

Riccardo Betti

List of Publications by Year in descending order

Source: <https://exaly.com/author-pdf/1792942/publications.pdf>

Version: 2024-02-01

63
papers

4,086
citations

126907

33
h-index

118850

62
g-index

64
all docs

64
docs citations

64
times ranked

1946
citing authors

#	ARTICLE	IF	CITATIONS
1	Scale interactions and anisotropy in Rayleigh-Taylor turbulence. <i>Journal of Fluid Mechanics</i> , 2022, 930, .	3.4	13
2	Measurements of the temperature and velocity of the dense fuel layer in inertial confinement fusion experiments. <i>Physical Review E</i> , 2022, 105, .	2.1	5
3	Analysis of limited coverage effects on areal density measurements in inertial confinement fusion implosions. <i>Physics of Plasmas</i> , 2022, 29, .	1.9	1
4	Generation of strong magnetic fields for magnetized plasma experiments at the 1-MA pulsed power machine. <i>Matter and Radiation at Extremes</i> , 2021, 6, .	3.9	12
5	Experimentally Inferred Fusion Yield Dependencies of OMEGA Inertial Confinement Fusion Implosions. <i>Physical Review Letters</i> , 2021, 127, 105001.	7.8	23
6	High yields in direct-drive inertial confinement fusion using thin-ice DT liner targets. <i>Physics of Plasmas</i> , 2021, 28, .	1.9	5
7	Theory of ignition and burn propagation in inertial fusion implosions. <i>Physics of Plasmas</i> , 2020, 27, .	1.9	21
8	Study of laser-driven magnetic fields with a continuous wave Faraday rotation diagnostic. <i>Physics of Plasmas</i> , 2020, 27, 033102.	1.9	6
9	Axial proton probing of magnetic and electric fields inside laser-driven coils. <i>Physics of Plasmas</i> , 2020, 27, .	1.9	16
10	Nonlinear bubble competition of the multimode ablative Rayleigh-Taylor instability and applications to inertial confinement fusion. <i>Physics of Plasmas</i> , 2020, 27, .	1.9	21
11	Tripled yield in direct-drive laser fusion through statistical modelling. <i>Nature</i> , 2019, 565, 581-586.	27.8	103
12	Two mode coupling of the ablative Rayleigh-Taylor instabilities. <i>Physics of Plasmas</i> , 2019, 26, .	1.9	20
13	Thermonuclear ignition and the onset of propagating burn in inertial fusion implosions. <i>Physical Review E</i> , 2019, 99, 021201.	2.1	20
14	Nonlinear excitation of the ablative Rayleigh-Taylor instability for all wave numbers. <i>Physical Review E</i> , 2018, 97, 011203.	2.1	20
15	A comprehensive alpha-heating model for inertial confinement fusion. <i>Physics of Plasmas</i> , 2018, 25, .	1.9	27
16	Magnetic flux conservation in an imploding plasma. <i>Physical Review E</i> , 2018, 97, 011201.	2.1	7
17	Progress toward a self-consistent set of 1D ignition capsule metrics in ICF. <i>Physics of Plasmas</i> , 2018, 25, .	1.9	51
18	Self-Similar Multimode Bubble-Front Evolution of the Ablative Rayleigh-Taylor Instability in Two and Three Dimensions. <i>Physical Review Letters</i> , 2018, 121, 185002.	7.8	35

#	ARTICLE	IF	CITATIONS
19	Effects of residual kinetic energy on yield degradation and ion temperature asymmetries in inertial confinement fusion implosions. <i>Physics of Plasmas</i> , 2018, 25, .	1.9	33
20	Laser-driven magnetized liner inertial fusion on OMEGA. <i>Physics of Plasmas</i> , 2017, 24, .	1.9	33
21	Laser-driven magnetized liner inertial fusion. <i>Physics of Plasmas</i> , 2017, 24, .	1.9	49
22	The physics of long- and intermediate-wavelength asymmetries of the hot spot: Compression hydrodynamics and energetics. <i>Physics of Plasmas</i> , 2017, 24, .	1.9	33
23	Tokamak two-fluid ignition conditions. <i>Physics of Plasmas</i> , 2017, 24, 082504.	1.9	2
24	Application of benchmarked kinetic resistive wall mode stability codes to ITER, including additional physics. <i>Physics of Plasmas</i> , 2017, 24, .	1.9	8
25	Three-dimensional single-mode nonlinear ablative Rayleigh-Taylor instability. <i>Physics of Plasmas</i> , 2016, 23, .	1.9	31
26	Inertial-confinement fusion with lasers. <i>Nature Physics</i> , 2016, 12, 435-448.	16.7	508
27	Direct-drive inertial confinement fusion: A review. <i>Physics of Plasmas</i> , 2015, 22, .	1.9	521
28	Hydrodynamic scaling of the deceleration-phase Rayleigh-Taylor instability. <i>Physics of Plasmas</i> , 2015, 22, .	1.9	22
29	Gigabar Spherical Shock Generation on the OMEGA Laser. <i>Physical Review Letters</i> , 2015, 114, 045001.	7.8	100
30	Investigation of ion kinetic effects in direct-drive exploding-pusher implosions at the NIF. <i>Physics of Plasmas</i> , 2014, 21, 122712.	1.9	33
31	Theory of hydro-equivalent ignition for inertial fusion and its applications to OMEGA and the National Ignition Facility. <i>Physics of Plasmas</i> , 2014, 21, .	1.9	68
32	Improving the hot-spot pressure and demonstrating ignition hydrodynamic equivalence in cryogenic deuterium-tritium implosions on OMEGA. <i>Physics of Plasmas</i> , 2014, 21, .	1.9	139
33	Jump conditions in transonic equilibria. <i>Physics of Plasmas</i> , 2013, 20, 042502.	1.9	1
34	Inertial confinement fusion implosions with imposed magnetic field compression using the OMEGA Laser. <i>Physics of Plasmas</i> , 2012, 19, .	1.9	112
35	Scaling hot-electron generation to long-pulse, high-intensity laser-solid interactions. <i>Physics of Plasmas</i> , 2011, 18, 056703.	1.9	15
36	Two-dimensional magnetohydrodynamic simulations of poloidal flows in tokamaks and MHD pedestal. <i>Physics of Plasmas</i> , 2011, 18, .	1.9	7

