ignition-scale National Ignition Facility implosions. Physics of Plasmas, 2014, 21, .	1.9	20
132	Development of an inertial confinement fusion platform to study charged-particle-producing nuclear reactions relevant to nuclear astrophysics. Physics of Plasmas, 2017, 24, .	1.9	20
133	Direct-drive laser fusion: status, plans and future. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2021, 379, 20200011.	3.4	20
134	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
135	Using nuclear data and Monte Carlo techniques to study areal density and mix in D2 implosions. Physics of Plasmas, 2005, 12, 032703.	1.9	18
136	Analysis of trends in experimental observables: Reconstruction of the implosion dynamics and implications for fusion yield extrapolation for direct-drive cryogenic targets on OMEGA. Physics of Plasmas, 2018, 25, .	1.9	18
137	Proton core imaging of the nuclear burn in inertial confinement fusion implosions. Review of Scientific Instruments, 2006, 77, 043503.	1.3	17
138	Measurements of the effects of the intensity pickets on laser imprinting for direct-drive, adiabat-shaping designs on OMEGA. Physics of Plasmas, 2007, 14, 032702.	1.9	17
139	Effects of fuel-capsule shimming and drive asymmetry on inertial-confinement-fusion symmetry and yield. Physics of Plasmas, 2016, 23, .	1.9	17
140	Proton Spectra from <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:mmultiscripts><mml:mrow><mml:mi>He</mml:mi></mml:mrow><mml:mprescripts /><mml:none /><mml:mrow><mml:mn>3</mml:mn></mml:mrow></mml:mmultiscripts><mml:mo>+</mml:mo><mml:mi mathvariant="normal">T</mml:mi></mml:mrow></mml:math> and <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:mmultiscripts	7.8	16
141	Mitigating laser-imprint effects in direct-drive inertial confinement fusion implosions with an above-critical-density foam layer. Physics of Plasmas, 2018, 25, .	1.9	16
142	Radial structure of shell modulations near peak compression of spherical implosions. Physics of Plasmas, 2003, 10, 830-834.	1.9	15
143	A compact proton spectrometer for measurement of the absolute DD proton spectrum from which yield and ÏR are determined in thin-shell inertial-confinement-fusion implosions. Review of Scientific Instruments, 2014, 85, 103504.	1.3	15
144	Kinetic mix mechanisms in shock-driven inertial confinement fusion implosions. Physics of Plasmas, 2014, 21, .	1.9	15

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145	Observations of Multiple Nuclear Reaction Histories and Fuel-Ion Species Dynamics in Shock-Driven Inertial Confinement Fusion Implosions. Physical Review Letters, 2019, 122, 035001.	7.8	15
146	Measured dependence of nuclear burn region size on implosion parameters in inertial confinement fusion experiments. Physics of Plasmas, 2006, 13, 082704.	1.9	14
147	Capsule-areal-density asymmetries inferred from 14.7-MeV deuteriumâ€“helium protons in direct-drive OMEGA implosions. Physics of Plasmas, 2003, 10, 1919-1924.	1.9	13
148	High-yield bang time detector for the OMEGA laser. Review of Scientific Instruments, 2006, 77, 10E712.	1.3	13
149	Cryogenic-target performance and implosion physics studies on OMEGA. Physics of Plasmas, 2009, 16, 056301.	1.9	13
150	A magnetic particle time-of-flight (MagPTOF) diagnostic for measurements of shock- and compression-bang time at the NIF (invited). Review of Scientific Instruments, 2014, 85, 11D901.	1.3	12
151	A method for in situ absolute DD yield calibration of neutron time-of-flight detectors on OMEGA using CR-39-based proton detectors. Review of Scientific Instruments, 2015, 86, 053506.	1.3	12
