

Xavier Ribeyre

List of Publications by Year in descending order

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103
papers

2,040
citations

218677

26
h-index

265206

42
g-index

103
all docs

103
docs citations

103
times ranked

1067
citing authors

#	ARTICLE	IF	CITATIONS
1	Shock ignition: an alternative scheme for HiPER. Plasma Physics and Controlled Fusion, 2009, 51, 015013.	2.1	100
2	Physics issues for shock ignition. Nuclear Fusion, 2014, 54, 054009.	3.5	100
3	Gigabar Spherical Shock Generation on the OMEGA Laser. Physical Review Letters, 2015, 114, 045001.	7.8	100
4	Fast ignitor target studies for the HiPER project. Physics of Plasmas, 2008, 15, 056311.	1.9	79
5	Spherical shock-ignition experiments with the 40 + 20-beam configuration on OMEGA. Physics of Plasmas, 2012, 19, .	1.9	78
6	Ablation Pressure Driven by an Energetic Electron Beam in a Dense Plasma. Physical Review Letters, 2012, 109, 255004.	7.8	73
7	Shock ignition of thermonuclear fuel: principles and modelling. Nuclear Fusion, 2014, 54, 054008.	3.5	67
8	Design and optical characterization of a large continuous phase plate for Laser Integration Line and laser Megajoule facilities. Applied Optics, 2003, 42, 2377.	2.1	62
9	Pair creation in collision of γ -ray beams produced with high-intensity lasers. Physical Review E, 2016, 93, 013201.	2.1	57
10	Laser plasma interaction studies in the context of shock ignition – Transition from collisional to collisionless absorption. Physics of Plasmas, 2011, 18, .	1.9	56
11	Compressible Rayleigh–Taylor instabilities in supernova remnants. Physics of Fluids, 2004, 16, 4661-4670.	4.0	55
12	Generation of high pressure shocks relevant to the shock-ignition intensity regime. Physics of Plasmas, 2014, 21, .	1.9	55
13	Gain curves and hydrodynamic modeling for shock ignition. Physics of Plasmas, 2010, 17, 052704.	1.9	54
14	Spherical strong-shock generation for shock-ignition inertial fusion. Physics of Plasmas, 2015, 22, .	1.9	49
15	Dense plasma heating and Gbar shock formation by a high intensity flux of energetic electrons. Physics of Plasmas, 2013, 20, 062705.	1.9	46
16	Power Scaling for Collimated γ -Ray Beams Generated by Structured Laser-Irradiated Targets and Its Application to Two-Photon Pair Production. Physical Review Applied, 2020, 13, .	3.8	45
17	Shock ignition: modelling and target design robustness. Plasma Physics and Controlled Fusion, 2009, 51, 124030.	2.1	44
18	Experiment in Planar Geometry for Shock Ignition Studies. Physical Review Letters, 2012, 108, 195002.	7.8	42

