David J Strozzi

List of Publications by Year
in descending order

101 papers	3,351 citations	109321 35 h-index	161849 54 g-index
106 all docs	106 docs citations	106 times ranked	1450 citing authors

#	Article	IF	Citations
1	Burning plasma achieved in inertial fusion. Nature, 2022, 601, 542-548.	27.8	233
2	Fusion Energy Output Greater than the Kinetic Energy of an Imploding Shell at the National Ignition Facility. Physical Review Letters, 2018, 120, 245003.	7.8	205
3	Inertially confined fusion plasmas dominated by alpha-particle self-heating. Nature Physics, 2016, 12, 800-806.	16.7	144
4	Fast-ignition transport studies: Realistic electron source, integrated particle-in-cell and hydrodynamic modeling, imposed magnetic fields. Physics of Plasmas, 2012, 19, 072711.	1.9	107
5	Symmetry control of an indirectly driven high-density-carbon implosion at high convergence and high velocity. Physics of Plasmas, 2017, 24, .	1.9	106
6	Multistep redirection by cross-beam power transfer of ultrahigh-power lasers in a plasma. Nature Physics, 2012, 8, 344-349.	16.7	104
7	The high velocity, high adiabat, â€œBigfootâ€•campaign and tests of indirect-drive implosion scaling. Physics of Plasmas, 2018, 25, .	1.9	90
8	Design of inertial fusion implosions reaching the burning plasma regime. Nature Physics, 2022, 18, 251-258.	16.7	87
9	High-Performance Indirect-Drive Cryogenic Implosions at High Adiabat on the National Ignition Facility. Physical Review Letters, 2018, 121, 135001.	7.8	86
10	The velocity campaign for ignition on NIF. Physics of Plasmas, 2012, 19, .	1.9	76
11	Record Energetics for an Inertial Fusion Implosion at NIF. Physical Review Letters, 2021, 126, 025001.	7.8	76
12	Progress towards a more predictive model for hohlraum radiation drive and symmetry. Physics of Plasmas, 2017, 24, 056312.	1.9	64
13	The potential of imposed magnetic fields for enhancing ignition probability and fusion energy yield in indirect-drive inertial confinement fusion. Physics of Plasmas, 2017, 24, .	1.9	64
14	Progress in hohlraum physics for the National Ignition Facility. Physics of Plasmas, 2014, 21, .	1.9	62
15	Drift wave test particle transport in reversed shear profile. Physics of Plasmas, 1998, 5, 3910-3917.	1.9	60
16	Interplay of Laser-Plasma Interactions and Inertial Fusion Hydrodynamics. Physical Review Letters, 2017, 118, 025002.	7.8	60
17	Hohlraum energetics scaling to 520 TW on the National Ignition Facility. Physics of Plasmas, 2013, 20, .	1.9	59
18	Kinetic enhancement of Raman backscatter, and electron acoustic Thomson scatter. Physics of Plasmas, 2007, 14, 013104.	1.9	55

#	Article	IF	Citations
19	The relationship between gas fill density and hohlraum drive performance at the National Ignition Facility. Physics of Plasmas, 2017, 24, .	1.9	55
20	Achieving record hot spot energies with large HDC implosions on NIF in HYBRID-E. Physics of Plasmas, 2021, 28, .	1.9	55
21	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.	2.1	53
22	Probing matter at Gbar pressures at the NIF. High Energy Density Physics, 2014, 10, 27-34.	1.5	52
23	Ray-based calculations of backscatter in laser fusion targets. Physics of Plasmas, 2008, 15, .	1.9	51
24	Suprathermal electrons generated by the two-plasmon-decay instability in gas-filled Hohlraums. Physics of Plasmas, 2010, 17, .	1.9	51
25	The near vacuum hohlraum campaign at the NIF: A new approach. Physics of Plasmas, 2016, 23, .	1.9	51
26	Plasma-based beam combiner for very high fluence and energy. Nature Physics, 2018, 14, 80-84.	16.7	50
27	Hot-spot mix in large-scale HDC implosions at NIF. Physics of Plasmas, 2020, 27, .	1.9	46
28	Simulation of self-generated magnetic fields in an inertial fusion hohlraum environment. Physics of Plasmas, 2017, 24, .	1.9	44
29	Experimental Evidence of Predominantly Transverse Electron Plasma Waves Driven by Stimulated Raman Scattering of Picosecond Laser Pulses. Physical Review Letters, 2009, 102, 185003.	7.8	41
30	First beryllium capsule implosions on the National Ignition Facility. Physics of Plasmas, 2016, 23, 056310.	1.9	37
31	Impact of the Langdon effect on crossed-beam energy transfer. Nature Physics, 2020, 16, 181-185.	16.7	37
32	Breakdown of electrostatic predictions for the nonlinear dispersion relation of a stimulated Raman scattering driven plasma wave. Physics of Plasmas, 2008, 15, .	1.9	36
33	Low-adiabat rugby hohlraum experiments on the National Ignition Facility: Comparison with high-flux modeling and the potential for gas-wall interpenetration. Physics of Plasmas, 2014, 21, .	1.9	36
34	Nonlinear Landau Damping Rate of a Driven Plasma Wave. Physical Review Letters, 2009, 103, 155002.	7.8	35
35	Enhanced energy coupling for indirectly driven inertial confinement fusion. Nature Physics, 2019, 15, 138-141.	16.7	32
36	Measurement of High-Pressure Shock Waves in Cryogenic Deuterium-Tritium Ice Layered Capsule Implosions on NIF. Physical Review Letters, 2013, 111, 065003.	7.8	28

