

David A Hammer

List of Publications by Citations

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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	Radiographic and spectroscopic studies of X-pinch plasma implosion dynamics and x-ray burst emission characteristics. <i>Physics of Plasmas</i> , 2001 , 8, 1305	2.1	141
88	Experiments measuring the initial energy deposition, expansion rates and morphology of exploding wires with about 1 kA/wire. <i>Physics of Plasmas</i> , 2001 , 8, 216-230	2.1	129
87	Multiphase Foamlike Structure of Exploding Wire Cores. <i>Physical Review Letters</i> , 1999 , 83, 4313-4316	7.4	113
86	Observation of a stable dense core within an unstable coronal plasma in wire-initiated dense Z-pinch experiments. <i>Physical Review Letters</i> , 1993 , 71, 3806-3809	7.4	105
85	X-ray backlighting of wire array Z-pinch implosions using X pinch. <i>Review of Scientific Instruments</i> , 2001 , 72, 671-673	1.7	78
84	X-pinch. Part I. <i>Plasma Physics Reports</i> , 2015 , 41, 291-342	1.2	76
83	High-luminosity monochromatic x-ray backlighting using an incoherent plasma source to study extremely dense plasmas (invited). <i>Review of Scientific Instruments</i> , 1997 , 68, 740-744	1.7	76
82	A 1 MA, variable risetime pulse generator for high energy density plasma research. <i>Review of Scientific Instruments</i> , 2008 , 79, 073501	1.7	75
81	Evolution of the structure of the dense plasma near the cross point in exploding wire X pinches. <i>Physics of Plasmas</i> , 1999 , 6, 2840-2846	2.1	72
80	High energy density z-pinch plasma conditions with picosecond time resolution. <i>Physical Review Letters</i> , 2002 , 89, 035003	7.4	67
79	The x-pinch as a point source of x rays for backlighting. <i>Review of Scientific Instruments</i> , 1995 , 66, 779-781.7		53
78	Structural evolution and formation of high-pressure plasmas in X pinches. <i>Physical Review Letters</i> , 2007 , 98, 025003	7.4	44
77	Electron-beam-generated x rays from X pinches. <i>Physics of Plasmas</i> , 2005 , 12, 033102	2.1	44
76	Hybrid X-pinch with conical electrodes. <i>Physics of Plasmas</i> , 2010 , 17, 112707	2.1	43
75	X-pinch. Part II. <i>Plasma Physics Reports</i> , 2015 , 41, 445-491	1.2	42
74	Study of gas-puff Z-pinches on COBRA. <i>Physics of Plasmas</i> , 2014 , 21, 112702	2.1	42
73	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> , 2010 , 111, 363-370	1	41

72	A simple air wedge shearing interferometer for studying exploding wires. <i>Review of Scientific Instruments</i> , 2001 , 72, 1098-1100	1.7	41
71	A review of projection radiography of plasma and biological objects in X-Pinch radiation. <i>Plasma Physics Reports</i> , 2016 , 42, 226-268	1.2	36
70	Structure of the dense cores and ablation plasmas in the initiation phase of tungsten wire-array Z pinches. <i>Physics of Plasmas</i> , 2007 , 14, 012704	2.1	35
69	Initial experiments using radial foils on the Cornell Beam Research Accelerator pulsed power generator. <i>Physics of Plasmas</i> , 2010 , 17, 012706	2.1	34
68	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> , 2008 , 79, 033503	1.7	32
67	Accelerated electrons and hard X-ray emission from X-pinches. <i>Plasma Physics Reports</i> , 2008 , 34, 754-770	1.2	31
66	Diagnostics on the COBRA pulsed power generator. <i>Review of Scientific Instruments</i> , 2006 , 77, 10F521	1.7	30
65	X-pinch soft x-ray source for microlithography. <i>Applied Physics Letters</i> , 1990 , 57, 2083-2085	3.4	30
64	The Role of Flux Advection in the Development of the Ablation Streams and Precursors of Wire Array Z-pinches 2009 ,		29
63	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> , 2005 , 44, 2349-58	1.7	28
62	Characterization of wire x pinches driven by a microsecond-long capacitive discharge. <i>Journal of Applied Physics</i> , 2000 , 87, 8295-8303	2.5	28
61	Hybrid X-pinches. <i>Plasma Physics Reports</i> , 2012 , 38, 359-381	1.2	27
60	Spectroscopic investigations of the short wavelength x-ray spectra from X-pinch plasmas. <i>Physica Scripta</i> , 1995 , 51, 517-521	2.6	27
59	Wide band focusing x-ray spectrograph with spatial resolution. <i>Review of Scientific Instruments</i> , 2008 , 79, 013106	1.7	26
58	Dynamics of hybrid X-pinches. <i>Plasma Physics Reports</i> , 2015 , 41, 52-70	1.2	22
57	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> , 2011 , 82, 063501	1.7	22
56	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> , 2005 , 76, 113111	1.7	20
55	Helical plasma striations in liners in the presence of an external axial magnetic field. <i>Physics of Plasmas</i> , 2016 , 23, 022708	2.1	18