#	ARTICLE	IF	CITATIONS
37	Generalized Measurable Ignition Criterion for Inertial Confinement Fusion. Physical Review Letters, 2010, 104, 135002.	7.8	63
38	Radiation hydrodynamic theory of double ablation fronts in direct-drive inertial confinement fusion. Physics of Plasmas, 2009, 16, 082704.	1.9	23
39	Performance of direct-drive cryogenic targets on OMEGA. Physics of Plasmas, 2008, 15, .	1.9	92
40	A general formulation of magnetohydrodynamic stability including flow and a resistive wall. Physics of Plasmas, 2008, 15, 072503.	1.9	15
41	A measurable Lawson criterion and hydro-equivalent curves for inertial confinement fusion. Physics of Plasmas, 2008, 15, .	1.9	70
42	Gain curves and hydrodynamic simulations of ignition and burn for direct-drive fast-ignition fusion targets. Physics of Plasmas, 2007, 14, 062701.	1.9	15
43	Gain curves for direct-drive fast ignition at densities around $300\text{g}\cdot\text{cc}$. Physics of Plasmas, 2006, 13, 100703.	1.9	41
44	Bubble Acceleration in the Ablative Rayleigh-Taylor Instability. Physical Review Letters, 2006, 97, 205002.	7.8	90
45	Improved target stability using picket pulses to increase and shape the ablator adiabat. Physics of Plasmas, 2005, 12, 056306.	1.9	29
46	Theory of laser-induced adiabat shaping in inertial fusion implosions: The relaxation method. Physics of Plasmas, 2005, 12, 042703.	1.9	48
47	Observation of Self-Similar Behavior of the 3D, Nonlinear Rayleigh-Taylor Instability. Physical Review Letters, 2005, 95, 265001.	7.8	34
48	High-density and high-IR fuel assembly for fast-ignition inertial confinement fusion. Physics of Plasmas, 2005, 12, 110702.	1.9	78
49	Laser-induced adiabat shaping by relaxation in inertial fusion implosions. Physics of Plasmas, 2004, 11, 5-8.	1.9	87
50	Improved performance of direct-drive inertial confinement fusion target designs with adiabat shaping using an intensity picket. Physics of Plasmas, 2003, 10, 1906-1918.	1.9	146
51	Theory of laser-induced adiabat shaping in inertial fusion implosions: The decaying shock. Physics of Plasmas, 2003, 10, 4448-4462.	1.9	55
52	Deceleration phase of inertial confinement fusion implosions. Physics of Plasmas, 2002, 9, 2277-2286.	1.9	118
53	Hot-spot dynamics and deceleration-phase Rayleigh-Taylor instability of imploding inertial confinement fusion capsules. Physics of Plasmas, 2001, 8, 5257-5267.	1.9	87
54	Stabilization of the resistive wall mode by differentially rotating walls. Physics of Plasmas, 2001, 8, 383-386.	1.9	7

#	ARTICLE	IF	CITATIONS
55	Ablative Stabilization of the Deceleration Phase Rayleigh-Taylor Instability. Physical Review Letters, 2000, 85, 4522-4525.	7.8	57
56	A model of laser imprinting. Physics of Plasmas, 2000, 7, 2062-2068.	1.9	81
57	Growth rates of the ablative Rayleigh-Taylor instability in inertial confinement fusion. Physics of Plasmas, 1998, 5, 1446-1454.	1.9	297
58	Beta limits for the N=1 mode in rotating-toroidal-resistive plasmas surrounded by a resistive wall. Physics of Plasmas, 1998, 5, 3615-3631.	1.9	59
59	Feedout and Rayleigh-Taylor Seeding Induced by Long Wavelength Perturbations in Accelerated Planar Foils. Physical Review Letters, 1998, 81, 5560-5563.	7.8	37
60	Self-consistent stability analysis of ablation fronts with small Froude numbers. Physics of Plasmas, 1996, 3, 4665-4676.	1.9	49
61	Self-consistent cutoff wave number of the ablative Rayleigh-Taylor instability. Physics of Plasmas, 1995, 2, 3844-3851.	1.9	65
62	Stability Analysis of Resistive Wall Kink Modes in Rotating Plasmas. Physical Review Letters, 1995, 74, 2949-2952.	7.8	201
63	Scaling Hot-Electron Generation to High-Power, Kilojoule-Class Laser-Solid Interactions. , 0, .		1