

Christopher P Ridgers

List of Publications by Year in descending order

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Version: 2024-02-01

57
papers

3,168
citations

236925

25
h-index

155660

55
g-index

58
all docs

58
docs citations

58
times ranked

1813
citing authors

#	ARTICLE	IF	CITATIONS
1	Contemporary particle-in-cell approach to laser-plasma modelling. Plasma Physics and Controlled Fusion, 2015, 57, 113001.	2.1	1,099
2	Dense Electron-Positron Plasmas and Ultraintense γ -rays from Laser-Irradiated Solids. Physical Review Letters, 2012, 108, 165006.	7.8	384
3	Quantum Radiation Reaction in Laser-Induced Electron-Beam Collisions. Physical Review Letters, 2014, 112, 015001.	7.8	153
4	Dense electron-positron plasmas and bursts of gamma-rays from laser-generated quantum electrodynamic plasmas. Physics of Plasmas, 2013, 20, .	1.9	104
5	Laser Absorption in Relativistically Underdense Plasmas by Synchrotron Radiation. Physical Review Letters, 2012, 109, 245006.	7.8	95
6	Strong Radiation-Damping Effects in a Gamma-Ray Source Generated by the Interaction of a High-Intensity Laser with a Wakefield-Accelerated Electron Beam. Physical Review X, 2012, 2, .	8.9	88
7	Automation and control of laser wakefield accelerators using Bayesian optimization. Nature Communications, 2020, 11, 6355.	12.8	78
8	Spin polarization of electrons by ultraintense lasers. Physical Review A, 2017, 96, .	2.5	77
9	Proton deflectometry of a magnetic reconnection geometry. Physics of Plasmas, 2010, 17, .	1.9	65
10	Theory of radiative electron polarization in strong laser fields. Physical Review A, 2018, 98, .	2.5	65
11	Signatures of quantum effects on radiation reaction in laser-induced electron-beam collisions. Journal of Plasma Physics, 2017, 83, .	2.1	55
12	Synchrotron radiation, pair production, and longitudinal electron motion during 10-100 PW laser solid interactions. Physics of Plasmas, 2014, 21, .	1.9	51
13	Fast Advection of Magnetic Fields by Hot Electrons. Physical Review Letters, 2010, 105, 095001.	7.8	48
14	Testing nonlocal models of electron thermal conduction for magnetic and inertial confinement fusion applications. Physics of Plasmas, 2017, 24, .	1.9	48
15	Reaching supercritical field strengths with intense lasers. New Journal of Physics, 2019, 21, 053040.	2.9	48
16	Ultrafast polarization of an electron beam in an intense bichromatic laser field. Physical Review A, 2019, 100, .	2.5	48
17	Electron spin polarization in realistic trajectories around the magnetic node of two counter-propagating, circularly polarized, ultra-intense lasers. Plasma Physics and Controlled Fusion, 2018, 60, 064003.	2.1	44
18	Magnetic Cavitation and the Reemergence of Nonlocal Transport in Laser Plasmas. Physical Review Letters, 2008, 100, 075003.	7.8	43

#	ARTICLE	IF	CITATIONS
19	The effect of nonlinear quantum electrodynamics on relativistic transparency and laser absorption in ultra-relativistic plasmas. <i>New Journal of Physics</i> , 2015, 17, 043051.	2.9	41
20	A comparison of non-local electron transport models for laser-plasmas relevant to inertial confinement fusion. <i>Physics of Plasmas</i> , 2017, 24, .	1.9	41
21	Efficient ion acceleration and dense electron-positron plasma creation in ultra-high intensity laser-solid interactions. <i>New Journal of Physics</i> , 2018, 20, 033014.	2.9	37
22	Extended-magnetohydrodynamics in under-dense plasmas. <i>Physics of Plasmas</i> , 2020, 27, .	1.9	32
23	Gamma-ray emission in near critical density plasmas. <i>Plasma Physics and Controlled Fusion</i> , 2013, 55, 124016.	2.1	31
24	Field Compressing Magnetothermal Instability in Laser Plasmas. <i>Physical Review Letters</i> , 2010, 105, 175001.	7.8	28
25	QED cascade saturation in extreme high fields. <i>Scientific Reports</i> , 2018, 8, 8400.	3.3	27
26	Polarized QED cascades. <i>New Journal of Physics</i> , 2021, 23, 053025.	2.9	27
27	Hot electron production in laser solid interactions with a controlled pre-pulse. <i>Physics of Plasmas</i> , 2014, 21, .	1.9	22
28	Plasma scale-length effects on electron energy spectra in high-irradiance laser plasmas. <i>Physical Review E</i> , 2016, 93, 043201.	2.1	21
29	Kinetic modeling of Nernst effect in magnetized hohlraums. <i>Physical Review E</i> , 2016, 93, 043206.	2.1	21
30	A spectrometer for ultrashort gamma-ray pulses with photon energies greater than 10 MeV. <i>Review of Scientific Instruments</i> , 2018, 89, 113303.	1.3	21
31	Field reconstruction from proton radiography of intense laser driven magnetic reconnection. <i>Physics of Plasmas</i> , 2019, 26, .	1.9	18
32	Super-Gaussian transport theory and the field-generating thermal instability in laser-plasmas. <i>New Journal of Physics</i> , 2013, 15, 025017.	2.9	17
33	Identifying the electron-positron cascade regimes in high-intensity laser-matter interactions. <i>New Journal of Physics</i> , 2019, 21, 013028.	2.9	17
34	Transport in the presence of inverse bremsstrahlung heating and magnetic fields. <i>Physics of Plasmas</i> , 2008, 15, .	1.9	16
35	Superluminal sheath-field expansion and fast-electron-beam divergence measurements in laser-solid interactions. <i>Physical Review E</i> , 2011, 83, 036404.	2.1	14
36	Incorporating kinetic effects on Nernst advection in inertial fusion simulations. <i>Plasma Physics and Controlled Fusion</i> , 2018, 60, 084009.	2.1	14

