

Bruce A Remington

List of Publications by Year in descending order

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136
papers

10,469
citations

26630

56
h-index

32842

100
g-index

138
all docs

138
docs citations

138
times ranked

3944
citing authors

#	ARTICLE	IF	CITATIONS
1	Strong suppression of heat conduction in a laboratory replica of galaxy-cluster turbulent plasmas. <i>Science Advances</i> , 2022, 8, eabj6799.	10.3	11
2	Time-resolved turbulent dynamo in a laser plasma. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2021, 118, .	7.1	20
3	Order-of-magnitude increase in laser-target coupling at near-relativistic intensities using compound parabolic concentrators. <i>Physical Review E</i> , 2021, 103, L031201.	2.1	11
4	High resolution >40 keV x-ray radiography using an edge-on micro-flag backlighter at NIF-ARC. <i>Review of Scientific Instruments</i> , 2021, 92, 033535.	1.3	3
5	Techniques for studying materials under extreme states of high energy density compression. <i>Physics of Plasmas</i> , 2021, 28, 060901.	1.9	3
6	Review of hydrodynamic instability experiments in inertially confined fusion implosions on National Ignition Facility. <i>Plasma Physics and Controlled Fusion</i> , 2020, 62, 014007.	2.1	31
7	Optimized continuum x-ray emission from laser-generated plasma. <i>Applied Physics Letters</i> , 2020, 117, .	3.3	12
8	Rayleigh-Taylor instabilities in high-energy density settings on the National Ignition Facility. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2019, 116, 18233-18238.	7.1	76
9	Turbulent mixing and transition criteria of flows induced by hydrodynamic instabilities. <i>Physics of Plasmas</i> , 2019, 26, .	1.9	154
10	Pushed single shell implosions for mix and radiation trapping studies using high-Z layers on National Ignition Facility. <i>Physics of Plasmas</i> , 2019, 26, .	1.9	12
11	Extreme Hardening of Pb at High Pressure and Strain Rate. <i>Physical Review Letters</i> , 2019, 123, 205701.	7.8	31
12	Long-duration direct drive hydrodynamics experiments on the National Ignition Facility: Platform development and numerical modeling with CHIC. <i>Physics of Plasmas</i> , 2019, 26, 082703.	1.9	4
13	First demonstration of ARC-accelerated proton beams at the National Ignition Facility. <i>Physics of Plasmas</i> , 2019, 26, .	1.9	34
14	Kinetic effects on neutron generation in moderately collisional interpenetrating plasma flows. <i>Physics of Plasmas</i> , 2019, 26, .	1.9	12
15	How high energy fluxes may affect Rayleigh-Taylor instability growth in young supernova remnants. <i>Nature Communications</i> , 2018, 9, 1564.	12.8	84
16	Laboratory evidence of dynamo amplification of magnetic fields in a turbulent plasma. <i>Nature Communications</i> , 2018, 9, 591.	12.8	105
17	Visualizing deceleration-phase instabilities in inertial confinement fusion implosions using an enhanced self-emission technique at the National Ignition Facility. <i>Physics of Plasmas</i> , 2018, 25, 054502.	1.9	22
18	Optimization of a high-yield, low-areal-density fusion product source at the National Ignition Facility with applications in nucleosynthesis experiments. <i>Physics of Plasmas</i> , 2018, 25, .	1.9	10

