

# Damien G Hicks

## List of Publications by Year in descending order

Source: <https://exaly.com/author-pdf/1591923/publications.pdf>

Version: 2024-02-01

154  
papers

8,814  
citations

25014

57  
h-index

43868

91  
g-index

163  
all docs

163  
docs citations

163  
times ranked

4093  
citing authors

#	ARTICLE	IF	CITATIONS
1	11 Tera-OPs/s photonic convolutional accelerator and deep optical neural network based on an integrated Kerr soliton crystal microcomb. , 2022, , .		1
2	Alpha blocking and $1/f^2$ spectral scaling in resting EEG can be accounted for by a sum of damped alpha band oscillatory processes. PLoS Computational Biology, 2022, 18, e1010012.	1.5	7
3	Optical Neuromorphic Processor at 11 TeraOPs/s based on Kerr Soliton Crystal Micro-combs. , 2022, , .		1
4	Analysis of extracellular spike waveforms and associated receptive fields of neurons in cat primary visual cortex. Journal of Physiology, 2021, 599, 2211-2238.	1.3	25
5	Melting of magnesium oxide up to two terapascals using double-shock compression. Physical Review B, 2021, 104, .	1.1	11
6	11 TOPS photonic convolutional accelerator for optical neural networks. Nature, 2021, 589, 44-51.	13.7	550
7	Optical neuromorphic processing based on Kerr microcombs. , 2021, , .		0
8	Spectral PCA for MANOVA and data over binary trees. Journal of Multivariate Analysis, 2021, , 104905.	0.5	1
9	Photonic convolutional accelerator and neural network in the Tera-OPs regime based on soliton crystal Kerr microcombs. , 2021, , .		1
10	Tera-OP/s Neuromorphic Processing with Kerr Microcombs. , 2021, , .		1
11	Photonic Perceptron Based on a Kerr Microcomb for High-Speed, Scalable, Optical Neural Networks. Laser and Photonics Reviews, 2020, 14, 2000070.	4.4	84
12	Inferring a simple mechanism for alpha-blocking by fitting a neural population model to EEG spectra. PLoS Computational Biology, 2020, 16, e1007662.	1.5	11
13	Inferring a simple mechanism for alpha-blocking by fitting a neural population model to EEG spectra. , 2020, 16, e1007662.		0
14	Inferring a simple mechanism for alpha-blocking by fitting a neural population model to EEG spectra. , 2020, 16, e1007662.		0
15	Inferring a simple mechanism for alpha-blocking by fitting a neural population model to EEG spectra. , 2020, 16, e1007662.		0
16	Inferring a simple mechanism for alpha-blocking by fitting a neural population model to EEG spectra. , 2020, 16, e1007662.		0
17	Parameter estimation and identifiability in a neural population model for electro-cortical activity. PLoS Computational Biology, 2019, 15, e1006694.	1.5	24
18	Measurement of the sound speed in dense fluid deuterium along the cryogenic liquid Hugoniot. Physics of Plasmas, 2019, 26, .	0.7	10

