

# David A Hammer

## List of Publications by Year in Descending Order

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

89  
papers

2,084  
citations

28  
h-index

43  
g-index

94  
ext. papers

2,285  
ext. citations

2  
avg, IF

4.47  
L-index

#	Paper	IF	Citations
89	Measurements of the imploding plasma sheath in triple-nozzle gas-puff z pinches. <i>Physics of Plasmas</i> , <b>2022</b> , 29, 062702	2.1	3
88	Direct comparison of wire, foil, and hybrid X-pinches on a 200 kA, 150 ns current driver. <i>Journal of Applied Physics</i> , <b>2021</b> , 129, 073301	2.5	6
87	Implosion dynamics of triple-nozzle gas-puff z pinches on COBRA. <i>Physics of Plasmas</i> , <b>2021</b> , 28, 022703	2.1	7
86	Current polarity effects on laboratory plasma jets. <i>Physics of Plasmas</i> , <b>2021</b> , 28, 082703	2.1	2
85	Liner implosion experiments driven by a dynamic screw pinch. <i>Physics of Plasmas</i> , <b>2021</b> , 28, 082707	2.1	2
84	Implosion mediated gas-puff hybrid X-pinch. <i>Physics of Plasmas</i> , <b>2021</b> , 28, 010703	2.1	3
83	Electron plasma wave Thomson scattering on laboratory plasma jets. <i>Physics of Plasmas</i> , <b>2020</b> , 27, 062708	2.1	1
82	Stabilization of Liner Implosions via a Dynamic Screw Pinch. <i>Physical Review Letters</i> , <b>2020</b> , 125, 035001	7.4	7
81	Design of a 3-D Printed Experimental Platform for Studying the Formation and Magnetization of Turbulent Plasma Jets. <i>IEEE Transactions on Plasma Science</i> , <b>2020</b> , 48, 4056-4067	1.3	1
80	Study of the structure of exploding flat foils at superhigh current density. <i>Journal of Applied Physics</i> , <b>2020</b> , 128, 205902	2.5	1
79	Enhancing the x-ray output of a single-wire explosion with a gas-puff based plasma opening switch. <i>Physics of Plasmas</i> , <b>2018</b> , 25, 022704	2.1	4
78	Study of Electric Explosion of Flat Micron-Thick Foils at Current Densities of $(550) \pm 108$ A/cm <sup>2</sup> . <i>Plasma Physics Reports</i> , <b>2018</b> , 44, 236-244	1.2	7
77	Studying of Explosive Electron Emission From Whisker Cathode Using X-Ray Point-Projection Radiography. <i>IEEE Transactions on Plasma Science</i> , <b>2018</b> , 46, 3815-3819	1.3	1
76	Observations of the magneto-Rayleigh-Taylor instability and shock dynamics in gas-puff Z-pinch experiments. <i>Physics of Plasmas</i> , <b>2018</b> , 25, 072701	2.1	10
75	. <i>IEEE Transactions on Plasma Science</i> , <b>2018</b> , 46, 3741-3745	1.3	9
74	Time-Resolved Thomson Scattering on Laboratory Plasma Jets. <i>IEEE Transactions on Plasma Science</i> , <b>2018</b> , 46, 3901-3905	1.3	10
73	Time-Resolved Thomson Scattering on Gas-Puff Z-Pinch Plasmas at Pinch Time. <i>IEEE Transactions on Plasma Science</i> , <b>2018</b> , 46, 3906-3911	1.3	5

