

Nelson Hoffman

List of Publications by Year in descending order

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66
papers

1,720
citations

304743

22
h-index

289244

40
g-index

67
all docs

67
docs citations

67
times ranked

846
citing authors

#	ARTICLE	IF	CITATIONS
1	First observation of increased DT yield over prediction due to addition of hydrogen. Physics of Plasmas, 2021, 28, 012707.	1.9	4
2	Time resolved ablator areal density during peak fusion burn on inertial confinement fusion implosions. Physics of Plasmas, 2021, 28, 032701.	1.9	7
3	First spectral measurement of deuterium-tritium fusion γ rays in inertial fusion experiments. Physical Review C, 2021, 104, .	2.9	8
4	Commissioning the new pulse dilation Gas Cherenkov Detector at the National Ignition Facility. High Energy Density Physics, 2020, 37, 100862.	1.5	9
5	Carbon ablator areal density at fusion burn: Observations and trends at the National Ignition Facility. Physics of Plasmas, 2020, 27, .	1.9	11
6	Diagnostic signature of the compressibility of the inertial-confinement-fusion pusher. Physical Review E, 2020, 101, 023208.	2.1	15
7	Improved inertial confinement fusion gamma reaction history ^{12}C gamma-ray signal by direct subtraction. Review of Scientific Instruments, 2019, 90, 113503.	1.3	14
8	Progress on observations of interspecies ion separation in inertial-confinement-fusion implosions via imaging x-ray spectroscopy. Physics of Plasmas, 2019, 26, 062702.	1.9	7
9	Prediction Uncertainties beyond the Range of Experience: A Case Study in Inertial Confinement Fusion Implosion Experiments. SIAM-ASA Journal on Uncertainty Quantification, 2019, 7, 604-633.	2.0	12
10	Highly Resolved Measurements of a Developing Strong Collisional Plasma Shock. Physical Review Letters, 2018, 120, 095001.	7.8	23
11	Cherenkov detector analysis for implosions with multiple nuclear reactions. Review of Scientific Instruments, 2018, 89, 101103.	1.3	3
12	First measurements of remaining shell areal density on the OMEGA laser using the Diagnostic for Areal Density (DAD). Review of Scientific Instruments, 2018, 89, 083510.	1.3	11
13	Measurements of ion velocity separation and ionization in multi-species plasma shocks. Physics of Plasmas, 2018, 25, .	1.9	7
14	Diffusion-dominated mixing in moderate convergence implosions. Physical Review E, 2018, 97, 061201.	2.1	16
15	Study of the ion kinetic effects in ICF run-away burn using a quasi-1D hybrid model. Physics of Plasmas, 2017, 24, .	1.9	10
16	Observation and modeling of interspecies ion separation in inertial confinement fusion implosions via imaging x-ray spectroscopy. Physics of Plasmas, 2017, 24, 056305.	1.9	15
17	Tamper asymmetry and its effect on transmission for x-ray driven opacity simulations. Physics of Plasmas, 2017, 24, .	1.9	1
18	Direct-drive DT implosions with Knudsen number variations. Journal of Physics: Conference Series, 2016, 717, 012030.	0.4	2