#	ARTICLE	IF	CITATIONS
19	Maps of variability in cell lineage trees. PLoS Computational Biology, 2019, 15, e1006745.	1.5	9
20	Differences between morphological and electrophysiological retinal ganglion cell classes. , 2018, 2018, 3056-3059.		2
21	Applications and results of X-ray spectroscopy in implosion experiments on the National Ignition Facility. AIP Conference Proceedings, 2017, , .	0.3	3
22	The role of hot spot mix in the low-foot and high-foot implosions on the NIF. Physics of Plasmas, 2017, 24, .	0.7	49
23	Ghost fringe removal techniques using Lissajous data presentation. AIP Conference Proceedings, 2017, , .	0.3	1
24	Hydrodynamic instabilities and mix studies on NIF: predictions, observations, and a path forward. Journal of Physics: Conference Series, 2016, 688, 012090.	0.3	3
25	Capsule Ablator Inflight Performance Measurements Via Streaked Radiography Of ICF Implosions On The NIF*. Journal of Physics: Conference Series, 2016, 688, 012014.	0.3	9
26	Ghost fringe removal techniques using Lissajous data presentation. Review of Scientific Instruments, 2016, 87, 033106.	0.6	7
27	A direct-drive exploding-pusher implosion as the first step in development of a monoenergetic charged-particle backlighting platform at the National Ignition Facility. High Energy Density Physics, 2016, 18, 38-44.	0.4	9
28	Analysis of laser shock experiments on precompressed samples using a quartz reference and application to warm dense hydrogen and helium. Journal of Applied Physics, 2015, 118, .	1.1	69
29	In-flight observations of low-mode $\langle i \rangle R$ asymmetries in NIF implosions. Physics of Plasmas, 2015, 22, .	0.7	24
30	Imaging Shock Waves in Diamond with Both High Temporal and Spatial Resolution at an XFEL. Scientific Reports, 2015, 5, 11089.	1.6	88
31	Investigation of ion kinetic effects in direct-drive exploding-pusher implosions at the NIF. Physics of Plasmas, 2014, 21, 122712.	0.7	33
32	The effect of shock dynamics on compressibility of ignition-scale National Ignition Facility implosions. Physics of Plasmas, 2014, 21, .	0.7	20
33	Progress towards ignition on the National Ignition Facility. Physics of Plasmas, 2013, 20, .	0.7	259
34	Solid Iron Compressed Up to 560 GPa. Physical Review Letters, 2013, 111, 065501.	2.9	137
35	Hot-Spot Mix in Ignition-Scale Inertial Confinement Fusion Targets. Physical Review Letters, 2013, 111, 045001.	2.9	135
36	Onset of Hydrodynamic Mix in High-Velocity, Highly Compressed Inertial Confinement Fusion Implosions. Physical Review Letters, 2013, 111, 085004.	2.9	215

#	ARTICLE	IF	CITATIONS
37	Hohlraum energetics scaling to 520 TW on the National Ignition Facility. <i>Physics of Plasmas</i> , 2013, 20, .	0.7	59
38	Performance of High-Convergence, Layered DT Implosions with Extended-Duration Pulses at the National Ignition Facility. <i>Physical Review Letters</i> , 2013, 111, 215001.	2.9	47
39	A platform for x-ray absorption fine structure study of dynamically compressed materials above 1 Mbar. <i>Review of Scientific Instruments</i> , 2013, 84, 123105.	0.6	25
40	X-ray driven implosions at ignition relevant velocities on the National Ignition Facility. <i>Physics of Plasmas</i> , 2013, 20, .	0.7	54
41	Nuclear imaging of the fuel assembly in ignition experiments. <i>Physics of Plasmas</i> , 2013, 20, 056320.	0.7	65
42	Radiative shocks produced from spherical cryogenic implosions at the National Ignition Facility. <i>Physics of Plasmas</i> , 2013, 20, 056315.	0.7	17
43	Observation of strong electromagnetic fields around laser-entrance holes of ignition-scale hohlraums in inertial-confinement fusion experiments at the National Ignition Facility. <i>New Journal of Physics</i> , 2013, 15, 025040.	1.2	14
44	NIF Ignition Campaign Target Performance and Requirements: Status May 2012. <i>Fusion Science and Technology</i> , 2013, 63, 67-75.	0.6	28
45	Ignition tuning for the National Ignition Campaign. <i>EPJ Web of Conferences</i> , 2013, 59, 01003.	0.1	1
46	Hohlraum designs for high velocity implosions on NIF. <i>EPJ Web of Conferences</i> , 2013, 59, 02002.	0.1	2
47	NIF capsule performance modeling. <i>EPJ Web of Conferences</i> , 2013, 59, 02011.	0.1	0
48	Shock timing on the National Ignition Facility: First experiments. <i>EPJ Web of Conferences</i> , 2013, 59, 02004.	0.1	1
49	Shock timing on the National Ignition Facility: The first precision tuning series. <i>EPJ Web of Conferences</i> , 2013, 59, 02005.	0.1	1
50	Time evolution of filamentation and self-generated fields in the coronae of directly driven inertial-confinement fusion capsules. <i>Physics of Plasmas</i> , 2012, 19, .	0.7	38
51	Cryogenic thermonuclear fuel implosions on the National Ignition Facility. <i>Physics of Plasmas</i> , 2012, 19, .	0.7	95
52	Diagnosing implosions at the national ignition facility with X-ray spectroscopy. <i>AIP Conference Proceedings</i> , 2012, , .	0.3	3
53	Charged-particle spectroscopy for diagnosing shock IR and strength in NIF implosions. <i>Review of Scientific Instruments</i> , 2012, 83, 10D901.	0.6	38
54	Collection of solid and gaseous samples to diagnose inertial confinement fusion implosions. <i>Review of Scientific Instruments</i> , 2012, 83, 023505.	0.6	6