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19	Shock-ignition relevant experiments with planar targets on OMEGA. <i>Physics of Plasmas</i> , 2014, 21, 022702.	1.9	42
20	Studies on targets for inertial fusion ignition demonstration at the HiPER facility. <i>Nuclear Fusion</i> , 2009, 49, 055008.	3.5	41
21	Coupled hydrodynamic model for laser-plasma interaction and hot electron generation. <i>Physical Review E</i> , 2015, 92, 041101.	2.1	41
22	Compression phase study of the HiPER baseline target. <i>Plasma Physics and Controlled Fusion</i> , 2008, 50, 025007.	2.1	38
23	Fast ion ignition with ultra-intense laser pulses. <i>Nuclear Fusion</i> , 2010, 50, 045003.	3.5	30
24	Recent results from experimental studies on laser-plasma coupling in a shock ignition relevant regime. <i>Plasma Physics and Controlled Fusion</i> , 2013, 55, 124045.	2.1	30
25	Studies of supersonic, radiative plasma jet interaction with gases at the Prague Asterix Laser System facility. <i>Physics of Plasmas</i> , 2008, 15, .	1.9	29
26	Modeling of the cross-beam energy transfer with realistic inertial-confinement-fusion beams in a large-scale hydrocode. <i>Physical Review E</i> , 2015, 91, 013102.	2.1	27
27	Collisionless Shocks Driven by Supersonic Plasma Flows with Self-Generated Magnetic Fields. <i>Physical Review Letters</i> , 2019, 123, 055002.	7.8	26
28	Radiation hydrodynamic theory of double ablation fronts in direct-drive inertial confinement fusion. <i>Physics of Plasmas</i> , 2009, 16, 082704.	1.9	23
29	Hydrodynamic and symmetry safety factors of HiPER's targets. <i>Plasma Physics and Controlled Fusion</i> , 2009, 51, 014001.	2.1	22
30	Creation of persistent, straight, 2 mm long laser driven channels in underdense plasmas. <i>Physics of Plasmas</i> , 2010, 17, .	1.9	22
31	Laser-driven shock waves studied by x-ray radiography. <i>Physical Review E</i> , 2017, 95, 063205.	2.1	22
32	Proton acceleration by collisionless shocks using a supersonic H ₂ gas-jet target and high-power infrared laser pulses. <i>Physics of Plasmas</i> , 2019, 26, .	1.9	22
33	Deleterious effects of nonthermal electrons in shock ignition concept. <i>Physical Review E</i> , 2014, 89, 033107.	2.1	21
34	Analytic criteria for shock ignition of fusion reactions in a central hot spot. <i>Physics of Plasmas</i> , 2011, 18, 102702.	1.9	21
35	Influence of laser induced hot electrons on the threshold for shock ignition of fusion reactions. <i>Physics of Plasmas</i> , 2016, 23, .	1.9	20
36	The control of hot-electron preheat in shock-ignition implosions. <i>Physics of Plasmas</i> , 2018, 25, .	1.9	20

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37	The scalability of the accretion column in magnetic cataclysmic variables: the POLAR project. <i>Astrophysics and Space Science</i> , 2011, 336, 81-85.	1.4	19
38	Enhanced hot-electron production and strong-shock generation in hydrogen-rich ablaters for shock ignition. <i>Physics of Plasmas</i> , 2017, 24, .	1.9	19
39	Laboratory modeling of supersonic radiative jets propagation in plasmas and their scaling to astrophysical conditions. <i>Plasma Physics and Controlled Fusion</i> , 2008, 50, 124056.	2.1	18
40	The HiPER project for inertial confinement fusion and some experimental results on advanced ignition schemes. <i>Plasma Physics and Controlled Fusion</i> , 2011, 53, 124041.	2.1	18
41	The role of hot electrons in the dynamics of a laser-driven strong converging shock. <i>Physics of Plasmas</i> , 2017, 24, .	1.9	17
42	All-optical programmable shaping of narrow-band nanosecond pulses with picosecond accuracy by use of adapted chirps and quadratic nonlinearities. <i>Optics Letters</i> , 2001, 26, 1173.	3.3	16
43	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
44	Modeling of two-dimensional effects in hot spot relaxation in laser-produced plasmas. <i>Physics of Plasmas</i> , 2008, 15, .	1.9	15
45	Nd:glass diode-pumped regenerative amplifier, multimillijoule short-pulse chirped-pulse-amplifier laser. <i>Optics Letters</i> , 2003, 28, 1374.	3.3	14
46	Optimal conditions for shock ignition of scaled cryogenic deuterium-tritium targets. <i>Physics of Plasmas</i> , 2013, 20, .	1.9	13
47	Electron-positron pairs beaming in the Breit-Wheeler process. <i>Plasma Physics and Controlled Fusion</i> , 2017, 59, 014024.	2.1	12
48	Dense plasma heating and shock wave generation by a beam of fast electrons. <i>Physics of Plasmas</i> , 2015, 22, 102704.	1.9	11
49	Detailed characterization of a laboratory magnetized supercritical collisionless shock and of the associated proton energization. <i>Matter and Radiation at Extremes</i> , 2022, 7, .	3.9	11
50	Supersonic plasma jet interaction with gases and plasmas. <i>Astrophysics and Space Science</i> , 2009, 322, 11-17.	1.4	10
51	Finite Mach number spherical shock wave, application to shock ignition. <i>Physics of Plasmas</i> , 2013, 20, 082702.	1.9	10
52	Laboratory evidence for proton energization by collisionless shock surfing. <i>Nature Physics</i> , 2021, 17, 1177-1182.	16.7	10
53	Shocks and phase space vortices driven by a density jump between two clouds of electrons and protons. <i>Plasma Physics and Controlled Fusion</i> , 2020, 62, 025022.	2.1	9
54	Analytical Study of Supernova Remnant Non-Stationary Expansions. <i>Astrophysics and Space Science</i> , 2005, 298, 75-80.	1.4	8

