

# Andrew J Schmitt

## List of Publications by Year in descending order

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87  
papers

3,292  
citations

147801

31  
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149698

56  
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87  
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87  
docs citations

87  
times ranked

1322  
citing authors

#	ARTICLE	IF	CITATIONS
1	Measurements of laser-imprint-induced shock velocity nonuniformities in plastic targets with the Nike KrF laser. <i>Physics of Plasmas</i> , 2021, 28, .	1.9	7
2	Order-of-magnitude laser imprint reduction using pre-expanded high-Z coatings on targets driven by a third harmonic Nd:glass laser. <i>Physics of Plasmas</i> , 2021, 28, .	1.9	9
3	Numerical Modeling of Radiation for the NRL ArF* Laser. , 2021, , .		0
4	Multimode Hydrodynamic Instability Growth of Preimposed Isolated Defects in Ablatively Driven Foils. <i>Physical Review Letters</i> , 2020, 125, 055001.	7.8	9
5	Isolated defect evolution in laser accelerated targets. <i>Physics of Plasmas</i> , 2020, 27, 072706.	1.9	6
6	Direct drive with the argon fluoride laser as a path to high fusion gain with sub-megajoule laser energy. <i>Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences</i> , 2020, 378, 20200031.	3.4	20
7	Multi-mode hydrodynamic evolution of perturbations seeded by isolated surface defects. <i>Physics of Plasmas</i> , 2020, 27, .	1.9	6
8	Plasma hydrodynamic experiments on NRL Nike KrF laser. <i>High Energy Density Physics</i> , 2020, 37, 100866.	1.5	1
9	Rayleigh-Taylor Growth of Isolated Bubbles and Spikes in Laser-Driven Foils. , 2020, , .		0
10	Rarefaction Flows and Mitigation of Imprint in Direct-Drive Implosions. <i>Physical Review Letters</i> , 2019, 123, 065001.	7.8	10
11	The National Direct-Drive Program: OMEGA to the National Ignition Facility. <i>Fusion Science and Technology</i> , 2018, 73, 89-97.	1.1	12
12	Absolute Hugoniot measurements for CH foams in the 2-9 Mbar range. <i>Physics of Plasmas</i> , 2018, 25, 032705.	1.9	11
13	Radiative and atomic properties of C and CH plasmas in the warm-dense-matter regime. <i>Physical Review E</i> , 2018, 98, .	2.1	5
14	Absolute Hugoniot Measurements for CH Foams in the 2-9 MBAR Range. , 2018, , .		0
15	Three-dimensional hydrodynamic simulations of OMEGA implosions. <i>Physics of Plasmas</i> , 2017, 24, .	1.9	26
16	Hot spot formation and stagnation properties in simulations of direct-drive NIF implosions. <i>Journal of Physics: Conference Series</i> , 2016, 717, 012047.	0.4	0
17	StarDriver: an estimate of the bandwidth required to suppress the 2 <sup>pe</sup> instability. <i>Plasma Physics and Controlled Fusion</i> , 2016, 58, 115006.	2.1	8
18	Numerical simulations of the ablative Rayleigh-Taylor instability in planar inertial-confinement-fusion targets using the FastRad3D code. <i>Physics of Plasmas</i> , 2016, 23, .	1.9	20

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19	Demonstration of Fuel Hot-Spot Pressure in Excess of 50ÅGbar for Direct-Drive, Layered Deuterium-Tritium Implosions on OMEGA. Physical Review Letters, 2016, 117, 025001.	7.8	72
20	Direct-drive inertial confinement fusion: A review. Physics of Plasmas, 2015, 22, .	1.9	521
21		1.9	52
22	Observation of parametric instabilities in the quarter critical density region driven by the Nike KrF laser. Physics of Plasmas, 2013, 20, 022701.	1.9	9
23	Laser requirements for a laser fusion energy powerÅplant. High Power Laser Science and Engineering, 2013, 1, 2-10.	4.6	22
24	High Gain Direct Drive Target Designs and Supporting Experiments with KrF. Plasma and Fusion Research, 2013, 8, 3404042-3404042.	0.7	0
25	Observed transition from Richtmyer-Meshkov jet formation through feedout oscillations to Rayleigh-Taylor instability in a laser target. Physics of Plasmas, 2012, 19, .	1.9	9
26	Observation of Strong Oscillations of Areal Mass in an Unsupported Shock Wave. Physical Review Letters, 2012, 109, 085001.	7.8	18
27	Calculations of nonlocal electron energy transport in laser produced plasmas in one and two dimensions using the velocity dependent Krook model. Physics of Plasmas, 2012, 19, 056317.	1.9	12
28	Observations of strong areal mass oscillations in a rippled target hit by a short pulse on the nike laser. , 2011, , .		1
29	Simulations of high-gain shock-ignited inertial-confinement-fusion implosions using less than 1MJ of direct KrF-laser energy. High Energy Density Physics, 2010, 6, 128-134.	1.5	12
30	Basic hydrodynamics of RichtmyerÅ€Meshkov-type growth and oscillations in the inertial confinement fusion-relevant conditions. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2010, 368, 1739-1768.	3.4	63
31	Shock ignition target design for inertial fusion energy. Physics of Plasmas, 2010, 17, 042701.	1.9	70
32	Acceleration to high velocities and heating by impact using Nike KrF laser. Physics of Plasmas, 2010, 17, 056317.	1.9	36
33	Optimization of irradiation configuration in laser fusion utilizing self-organizing electrodynamic system. Physics of Plasmas, 2010, 17, .	1.9	20
34	The Science and Technologies for Fusion Energy With Lasers and Direct-Drive Targets. IEEE Transactions on Plasma Science, 2010, 38, 690-703.	1.3	51
35	Kinetic theoretical approach to turbulence in variable-density incompressible, statistically inhomogeneous fluids. Physical Review E, 2010, 81, 026314.	2.1	2
36	Pulse shaping and energy storage capabilities of angularly multiplexed KrF laser fusion drivers. Journal of Applied Physics, 2009, 106, .	2.5	18