152	The National Direct-Drive Program: OMEGA to the National Ignition Facility. Fusion Science and Technology, 2018, 73, 89-97.	1.1	12
153	Measurement of apparent ion temperature using the magnetic recoil spectrometer at the OMEGA laser facility. Review of Scientific Instruments, 2018, 89, 10I129.	1.3	12
154	Hydrodynamics studies of direct-drive cone-in-shell, fast-ignitor targets on OMEGA. Physics of Plasmas, 2007, 14, 112702.	1.9	11
155	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
156	High-dynamic-range neutron time-of-flight detector used to infer the D(t,n)4He and D(d,n)3He reaction yield and ion temperature on OMEGA. Review of Scientific Instruments, 2016, 87, 11D814.	1.3	10
157	Hydrodynamic growth of shell modulations in the deceleration phase of spherical direct-drive implosions. Physics of Plasmas, 2003, 10, 1861-1866.	1.9	9
158	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
159	First Measurements of Deuterium-Tritium and Deuterium-Deuterium Fusion Reaction Yields in Ignition-Scalable Direct-Drive Implosions. Physical Review Letters, 2017, 118, 095002.	7.8	9
160	Deuteron breakup induced by 14-MeV neutrons from inertial confinement fusion. Physical Review C, 2019, 100, .	2.9	9
161	Novel Hot-Spot Ignition Designs for Inertial Confinement Fusion with Liquid-Deuterium-Tritium Spheres. Physical Review Letters, 2020, 125, 065001.	7.8	9
162	Enhanced laser-energy coupling with small-spot distributed phase plates (SG5-650) in OMEGA DT cryogenic target implosions. Physics of Plasmas, 2022, 29, .	1.9	9

#	Article	IF	Citations
163	Causes of fuelâ€“ablator mix inferred from modeling of monochromatic time-gated radiography of OMEGA cryogenic implosions. Physics of Plasmas, 2022, 29, .	1.9	8
164	Testing a Cherenkov neutron time-of-flight detector on OMEGA. Review of Scientific Instruments, 2018, 89, 10I122.	1.3	7
165	Study of Rayleighâ€“Taylor growth in laser irradiated planar SiO₂ targets at ignition-relevant conditions. Physics of Plasmas, 2013, 20, 072707.	1.9	6
166	A compact neutron spectrometer for characterizing inertial confinement fusion implosions at OMEGA and the NIF. Review of Scientific Instruments, 2014, 85, 063502.	1.3	6
167	Experimental Evidence of a Variant Neutron Spectrum from the <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:mi>T</mml:mi><mml:mo stretchy="false">(</mml:mo><mml:mi>t</mml:mi><mml:mo>,</mml:mo><mml:mn>2</mml:mn><mml:mi>n</mml:mi><mml:mo) Tj ET	7.8	6
168	Energies in the Range of 16â€“50 MeV. Physical Review Letters, 2018, 121, 042501. 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
169	Inferences of mix in direct-drive spherical implosions with high uniformity. Plasma Physics and Controlled Fusion, 2001, 43, A277-A286.	2.1	4
170	A novel photomultiplier tube neutron time-of-flight detector. Review of Scientific Instruments, 2021, 92, 013509.	1.3	4
171	Polar direct drive â€“ Ignition at 1 MJ. European Physical Journal Special Topics, 2006, 133, 233-235.	0.2	4
172	Applications and results of X-ray spectroscopy in implosion experiments on the National Ignition Facility. AIP Conference Proceedings, 2017, , .	0.4	3
173	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
174	Properties of hot-spot emission in a warm plastic-shell implosion on the OMEGA laser system. Physical Review E, 2018, 98, .	2.1	2
175	Density evolution after shock release from laser-driven polystyrene (CH) targets in inertial confinement fusion. Physics of Plasmas, 2021, 28, .	1.9	2
176	Polar-direct-drive experiments at the National Ignition Facility. Journal of Physics: Conference Series, 2016, 717, 012009.	0.4	1
177	10.1063/1.5022181.1. , 2018, , .		0