54	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> , 2012 , 19, 056302	2.1	17
53	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> , 1997 , 85, 484-491	1	17
52	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> , 2013 , 115, 128-136	0.7	16
51	Nested multilayered X pinches for generators with mega-ampere current level. <i>Physics of Plasmas</i> , 2009 , 16, 050702	2.1	15
50	Characterization of the COBRA triple-nozzle gas-puff valve using planar laser induced fluorescence 2014 ,		13
49	A source of hard X-ray radiation based on hybrid X pinches. <i>Physics of Plasmas</i> , 2016 , 23, 103303	2.1	12
48	Study of New Configurations of Hybrid X Pinches. <i>IEEE Transactions on Plasma Science</i> , 2014 , 42, 748-753		11
47	The impact of Hall physics on magnetized high energy density plasma jets). <i>Physics of Plasmas</i> , 2014 , 21, 056307	2.1	11
46	A compact linear accelerator based on a scalable microelectromechanical-system RF-structure. <i>Review of Scientific Instruments</i> , 2017 , 88, 063304	1.7	10
45	Observations of the magneto-Rayleigh-Taylor instability and shock dynamics in gas-puff Z-pinch experiments. <i>Physics of Plasmas</i> , 2018 , 25, 072701	2.1	10
44	Time-Resolved Thomson Scattering on Laboratory Plasma Jets. <i>IEEE Transactions on Plasma Science</i> , 2018 , 46, 3901-3905	1.3	10
43	Formation, cascade development, and rupture of the X-pinch neck. <i>Journal of Experimental and Theoretical Physics</i> , 2000 , 91, 469-478	1	10
42	Multi-angle multi-pulse time-resolved Thomson scattering on laboratory plasma jets. <i>Review of Scientific Instruments</i> , 2018 , 89, 10C109	1.7	10
41	Time-resolved and multiple-angle Thomson scattering on gas-puff Z-Pinch plasmas at pinch time. <i>Review of Scientific Instruments</i> , 2018 , 89, 10C117	1.7	10
40	. <i>IEEE Transactions on Plasma Science</i> , 2018 , 46, 3741-3745	1.3	9
39	X-Pinches as Broadband Sources of X-Rays for Radiography. <i>Journal of Biomedical Science and Engineering</i> , 2015 , 08, 747-755	0.7	9
38	Study of Electric Explosion of Flat Micron-Thick Foils at Current Densities of $(5\text{--}10) \times 10^8$ A/cm ² . <i>Plasma Physics Reports</i> , 2018 , 44, 236-244	1.2	7
37	Gas puff Z-pinch implosions with external Bz field on COBRA 2014 ,		7