72	Multi-angle multi-pulse time-resolved Thomson scattering on laboratory plasma jets. <i>Review of Scientific Instruments</i> , <b>2018</b> , 89, 10C109	1.7	10
71	Time-resolved and multiple-angle Thomson scattering on gas-puff Z-Pinch plasmas at pinch time. <i>Review of Scientific Instruments</i> , <b>2018</b> , 89, 10C117	1.7	10
70	Study of Triple Ar Gas Puff Z-Pinches on 0.9-MA, 200-ns COBRA. <i>IEEE Transactions on Plasma Science</i> , <b>2018</b> , 46, 3864-3870	1.3	6
69	The generation of mega-gauss fields on the Cornell beam research accelerator. <i>Review of Scientific Instruments</i> , <b>2018</b> , 89, 095102	1.7	1
68	Studying the Dynamics of Hybrid X-Pinches. <i>Bulletin of the Russian Academy of Sciences: Physics</i> , <b>2018</b> , 82, 386-389	0.4	2
67	A compact linear accelerator based on a scalable microelectromechanical-system RF-structure. <i>Review of Scientific Instruments</i> , <b>2017</b> , 88, 063304	1.7	10
66	Technique for insulated and non-insulated metal liner X-pinch radiography on a 1 MA pulsed power machine. <i>Review of Scientific Instruments</i> , <b>2017</b> , 88, 113502	1.7	5
65	Study of the time-resolved, 3-dimensional current density distribution in solid metallic liners at 1 MA. <i>Physics of Plasmas</i> , <b>2016</b> , 23, 092711	2.1	2
64	Comment on "A doubly curved elliptical crystal spectrometer for the study of localized x-ray absorption in hot plasmas" [Rev. Sci. Instrum. 85, 103114 (2014)]. <i>Review of Scientific Instruments</i> , <b>2016</b> , 87, 107101	1.7	1
63	Helical plasma striations in liners in the presence of an external axial magnetic field. <i>Physics of Plasmas</i> , <b>2016</b> , 23, 022708	2.1	18
62	Measuring 10-20 T magnetic fields in single wire explosions using Zeeman splitting. <i>Review of Scientific Instruments</i> , <b>2016</b> , 87, 103506	1.7	6
61	A source of hard X-ray radiation based on hybrid X pinches. <i>Physics of Plasmas</i> , <b>2016</b> , 23, 103303	2.1	12
60	Radiative properties of argon gas puff z-pinch implosions on COBRA. <i>Physics of Plasmas</i> , <b>2016</b> , 23, 101202	2.1	5
59	Measuring 20-100 T B-fields using Zeeman splitting of sodium emission lines on a 500 kA pulsed power machine. <i>Review of Scientific Instruments</i> , <b>2016</b> , 87, 11D407	1.7	4
58	A review of projection radiography of plasma and biological objects in X-Pinch radiation. <i>Plasma Physics Reports</i> , <b>2016</b> , 42, 226-268	1.2	36
57	Dynamics of hybrid X-pinches. <i>Plasma Physics Reports</i> , <b>2015</b> , 41, 52-70	1.2	22
56	X-pinch. Part II. <i>Plasma Physics Reports</i> , <b>2015</b> , 41, 445-491	1.2	42
55	X-ray absorption spectroscopy on the basis of hybrid X-pinch radiation. <i>Plasma Physics Reports</i> , <b>2015</b> , 41, 535-541	1.2	3