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19	Long-duration planar direct-drive hydrodynamics experiments on the NIF. <i>Plasma Physics and Controlled Fusion</i> , 2018, 60, 014012.	2.1	14
20	Solid-state framing camera operating in interferometric mode. <i>Review of Scientific Instruments</i> , 2018, 89, 10G107.	1.3	1
21	Developing a high-flux, high-energy continuum backlighter for extended x-ray absorption fine structure measurements at the National Ignition Facility. <i>Review of Scientific Instruments</i> , 2018, 89, 10F114.	1.3	20
22	Ablative stabilization of Rayleigh-Taylor instabilities resulting from a laser-driven radiative shock. <i>Physics of Plasmas</i> , 2018, 25, .	1.9	18
23	Modeling laser-driven high-rate plasticity in BCC lead. <i>AIP Conference Proceedings</i> , 2018, , .	0.4	3
24	Development of new platforms for hydrodynamic instability and asymmetry measurements in deceleration phase of indirectly driven implosions on NIF. <i>Physics of Plasmas</i> , 2018, 25, 082705.	1.9	15
25	Deformation and failure in extreme regimes by high-energy pulsed lasers: A review. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2017, 688, 429-458.	5.6	50
26	Development of an inertial confinement fusion platform to study charged-particle-producing nuclear reactions relevant to nuclear astrophysics. <i>Physics of Plasmas</i> , 2017, 24, .	1.9	20
27	Numerical modeling of laser-driven experiments aiming to demonstrate magnetic field amplification via turbulent dynamo. <i>Physics of Plasmas</i> , 2017, 24, .	1.9	31
28	Magnetic field production via the Weibel instability in interpenetrating plasma flows. <i>Physics of Plasmas</i> , 2017, 24, .	1.9	27
29	Modeling of grain size strengthening in tantalum at high pressures and strain rates. <i>AIP Conference Proceedings</i> , 2017, , .	0.4	3
30	The role of hot spot mix in the low-foot and high-foot implosions on the NIF. <i>Physics of Plasmas</i> , 2017, 24, .	1.9	49
31	Investigating iron material strength up to 1 Mbar using Rayleigh-Taylor growth measurements. <i>AIP Conference Proceedings</i> , 2017, , .	0.4	14
32	Measurement of ablative Richtmyer-Meshkov evolution from laser imprint. <i>Physics of Plasmas</i> , 2017, 24, 102702.	1.9	4
33	Transition from Collisional to Collisionless Regimes in Interpenetrating Plasma Flows on the National Ignition Facility. <i>Physical Review Letters</i> , 2017, 118, 185003.	7.8	49
34	Thermonuclear reactions probed at stellar-core conditions with laser-based inertial-confinement fusion. <i>Nature Physics</i> , 2017, 13, 1227-1231.	16.7	38
35	Laboratory astrophysical collisionless shock experiments on Omega and NIF. <i>Journal of Physics: Conference Series</i> , 2016, 688, 012084.	0.4	11
36	Scaled laboratory experiments explain the kink behaviour of the Crab Nebula jet. <i>Nature Communications</i> , 2016, 7, 13081.	12.8	46

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37	Proton pinhole imaging on the National Ignition Facility. Review of Scientific Instruments, 2016, 87, 11E704.	1.3	4
38	A multi-wavelength, high-contrast contact radiography system for the study of low-density aerogel foams. Review of Scientific Instruments, 2016, 87, 073706.	1.3	1
39	Lattice-level observation of the elastic-to-plastic relaxation process with subnanosecond resolution in shock-compressed Ta using time-resolved <i>in situ</i> Laue diffraction. Physical Review B, 2015, 92, .	3.2	27
40	Rayleigh-Taylor mixing in supernova experiments. Physics of Plasmas, 2015, 22, .	1.9	43
41	From microjoules to megajoules and kilobars to gigabars: Probing matter at extreme states of deformation. Physics of Plasmas, 2015, 22, 090501.	1.9	39
42	Probing the deep nonlinear stage of the ablative Rayleigh-Taylor instability in indirect drive experiments on the National Ignition Facility. Physics of Plasmas, 2015, 22, .	1.9	30
43	Collisionless shock experiments with lasers and observation of Weibel instabilities. Physics of Plasmas, 2015, 22, .	1.9	51
44	Observation of magnetic field generation via the Weibel instability in interpenetrating plasma flows. Nature Physics, 2015, 11, 173-176.	16.7	236
45	Grain-Size-Independent Plastic Flow at Ultrahigh Pressures and Strain Rates. Physical Review Letters, 2015, 114, 065502.	7.8	67
46	Thin Shell, High Velocity Inertial Confinement Fusion Implosions on the National Ignition Facility. Physical Review Letters, 2015, 114, 145004.	7.8	56
47	Developing a bright 17-keV x-ray source for probing high-energy-density states of matter at high spatial resolution. Physics of Plasmas, 2015, 22, 043114.	1.9	7
48	Demonstration of High Performance in Layered Deuterium-Tritium Capsule Implosions in Uranium Hohlraums at the National Ignition Facility. Physical Review Letters, 2015, 115, 055001.	7.8	101
49	Investigation of ion kinetic effects in direct-drive exploding-pusher implosions at the NIF. Physics of Plasmas, 2014, 21, 122712.	1.9	33
50	Progress in indirect and direct-drive planar experiments on hydrodynamic instabilities at the ablation front. Physics of Plasmas, 2014, 21, 122702.	1.9	18
51	Development of the CD Symcap platform to study gas-shell mix in implosions at the National Ignition Facility. Physics of Plasmas, 2014, 21, .	1.9	42
52	Fuel gain exceeding unity in an inertially confined fusion implosion. Nature, 2014, 506, 343-348.	27.8	742
53	Hydrodynamic instability growth and mix experiments at the National Ignition Facility. Physics of Plasmas, 2014, 21, .	1.9	60
54	First Measurements of Hydrodynamic Instability Growth in Indirectly Driven Implosions at Ignition-Relevant Conditions on the National Ignition Facility. Physical Review Letters, 2014, 112, 185003.	7.8	90