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37	Optimal parameters for radiation reaction experiments. Plasma Physics and Controlled Fusion, 2019, 61, 074009.	2.1	14
38	Observations of pressure anisotropy effects within semi-collisional magnetized plasma bubbles. Nature Communications, 2021, 12, 334.	12.8	14
39	Modelling the effects of the radiation reaction force on the interaction of thin foils with ultra-intense laser fields. Plasma Physics and Controlled Fusion, 2018, 60, 064006.	2.1	12
40	Relativistic Doppler-boosted \hat{I}^3 -rays in High Fields. Scientific Reports, 2018, 8, 9155.	3.3	12
41	Proton deflectometry of a capacitor coil target along two axes. High Power Laser Science and Engineering, 2020, 8, .	4.6	11
42	Realising single-shot measurements of quantum radiation reaction in high-intensity lasers. New Journal of Physics, 2019, 21, 053030.	2.9	9
43	Highly efficient conversion of laser energy to hard x-rays in high-intensity laser "solid simulations. Physics of Plasmas, 2021, 28, .	1.9	9
44	Magnetothermal instability in laser plasmas including hydrodynamic effects. Physics of Plasmas, 2012, 19, .	1.9	8
45	Time-resolved measurements of fast electron recirculation for relativistically intense femtosecond scale laser-plasma interactions. Scientific Reports, 2018, 8, 4525.	3.3	8
46	The inadequacy of a magnetohydrodynamic approach to the Biermann battery. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2021, 379, 20200017.	3.4	7
47	Photon emission enhancement studies from the interaction of ultraintense laser pulses with shaped targets. Physical Review E, 2022, 105, 025205.	2.1	7
48	Proton radiography in background magnetic fields. Matter and Radiation at Extremes, 2021, 6, .	3.9	5
49	Proton probe measurement of fast advection of magnetic fields by hot electrons. Plasma Physics and Controlled Fusion, 2011, 53, 124026.	2.1	3
50	Vlasov "Fokker "Planck simulations of pre-magnetized ablating planar targets. Physics of Plasmas, 2021, 28, 092708.	1.9	3
51	Effect of laser temporal intensity skew on enhancing pair production in laser "electron-beam collisions. New Journal of Physics, 2021, 23, 095004.	2.9	2
52	Prospects for high gain inertial fusion energy: an introduction to the second edition. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2021, 379, 20200028.	3.4	2
53	Prospects for high gain inertial fusion energy: an introduction to the first special edition. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2020, 378, 20200006.	3.4	1
54	Investigation of QED Effects With Varying $\langle i \rangle Z \langle /i \rangle$ in Thin Foil Targets. IEEE Transactions on Plasma Science, 2021, 49, 573-577.	1.3	1

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55	Formation and evolution of post-solitons following a high intensity laser-plasma interaction with a low-density foam target. Plasma Physics and Controlled Fusion, 2021, 63, 074001.	2.1	1
56	Controlling x-ray flux in hohlraums using burnthrough barriers. Physics of Plasmas, 2020, 27, 103301.	1.9	1
57	Investigation of the performance of mid-Z Hohlraum wall liners for producing x-ray drive. Physics of Plasmas, 2021, 28, 012703.	1.9	0