54	Investigation of the effect of a power feed vacuum gap in solid liner experiments at 1 MA. <i>Physics of Plasmas</i> , <b>2015</b> , 22, 094501	2.1	3
53	X-pinch. Part I. <i>Plasma Physics Reports</i> , <b>2015</b> , 41, 291-342	1.2	76
52	X-Pinches as Broadband Sources of X-Rays for Radiography. <i>Journal of Biomedical Science and Engineering</i> , <b>2015</b> , 08, 747-755	0.7	9
51	Interferometric Characterization of Laboratory Plasma Astrophysical Jets Produced by a 1- $\mu$ s Pulsed Power Driver. <i>IEEE Transactions on Plasma Science</i> , <b>2014</b> , 42, 2666-2667	1.3	0
50	Study of New Configurations of Hybrid X-Pinches. <i>IEEE Transactions on Plasma Science</i> , <b>2014</b> , 42, 748-753		11
49	A doubly curved elliptical crystal spectrometer for the study of localized x-ray absorption in hot plasmas. <i>Review of Scientific Instruments</i> , <b>2014</b> , 85, 103114	1.7	5
48	The impact of Hall physics on magnetized high energy density plasma jets. <i>Physics of Plasmas</i> , <b>2014</b> , 21, 056307	2.1	11
47	Study of gas-puff Z-pinches on COBRA. <i>Physics of Plasmas</i> , <b>2014</b> , 21, 112702	2.1	42
46	Gas puff Z-pinch implosions with external Bz field on COBRA <b>2014</b> ,		7
45	Early time studies of cylindrical liner implosions at 1 MA on COBRA <b>2014</b> ,		2
44	Hard X-rays from hybrid X pinches <b>2014</b> ,		3
43	Characterization of the COBRA triple-nozzle gas-puff valve using planar laser induced fluorescence <b>2014</b> ,		13
42	Determination of the size of a radiation source by the method of calculation of diffraction patterns. <i>Optics and Spectroscopy (English Translation of Optika i Spektroskopiya)</i> , <b>2013</b> , 115, 128-136	0.7	16
41	Hybrid X-pinches. <i>Plasma Physics Reports</i> , <b>2012</b> , 38, 359-381	1.2	27
40	Cable Array X-Pinch Experiments at 1 MA. <i>IEEE Transactions on Plasma Science</i> , <b>2012</b> , 40, 3367-3371	1.3	2
39	Time and space resolved measurement of the electron temperature, mass density and ionization state in the ablation plasma between two exploding Al wires. <i>Physics of Plasmas</i> , <b>2012</b> , 19, 056302	2.1	17
38	High resolution absorption spectroscopy of exploding wire plasmas using an x-pinch x-ray source and spherically bent crystal. <i>Review of Scientific Instruments</i> , <b>2011</b> , 82, 063501	1.7	22
37	Anode-Cathode Asymmetry in a Wire-Array X-Pinch: Highly Resolved Axial-Shear-Flow Structure Observed on the Outer Edges of Ablating Wires. <i>IEEE Transactions on Plasma Science</i> , <b>2011</b> , 39, 2430-2431	1.3	2

36	Hybrid X-pinch with conical electrodes. <i>Physics of Plasmas</i> , <b>2010</b> , 17, 112707	2.1	43
35	Initial experiments using radial foils on the Cornell Beam Research Accelerator pulsed power generator. <i>Physics of Plasmas</i> , <b>2010</b> , 17, 012706	2.1	34
34	X-pinch source of subnanosecond soft X-ray pulses based on small-sized low-inductance current generator. <i>Journal of Experimental and Theoretical Physics</i> , <b>2010</b> , 111, 363-370	1	41
33	Nested multilayered X pinches for generators with mega-ampere current level. <i>Physics of Plasmas</i> , <b>2009</b> , 16, 050702	2.1	15
32	The Role of Flux Advection in the Development of the Ablation Streams and Precursors of Wire Array Z-pinches <b>2009</b> ,		29
31	Overview of 12-cm-Diameter, Argon Gas-Puff Experiments and Analyses with >200-ns Implosion Times at 3- to 6-MA Peak Currents <b>2009</b> ,		2
30	Magnetic Field Measurements in Wire-Array Z-Pinches using Magneto-Optically Active Waveguides <b>2009</b> ,		2
29	A 1 MA, variable risetime pulse generator for high energy density plasma research. <i>Review of Scientific Instruments</i> , <b>2008</b> , 79, 073501	1.7	75
28	Measurements of high-current electron beams from X pinches and wire array Z pinches. <i>Review of Scientific Instruments</i> , <b>2008</b> , 79, 10E316	1.7	6
27	Wide band focusing x-ray spectrograph with spatial resolution. <i>Review of Scientific Instruments</i> , <b>2008</b> , 79, 013106	1.7	26
26	COBRA-STAR, a five frame point-projection x-ray imaging system for 1 MA scale wire-array Z pinches. <i>Review of Scientific Instruments</i> , <b>2008</b> , 79, 033503	1.7	32
25	Accelerated electrons and hard X-ray emission from X-pinches. <i>Plasma Physics Reports</i> , <b>2008</b> , 34, 754-770.	1.2	31
24	Structure of the dense cores and ablation plasmas in the initiation phase of tungsten wire-array Z pinches. <i>Physics of Plasmas</i> , <b>2007</b> , 14, 012704	2.1	35
23	Structural evolution and formation of high-pressure plasmas in X pinches. <i>Physical Review Letters</i> , <b>2007</b> , 98, 025003	7.4	44
22	Diagnostics on the COBRA pulsed power generator. <i>Review of Scientific Instruments</i> , <b>2006</b> , 77, 10F521	1.7	30
21	The Imaging of Z-Pinches Using X-Pinch Backlighting. <i>AIP Conference Proceedings</i> , <b>2006</b> ,	0	7
20	Determination of the size and structure of an X-pinch x-ray source from the diffraction pattern produced by microfabricated slits. <i>Applied Optics</i> , <b>2005</b> , 44, 2349-58	1.7	28
19	Cross calibration of new x-ray films against direct exposure film from 1 to 8keV using the X-pinch x-ray source. <i>Review of Scientific Instruments</i> , <b>2005</b> , 76, 113111	1.7	20