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55	High-Adiabatic High-Foot Inertial Confinement Fusion Implosion Experiments on the National Ignition Facility. <i>Physical Review Letters</i> , 2014, 112, 055001.	7.8	199
56	Design of a High-Foot High-Adiabatic ICF Capsule for the National Ignition Facility. <i>Physical Review Letters</i> , 2014, 112, 055002.	7.8	173
57	Measurements of an Ablator-Gas Atomic Mix in Indirectly Driven Implosions at the National Ignition Facility. <i>Physical Review Letters</i> , 2014, 112, 025002.	7.8	60
58	The high-foot implosion campaign on the National Ignition Facility. <i>Physics of Plasmas</i> , 2014, 21, .	1.9	149
59	An in-flight radiography platform to measure hydrodynamic instability growth in inertial confinement fusion capsules at the National Ignition Facility. <i>Physics of Plasmas</i> , 2014, 21, .	1.9	98
60	Reduced instability growth with high-adiabatic high-foot implosions at the National Ignition Facility. <i>Physical Review E</i> , 2014, 90, 011102.	2.1	77
61	Multiscale strength (MS) models: their foundation, their successes, and their challenges. <i>Journal of Physics: Conference Series</i> , 2014, 500, 112055.	0.4	16
62	Measurement of the $T + T$ Neutron Spectrum Using the National Ignition Facility. <i>Physical Review Letters</i> , 2013, 111, 052501.	7.8	34
63	Progress towards ignition on the National Ignition Facility. <i>Physics of Plasmas</i> , 2013, 20, .	1.9	259
64	Hot-Spot Mix in Ignition-Scale Inertial Confinement Fusion Targets. <i>Physical Review Letters</i> , 2013, 111, 045001.	7.8	135
65	Onset of Hydrodynamic Mix in High-Velocity, Highly Compressed Inertial Confinement Fusion Implosions. <i>Physical Review Letters</i> , 2013, 111, 085004.	7.8	215
66	Performance of High-Convergence, Layered DT Implosions with Extended-Duration Pulses at the National Ignition Facility. <i>Physical Review Letters</i> , 2013, 111, 215001.	7.8	47
67	Modeling HEDLA magnetic field generation experiments on laser facilities. <i>High Energy Density Physics</i> , 2013, 9, 172-177.	1.5	16
68	Strength of Shock-Loaded Single-Crystal Tantalum [100] Determined using <i>In Situ</i> Broadband X-Ray Laue Diffraction. <i>Physical Review Letters</i> , 2013, 110, 115501.	7.8	61
69	Radiative shocks produced from spherical cryogenic implosions at the National Ignition Facility. <i>Physics of Plasmas</i> , 2013, 20, 056315.	1.9	17
70	Visualizing electromagnetic fields in laser-produced counter-streaming plasma experiments for collisionless shock laboratory astrophysics. <i>Physics of Plasmas</i> , 2013, 20, .	1.9	36
71	Solid-state framing camera with multiple time frames. <i>Applied Physics Letters</i> , 2013, 103, .	3.3	24
72	Measuring the absolute deuterium-tritium neutron yield using the magnetic recoil spectrometer at OMEGA and the NIF. <i>Review of Scientific Instruments</i> , 2012, 83, 10D912.	1.3	35

