Peter Hakel

List of Publications by Year
in descending order

63 papers	1,170 citations	394421 19 h-index	395702 33 g-index
66 all docs	66 docs citations	66 times ranked	1155 citing authors

#	Article	IF	Citations
1	A NEW GENERATION OF LOS ALAMOS OPACITY TABLES. Astrophysical Journal, 2016, 817, 116.	4.5	153
2	The Los Alamos suite of relativistic atomic physics codes. Journal of Physics B: Atomic, Molecular and Optical Physics, 2015, 48, 144014.	1.5	122
3	The new Los Alamos opacity code ATOMIC. Journal of Quantitative Spectroscopy and Radiative Transfer, 2006, 99, 265-271.	2.3	94
4	K-shell spectra from hot dense aluminum layers buried in carbon and heated by ultrashort laser pulses. Journal of Quantitative Spectroscopy and Radiative Transfer, 2003, 81, 133-146.	2.3	54
5	Relativistic opacities for astrophysical applications. High Energy Density Physics, 2015, 16, 53-59.	1.5	52
6	Light element opacities from ATOMIC. High Energy Density Physics, 2013, 9, 369-374.	1.5	41
7	Los Alamos Opacities: Transition from LEDCOP to ATOMIC. AIP Conference Proceedings, 2004, , .	0.4	37
8	X-ray line polarization of He-like Si satellite spectra in plasmas driven by high-intensity ultrashort pulsed lasers. Physical Review E, 2004, 69, 056405.	2.1	36
9	Light element opacities of astrophysical interest from ATOMIC. High Energy Density Physics, 2015, 14, 33-37.	1.5	31
10	Cascade effects on the polarization of He-like Fe<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:mn>1</mml:mn><mml:mi>s</mml:mi><mml:mn>2</mml:mn><mml:mi>l</mml:mi><mml:mtext>â^ line emission. Physical Review A, 2007, 76, .	2.5	30
11	Demonstration of aluminum K -shell line shifts in isochorically heated targets driven by ultrashort laser pulses. Europhysics Letters, 2002, 60, 861-867.	2.0	28
12	Implosion dynamics and x-ray generation in small-diameter wire-array<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mi>Z</mml:mi></mml:math>pinches. Physical Review E, 2009, 79, 056404.	2.1	28
13	Observation of early shell-dopant mix in OMEGA direct-drive implosions and comparisons with radiation-hydrodynamic simulations. Physics of Plasmas, 2014, 21, .	1.9	25
14	Study of the Internal Structure and Small-Scale Instabilities in the Dense<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mi>Z</mml:mi></mml:math>Pinch. Physical Review Letters, 2011, 107, 165002.	7.8	22
15	Atomic structure considerations for the low-temperature opacity of Sn. High Energy Density Physics, 2017, 23, 133-137.	1.5	22
16	Systematic Fuel Cavity Asymmetries in Directly Driven Inertial Confinement Fusion Implosions. Physical Review Letters, 2017, 118, 135001.	7.8	22
17	Energy transport and isochoric heating of a low-Z, reduced-mass target irradiated with a high intensity laser pulse. Physics of Plasmas, 2011, 18, .	1.9	21
18	Development of a polar direct-drive platform for studying inertial confinement fusion implosion mix on the National Ignition Facility. Physics of Plasmas, 2013, 20, .	1.9	21

#	Article	IF	Citations
19	Observation of interspecies ion separation in inertial-confinement-fusion implosions. Europhysics Letters, 2016, 115, 65001.	2.0	21
20	CHEMEOS: A New Chemical-Picture-Based Model for Plasma Equation-of-State Calculations. AIP Conference Proceedings, 2004, , .	0.4	18
21	Laboratory measurements of resistivity in warm dense plasmas relevant to the microphysics of brown dwarfs. Nature Communications, 2015, 6, 8742.	12.8	17
22	Generation of disc-like plasma from laser-matter interaction in the presence of a strong external magnetic field. Plasma Physics and Controlled Fusion, 2017, 59, 085008.	2.1	17
23	An equation of state for partially ionized plasmas: The Coulomb contribution to the free energy. High Energy Density Physics, 2015, 16, 36-40.	1.5	15
24	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
25	Seismic inversion of the solar entropy. Astronomy and Astrophysics, 2017, 607, A58.	5.1	15
26	X-ray spectroscopic diagnostics and modeling of polar-drive implosion experiments on the National Ignition Facility. Physics of Plasmas, 2014, 21, .	1.9	13
27	Compressed shell conditions extracted from spectroscopic analysis of Ti K-shell absorption spectra with evaluation of line self-emission. Physics of Plasmas, 2014, 21, .	1.9	13
28	State-resolved Photodissociation and Radiative Association Data for the Molecular Hydrogen Ion. Astrophysical Journal, 2017, 851, 64.	4.5	13
29	Designing symmetric polar direct drive implosions on the Omega laser facility. Physics of Plasmas, 2014, 21, .	1.9	12
30	Laser irradiance scaling in polar direct drive implosions on the National Ignition Facility. Physics of Plasmas, 2015, 22, .	1.9	11
31	X-ray line polarization spectroscopy of Li-like Si satellite line spectra. Journal of Physics B: Atomic, Molecular and Optical Physics, 2009, 42, 085701.	1.5	10
32	FESTR: Finite-Element Spectral Transfer of Radiation spectroscopic modeling and analysis code. Computer Physics Communications, 2016, 207, 415-425.	7.5	10
33	Inversions of the Ledoux discriminant: a closer look at the tachocline. Monthly Notices of the Royal Astronomical Society: Letters, 2017, 472, L70-L74.	3.3	10
34	Experiments and simulations of isochorically heated warm dense carbon foam at the Texas Petawatt Laser. Matter and Radiation at Extremes, 2021, 6, .	3.9	10
35	Spectral line strength binning method for opacity calculations. High Energy Density Physics, 2007, 3, 309-313.	1.5	9
36	Laser-driven production of the antihydrogen molecular ion. Physical Review A, 2019, 100, .	2.5	9