#	ARTICLE	IF	CITATIONS
55	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.	0.6	38
56	Assembly of High-Areal-Density Deuterium-Tritium Fuel from Indirectly Driven Cryogenic Implosions. Physical Review Letters, 2012, 108, 215005.	2.9	57
57	Precision equation-of-state measurements on National Ignition Facility ablator materials from 1 to 12 Mbar using laser-driven shock waves. Journal of Applied Physics, 2012, 111, .	1.1	40
58	Equation of state of CH <sub>1.36</sub> : First-principles molecular dynamics simulations and shock-and-release wave speed measurements. Physical Review B, 2012, 86, .	1.1	57
59	Powder diffraction from solids in the terapascal regime. Review of Scientific Instruments, 2012, 83, 113904.	0.6	84
60	Instruments, 2012, 83, 10D310.	0.6	8
61	Total energy loss to fast ablator-ions and target capacitance of direct-drive implosions on OMEGA. Applied Physics Letters, 2012, 101, 114102.	1.5	10
62	Phase Transformations and Metallization of Magnesium Oxide at High Pressure and Temperature. Science, 2012, 338, 1330-1333.	6.0	156
63	Implosion dynamics measurements at the National Ignition Facility. Physics of Plasmas, 2012, 19, .	0.7	125
64	High performance imaging streak camera for the National Ignition Facility. Review of Scientific Instruments, 2012, 83, 125105.	0.6	40
65	MASS-RADIUS RELATIONSHIPS FOR EXOPLANETS. Astrophysical Journal, 2012, 744, 59.	1.6	134
66	Shock timing experiments on the National Ignition Facility: Initial results and comparison with simulation. Physics of Plasmas, 2012, 19, .	0.7	115
67	Self-consistent measurement of the equation of state of liquid deuterium. High Energy Density Physics, 2012, 8, 76-80.	0.4	16
68	Shock vaporization of silica and the thermodynamics of planetary impact events. Journal of Geophysical Research, 2012, 117, .	3.3	91
69	A high-resolution integrated model of the National Ignition Campaign cryogenic layered experiments. Physics of Plasmas, 2012, 19, .	0.7	108
70	Progress in the indirect-drive National Ignition Campaign. Plasma Physics and Controlled Fusion, 2012, 54, 124026.	0.9	38
71	Evidence for a Phase Transition in Silicate Melt at Extreme Pressure and Temperature Conditions. Physical Review Letters, 2012, 108, 065701.	2.9	61
72	Precision Shock Tuning on the National Ignition Facility. Physical Review Letters, 2012, 108, 215004.	2.9	83