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73	Three-dimensional modeling and analysis of a high energy density Kelvin-Helmholtz experiment. <i>Physics of Plasmas</i> , 2012, 19, .	1.9	18
74	Validation of a Turbulent Kelvin-Helmholtz Shear Layer Model Using a High-Energy-Density OMEGA Laser Experiment. <i>Physical Review Letters</i> , 2012, 109, 155004.	7.8	39
75	Tailored ramp-loading via shock release of stepped-density reservoirs. <i>Physics of Plasmas</i> , 2012, 19, .	1.9	23
76	Generation of scaled protogalactic seed magnetic fields in laser-produced shock waves. <i>Nature</i> , 2012, 481, 480-483.	27.8	113
77	Neutron spectrometry—An essential tool for diagnosing implosions at the National Ignition Facility (invited). <i>Review of Scientific Instruments</i> , 2012, 83, 10D308.	1.3	117
78	Self-organized electromagnetic field structures in laser-produced counter-streaming plasmas. <i>Nature Physics</i> , 2012, 8, 809-812.	16.7	118
79	Basic scalings for collisionless-shock experiments in a plasma without pre-imposed magnetic field. <i>Plasma Physics and Controlled Fusion</i> , 2012, 54, 105021.	2.1	33
80	Designs for highly nonlinear ablative Rayleigh-Taylor experiments on the National Ignition Facility. <i>Physics of Plasmas</i> , 2012, 19, .	1.9	33
81	Characterizing counter-streaming interpenetrating plasmas relevant to astrophysical collisionless shocks. <i>Physics of Plasmas</i> , 2012, 19, .	1.9	101
82	A new method to generate dust with astrophysical properties. <i>Journal of Instrumentation</i> , 2011, 6, P05010-P05010.	1.2	6
83	A multiscale strength model for extreme loading conditions. <i>Journal of Applied Physics</i> , 2011, 109, .	2.5	161
84	Design of experiments to observe radiation stabilized Rayleigh-Taylor instability growth at an embedded decelerating interface. <i>Physics of Plasmas</i> , 2011, 18, .	1.9	10
85	Astrophysically relevant radiation hydrodynamics experiment at the National Ignition Facility. <i>Astrophysics and Space Science</i> , 2011, 336, 207-211.	1.4	19
86	Absolute measurements of x-ray backlighter sources at energies above 10 keV. <i>Physics of Plasmas</i> , 2011, 18, .	1.9	27
87	Development of a short duration backlit pinhole for radiography on the National Ignition Facility. <i>Review of Scientific Instruments</i> , 2010, 81, 10E536.	1.3	20
88	Strong stabilization of the Rayleigh-Taylor instability by material strength at megabar pressures. <i>Physics of Plasmas</i> , 2010, 17, .	1.9	63
89	Viscous Rayleigh-Taylor Instability Experiments at High Pressure and Strain Rate. <i>Physical Review Letters</i> , 2010, 104, 135504.	7.8	96
90	Metal deformation and phase transitions at extremely high strain rates. <i>MRS Bulletin</i> , 2010, 35, 999-1006.	3.5	26