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37	X-ray line emissions from tamped thin aluminum targets driven by subpicosecond-duration laser pulses. High Energy Density Physics, 2009, 5, 35-43.	1.5	8
38	Measurement of the Ionization State and Electron Temperature of Plasma during the Ablation Stage of a Wire-Array Z Pinch Using Absorption Spectroscopy. Physical Review Letters, 2011, 106, 225005.	7.8	8
39	The derivation of kinetic equations for anisotropic plasmas from the impact approximation. Journal of Physics B: Atomic, Molecular and Optical Physics, 2011, 44, 215701.	1.5	8
40	Theoretical modeling and analysis of the emission spectra of a ChemCam standard: Basalt BIR-1A. Spectrochimica Acta, Part B: Atomic Spectroscopy, 2015, 110, 20-30.	2.9	8
41	Observation of extremely strong shock waves in solids launched by petawatt laser heating. Physics of Plasmas, 2017, 24, .	1.9	8
42	Precision X-ray spectroscopy of intense laser-plasma interactions. High Energy Density Physics, 2011, 7, 105-109.	1.5	7
43	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
44	A temperature profile diagnostic for radiation waves on OMEGA-60. High Energy Density Physics, 2021, 39, 100939.	1.5	6
45	Multiple-view spectrally resolved x-ray imaging observations of polar-direct-drive implosions on OMEGA. Physics of Plasmas, 2014, 21, 122704.	1.9	5
46	Effect of reentrant cone geometry on energy transport in intense laser-plasma interactions. Physical Review E, 2009, 80, 045401.	2.1	4
47	New Los Alamos Opacity Calculations. Atoms, 2018, 6, 32.	1.6	4
48	X-Ray Spectroscopy of Dense Plasmas Produced by Isochoric Heating with Ultrashort Laser Pulses. AIP Conference Proceedings, 2004, , .	0.4	3
49	Development of a polar direct drive platform for mix and burn experiments on the National Ignition Facility. Journal of Physics: Conference Series, 2016, 688, 012075.	0.4	3
50	Astrophysical and inertial-confinement-fusion plasmas generated with millijoule femtosecond laser pulses. Journal of Modern Optics, 2002, 49, 2615-2628.	1.3	2
51	X-ray absorption spectroscopy for wire-array Z-pinches at the non-radiative stage. High Energy Density Physics, 2011, 7, 383-390.	1.5	2
52	Radiative cooling of two-component wire-array Z-pinch plasma. Physics of Plasmas, 2014, 21, .	1.9	2
53	A new generation of Los Alamos opacity tables. AIP Conference Proceedings, 2017, , .	0.4	2
54	Opacity effects on the polarization of line emissions inÂastrophysical plasmas. Astrophysics and Space Science, 2009, 322, 113-116.	1.4	1

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55	Polarization properties of the Ly-Î± line from sulphur plasmas driven by high-intensity, ultrashort-duration laser pulses1This article is part of a Special Issue on the 10th International Colloquium on Atomic Spectra and Oscillator Strengths for Astrophysical and Laboratory Plasmas.. Canadian Journal of Physics, 2011, 89, 509-511.	1.1	1
56	Kinetic studies of ICF implosions. Journal of Physics: Conference Series, 2016, 717, 012027.	0.4	1
57	FESTR: Finite-Element Spectral Transfer of Radiation spectroscopic modeling and analysis code (New) Tj ETQq1 1 0.784314 rgBT /Ove	7.5	1
58	Sodium tracer measurements of an expanded dense aluminum plasma from e-beam isochoric heating. Physics of Plasmas, 2021, 28, .	1.9	1
59	Hot solid-state aluminum plasmas, positrons, and neutrons generated with the garching laser facility ATLAS. AIP Conference Proceedings, 2002, , .	0.4	0
60	Polarization Spectroscopy Modeling With The Inclusion Of Radiation Transport. , 2009, , .		0
61	Light element opacities of astrophysical interest from ATOMIC. , 2013, , .		0
62	Kinetic equations for cylindrically symmetric plasmas including atomic coherence and Coulomb potential effects. Journal of Physics B: Atomic, Molecular and Optical Physics, 2017, 50, 095701.	1.5	0
63	Opacity effects on the polarization of line emissions inÂastrophysical plasmas. , 2008, , 113-116.		0