#	ARTICLE	IF	CITATIONS
73	Hot-spot mix in ignition-scale implosions on the NIF. <i>Physics of Plasmas</i> , 2012, 19, .	0.7	107
74	The velocity campaign for ignition on NIF. <i>Physics of Plasmas</i> , 2012, 19, .	0.7	76
75	First implosion experiments with cryogenic thermonuclear fuel on the National Ignition Facility. <i>Plasma Physics and Controlled Fusion</i> , 2012, 54, 045013.	0.9	41
76	Velocity and Timing of Multiple Spherically Converging Shock Waves in Liquid Deuterium. <i>Physical Review Letters</i> , 2011, 106, 195005.	2.9	54
77	Demonstration of Ignition Radiation Temperatures in Indirect-Drive Inertial Confinement Fusion Hohlraums. <i>Physical Review Letters</i> , 2011, 106, 085004.	2.9	96
78	Capsule implosion optimization during the indirect-drive National Ignition Campaign. <i>Physics of Plasmas</i> , 2011, 18, .	0.7	131
79	Progress towards ignition on the National Ignition Facility. <i>Nuclear Fusion</i> , 2011, 51, 094024.	1.6	35
80	Refraction-enhanced x-ray radiography for density profile measurements at CH/Be interface. <i>Journal of Instrumentation</i> , 2011, 6, P09004-P09004.	0.5	30
81	Refractive index of lithium fluoride ramp compressed to 800 GPa. <i>Journal of Applied Physics</i> , 2011, 109, .	1.1	58
82	The direct measurement of ablation pressure driven by 351-nm laser radiation. <i>Journal of Applied Physics</i> , 2011, 110, .	1.1	43
83	Multiple spherically converging shock waves in liquid deuterium. <i>Physics of Plasmas</i> , 2011, 18, 092706.	0.7	34
84	Strength effects in diamond under shock compression from 0.1 to 1 TPa. <i>Physical Review B</i> , 2010, 81, .	1.1	87
85	Melting temperature of diamond at ultrahigh pressure. <i>Nature Physics</i> , 2010, 6, 40-43.	6.5	210
86	Convergent ablator performance measurements. <i>Physics of Plasmas</i> , 2010, 17, .	0.7	80
87	Streaked radiography measurements of convergent ablator performance (invited). <i>Review of Scientific Instruments</i> , 2010, 81, 10E304.	0.6	27
88	Capsule performance optimization in the National Ignition Campaign. <i>Physics of Plasmas</i> , 2010, 17, .	0.7	51
89	High-precision measurements of the equation of state of hydrocarbons at $10^{10}$ Mbar using laser-driven shock waves. <i>Physics of Plasmas</i> , 2010, 17, .	0.7	119
90	Insulator-to-Conducting Transition in Dense Fluid Helium. <i>Physical Review Letters</i> , 2010, 104, 184503.	2.9	93

#	ARTICLE	IF	CITATIONS
91	Proton radiography of a shock-compressed target. <i>Physical Review E</i> , 2010, 82, 016407.	0.8	23
92	Laser-driven single shock compression of fluid deuterium from 45 to 220 GPa. <i>Physical Review B</i> , 2009, 79, .	1.1	138
93	Demonstration of the shock-timing technique for ignition targets on the National Ignition Facility. <i>Physics of Plasmas</i> , 2009, 16, .	0.7	82
94	Diamond spheres for inertial confinement fusion. <i>Nuclear Fusion</i> , 2009, 49, 112001.	1.6	94
95	Shock Experiments on Pre-Compressed Fluid Helium. , 2009, , .		5
96	Diamond at 800ÅGPa. <i>Physical Review Letters</i> , 2009, 102, 075503.	2.9	155
97	TOWN HALL MEETINGâ€”SCCM 2009. , 2009, , .		1
98	Modeling of laser-driven proton radiography of dense matter. <i>High Energy Density Physics</i> , 2008, 4, 26-40.	0.4	25
99	MEASUREMENTS OF THE RELEASE OF ALPHA QUARTZ: A NEW STANDARD FOR IMPEDANCE-MATCHING EXPERIMENTS. <i>AIP Conference Proceedings</i> , 2008, , .	0.3	4
100	High-precision measurements of the diamond Hugoniot in and above the melt region. <i>Physical Review B</i> , 2008, 78, .	1.1	82
101	Design of a streaked radiography instrument for ICF ablator tuning measurements. <i>Review of Scientific Instruments</i> , 2008, 79, 10E913.	0.6	3
102	Hugoniot Data for Helium in the Ionization Regime. <i>Physical Review Letters</i> , 2008, 100, 124503.	2.9	103
103	Shock formation and the ideal shape of ramp compression waves. <i>Physical Review E</i> , 2008, 78, 066115.	0.8	39
104	Ultrafast Dynamic Compression Technique to Study the Kinetics of Phase Transformations in Bismuth. <i>Physical Review Letters</i> , 2008, 101, 065701.	2.9	57
105	Influence and measurement of mass ablation in ICF implosions. <i>Journal of Physics: Conference Series</i> , 2008, 112, 022003.	0.3	15
106	Experimental studies of ICF indirect-drive Be and high density C candidate ablaters. <i>Journal of Physics: Conference Series</i> , 2008, 112, 022004.	0.3	13
107	Quasi-isentropic material property studies at extreme pressures: from omega to NIF. <i>Journal of Physics: Conference Series</i> , 2008, 112, 042024.	0.3	11
108	Streaked optical pyrometer system for laser-driven shock-wave experiments on OMEGA. <i>Review of Scientific Instruments</i> , 2007, 78, 034903.	0.6	143

