

# 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  
g-index

44  
all docs

44  
docs citations

44  
times ranked

766  
citing authors

#	ARTICLE	IF	CITATIONS
1	On the dominant and subdominant behavior of stimulated Raman and Brillouin scattering driven by nonuniform laser beams. <i>Physics of Plasmas</i> , 1998, 5, 4337-4356.	1.9	156
2	Laser-plasma interactions in ignition-scale hohlraum plasmas. <i>Physics of Plasmas</i> , 1996, 3, 2029-2040.	1.9	148
3	The frequency and damping of ion acoustic waves in hydrocarbon (CH) and two-ion-species plasmas. <i>Physics of Plasmas</i> , 1995, 2, 129-138.	1.9	136
4	Theory and three-dimensional simulation of light filamentation in laser-produced plasma. <i>Physics of Fluids B</i> , 1993, 5, 2243-2258.	1.7	118
5	Multistep redirection by cross-beam power transfer of ultrahigh-power lasers in a plasma. <i>Nature Physics</i> , 2012, 8, 344-349.	16.7	104
6	The high velocity, high adiabat, Bigfoot campaign and tests of indirect-drive implosion scaling. <i>Physics of Plasmas</i> , 2018, 25, .	1.9	90
7	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
8	Analysis of the National Ignition Facility ignition hohlraum energetics experiments. <i>Physics of Plasmas</i> , 2011, 18, .	1.9	82
9	Reduction of laser self-focusing in plasma by polarization smoothing. <i>Physics of Plasmas</i> , 1998, 5, 2701-2705.	1.9	78
10	Filamentation and forward Brillouin scatter of entire smoothed and aberrated laser beams. <i>Physics of Plasmas</i> , 2000, 7, 2023-2032.	1.9	69
11	Effect of plasma noise spectrum on stimulated scattering in inhomogeneous plasma. <i>Physics of Fluids B</i> , 1989, 1, 414-421.	1.7	66
12	Influence of Spatial and Temporal Laser Beam Smoothing on Stimulated Brillouin Scattering in Filamentary Laser Light. <i>Physical Review Letters</i> , 1995, 75, 1078-1081.	7.8	59
13	Hohlraum energetics scaling to 520 TW on the National Ignition Facility. <i>Physics of Plasmas</i> , 2013, 20, .	1.9	59
14	Stopping and thermalization of interpenetrating plasma streams. <i>Physics of Fluids B</i> , 1991, 3, 3-12.	1.7	51
15	Experimental basis for laser-plasma interactions in ignition hohlraums at the National Ignition Facility. <i>Physics of Plasmas</i> , 2010, 17, .	1.9	49
16	Suppression of Stimulated Brillouin Scattering by Increased Landau Damping in Multiple-Ion-Species Hohlraum Plasmas. <i>Physical Review Letters</i> , 2008, 100, 105001.	7.8	43
17	Two-dimensional Vlasov simulation of electron plasma wave trapping, wavefront bowing, self-focusing, and sideloss. <i>Physics of Plasmas</i> , 2011, 18, .	1.9	42
18	Stimulated Raman and Brillouin scattering of polarization-smoothed and temporally smoothed laser beams. <i>Physics of Plasmas</i> , 1999, 6, 1043-1047.	1.9	33

#	ARTICLE	IF	CITATIONS
19	Observation of the Density Threshold Behavior for the Onset of Stimulated Raman Scattering in High-Temperature Hohlraum Plasmas. <i>Physical Review Letters</i> , 2009, 103, 045006.	7.8	32
20	Stimulated backscatter of laser light from BigFoot hohlraums on the National Ignition Facility. <i>Physics of Plasmas</i> , 2019, 26, .	1.9	28
21	Direct Measurements of an Increased Threshold for Stimulated Brillouin Scattering with Polarization Smoothing in Ignition Hohlraum Plasmas. <i>Physical Review Letters</i> , 2008, 101, 115002.	7.8	27
22	Energetics of multiple-ion species hohlraum plasmas. <i>Physics of Plasmas</i> , 2008, 15, .	1.9	26
23	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
24	Integrated performance of large HDC-capsule implosions on the National Ignition Facility. <i>Physics of Plasmas</i> , 2020, 27, .	1.9	22
25	Kinetic Theory and Vlasov Simulation of Nonlinear Ion-Acoustic Waves in Multi-Ion Species Plasmas. <i>Physical Review Letters</i> , 2013, 110, 195004.	7.8	21
26	Three-dimensional modeling of laser-plasma interaction: Benchmarking our predictive modeling tools versus experiments. <i>Physics of Plasmas</i> , 2008, 15, 056313.	1.9	19
27	Longitudinal and Transverse Instability of Ion Acoustic Waves. <i>Physical Review Letters</i> , 2017, 119, 055002.	7.8	19
28	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
29	Laser propagation in a subcritical foam: Ion and electron heating. <i>Physics of Plasmas</i> , 2018, 25, .	1.9	17
30	The frequency and damping of ion acoustic waves in collisional and collisionless two-species plasma. <i>Physics of Plasmas</i> , 2005, 12, 032104.	1.9	16
31	Beyond the gain exponent: Effect of damping, scale length, and speckle length on stimulated scatter. <i>Physical Review E</i> , 2015, 91, 031103.	2.1	14
32	Laser propagation in a subcritical foam: Subgrid model. <i>Physics of Plasmas</i> , 2020, 27, 112710.	1.9	13
33	Plasma optics in the context of high intensity lasers. <i>Matter and Radiation at Extremes</i> , 2019, 4, .	3.9	12
34	Deficiencies in compression and yield in x-ray-driven implosions. <i>Physics of Plasmas</i> , 2020, 27, .	1.9	12
35	Experiments to explore the influence of pulse shaping at the National Ignition Facility. <i>Physics of Plasmas</i> , 2020, 27, 112708.	1.9	11
36	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

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37	Experimental and calculational investigation of laser-heated additive manufactured foams. <i>Physics of Plasmas</i> , 2021, 28, .	1.9	9
38	Principal factors in performance of indirect-drive laser fusion experiments. <i>Physics of Plasmas</i> , 2020, 27, .	1.9	7
39	Stimulated forward Raman scattering in large scale-length laser-produced plasmas. <i>Journal of Instrumentation</i> , 2011, 6, P10008-P10008.	1.2	6
40	Laser transport and backscatter in low-density SiO <sub>2</sub> and Ta <sub>2</sub> O <sub>5</sub> foams. <i>Physics of Plasmas</i> , 2021, 28, .	1.9	6
41	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
42	Influence of Spatial and Temporal Laser Beam Smoothing on Stimulated Brillouin Scattering in Filamentary Laser Light. <i>Physical Review Letters</i> , 1996, 76, 3239-3239.	7.8	5
43	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
44	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