

Richard Berger

List of Publications by Year in descending order

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44
papers

1,854
citations

279798

23
h-index

254184

43
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docs citations

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times ranked

766
citing authors

#	ARTICLE	IF	CITATIONS
1	Laser transport and backscatter in low-density SiO ₂ and Ta ₂ O ₅ foams. <i>Physics of Plasmas</i> , 2021, 28, .	1.9	6
2	Nonlinear kinetic simulation study of the ion-ion streaming instability in single- and multi-ion species plasmas. <i>Physics of Plasmas</i> , 2021, 28, 022105.	1.9	0
3	Experimental and calculational investigation of laser-heated additive manufactured foams. <i>Physics of Plasmas</i> , 2021, 28, .	1.9	9
4	Simulation studies of the interaction of laser radiation with additively manufactured foams. <i>Plasma Physics and Controlled Fusion</i> , 2021, 63, 055009.	2.1	5
5	The effects of multispecies <i>Hohlraum</i> walls on stimulated Brillouin scattering, <i>Hohlraum</i> dynamics, and beam propagation. <i>Physics of Plasmas</i> , 2021, 28, .	1.9	6
6	Integrated performance of large HDC-capsule implosions on the National Ignition Facility. <i>Physics of Plasmas</i> , 2020, 27, .	1.9	22
7	Principal factors in performance of indirect-drive laser fusion experiments. <i>Physics of Plasmas</i> , 2020, 27, .	1.9	7
8	Deficiencies in compression and yield in x-ray-driven implosions. <i>Physics of Plasmas</i> , 2020, 27, .	1.9	12
9	Laser propagation in a subcritical foam: Subgrid model. <i>Physics of Plasmas</i> , 2020, 27, 112710.	1.9	13
10	Hotspot parameter scaling with velocity and yield for high-adiabat layered implosions at the National Ignition Facility. <i>Physical Review E</i> , 2020, 102, 023210.	2.1	25
11	Experiments to explore the influence of pulse shaping at the National Ignition Facility. <i>Physics of Plasmas</i> , 2020, 27, 112708.	1.9	11
12	Plasma optics in the context of high intensity lasers. <i>Matter and Radiation at Extremes</i> , 2019, 4, .	3.9	12
13	High-Order Accurate Conservative Finite Difference Methods for Vlasov Equations in 2D+2V. <i>SIAM Journal of Scientific Computing</i> , 2019, 41, B953-B982.	2.8	9
14	Investigation and modeling of optics damage in high-power laser systems caused by light backscattered in plasma at the target. <i>Journal of Applied Physics</i> , 2019, 125, .	2.5	18
15	Stimulated backscatter of laser light from BigFoot hohlraums on the National Ignition Facility. <i>Physics of Plasmas</i> , 2019, 26, .	1.9	28
16	The high velocity, high adiabat, "Bigfoot" campaign and tests of indirect-drive implosion scaling. <i>Physics of Plasmas</i> , 2018, 25, .	1.9	90
17	Laser propagation in a subcritical foam: Ion and electron heating. <i>Physics of Plasmas</i> , 2018, 25, .	1.9	17
18	High-Performance Indirect-Drive Cryogenic Implosions at High Adiabatic on the National Ignition Facility. <i>Physical Review Letters</i> , 2018, 121, 135001.	7.8	86

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19	Longitudinal and Transverse Instability of Ion Acoustic Waves. Physical Review Letters, 2017, 119, 055002.	7.8	19
20	Beyond the gain exponent: Effect of damping, scale length, and speckle length on stimulated scatter. Physical Review E, 2015, 91, 031103.	2.1	14
21	Hohlraum energetics scaling to 520 TW on the National Ignition Facility. Physics of Plasmas, 2013, 20, .	1.9	59
22	Kinetic Theory and Vlasov Simulation of Nonlinear Ion-Acoustic Waves in Multi-Ion Species Plasmas. Physical Review Letters, 2013, 110, 195004.	7.8	21
23	Multistep redirection by cross-beam power transfer of ultrahigh-power lasers in a plasma. Nature Physics, 2012, 8, 344-349.	16.7	104
24	Two-dimensional Vlasov simulation of electron plasma wave trapping, wavefront bowing, self-focusing, and sideloss. Physics of Plasmas, 2011, 18, .	1.9	42
25	Stimulated forward Raman scattering in large scale-length laser-produced plasmas. Journal of Instrumentation, 2011, 6, P10008-P10008.	1.2	6
26	Analysis of the National Ignition Facility ignition hohlraum energetics experiments. Physics of Plasmas, 2011, 18, .	1.9	82
27	Experimental basis for laser-plasma interactions in ignition hohlraums at the National Ignition Facility. Physics of Plasmas, 2010, 17, .	1.9	49
28	Observation of the Density Threshold Behavior for the Onset of Stimulated Raman Scattering in High-Temperature Hohlraum Plasmas. Physical Review Letters, 2009, 103, 045006.	7.8	32
29	Suppression of Stimulated Brillouin Scattering by Increased Landau Damping in Multiple-Ion-Species Hohlraum Plasmas. Physical Review Letters, 2008, 100, 105001.	7.8	43
30	Energetics of multiple-ion species hohlraum plasmas. Physics of Plasmas, 2008, 15, .	1.9	26
31	Three-dimensional modeling of laser-plasma interaction: Benchmarking our predictive modeling tools versus experiments. Physics of Plasmas, 2008, 15, 056313.	1.9	19
32	Direct Measurements of an Increased Threshold for Stimulated Brillouin Scattering with Polarization Smoothing in Ignition Hohlraum Plasmas. Physical Review Letters, 2008, 101, 115002.	7.8	27
33	The frequency and damping of ion acoustic waves in collisional and collisionless two-species plasma. Physics of Plasmas, 2005, 12, 032104.	1.9	16
34	Filamentation and forward Brillouin scatter of entire smoothed and aberrated laser beams. Physics of Plasmas, 2000, 7, 2023-2032.	1.9	69
35	Stimulated Raman and Brillouin scattering of polarization-smoothed and temporally smoothed laser beams. Physics of Plasmas, 1999, 6, 1043-1047.	1.9	33
36	On the dominant and subdominant behavior of stimulated Raman and Brillouin scattering driven by nonuniform laser beams. Physics of Plasmas, 1998, 5, 4337-4356.	1.9	156

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37	Reduction of laser self-focusing in plasma by polarization smoothing. Physics of Plasmas, 1998, 5, 2701-2705.	1.9	78
38	Influence of Spatial and Temporal Laser Beam Smoothing on Stimulated Brillouin Scattering in Filamentary Laser Light. Physical Review Letters, 1996, 76, 3239-3239.	7.8	5
39	Laser-plasma interactions in ignition-scale hohlraum plasmas. Physics of Plasmas, 1996, 3, 2029-2040.	1.9	148
40	Influence of Spatial and Temporal Laser Beam Smoothing on Stimulated Brillouin Scattering in Filamentary Laser Light. Physical Review Letters, 1995, 75, 1078-1081.	7.8	59
41	The frequency and damping of ion acoustic waves in hydrocarbon (CH) and two-ion-species plasmas. Physics of Plasmas, 1995, 2, 129-138.	1.9	136
42	Theory and three-dimensional simulation of light filamentation in laser-produced plasma. Physics of Fluids B, 1993, 5, 2243-2258.	1.7	118
43	Stopping and thermalization of interpenetrating plasma streams. Physics of Fluids B, 1991, 3, 3-12.	1.7	51
44	Effect of plasma noise spectrum on stimulated scattering in inhomogeneous plasma. Physics of Fluids B, 1989, 1, 414-421.	1.7	66