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55	Response to "Comment on "Compressible Rayleigh-Taylor instabilities in supernova remnants"" [Phys. Fluids 17, 069101 (2005)]. Physics of Fluids, 2005, 17, 069102.	4.0	8
56	HiPER laser: from capsule design to the laser reference design. Proceedings of SPIE, 2011, , .	0.8	8
57	Preliminary results from recent experiments and future roadmap to Shock Ignition of Fusion Targets. Journal of Physics: Conference Series, 2012, 399, 012005.	0.4	8
58	Shock generation comparison with planar and hemispherical targets in shock ignition relevant experiment. Physics of Plasmas, 2017, 24, .	1.9	8
59	Effect of differential cross section in Breit-Wheeler pair production. Plasma Physics and Controlled Fusion, 2018, 60, 104001.	2.1	8
60	Studying ignition schemes on European laser facilities. Nuclear Fusion, 2011, 51, 094025.	3.5	7
61	Physics of laser-plasma interaction for shock ignition of fusion reactions. Plasma Physics and Controlled Fusion, 2016, 58, 014018.	2.1	7
62	Electron-positron pair production in the collision of real photon beams with wide energy distributions. Plasma Physics and Controlled Fusion, 0, , .	2.1	7
63	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
64	Tree code for collision detection of large numbers of particles applied to the Breit-Wheeler process. Journal of Computational Physics, 2018, 355, 582-596.	3.8	6
65	Linear and non-linear amplification of high-mode perturbations at the ablation front in HiPER targets. Plasma Physics and Controlled Fusion, 2011, 53, 015015.	2.1	5
66	Impact of the electron to ion mass ratio on unstable systems in particle-in-cell simulations. Physics of Plasmas, 2018, 25, .	1.9	5
67	New opacity measurement principle for LMJ-PETAL laser facility. High Energy Density Physics, 2015, 17, 162-167.	1.5	4
68	The preplasma effect on the properties of the shock wave driven by a fast electron beam. Physics of Plasmas, 2016, 23, 082702.	1.9	4
69	Nonstationary Rayleigh-Taylor instability in supernova ejecta. Physics of Plasmas, 2007, 14, 112902.	1.9	3
70	Non-Stationary Rayleigh-Taylor Instabilities in Pulsar Wind Interaction with a Supernova Shell. Astrophysics and Space Science, 2007, 307, 169-172.	1.4	3
71	Fast ignitor target studies for HiPER. Journal of Physics: Conference Series, 2008, 112, 022062.	0.4	3
72	Target design for shock ignition. Journal of Physics: Conference Series, 2010, 244, 022013.	0.4	3