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91	A high energy density shock driven Kelvin-Helmholtz shear layer experiment. <i>Physics of Plasmas</i> , 2009, 16, .	1.9	53
92	The National Ignition Facility: Ushering in a new age for high energy density science. <i>Physics of Plasmas</i> , 2009, 16, .	1.9	360
93	Observation of a Kelvin-Helmholtz Instability in a High-Energy-Density Plasma on the Omega Laser. <i>Physical Review Letters</i> , 2009, 103, 045005.	7.8	86
94	Three-dimensional blast-wave-driven Rayleigh-Taylor instability and the effects of long-wavelength modes. <i>Physics of Plasmas</i> , 2009, 16, .	1.9	35
95	TWO-DIMENSIONAL BLAST-WAVE-DRIVEN RAYLEIGH-TAYLOR INSTABILITY: EXPERIMENT AND SIMULATION. <i>Astrophysical Journal</i> , 2009, 696, 749-759.	4.5	61
96	Progress towards materials science above 1000 GPa (10 Mbar) on the NIF laser. , 2009, , .		1
97	High-resolution 17-keV backlighters for high energy density experiments. <i>Physics of Plasmas</i> , 2008, 15, .	1.9	111
98	Development of backlighting sources for a Compton radiography diagnostic of inertial confinement fusion targets (invited). <i>Review of Scientific Instruments</i> , 2008, 79, 10E901.	1.3	41
99	High-pressure nanocrystalline structure of a shock-compressed single crystal of iron. <i>Physical Review B</i> , 2008, 78, .	3.2	48
100	Experimental astrophysics with high power lasers and Z-pinch. <i>Reviews of Modern Physics</i> , 2006, 78, 755-807.	45.6	640
101	Material dynamics under extreme conditions of pressure and strain rate. <i>Materials Science and Technology</i> , 2006, 22, 474-488.	1.6	112
102	High-energy K α radiography using high-intensity, short-pulse lasers. <i>Physics of Plasmas</i> , 2006, 13, 056309.	1.9	193
103	Shock deformation of face-centred-cubic metals on subnanosecond timescales. <i>Nature Materials</i> , 2006, 5, 805-809.	27.5	227
104	EXAFS Measurement of Iron bcc-to-hcp Phase Transformation in Nanosecond-Laser Shocks. <i>Physical Review Letters</i> , 2005, 95, 075501.	7.8	106
105	Extended x-ray absorption fine structure measurement of phase transformation in iron shocked by nanosecond laser. <i>Physics of Plasmas</i> , 2005, 12, 092703.	1.9	10
106	Extended X-Ray Absorption Fine Structure Measurements of Laser-Shocked V and Ti and Crystal Phase Transformation in Ti. <i>Physical Review Letters</i> , 2004, 92, 095504.	7.8	28
107	Materials science under extreme conditions of pressure and strain rate. <i>Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science</i> , 2004, 35, 2587-2607.	2.2	82
108	Nonlinear mixing behavior of the three-dimensional Rayleigh-Taylor instability at a decelerating interface. <i>Physics of Plasmas</i> , 2004, 11, 2829-2837.	1.9	46