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37	Stimulated backscatter of laser light from BigFoot hohlraums on the National Ignition Facility. Physics of Plasmas, 2019, 26, .	1.9	28
38	Symmetric fielding of the largest diamond capsule implosions on the NIF. Physics of Plasmas, 2020, 27, .	1.9	28
39	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
40	Energy transfer between lasers in low-gas-fill-density hohlraums. Physical Review E, 2018, 98, .	2.1	27
41	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, .	1.9	25
42	Transient magnetic field diffusion considerations relevant to magnetically assisted indirect drive inertial confinement fusion. Physics of Plasmas, 2020, 27, 112711.	1.9	25
43	Hotspot parameter scaling with velocity and yield for high-adiabat layered implosions at the National Ignition Facility. Physical Review E, 2020, 102, 023210.	2.1	25
44	Progress toward ignition at the National Ignition Facility. Plasma Physics and Controlled Fusion, 2013, 55, 124015.	2.1	23
45	Imposed magnetic field and hot electron propagation in inertial fusion hohlraums. Journal of Plasma Physics, 2015, 81, .	2.1	23
46	Integrated performance of large HDC-capsule implosions on the National Ignition Facility. Physics of Plasmas, 2020, 27, .	1.9	22
47	High performance capsule implosions on the OMEGA Laser facility with rugby hohlraums. Physics of Plasmas, 2010, 17, 056313.	1.9	20
48	Threshold for electron trapping nonlinearity in Langmuir waves. Physics of Plasmas, 2012, 19, .	1.9	20
49	Heat transport modeling of the dot spectroscopy platform on NIF. Plasma Physics and Controlled Fusion, 2018, 60, 044009.	2.1	20
50	Beryllium capsule implosions at a case-to-capsule ratio of 3.7 on the National Ignition Facility. Physics of Plasmas, 2018, 25, .	1.9	20
51	Three-dimensional modeling of laser-plasma interaction: Benchmarking our predictive modeling tools versus experiments. Physics of Plasmas, 2008, 15, 056313.	1.9	19
52	Nonlinear group velocity of an electron plasma wave. Physics of Plasmas, 2010, 17, 082301.	1.9	18
53	Convective Raman amplification of light pulses causing kinetic inflation in inertial fusion plasmas. Physics of Plasmas, 2012, 19, .	1.9	18
54	Saturation mechanisms of backward stimulated Raman scattering in a one-dimensional geometry. Physics of Plasmas, 2013, 20, 103103.	1.9	18

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55	Nonlinear kinetic description of Raman growth using an envelope code, and comparisons with Vlasov simulations. Physics of Plasmas, 2010, 17, .	1.9	17
56	Particle-in-cell simulations of kinetic effects in plasma-based backward Raman amplification in underdense plasmas. Physics of Plasmas, 2010, 17, .	1.9	17
57	Self-Organization and Threshold of Stimulated Raman Scattering. Physical Review Letters, 2010, 105, 015001.	7.8	17
58	A plasma amplifier to combine multiple beams at NIF. Physics of Plasmas, 2018, 25, .	1.9	17
59	Coherent acceleration of magnetized ions by electrostatic waves with arbitrary wavenumbers. Physics of Plasmas, 2003, 10, 2722-2731.	1.9	16
60	Fast ignition: Dependence of the ignition energy on source and target parameters for particle-in-cell-modelled energy and angular distributions of the fast electrons. Physics of Plasmas, 2013, 20, .	1.9	16
61	Implosion and burn of fast ignition capsulesâ€"Calculations with HYDRA. Physics of Plasmas, 2012, 19, 092706.	1.9	15
62	Magnetized ICF implosions: Scaling of temperature and yield enhancement. Physics of Plasmas, 2022, 29, .	1.9	15
63	Exploring implosion designs for increased compression on the National Ignition Facility using high density carbon ablators. Physics of Plasmas, 2022, 29, .	1.9	15
64	Study of laser plasma interactions using an Eulerian Vlasov code. Computer Physics Communications, 2004, 164, 156-159.	7.5	14
65	Raman Backscatter as a Remote Laser Power Sensor in High-Energy-Density Plasmas. Physical Review Letters, 2013, 111, 025001.	7.8	14
66	Performance of beryllium targets with full-scale capsules in low-fill 6.72-mm hohlraums on the National Ignition Facility. Physics of Plasmas, 2017, 24, .	1.9	14
67	The Magnetized Indirect Drive Project on the National Ignition Facility. Journal of Fusion Energy, 2022, 41, 1.	1.2	14
68	A grid-based binary model for coulomb collisions in plasmas. Journal of Computational Physics, 2013, 234, 33-43.	3.8	13
69	Kinetic dispersion of Langmuir waves. I. The Langmuir decay instability. Physics of Plasmas, 2009, 16, 092304.	1.9	12
70	Deficiencies in compression and yield in x-ray-driven implosions. Physics of Plasmas, 2020, 27, .	1.9	12
71	Diagnosing plasma magnetization in inertial confinement fusion implosions using secondary deuterium-tritium reactions. Review of Scientific Instruments, 2021, 92, 043543.	1.3	12
72	Experiments to explore the influence of pulse shaping at the National Ignition Facility. Physics of Plasmas, 2020, 27, 112708.	1.9	11

