

D P Higginson

List of Publications by Year in descending order

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Version: 2024-02-01

62
papers

1,372
citations

361413

20
h-index

361022

35
g-index

62
all docs

62
docs citations

62
times ranked

1339
citing authors

#	ARTICLE	IF	CITATIONS
1	Laboratory formation of a scaled protostellar jet by coaligned poloidal magnetic field. <i>Science</i> , 2014, 346, 325-328.	12.6	173
2	Focusing of short-pulse high-intensity laser-accelerated proton beams. <i>Nature Physics</i> , 2012, 8, 139-142.	16.7	110
3	Bremsstrahlung and $K\alpha$ fluorescence measurements for inferring conversion efficiencies into fast ignition relevant hot electrons. <i>Physics of Plasmas</i> , 2009, 16, .	1.9	80
4	Production of neutrons up to 18 MeV in high-intensity, short-pulse laser matter interactions. <i>Physics of Plasmas</i> , 2011, 18, .	1.9	80
5	Laser generated neutron source for neutron resonance spectroscopy. <i>Physics of Plasmas</i> , 2010, 17, .	1.9	67
6	Hot Electron Temperature and Coupling Efficiency Scaling with Prepulse for Cone-Guided Fast Ignition. <i>Physical Review Letters</i> , 2012, 108, 115004.	7.8	60
7	Electron acceleration in laboratory-produced turbulent collisionless shocks. <i>Nature Physics</i> , 2020, 16, 916-920.	16.7	60
8	Transition from Collisional to Collisionless Regimes in Interpenetrating Plasma Flows on the National Ignition Facility. <i>Physical Review Letters</i> , 2017, 118, 185003.	7.8	49
9	Magnetically Guided Fast Electrons in Cylindrically Compressed Matter. <i>Physical Review Letters</i> , 2011, 107, 065004.	7.8	45
10	Dynamics of Relativistic Laser-Plasma Interaction on Solid Targets. <i>Physical Review Letters</i> , 2012, 109, 145006.	7.8	40
11	Laboratory unraveling of matter accretion in young stars. <i>Science Advances</i> , 2017, 3, e1700982.	10.3	35
12	Sustained Neutron Production from a Sheared-Flow Stabilized Z Pinch. <i>Physical Review Letters</i> , 2019, 122, 135001.	7.8	35
13	Proton radiography of laser-driven imploding target in cylindrical geometry. <i>Physics of Plasmas</i> , 2011, 18, 012704.	1.9	30
14	Temporal Narrowing of Neutrons Produced by High-Intensity Short-Pulse Lasers. <i>Physical Review Letters</i> , 2015, 115, 054802.	7.8	30
15	Generation of high-energy (>15 MeV) neutrons using short pulse high intensity lasers. <i>Physics of Plasmas</i> , 2012, 19, 093106.	1.9	29
16	Magnetic field production via the Weibel instability in interpenetrating plasma flows. <i>Physics of Plasmas</i> , 2017, 24, .	1.9	27
17	Measurement of Kinetic-Scale Current Filamentation Dynamics and Associated Magnetic Fields in Interpenetrating Plasmas. <i>Physical Review Letters</i> , 2020, 124, 215001.	7.8	25
18	Fast-electron transport in cylindrically laser-compressed matter. <i>Plasma Physics and Controlled Fusion</i> , 2009, 51, 124035.	2.1	24

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19	Highly Resolved Measurements of a Developing Strong Collisional Plasma Shock. <i>Physical Review Letters</i> , 2018, 120, 095001.	7.8	23
20	A pairwise nuclear fusion algorithm for weighted particle-in-cell plasma simulations. <i>Journal of Computational Physics</i> , 2019, 388, 439-453.	3.8	23
21	Enhancement of Quasistationary Shocks and Heating via Temporal Staging in a Magnetized Laser-Plasma Jet. <i>Physical Review Letters</i> , 2017, 119, 255002.	7.8	18
22	A dual channel X-ray spectrometer for fast ignition research. <i>Journal of Instrumentation</i> , 2010, 5, P07008-P07008.	1.2	16
23	Laser-driven cylindrical compression of targets for fast electron transport study in warm and dense plasmas. <i>Physics of Plasmas</i> , 2011, 18, 043108.	1.9	16
24	A corrected method for Coulomb scattering in arbitrarily weighted particle-in-cell plasma simulations. <i>Journal of Computational Physics</i> , 2020, 413, 109450.	3.8	15
25	A novel platform to study magnetized high-velocity collisionless shocks. <i>High Energy Density Physics</i> , 2015, 17, 190-197.	1.5	14
26	Laboratory disruption of scaled astrophysical outflows by a misaligned magnetic field. <i>Nature Communications</i> , 2021, 12, 762.	12.8	14
27	Characterizing the energy distribution of laser-generated relativistic electrons in cone-wire targets. <i>Physics of Plasmas</i> , 2012, 19, .	1.9	13
28	Experimental evidence for the enhanced and reduced stopping regimes for protons propagating through hot plasmas. <i>Scientific Reports</i> , 2018, 8, 14586.	3.3	13
29	Monochromatic short pulse laser produced ion beam using a compact passive magnetic device. <i>Review of Scientific Instruments</i> , 2014, 85, 043504.	1.3	12
30	Kinetic effects on neutron generation in moderately collisional interpenetrating plasma flows. <i>Physics of Plasmas</i> , 2019, 26, .	1.9	12
31	Single-shot divergence measurements of a laser-generated relativistic electron beam. <i>Physics of Plasmas</i> , 2010, 17, .	1.9	11
32	Generation of energetic (>15 MeV) neutron beams from proton- and deuteron-driven nuclear reactions using short pulse lasers. <i>Plasma Physics and Controlled Fusion</i> , 2013, 55, 105009.	2.1	11
33	Proton stopping power measurements using high intensity short pulse lasers produced proton beams. <i>Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment</i> , 2014, 740, 105-106.	1.6	11
34	A full-angle Monte-Carlo scattering technique including cumulative and single-event Rutherford scattering in plasmas. <i>Journal of Computational Physics</i> , 2017, 349, 589-603.	3.8	11
35	Hybrid particle-in-cell simulations of laser-driven plasma interpenetration, heating, and entrainment. <i>Physics of Plasmas</i> , 2019, 26, 112107.	1.9	11
36	Maximizing neutron yields by scaling hollow diameter of a dense plasma focus anode. <i>Journal of Applied Physics</i> , 2018, 124, 233301.	2.5	10