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109	Extended x-ray absorption fine structure measurements of laser shocks in Ti and V and phase transformation in Ti. <i>Physics of Plasmas</i> , 2004, 11, 2688-2695.	1.9	13
110	A model for instability growth in accelerated solid metals. <i>Journal of Applied Physics</i> , 2003, 93, 5287-5301.	2.5	64
111	The time scale for the transition to turbulence in a high Reynolds number, accelerated flow. <i>Physics of Plasmas</i> , 2003, 10, 614-622.	1.9	113
112	Effect of shock proximity on Richtmyerâ€“Meshkov growth. <i>Physics of Plasmas</i> , 2003, 10, 1931-1936.	1.9	69
113	Progress in understanding turbulent mixing induced by Rayleighâ€“Taylor and Richtmyerâ€“Meshkov instabilities. <i>Physics of Plasmas</i> , 2003, 10, 1883-1896.	1.9	69
114	Anomalous Elastic Response of Silicon to Uniaxial Shock Compression on Nanosecond Time Scales. <i>Physical Review Letters</i> , 2001, 86, 2349-2352.	7.8	177
115	The ablation-front Rayleighâ€“Taylor dispersion curve in indirect drive. <i>Physics of Plasmas</i> , 2001, 8, 2344-2348.	1.9	30
116	An experimental testbed for the study of hydrodynamic issues in supernovae. <i>Physics of Plasmas</i> , 2001, 8, 2446-2453.	1.9	92
117	Criteria for Scaled Laboratory Simulations of Astrophysical MHD Phenomena. <i>Astrophysical Journal, Supplement Series</i> , 2000, 127, 465-468.	7.7	184
118	Ablation front Rayleighâ€“Taylor growth experiments in spherically convergent geometry. <i>Physics of Plasmas</i> , 2000, 7, 2033-2039.	1.9	50
119	A review of astrophysics experiments on intense lasers. <i>Physics of Plasmas</i> , 2000, 7, 1641-1652.	1.9	188
120	Modeling Astrophysical Phenomena in the Laboratory with Intense Lasers. <i>Science</i> , 1999, 284, 1488-1493.	12.6	369
121	Similarity Criteria for the Laboratory Simulation of Supernova Hydrodynamics. <i>Astrophysical Journal</i> , 1999, 518, 821-832.	4.5	381
122	Measurement of single mode imprint in laser ablative drive of a thin Al foil by extreme ultraviolet laser radiography. <i>Physics of Plasmas</i> , 1998, 5, 227-233.	1.9	24
123	Comparison of Drive-Seeded Modulations in Planar Foils for 0.35 and 0.53 μ m Laser Drive. <i>Physical Review Letters</i> , 1998, 80, 1904-1907.	7.8	15
124	High energy-density science on the National Ignition Facility. , 1998, , .		16
125	Development of a Laboratory Environment to Test Models of Supernova Remnant Formation. <i>Astrophysical Journal</i> , 1998, 500, L157-L161.	4.5	34
126	Measurement of a Dispersion Curve for Linear-Regime Rayleigh-Taylor Growth Rates in Laser-Driven Planar Targets. <i>Physical Review Letters</i> , 1997, 78, 3318-3321.	7.8	110

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127	Measurements of direct drive laser imprint in thin foils by radiography using an x-ray laser backlighter. <i>Physics of Plasmas</i> , 1997, 4, 1985-1993.	1.9	26
128	Simulations of laser imprint for Nova experiments and for ignition capsules. <i>Physics of Plasmas</i> , 1997, 4, 1978-1984.	1.9	34
129	Supernova hydrodynamics experiments on the Nova laser. <i>Physics of Plasmas</i> , 1997, 4, 1994-2003.	1.9	121
130	Supernova-relevant Hydrodynamic Instability Experiments on the Nova Laser. <i>Astrophysical Journal</i> , 1997, 478, L75-L78.	4.5	68
131	Measurements of laser-speckle-induced perturbations in laser-driven foils. <i>Physical Review E</i> , 1996, 54, 4473-4475.	2.1	23
132	Measurement of 0.35 μ m Laser Imprint in a Thin Si Foil Using an X-Ray Laser Backlighter. <i>Physical Review Letters</i> , 1996, 76, 3574-3577.	7.8	61
133	Experimental Comparison of Classical versus Ablative Rayleigh-Taylor Instability. <i>Physical Review Letters</i> , 1996, 76, 4536-4539.	7.8	73
134	Single-mode and multimode Rayleigh-Taylor experiments on Nova. <i>Physics of Plasmas</i> , 1995, 2, 241-255.	1.9	139
135	A review of the ablative stabilization of the Rayleigh-Taylor instability in regimes relevant to inertial confinement fusion. <i>Physics of Plasmas</i> , 1994, 1, 1379-1389.	1.9	191
136	Richtmyer-Meshkov experiments on the Nova laser at high compression. <i>Physical Review Letters</i> , 1993, 70, 1806-1809.	7.8	71