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73	Heating a plasma by a broadband stream of fast electrons: Fast ignition, shock ignition, and Gbar shock wave applications. <i>Journal of Experimental and Theoretical Physics</i> , 2015, 121, 529-540.	0.9	3
74	X-ray absorption radiography for high pressure shock wave studies. <i>Journal of Instrumentation</i> , 2018, 13, C01013-C01013.	1.2	3
75	Failed self-reformation of a sub-critical fast magnetosonic shock in collisionless plasma. <i>Plasma Research Express</i> , 2019, 1, 035001.	0.9	3
76	Mildly relativistic collisionless shock formed by magnetic piston. <i>Physics of Plasmas</i> , 2020, 27, 122106.	1.9	3
77	Gravitational influence of high power laser pulses. <i>Physical Review D</i> , 2022, 105, .	4.7	3
78	Relativistic hole boring and fast ion ignition with ultra-intense laser pulses. <i>Journal of Physics: Conference Series</i> , 2010, 244, 022069.	0.4	2
79	Experiment on laser interaction with a planar target for conditions relevant to shock ignition. <i>Physica Scripta</i> , 2014, T161, 014017.	2.5	2
80	A 3D cell-centered Lagrangian scheme applied to the simulation of 3D non-stationary Rayleighâ€“Taylor Instability in supernova remnants. <i>High Energy Density Physics</i> , 2015, 17, 151-156.	1.5	2
81	Broadband computations using the Miro software. , 1999, , .		1
82	Numerical simulations of the HiPER baseline target. <i>European Physical Journal: Special Topics</i> , 2009, 175, 83-88.	2.6	1
83	X-ray diagnostics of fast electrons propagation in high density plasmas obtained by cylindrical compression. <i>Journal of Physics: Conference Series</i> , 2010, 244, 022027.	0.4	1
84	Investigation of laser plasmas relevant to shock ignition at PALS. <i>Proceedings of SPIE</i> , 2011, , .	0.8	1
85	Parametric instabilities study in a shock ignition relevant regime. <i>Proceedings of SPIE</i> , 2011, , .	0.8	1
86	Progress in the shock-ignition inertial confinement fusion concept. <i>EPJ Web of Conferences</i> , 2013, 59, 03001.	0.3	1
87	Laser plasma physics in shock ignition â€“ transition from collisional to collisionless absorption. <i>EPJ Web of Conferences</i> , 2013, 59, 05008.	0.3	1
88	Study of shock waves generation, hot electron production and role of parametric instabilities in an intensity regime relevant for the shock ignition. <i>Journal of Physics: Conference Series</i> , 2016, 688, 012003.	0.4	1
89	Towards a novel stellar opacity measurement scheme using stability properties of double ablation front structures. <i>Physics of Plasmas</i> , 2018, 25, 072707.	1.9	1
90	Quasi-perpendicular fast magnetosonic shock with wave precursor in collisionless plasma. <i>Physics of Plasmas</i> , 2018, 25, 074502.	1.9	1

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91	Non-stationary Rayleigh-Taylor instability in plerions. European Physical Journal Special Topics, 2006, 133, 1055-1057.	0.2	1
92	Large transmission 11% and 31% gratings for the LIL laser. , 2001, 4438, 41.		0
93	Numerical simulations of the HiPER baseline target. Journal of Physics: Conference Series, 2008, 112, 022067.	0.4	0
94	Ion beam manufacturing of a graded-phase mirror for the generation of square "top hat" laser beams. , 2008, , .		0
95	Simulations of the supersonic radiative jet propagation in plasmas. Astrophysics and Space Science, 2009, 322, 85-90.	1.4	0
96	Experimental results performed in the framework of the HIPER European Project. , 2011, , .		0
97	Analytical criterion for shock ignition of fusion reaction in hot spot. EPJ Web of Conferences, 2013, 59, 03005.	0.3	0
98	Hydrodynamic modeling and simulations of shock ignition thresholds. EPJ Web of Conferences, 2013, 59, 03002.	0.3	0
99	All-optical programmable 100 GHz phase modulation of narrow band nanosecond energetic pulses. , 2002, , .		0
100	Diode-Pumped Regenerative Amplifier Front End for the Petawatt Laser Chain at LULI. Springer Series in Optical Sciences, 2004, , 315-320.	0.7	0
101	Supersonic plasma jet interaction with gases and plasmas. , 2008, , 11-17.		0
102	Simulations on Pair Creation in Collision of $\hat{1}^3$ -Beams Produced with High Intensity Lasers. , 2016, , .		0
103	Non-Stationary Rayleigh-Taylor Instabilities in Pulsar Wind Interaction with a Supernova Shell. , 2006, , 169-172.		0