#	ARTICLE	IF	CITATIONS
19	Kinetic studies of ICF implosions. <i>Journal of Physics: Conference Series</i> , 2016, 717, 012027.	0.4	1
20	Observation of interspecies ion separation in inertial-confinement-fusion implosions. <i>Europhysics Letters</i> , 2016, 115, 65001.	2.0	21
21	Ion-kinetic simulations of D-3He gas-filled inertial confinement fusion target implosions with moderate to large Knudsen number. <i>Physics of Plasmas</i> , 2016, 23, .	1.9	26
22	A direct-drive exploding-pusher implosion as the first step in development of a monoenergetic charged-particle backlighting platform at the National Ignition Facility. <i>High Energy Density Physics</i> , 2016, 18, 38-44.	1.5	9
23	Low Fuel Convergence Path to Direct-Drive Fusion Ignition. <i>Physical Review Letters</i> , 2016, 116, 255003.	7.8	36
24	Assessment of ion kinetic effects in shock-driven inertial confinement fusion implosions using fusion burn imaging. <i>Physics of Plasmas</i> , 2015, 22, .	1.9	27
25	Ion Thermal Decoupling and Species Separation in Shock-Driven Implosions. <i>Physical Review Letters</i> , 2015, 114, 025001.	7.8	67
26	Approximate models for the ion-kinetic regime in inertial-confinement-fusion capsule implosions. <i>Physics of Plasmas</i> , 2015, 22, 052707.	1.9	38
27	Gamma Reaction History ablator areal density constraints upon correlated diagnostic modeling of National Ignition Facility implosion experiments. <i>Physics of Plasmas</i> , 2015, 22, .	1.9	21
28	Investigation of ion kinetic effects in direct-drive exploding-pusher implosions at the NIF. <i>Physics of Plasmas</i> , 2014, 21, 122712.	1.9	33
29	Exploration of the Transition from the Hydrodynamiclike to the Strongly Kinetic Regime in Shock-Driven Implosions. <i>Physical Review Letters</i> , 2014, 112, 185001.	7.8	77
30	Measurement of areal density in the ablators of inertial-confinement-fusion capsules via detection of ablator ($n, n \approx 2^{13}$) gamma-ray emission. <i>Physics of Plasmas</i> , 2013, 20, .	1.9	27
31	Revised Knudsen-layer reduction of fusion reactivity. <i>Physics of Plasmas</i> , 2013, 20, .	1.9	45
32	In situ calibration of the Gamma Reaction History instrument using reference samples (â€œpucksâ€œ) for areal density measurements. <i>EPJ Web of Conferences</i> , 2013, 59, 13019.	0.3	11
33	Knudsen Layer Reduction of Fusion Reactivity. <i>Physical Review Letters</i> , 2012, 109, 095001.	7.8	77
34	Determination of the deuterium-tritium branching ratio based on inertial confinement fusion implosions. <i>Physical Review C</i> , 2012, 85, .	2.9	25
35	D-T gamma-to-neutron branching ratio determined from inertial confinement fusion plasmas. <i>Physics of Plasmas</i> , 2012, 19, .	1.9	37
36	Uncertainty analysis for ablator areal density measurements using gamma-ray emission of imploded capsules at the OMEGA laser. , 2011, , .		0