#	ARTICLE	IF	CITATIONS
109	The first target experiments on the National Ignition Facility. <i>European Physical Journal D</i> , 2007, 44, 273-281.	0.6	11
110	Density Measurements of Shock Compressed Matter Using Short Pulse Laser Diagnostics. <i>Astrophysics and Space Science</i> , 2007, 307, 257-261.	0.5	1
111	Density Measurements of Shock Compressed Matter Using Short Pulse Laser Diagnostics. , 2007, , 257-261.		0
112	Dissociation of Liquid Silica at High Pressures and Temperatures. <i>Physical Review Letters</i> , 2006, 97, 025502.	2.9	158
113	Laser-driven shock waves for the study of extreme matter states. <i>Plasma Physics and Controlled Fusion</i> , 2006, 48, B347-B358.	0.9	38
114	Novel diagnostic of low-Z shock compressed material. <i>High Energy Density Physics</i> , 2006, 2, 1-6.	0.4	9
115	Laser-driven shock experiments on precompressed water: Implications for "giant planets. <i>Journal of Chemical Physics</i> , 2006, 125, 014701.	1.2	77
116	Proton Radiography of a Laser-Driven Implosion. <i>Physical Review Letters</i> , 2006, 97, 045001.	2.9	146
117	Shock-timing experiments using double-pulse laser irradiation. <i>Physics of Plasmas</i> , 2006, 13, 056303.	0.7	31
118	The first experiments on the national ignition facility. <i>European Physical Journal Special Topics</i> , 2006, 133, 43-45.	0.2	1
119	Novel Diagnostic of Shock Fronts in Low-Z Dense Plasmas. <i>Astrophysics and Space Science</i> , 2005, 298, 313-316.	0.5	1
120	Imaging VISAR diagnostic for the National Ignition Facility (NIF). , 2005, , .		14
121	Shock compression of quartz in the high-pressure fluid regime. <i>Physics of Plasmas</i> , 2005, 12, 082702.	0.7	89
122	Progress in the study of warm dense matter. <i>Plasma Physics and Controlled Fusion</i> , 2005, 47, B441-B449.	0.9	120
123	Systematic uncertainties in shock-wave impedance-match analysis and the high-pressure equation of state of Al. <i>Journal of Applied Physics</i> , 2005, 98, 113529.	1.1	75
124	Properties of fluid deuterium under double-shock compression to several Mbar. <i>Physics of Plasmas</i> , 2004, 11, L49-L52.	0.7	58
125	Proton radiography as an electromagnetic field and density perturbation diagnostic (invited). <i>Review of Scientific Instruments</i> , 2004, 75, 3531-3536.	0.6	159
126	Shock Compressing Diamond to a Conducting Fluid. <i>Physical Review Letters</i> , 2004, 93, 195506.	2.9	81