36	The Imaging of Z-Pinches Using X-Pinch Backlighting. <i>AIP Conference Proceedings</i> , 2006 ,	0	7
35	Stabilization of Liner Implosions via a Dynamic Screw Pinch. <i>Physical Review Letters</i> , 2020 , 125, 035001	7.4	7
34	Implosion dynamics of triple-nozzle gas-puff z pinches on COBRA. <i>Physics of Plasmas</i> , 2021 , 28, 022703	2.1	7
33	Measurements of high-current electron beams from X pinches and wire array Z pinches. <i>Review of Scientific Instruments</i> , 2008 , 79, 10E316	1.7	6
32	Intense pulsed plasma x-ray source for lithography. <i>Journal of Vacuum Science & Technology an Official Journal of the American Vacuum Society B, Microelectronics Processing and Phenomena</i> , 1991 , 9, 3245		6
31	Measuring 10-20 T magnetic fields in single wire explosions using Zeeman splitting. <i>Review of Scientific Instruments</i> , 2016 , 87, 103506	1.7	6
30	Direct comparison of wire, foil, and hybrid X-pinches on a 200 kA, 150 ns current driver. <i>Journal of Applied Physics</i> , 2021 , 129, 073301	2.5	6
29	Study of Triple Ar Gas Puff Z-Pinches on 0.9-MA, 200-ns COBRA. <i>IEEE Transactions on Plasma Science</i> , 2018 , 46, 3864-3870	1.3	6
28	Time-Resolved Thomson Scattering on Gas-Puff Z-Pinch Plasmas at Pinch Time. <i>IEEE Transactions on Plasma Science</i> , 2018 , 46, 3906-3911	1.3	5
27	Technique for insulated and non-insulated metal liner X-pinch radiography on a 1 MA pulsed power machine. <i>Review of Scientific Instruments</i> , 2017 , 88, 113502	1.7	5
26	A doubly curved elliptical crystal spectrometer for the study of localized x-ray absorption in hot plasmas. <i>Review of Scientific Instruments</i> , 2014 , 85, 103114	1.7	5
25	Physico-chemical factors influence beet (<i>Beta vulgaris</i> L.) seed germination. 2003 , 433-440		5
24	Radiative properties of argon gas puff z-pinch implosions on COBRA. <i>Physics of Plasmas</i> , 2016 , 23, 101202	2.1	5
23	Enhancing the x-ray output of a single-wire explosion with a gas-puff based plasma opening switch. <i>Physics of Plasmas</i> , 2018 , 25, 022704	2.1	4
22	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> , 2016 , 87, 11D407	1.7	4
21	X-ray absorption spectroscopy on the basis of hybrid X-pinch radiation. <i>Plasma Physics Reports</i> , 2015 , 41, 535-541	1.2	3
20	Investigation of the effect of a power feed vacuum gap in solid liner experiments at 1 MA. <i>Physics of Plasmas</i> , 2015 , 22, 094501	2.1	3
19	Hard X-rays from hybrid X pinches 2014 ,		3

18	Implosion mediated gas-puff hybrid X-pinch. <i>Physics of Plasmas</i> , 2021 , 28, 010703	2.1	3
17	Measurements of the imploding plasma sheath in triple-nozzle gas-puff z pinches. <i>Physics of Plasmas</i> , 2022 , 29, 062702	2.1	3
16	Study of the time-resolved, 3-dimensional current density distribution in solid metallic liners at 1 MA. <i>Physics of Plasmas</i> , 2016 , 23, 092711	2.1	2
15	Early time studies of cylindrical liner implosions at 1 MA on COBRA 2014 ,		2
14	Cable Array Z-Z-Pinch Experiments at 1 MA. <i>IEEE Transactions on Plasma Science</i> , 2012 , 40, 3367-3371	1.3	2
13	Anode-Cathode Asymmetry in a Wire-Array Z-Z-Pinch: Highly Resolved Axial-Shear-Flow Structure Observed on the Outer Edges of Ablating Wires. <i>IEEE Transactions on Plasma Science</i> , 2011 , 39, 2430-2431 ^{1,3}		2
12	Overview of 12-cm-Diameter, Argon Gas-Puff Experiments and Analyses with >200-ns Implosion Times at 3- to 6-MA Peak Currents 2009 ,		2
11	Magnetic Field Measurements in Wire-Array Z-Pinches using Magneto-Optically Active Waveguides 2009 ,		2
10	Studying the Dynamics of Hybrid X-Pinches. <i>Bulletin of the Russian Academy of Sciences: Physics</i> , 2018 , 82, 386-389	0.4	2
9	Current polarity effects on laboratory plasma jets. <i>Physics of Plasmas</i> , 2021 , 28, 082703	2.1	2
8	Liner implosion experiments driven by a dynamic screw pinch. <i>Physics of Plasmas</i> , 2021 , 28, 082707	2.1	2
7	Electron plasma wave Thomson scattering on laboratory plasma jets. <i>Physics of Plasmas</i> , 2020 , 27, 062708 ¹		1
6	Studying of Explosive Electron Emission From Whisker-Cathode Using X-Ray Point-Projection Radiography. <i>IEEE Transactions on Plasma Science</i> , 2018 , 46, 3815-3819	1.3	1
5	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> , 2020 , 48, 4056-4067	1.3	1
4	Study of the structure of exploding flat foils at superhigh current density. <i>Journal of Applied Physics</i> , 2020 , 128, 205902	2.5	1
3	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> , 2016 , 87, 107101	1.7	1
2	The generation of mega-gauss fields on the Cornell beam research accelerator. <i>Review of Scientific Instruments</i> , 2018 , 89, 095102	1.7	1
1	Interferometric Characterization of Laboratory Plasma Astrophysical Jets Produced by a 1- μ s Pulsed Power Driver. <i>IEEE Transactions on Plasma Science</i> , 2014 , 42, 2666-2667	1.3	0