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37	Stability of a Shock-Decelerated Ablation Front. <i>Physical Review Letters</i> , 2009, 103, 085002.	7.8	12
38	A Laser Based Fusion Test Facility. <i>Fusion Science and Technology</i> , 2009, 56, 594-603.	1.1	38
39	Direct Drive Fusion Energy Shock Ignition Designs for Sub-MJ Lasers. <i>Fusion Science and Technology</i> , 2009, 56, 377-383.	1.1	35
40	Enhanced Direct-Drive Implosions with Thin High- $Z$ Ablation Layers. <i>Physical Review Letters</i> , 2008, 100, 075002.	7.8	23
41	Classical and ablative Richtmyer-Meshkov instability and other ICF-relevant plasma flows diagnosed with monochromatic x-ray imaging. <i>Physica Scripta</i> , 2008, T132, 014021.	2.5	10
42	Laser plasma instability experiments with KrF lasers. <i>Physics of Plasmas</i> , 2007, 14, 056316.	1.9	10
43	Shock front distortion and Richtmyer-Meshkov-type growth caused by a small preshock nonuniformity. <i>Physics of Plasmas</i> , 2007, 14, .	1.9	29
44	Direct-drive laser target designs for sub-megajoule energies. <i>Physics of Plasmas</i> , 2007, 14, 056317.	1.9	9
45	Perturbation evolution started by Richtmyer-Meshkov instability in planar laser targets. <i>Physics of Plasmas</i> , 2006, 13, 080703.	1.9	17
46	Multimode evolution of the ablative Richtmyer-Meshkov and Landau-Darrieus instability in laser imprint of planar targets. <i>Physics of Plasmas</i> , 2006, 13, 122703.	1.9	10
47	Pathway to a lower cost high repetition rate ignition facility. <i>Physics of Plasmas</i> , 2006, 13, 056320.	1.9	34
48	Size distribution and energy spectrum in the mixed state induced by Rayleigh-Taylor instability. <i>Physical Review E</i> , 2006, 73, 047303.	2.1	2
49	Modeling fluid instabilities in inertial confinement fusion hydrodynamics codes. <i>Physics of Plasmas</i> , 2005, 12, 056311.	1.9	16
50	Absolutely calibrated vacuum ultraviolet spectra in the 150-250-nm range from plasmas generated by the NIKE KrF laser. <i>Physics of Plasmas</i> , 2005, 12, 062701.	1.9	3
51	Large-scale high-resolution simulations of high gain direct-drive inertial confinement fusion targets. <i>Physics of Plasmas</i> , 2004, 11, 2716-2722.	1.9	31
52	Laser imprint reduction with a shaping pulse, oscillatory Richtmyer-Meshkov to Rayleigh-Taylor transition and other coherent effects in plastic-foam targets. <i>Physics of Plasmas</i> , 2003, 10, 1897-1905.	1.9	23
53	Strong shock wave and areal mass oscillations associated with impulsive loading of planar laser targets. <i>Physics of Plasmas</i> , 2003, 10, 3270-3282.	1.9	13
54	Laser imprint reduction with a short shaping laser pulse incident upon a foam-plastic target. <i>Physics of Plasmas</i> , 2002, 9, 5050-5058.	1.9	43