#	ARTICLE	IF	CITATIONS
127	Multi-MeV Proton Source Investigations in Ultraintense Laser-Foil Interactions. <i>Physical Review Letters</i> , 2004, 92, 055003.	2.9	269
128	High pressures generated by laser driven shocks: applications to planetary physics. <i>Nuclear Fusion</i> , 2004, 44, S208-S214.	1.6	30
129	Line-imaging velocimeter for shock diagnostics at the OMEGA laser facility. <i>Review of Scientific Instruments</i> , 2004, 75, 4916-4929.	0.6	394
130	Electronic conduction in shock-compressed water. <i>Physics of Plasmas</i> , 2004, 11, L41-L44.	0.7	96
131	Coupling static and dynamic compressions: first measurements in dense hydrogen. <i>High Pressure Research</i> , 2004, 24, 25-31.	0.4	96
132	Shock-Induced Transformation of Al <sub>2</sub> O <sub>3</sub> and LiF into Semiconducting Liquids. <i>Physical Review Letters</i> , 2003, 91, 035502.	2.9	97
133	Spectrometry of charged particles from inertial-confinement-fusion plasmas. <i>Review of Scientific Instruments</i> , 2003, 74, 975-995.	0.6	214
134	Proton Moiré fringes for diagnosing electromagnetic fields in opaque materials and plasmas. <i>Applied Physics Letters</i> , 2003, 82, 3188-3190.	1.5	15
135	First observation of Moiré fringes in a proton beam generated by a 100 fs laser pulse. <i>Review of Scientific Instruments</i> , 2003, 74, 1917-1920.	0.6	6
136	Absolute measurements of neutron yields from DD and DT implosions at the OMEGA laser facility using CR-39 track detectors. <i>Review of Scientific Instruments</i> , 2002, 73, 2597-2605.	0.6	75
137	Using secondary-proton spectra to study the compression and symmetry of deuterium-filled capsules at OMEGA. <i>Physics of Plasmas</i> , 2002, 9, 2725-2737.	0.7	48
138	Laser-produced protons and their application as a particle probe. <i>Laser and Particle Beams</i> , 2002, 20, 641-641.	0.4	6
139	Laser-produced protons and their application as a particle probe. <i>Laser and Particle Beams</i> , 2002, 20, 269-275.	0.4	45
140	Calculations and measurements of x-ray Thomson scattering spectra in warm dense matter. <i>AIP Conference Proceedings</i> , 2002, , .	0.3	0
141	Taking Thin Diamonds to Their Limit: Coupling Static-Compression and Laser-Shock Techniques to Generate Dense Water. <i>AIP Conference Proceedings</i> , 2002, , .	0.3	5
142	OMEGA ICF experiments and preparation for direct drive ignition on NIF. <i>Nuclear Fusion</i> , 2001, 41, 1413-1422.	1.6	45
143	A neutron spectrometer for precise measurements of DT neutrons from 10 to 18 MeV at OMEGA and the National Ignition Facility. <i>Review of Scientific Instruments</i> , 2001, 72, 854-858.	0.6	50
144	Nuclear diagnostics for the National Ignition Facility (invited). <i>Review of Scientific Instruments</i> , 2001, 72, 773-779.	0.6	39

#	ARTICLE	IF	CITATIONS
145	Optimal foil shape for neutron time-of-flight measurements using elastic recoils. Review of Scientific Instruments, 2001, 72, 859-862.	0.6	0
146	Observations of fast protons above 1 MeV produced in direct-drive laser-fusion experiments. Physics of Plasmas, 2001, 8, 606-610.	0.7	28
147	Study of direct-drive, deuterium-tritium gas-filled plastic capsule implosions using nuclear diagnostics at OMEGA. Physics of Plasmas, 2001, 8, 4902-4913.	0.7	43
148	OMEGA experiments and preparation for moderate-gain direct-drive experiments on NIF. Comptes Rendus Physique, 2000, 1, 681-691.	0.1	1
149	D-3He proton spectra for diagnosing shell IR and fuel Ti of imploded capsules at OMEGA. Physics of Plasmas, 2000, 7, 2578-2584.	0.7	54
150	Direct-drive high-convergence-ratio implosion studies on the OMEGA laser system. Physics of Plasmas, 2000, 7, 2108-2113.	0.7	23
151	Charged-particle acceleration and energy loss in laser-produced plasmas. Physics of Plasmas, 2000, 7, 5106-5117.	0.7	59
152	Charged-coupled devices for charged-particle spectroscopy on OMEGA and NOVA. Review of Scientific Instruments, 1997, 68, 593-595.	0.6	2
153	Design of an electronic charged particle spectrometer to measure $\alpha$ on inertial fusion experiments. Review of Scientific Instruments, 1997, 68, 589-592.	0.6	20
154	A study of CR-39 track response to charged particles from NOVA implosions. Review of Scientific Instruments, 1997, 68, 596-598.	0.6	7