18	Electron-beam-generated x rays from X pinches. <i>Physics of Plasmas</i> , <b>2005</b> , 12, 033102	2.1	44
17	Physico-chemical factors influence beet ( <i>Beta vulgaris</i> L.) seed germination. <b>2003</b> , 433-440		5
16	High energy density z-pinch plasma conditions with picosecond time resolution. <i>Physical Review Letters</i> , <b>2002</b> , 89, 035003	7.4	67
15	X-ray backlighting of wire array Z-pinch implosions using X pinch. <i>Review of Scientific Instruments</i> , <b>2001</b> , 72, 671-673	1.7	78
14	Radiographic and spectroscopic studies of X-pinch plasma implosion dynamics and x-ray burst emission characteristics. <i>Physics of Plasmas</i> , <b>2001</b> , 8, 1305	2.1	141
13	Experiments measuring the initial energy deposition, expansion rates and morphology of exploding wires with about 1 kA/wire. <i>Physics of Plasmas</i> , <b>2001</b> , 8, 216-230	2.1	129
12	A simple air wedge shearing interferometer for studying exploding wires. <i>Review of Scientific Instruments</i> , <b>2001</b> , 72, 1098-1100	1.7	41
11	Formation, cascade development, and rupture of the X-pinch neck. <i>Journal of Experimental and Theoretical Physics</i> , <b>2000</b> , 91, 469-478	1	10
10	Characterization of wire x pinches driven by a microsecond-long capacitive discharge. <i>Journal of Applied Physics</i> , <b>2000</b> , 87, 8295-8303	2.5	28
9	Evolution of the structure of the dense plasma near the cross point in exploding wire X pinches. <i>Physics of Plasmas</i> , <b>1999</b> , 6, 2840-2846	2.1	72
8	Multiphase Foamlike Structure of Exploding Wire Cores. <i>Physical Review Letters</i> , <b>1999</b> , 83, 4313-4316	7.4	113
7	High-luminosity monochromatic x-ray backlighting using an incoherent plasma source to study extremely dense plasmas (invited). <i>Review of Scientific Instruments</i> , <b>1997</b> , 68, 740-744	1.7	76
6	Effect of an electron beam generated in an X-pinch plasma on the structure of the K spectra of multiply charged ions. <i>Journal of Experimental and Theoretical Physics</i> , <b>1997</b> , 85, 484-491	1	17
5	The x-pinch as a point source of x rays for backlighting. <i>Review of Scientific Instruments</i> , <b>1995</b> , 66, 779-781.7		53
4	Spectroscopic investigations of the short wavelength x-ray spectra from X-pinch plasmas. <i>Physica Scripta</i> , <b>1995</b> , 51, 517-521	2.6	27
3	Observation of a stable dense core within an unstable coronal plasma in wire-initiated dense Z-pinch experiments. <i>Physical Review Letters</i> , <b>1993</b> , 71, 3806-3809	7.4	105
2	Intense pulsed plasma x-ray source for lithography. <i>Journal of Vacuum Science &amp; Technology an Official Journal of the American Vacuum Society B, Microelectronics Processing and Phenomena</i> , <b>1991</b> , 9, 3245		6
1	X-pinch soft x-ray source for microlithography. <i>Applied Physics Letters</i> , <b>1990</b> , 57, 2083-2085	3.4	30