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55	Effects of thin high-Z layers on the hydrodynamics of laser-accelerated plastic targets. <i>Physics of Plasmas</i> , 2002, 9, 2234-2243.	1.9	61
56	Direct observation of mass oscillations due to ablative Richtmyer-Meshkov instability and feedout in planar plastic targets. <i>Physics of Plasmas</i> , 2002, 9, 2264-2276.	1.9	53
57	Growth of pellet imperfections and laser imprint in direct drive inertial confinement fusion targets. <i>Physics of Plasmas</i> , 2001, 8, 2287-2295.	1.9	27
58	<title>New direct-drive radiation preheated high-gain target designs for laser fusion</title>. , 2001, , .		2
59	<title>Nike direct-drive ICF program</title>. , 2001, , .		1
60	Direct Observation of Feedout-Related Mass Oscillations in Plastic Targets. <i>Physical Review Letters</i> , 2001, 87, 265002.	7.8	33
61	Feedout and Richtmyer-Meshkov instability at large density difference. <i>Physics of Plasmas</i> , 2001, 8, 592-605.	1.9	36
62	Direct Observation of Mass Oscillations Due to Ablative Richtmyer-Meshkov Instability in Plastic Targets. <i>Physical Review Letters</i> , 2001, 87, 265001.	7.8	68
63	Richtmyer-Meshkov-like instabilities and early-time perturbation growth in laser targets and Z-pinch loads. <i>Physics of Plasmas</i> , 2000, 7, 1662-1671.	1.9	67
64	Effects of radiation on direct-drive laser fusion targets. <i>Physics of Plasmas</i> , 2000, 7, 2046-2054.	1.9	33
65	High-gain direct-drive target design for laser fusion. <i>Physics of Plasmas</i> , 2000, 7, 2298-2301.	1.9	108
66	Experimental investigation of short scalelength density fluctuations in laser-produced plasmas. <i>Physics of Plasmas</i> , 2000, 7, 2114-2125.	1.9	12
67	Study of radiative plasma structures in laser driven ablating plasmas. <i>Physics of Plasmas</i> , 1999, 6, 4015-4021.	1.9	10
68	Measurements of near forward scattered laser light in a large inertial confinement fusion plasma (invited). <i>Review of Scientific Instruments</i> , 1999, 70, 677-681.	1.3	8
69	First Measurement of Short Length-Scale Density Fluctuations in a Large Laser Plasma. <i>Physical Review Letters</i> , 1999, 83, 1783-1786.	7.8	24
70	Observation of Rayleigh-Taylor growth to short wavelengths on Nike. <i>Physics of Plasmas</i> , 1999, 6, 565-570.	1.9	58
71	Critical Science Issues for Direct Drive Inertial Fusion Energy. <i>Journal of Fusion Energy</i> , 1998, 17, 227-229.	1.2	0
72	Direct-drive laser fusion: Status and prospects. <i>Physics of Plasmas</i> , 1998, 5, 1901-1918.	1.9	319

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73	Computational modeling of direct-drive fusion pellets and KrF-driven foil experiments. <i>Physics of Plasmas</i> , 1998, 5, 1935-1944.	1.9	51
74	Time-dependent filamentation and stimulated Brillouin forward scattering in inertial confinement fusion plasmas. <i>Physics of Plasmas</i> , 1998, 5, 503-517.	1.9	93
75	Comment on "Measurements of Rayleigh-Taylor Growth Rate of Planar Targets Irradiated Directly by Partially Coherent Light" <i>Physical Review Letters</i> , 1998, 80, 3414-3414.	7.8	1
76	Measurements of laser-imprinted perturbations and Rayleigh-Taylor growth with the Nike KrF laser. <i>Physics of Plasmas</i> , 1997, 4, 1969-1977.	1.9	61
77	The Nike KrF laser facility: Performance and initial target experiments. <i>Physics of Plasmas</i> , 1996, 3, 2098-2107.	1.9	157
78	Thermal filamentation in plasmas with nonlocal thermal conductivity. <i>Physics of Fluids B</i> , 1993, 5, 932-943.	1.7	6
79	Three-dimensional filamentation of light in laser plasmas. <i>Physics of Fluids B</i> , 1991, 3, 186-194.	1.7	38
80	Measurements of plasma opacity from laser-produced optically thin strongly coupled plasmas. <i>Physical Review Letters</i> , 1991, 66, 612-615.	7.8	28
81	Illumination uniformity of spherical targets using kilojoule-scale lasers with optical smoothing. <i>Journal of Applied Physics</i> , 1990, 67, 2303-2309.	2.5	3
82	Reduction of Raman Scattering in a Plasma to Convective Levels Using Induced Spatial Incoherence. <i>Physical Review Letters</i> , 1989, 62, 768-771.	7.8	71
83	The effects of plasma flow on thermal and ponderomotive light filamentation. <i>Physics of Fluids B</i> , 1989, 1, 1287-1294.	1.7	10
84	The effects of optical smoothing techniques on filamentation in laser plasmas. <i>Physics of Fluids</i> , 1988, 31, 3079.	1.4	109
85	Theory of induced spatial incoherence. <i>Journal of Applied Physics</i> , 1987, 62, 2680-2701.	2.5	177
86	Illumination uniformity of laser-fusion pellets using induced spatial incoherence. <i>Journal of Applied Physics</i> , 1986, 60, 6-13.	2.5	24
87	Absolutely uniform illumination of laser fusion pellets. <i>Applied Physics Letters</i> , 1984, 44, 399-401.	3.3	47