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73	Vlasov simulations of trapping and inhomogeneity in Raman scattering. Journal of Plasma Physics, 2006, 72, 1299.	2.1	10
74	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.	1.9	9
75	A tesselation-based model for intensity estimation and laser plasma interactions calculations in three dimensions. Physics of Plasmas, 2018, 25, 033114.	1.9	9
76	Principal factors in performance of indirect-drive laser fusion experiments. Physics of Plasmas, 2020, 27, .	1.9	7
77	Experimental room temperature hohlraum performance study on the National Ignition Facility. Physics of Plasmas, 2016, 23, .	1.9	6
78	Beryllium implosions at smaller case-to-capsule ratio on NIF. High Energy Density Physics, 2020, 34, 100747.	1.5	6
79	Laser transport and backscatter in low-density SiO2 and Ta2O5 foams. Physics of Plasmas, 2021, 28, .	1.9	6
80	The effects of multispecies Hohlraum walls on stimulated Brillouin scattering, Hohlraum dynamics, and beam propagation. Physics of Plasmas, 2021, 28, .	1.9	6
81	Nonlinear Envelope Equation and Nonlinear Landau Damping Rate for a Driven Electron Plasma Wave. Transport Theory and Statistical Physics, 2011, 40, 185-224.	0.4	5
82	Developing one-dimensional implosions for inertial confinement fusion science. High Power Laser Science and Engineering, 2016, 4, .	4.6	5
83	Symmetry tuning and high energy coupling for an Al capsule in a Au rugby hohlraum on NIF. Physics of Plasmas, 2020, 27, .	1.9	5
84	NIF Rugby High Foot Campaign from the design side. Journal of Physics: Conference Series, 2016, 717, 012035.	0.4	4
85	Reaching 30% energy coupling efficiency for a high-density-carbon capsule in a gold rugby hohlraum on NIF. Nuclear Fusion, 2021, 61, 086028.	3.5	4
86	Hydroscaling indirect-drive implosions on the National Ignition Facility. Physics of Plasmas, 2022, 29, .	1.9	4
87	Studies of particle wake potentials in plasmas. High Energy Density Physics, 2011, 7, 191-196.	1.5	3
88	Positron radiography of ignition-relevant ICF capsules. Physics of Plasmas, 2017, 24, .	1.9	3
89	Single and double shell ignition targets for the national ignition facility at 527â€‰nm. Physics of Plasmas, 2021, 28, .	1.9	3
90	Features of a point design for Fast Ignition. Journal of Physics: Conference Series, 2010, 244, 022066.	0.4	2

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91	Magnetized laserâ€“plasma interactions in high-energy-density systems: Parallel propagation. Physics of Plasmas, 2022, 29, .	1.9	2
92	Analyses of laser-plasma interactions in NIF ignition emulator designs. Journal of Physics: Conference Series, 2010, 244, 022019.	0.4	1
93	Assessing the 2Ï‰peinstability and other preheat considerations in ignition-scale hohlraums. Journal of Physics: Conference Series, 2010, 244, 022020.	0.4	1
94	Fast ignition transport simulations for NIF. Journal of Physics: Conference Series, 2010, 244, 022065.	0.4	0
95	Cone-guided fast ignition withnoimposed magnetic fields. EPJ Web of Conferences, 2013, 59, 03012.	0.3	0
96	Progress and prospects for an IFE relevant FI point design. EPJ Web of Conferences, 2013, 59, 03011.	0.3	0
97	A PIC-Fluid Hybrid Algorithm for Multiscale Simulations of Laser-Plasma Interactions. IEEE Transactions on Plasma Science, 2014, 42, 1335-1338.	1.3	0
98	Application of plasma optics to precision control of laser energy deposition in laser-fusion experiments. , 2021, , .		0
99	Stopping-power enhancement from discrete particle-wake correlations in high-energy-density plasmas. Physical Review E, 2021, 104, 035203.	2.1	0
100	Magnetized ICF Implosions: Scaling of Temperature and Yield Enhancement. , 2022, , .		0
101	Modeling High-Yield Magnetized Implosions on the National Ignition Facility. , 2022, , .		0