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37	Tuning indirect-drive implosions using cone power balance. <i>Physics of Plasmas</i> , 2011, 18, .	1.9	17
38	Sensitivity of capsule implosion symmetry due to laser beam imbalance in a scale 0.2 hot hohlraum at Omega. <i>Journal of Physics: Conference Series</i> , 2010, 244, 032043.	0.4	1
39	A reduced model for the ICF Gamma-Ray reaction history diagnostic. <i>Journal of Physics: Conference Series</i> , 2010, 244, 032058.	0.4	1
40	On a statistical scattering model to explain capsule implosion asymmetry in vacuum hohlraums with radiation temperatures of order 100eV. <i>Journal of Physics: Conference Series</i> , 2010, 244, 022076.	0.4	0
41	Calibrating mix models for NIF tuning. <i>Journal of Physics: Conference Series</i> , 2010, 244, 022011.	0.4	8
42	Diagnosing inertial confinement fusion gamma ray physics (invited). <i>Review of Scientific Instruments</i> , 2010, 81, 10D333.	1.3	85
43	Using gamma-ray emission to measure areal density of inertial confinement fusion capsules. <i>Review of Scientific Instruments</i> , 2010, 81, 10D332.	1.3	21
44	INERTIAL CONFINEMENT FUSION RESEARCH AT LOS ALAMOS NATIONAL LABORATORY. , 2009, , .		0
45	Demonstration of symcaps to measure implosion symmetry in the foot of the NIF scale 0.7 hohlraums. <i>Laser and Particle Beams</i> , 2009, 27, 123-127.	1.0	16
46	Use of d-H3e proton spectroscopy as a diagnostic of shell \bar{r} in capsule implosion experiments with $\hat{a}^{1/4}0.2$ NIF scale high temperature Hohlraums at Omega. <i>Review of Scientific Instruments</i> , 2008, 79, 10E526.	1.3	4
47	Tuning NIF drive symmetry with symmetry capsules. <i>Journal of Physics: Conference Series</i> , 2008, 112, 022075.	0.4	5
48	Radiation hydrodynamics with backscatter and beam spray in gas filled hohlraum experiments at the National Ignition Facility. <i>European Physical Journal Special Topics</i> , 2006, 133, 129-133.	0.2	0
49	Gold wall ablation and hohlraum filling measurements of vacuum and gas-filled hohlraums. , 2006, 6261, 49.		8
50	Late-time radiography of beryllium ignition-target ablators in long-pulse gas-filled hohlraums. <i>Physics of Plasmas</i> , 2006, 13, 056304.	1.9	11
51	Diagnosing ablator burn through in ignition capsules using D2+He3 gas filled surrogates. <i>Review of Scientific Instruments</i> , 2006, 77, 10E711.	1.3	5
52	Diagnosing radiation drive asymmetry and absorbed energy in ignitionHohlraumsusing gas-filled capsules. <i>Review of Scientific Instruments</i> , 2006, 77, 10E705.	1.3	8
53	Predictions of the Microstructural Contribution to Instability Seeding in Beryllium ICF Capsules. <i>AIP Conference Proceedings</i> , 2004, , .	0.4	1
54	Multifluid interpenetration mixing in directly driven inertial confinement fusion capsule implosions. <i>Physics of Plasmas</i> , 2004, 11, 2723-2728.	1.9	27

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55	Degradation of radiatively driven inertial confinement fusion capsule implosions by multifluid interpenetration mixing. <i>Physics of Plasmas</i> , 2003, 10, 4427-4434.	1.9	24
56	Nuclear diagnostics for the National Ignition Facility (invited). <i>Review of Scientific Instruments</i> , 2001, 72, 773-779.	1.3	39
57	Developments in NIF Beryllium Capsule Design. <i>Fusion Science and Technology</i> , 2000, 38, 16-21.	0.6	17
58	The feedout process: Rayleigh-Taylor and Richtmyer-Meshkov instabilities in uniform, radiation-driven foils. <i>Physics of Plasmas</i> , 1999, 6, 932-939.	1.9	22
59	Feedout coupling of Richtmyer-Meshkov and Rayleigh-Taylor instabilities in stratified, radiation-driven foils. <i>Physics of Plasmas</i> , 1999, 6, 940-946.	1.9	7
60	Cylindrical implosion experiments using laser direct drive. <i>Physics of Plasmas</i> , 1999, 6, 2095-2104.	1.9	44
61	Fusion neutrons from the gas-pusher interface in deuterated-shell inertial confinement fusion implosions. <i>Physics of Plasmas</i> , 1998, 5, 768-774.	1.9	32
62	The development and advantages of beryllium capsules for the National Ignition Facility. <i>Physics of Plasmas</i> , 1998, 5, 1953-1959.	1.9	136
63	Simulation of instability growth rates on the front and back of laser accelerated planar targets. <i>Physics of Plasmas</i> , 1998, 5, 2988-2996.	1.9	5
64	Ignition target design and robustness studies for the National Ignition Facility. <i>Physics of Plasmas</i> , 1996, 3, 2084-2093.	1.9	91
65	Design and modeling of ignition targets for the National Ignition Facility. <i>Physics of Plasmas</i> , 1995, 2, 2480-2487.	1.9	329
66	Exact solutions to a time-dependent vacuum transport problem. <i>Journal of Quantitative Spectroscopy and Radiative Transfer</i> , 1985, 34, 435-445.	2.3	2