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37	The response function of Fujifilm BAS-TR imaging plates to laser-accelerated titanium ions. Review of Scientific Instruments, 2019, 90, 083302.	1.3	10
38	Kinetic simulations of sheared flow stabilization in high-temperature Z-pinch plasmas. Physics of Plasmas, 2019, 26, .	1.9	10
39	X-ray spectroscopy evidence for plasma shell formation in experiments modeling accretion columns in young stars. Matter and Radiation at Extremes, 2019, 4, .	3.9	10
40	Proton radiography of cylindrical laser-driven implosions. Plasma Physics and Controlled Fusion, 2011, 53, 032003.	2.1	9
41	Diagnostics of laser-produced plasmas based on the analysis of intensity ratios of He-like ions X-ray emission. Physics of Plasmas, 2016, 23, .	1.9	9
42	Thermonuclear neutron emission from a sheared-flow stabilized Z-pinch. Physics of Plasmas, 2021, 28, .	1.9	8
43	New developments in energy transfer and transport studies in relativistic laser-plasma interactions. Plasma Physics and Controlled Fusion, 2010, 52, 124046.	2.1	7
44	Impact of extended preplasma on energy coupling in kilojoule energy relativistic laser interaction with cone wire targets relevant to fast ignition. New Journal of Physics, 2013, 15, 015020.	2.9	7
45	Carbon ion beam focusing using laser irradiated, heated diamond hemispherical shells. Journal of Physics: Conference Series, 2010, 244, 022053.	0.4	6
46	Experimental study of fast electron propagation in compressed matter. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2011, 653, 176-180.	1.6	6
47	First Experiments and Radiographs on the MegaJoule Neutron Imaging Radiography (MJOLNIR) Dense Plasma Focus. IEEE Transactions on Plasma Science, 2021, 49, 3299-3306.	1.3	6
48	Effect of polarity on beam and plasma target formation in a dense plasma focus. Physics of Plasmas, 2019, 26, 042702.	1.9	5
49	High-contrast laser acceleration of relativistic electrons in solid cone-wire targets. Physical Review E, 2015, 92, 063112.	2.1	4
50	Proton pinhole imaging on the National Ignition Facility. Review of Scientific Instruments, 2016, 87, 11E704.	1.3	4
51	Parameters of supersonic astrophysically-relevant plasma jets collimating via poloidal magnetic field measured by x-ray spectroscopy method. Journal of Physics: Conference Series, 2016, 774, 012114.	0.4	4
52	Hot electron generation and transport using K α emission. Journal of Physics: Conference Series, 2010, 244, 022026.	0.4	3
53	Emission of energetic protons from relativistic intensity laser interaction with a cone-wire target. Physical Review E, 2012, 86, 056405.	2.1	3
54	TNSA-like plasmas collision in an ambient magnetic field as a route to astrophysical collisionless shock observation in a laboratory. High Energy Density Physics, 2015, 17, 183-189.	1.5	2

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55	A Cartesian-diffusion Langevin method for hybrid kinetic-fluid Coulomb scattering in particle-in-cell plasma simulations. Journal of Computational Physics, 2022, 457, 110935.	3.8	2
56	Radiation and hot electron temperature measurements of short-pulselaser driven hohlraums. High Energy Density Physics, 2009, 5, 212-215.	1.5	1
57	X-ray diagnostics of fast electrons propagation in high density plasmas obtained by cylindrical compression. Journal of Physics: Conference Series, 2010, 244, 022027.	0.4	1
58	Neutron resonance spectrometry for temperature measurement during dynamic loading. AIP Conference Proceedings, 2012, , .	0.4	1
59	Kinetic mix at gas-shell interface in inverted corona fusion targets. Physics of Plasmas, 2021, 28, 122702.	1.9	1
60	Divergence of laser-generated hot electrons generated in a cone geometry. Journal of Physics: Conference Series, 2010, 244, 022064.	0.4	0
61	Particle transport and electric fields in a laser-generated focused proton beam. , 2012, , .		0
62	Time of Flight Measurements for Neutrons Produced in Reactions Driven by Laser-Target Interactions at Petawatt level. Physics Procedia, 2015, 77, 29-33.	1.2	0