Nathan B Meezan

List of Publications by Year
in descending order

69	4,153	76294	110317
papers	citations	40 h-index	64 g-index

72	72	72	1557
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Design of inertial fusion implosions reaching the burning plasma regime. Nature Physics, 2022, 18, 251-258.	6.5	87
2	Burning plasma achieved in inertial fusion. Nature, 2022, 601, 542-548.	13.7	233
3	Low mode implosion symmetry sensitivity in low gas-fill NIF cylindrical hohlraums. Physics of Plasmas, 2021, 28, .	0.7	15
4	Developing â€œinverted-coronaâ€•fusion targets as high-fluence neutron sources. Review of Scientific Instruments, 2021, 92, 033544.	0.6	4
5	The effects of multispecies Hohlraum walls on stimulated Brillouin scattering, Hohlraum dynamics, and beam propagation. Physics of Plasmas, 2021, 28, .	0.7	6
6	Kinetic mix at gas-shell interface in inverted corona fusion targets. Physics of Plasmas, 2021, 28, 122702.	0.7	1
7	Evidence of restricted heat transport in National Ignition Facility Hohlraums. Physics of Plasmas, 2020, 27, 102704.	0.7	15
8	Fill tube dynamics in inertial confinement fusion implosions with high density carbon ablators. Physics of Plasmas, 2020, 27, .	0.7	11
9	View factor estimation of hot spot velocities in inertial confinement fusion implosions at the National Ignition Facility. Physics of Plasmas, 2020, 27, .	0.7	9
10	Experimental demonstration of the reduced expansion of a laser-heated surface using a low density foam layer, pertaining to advanced hohlraum designs with less wall-motion. Physics of Plasmas, 2020, 27, .	0.7	12
11	Foam-lined hohlraum, inertial confinement fusion experiments on the National Ignition Facility. Physical Review E, 2020, 102, 051201.	0.8	2
12	Hotspot conditions achieved in inertial confinement fusion experiments on the National Ignition Facility. Physics of Plasmas, 2020, 27, .	0.7	50
13	Understanding ICF hohlraums using NIF gated laser-entrance-hole images. Physics of Plasmas, 2020, 27, 022702.	0.7	13
14	Interpenetration and kinetic effects in converging, high-energy plasma jets. High Energy Density Physics, 2020, 37, 100861.	0.4	4
15	Toward a burning plasma state using diamond ablator inertially confined fusion (ICF) implosions on the National Ignition Facility (NIF). Plasma Physics and Controlled Fusion, 2019, 61, 014023.	0.9	53
16	Ultra-high (>30%) coupling efficiency designs for demonstrating central hot-spot ignition on the National Ignition Facility using a Frustraum. Physics of Plasmas, 2019, 26, .	0.7	25
17	Response to Comment on â€œInsulator-metal transition in dense fluid deuteriumâ€• Science, 2019, 363, .	6.0	5
18	Hybrid particle-in-cell simulations of laser-driven plasma interpenetration, heating, and entrainment. Physics of Plasmas, 2019, 26, 112107.	0.7	11

#	Article	IF	Citations
19	The I-Raum: A new shaped hohlraum for improved inner beam propagation in indirectly-driven ICF implosions on the National Ignition Facility. Physics of Plasmas, 2018, 25, .	0.7	43
20	Exploring the limits of case-to-capsule ratio, pulse length, and picket energy for symmetric hohlraum drive on the National Ignition Facility Laser. Physics of Plasmas, 2018, 25, .	0.7	79
21	First demonstration of improved capsule implosions by reducing radiation preheat in uranium vs gold hohlraums. Physics of Plasmas, 2018, 25, .	0.7	17
22	Simultaneous visualization of wall motion, beam propagation, and implosion symmetry on the National Ignition Facility (invited). Review of Scientific Instruments, 2018, 89, 10K111.	0.6	15
23	Developing an Experimental Basis for Understanding Transport in NIF Hohlraum Plasmas. Physical Review Letters, 2018, 121, 095002.	2.9	28
24	Increasing stagnation pressure and thermonuclear performance of inertial confinement fusion capsules by the introduction of a high-Z dopant. Physics of Plasmas, 2018, 25, .	0.7	42
25	Insulator-metal transition in dense fluid deuterium. Science, 2018, 361, 677-682.	6.0	108
26	Development of new platforms for hydrodynamic instability and asymmetry measurements in deceleration phase of indirectly driven implosions on NIF. Physics of Plasmas, 2018, 25, 082705.	0.7	15
27	Fusion Energy Output Greater than the Kinetic Energy of an Imploding Shell at the National Ignition Facility. Physical Review Letters, 2018, 120, 245003.	2.9	205
28	The relationship between gas fill density and hohlraum drive performance at the National Ignition Facility. Physics of Plasmas, 2017, 24, .	0.7	55
29	Symmetry control of an indirectly driven high-density-carbon implosion at high convergence and high velocity. Physics of Plasmas, 2017, 24, .	0.7	106
30	Observation of hohlraum-wall motion with spectrally selective x-ray imaging at the National Ignition Facility. Review of Scientific Instruments, 2016, 87, 11E321.	0.6	11
31	Towards a more universal understanding of radiation drive in gas-filled hohlraums. Journal of Physics: Conference Series, 2016, 717, 012026.	0.3	20
32	Implosion configurations for robust ignition using high- density carbon (diamond) ablator for indirect-drive ICF at the National Ignition Facility. Journal of Physics: Conference Series, 2016, 717, 012023.	0.3	30
33	The near vacuum hohlraum campaign at the NIF: A new approach. Physics of Plasmas, 2016, 23, .	0.7	51
34	Symmetry control in subscale near-vacuum hohlraums. Physics of Plasmas, 2016, 23, .	0.7	34
35	Integrated modeling of cryogenic layered highfoot experiments at the NIF. Physics of Plasmas, 2016, 23, .	0.7	59
36	Update 2015 on Target Fabrication Requirements for NIF Layered Implosions, with Emphasis on Capsule Support and Oxygen Modulations in GDP. Fusion Science and Technology, 2016, 70, 121-126.	0.6	16

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37	Images of the gold bubble feature in NIF Gas-Filled Ignition Hohlraums. Journal of Physics: Conference Series, 2016, 717, 012049.	0.3	12
38	Laser absorption, power transfer, and radiation symmetry during the first shock of inertial confinement fusion gas-filled hohlraum experiments. Physics of Plasmas, 2015, 22, 122701.	0.7	9
39	First High-Convergence Cryogenic Implosion in a Near-Vacuum Hohlraum. Physical Review Letters, 2015, 114, 175001.	2.9	117
40	Cryogenic tritium-hydrogen-deuterium and deuterium-tritium layer implosions with high density carbon ablators in near-vacuum hohlraums. Physics of Plasmas, 2015, 22, 062703.	0.7	62
41	of Plasmas, 2015, 22, 056315.	0.7	82
42	of Plasmas, 2015, 22, 056318.	0.7	80
43	Investigation of ion kinetic effects in direct-drive exploding-pusher implosions at the NIF. Physics of Plasmas, 2014, 21, 122712.	0.7	33
44	Progress in hohlraum physics for the National Ignition Facility. Physics of Plasmas, 2014, 21, .	0.7	62
45	Novel Characterization of Capsule X-Ray Drive at the National Ignition Facility. Physical Review Letters, 2014, 112, 105003.	2.9	87
46	High-density carbon ablator experiments on the National Ignition Facility. Physics of Plasmas, 2014, 21, .	0.7	116
47	Onset of Hydrodynamic Mix in High-Velocity, Highly Compressed Inertial Confinement Fusion Implosions. Physical Review Letters, 2013, 111, 085004.	2.9	215
48	Hohlraum energetics scaling to 520 TW on the National Ignition Facility. Physics of Plasmas, 2013, 20, .	0.7	59
49	X-ray driven implosions at ignition relevant velocities on the National Ignition Facility. Physics of Plasmas, 2013, 20, .	0.7	54
50	Soft x-ray images of the laser entrance hole of ignition hohlraums. Review of Scientific Instruments, 2012, 83, 10E525.	0.6	22
51	A high-resolution integrated model of the National Ignition Campaign cryogenic layered experiments. Physics of Plasmas, 2012, 19, .	0.7	108
52	X-ray conversion efficiency in vacuum hohlraum experiments at the National Ignition Facility. Physics of Plasmas, 2012, 19, 053301.	0.7	48
53	Multistep redirection by cross-beam power transfer of ultrahigh-power lasers in a plasma. Nature Physics, 2012, 8, 344-349.	6.5	104
54	Capsule implosion optimization during the indirect-drive National Ignition Campaign. Physics of Plasmas, 2011, 18, .	0.7	131

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55	Symmetry tuning for ignition capsules via the symcap technique. Physics of Plasmas, 2011, 18, .	0.7	101
56	Symmetry tuning via controlled crossed-beam energy transfer on the National Ignition Facility. Physics of Plasmas, 2010, 17, .	0.7	171
57	Images of the laser entrance hole from the static x-ray imager at NIF. Review of Scientific Instruments, 2010, 81, 10E538.	0.6	42
58	The first measurements of soft x-ray flux from ignition scale Hohlraums at the National Ignition Facility using DANTE (invited). Review of Scientific Instruments, 2010, 81, 10E321.	0.6	66
59	Symmetric Inertial Confinement Fusion Implosions at Ultra-High Laser Energies. Science, 2010, 327, 1228-1231.	6.0	321
60	Backscatter measurements for NIF ignition targets (invited). Review of Scientific Instruments, 2010, 81, 10D921.	0.6	82
61	Experimental basis for laser-plasma interactions in ignition hohlraums at the National Ignition Facility. Physics of Plasmas, 2010, 17, .	0.7	49
62	Hot electron measurements in ignition relevant Hohlraums on the National Ignition Facility. Review of Scientific Instruments, 2010, 81, 10D938.	0.6	58
63	Suprathermal electrons generated by the two-plasmon-decay instability in gas-filled Hohlraums. Physics of Plasmas, 2010, 17, .	0.7	51
64	Energy transfer between laser beams crossing in ignition hohlraums. Physics of Plasmas, 2009, 16, .	0.7	92
65	Suppression of Stimulated Brillouin Scattering by Increased Landau Damping in Multiple-Ion-Species Hohlraum Plasmas. Physical Review Letters, 2008, 100, 105001.	2.9	43
66	Three-dimensional modeling of laser-plasma interaction: Benchmarking our predictive modeling tools versus experiments. Physics of Plasmas, 2008, 15, 056313.	0.7	19
67	Role of hydrodynamics simulations in laser-plasma interaction predictive capability. Physics of Plasmas, 2007, 14, 056304.	0.7	24
68	Thomson-scattering measurements of high electron temperature hohlraum plasmas for laser-plasma interaction studies. Physics of Plasmas, 2006, 13, 052704.	0.7	53
69	Hydrodynamics simulations of 2Ï‰ laser propagation in underdense gasbag plasmas. Physics of Plasmas, 2004, 11, 5573-5579.	0.7	23