

# Derek B Schaeffer

## List of Publications by Year in descending order

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48  
papers

877  
citations

430754

18  
h-index

477173

29  
g-index

48  
all docs

48  
docs citations

48  
times ranked

750  
citing authors

#	ARTICLE	IF	CITATIONS
1	Proton deflectometry with <i>in situ</i> x-ray reference for absolute measurement of electromagnetic fields in high-energy-density plasmas. <i>Review of Scientific Instruments</i> , 2022, 93, 023502.	0.6	4
2	Design of proton deflectometry with <i>in situ</i> x-ray fiducial for magnetized high-energy-density systems. <i>Applied Optics</i> , 2022, 61, C133.	0.9	3
3	High repetition rate exploration of the Biermann battery effect in laser produced plasmas over large spatial regions. <i>High Power Laser Science and Engineering</i> , 2022, 10, .	2.0	7
4	Laser-driven, ion-scale magnetospheres in laboratory plasmas. II. Particle-in-cell simulations. <i>Physics of Plasmas</i> , 2022, 29, .	0.7	4
5	Laser-driven, ion-scale magnetospheres in laboratory plasmas. I. Experimental platform and first results. <i>Physics of Plasmas</i> , 2022, 29, .	0.7	9
6	Kinetic Simulations of Electron Pre-energization by Magnetized Collisionless Shocks in Expanding Laboratory Plasmas. <i>Astrophysical Journal Letters</i> , 2021, 908, L52.	3.0	3
7	Measurements of electron temperature in high-energy-density plasmas using gated x-ray pinhole imaging. <i>Review of Scientific Instruments</i> , 2021, 92, 043524.	0.6	2
8	Raster Thomson scattering in large-scale laser plasmas produced at high repetition rate. <i>Review of Scientific Instruments</i> , 2021, 92, 093102.	0.6	7
9	Proton radiography of non-uniform initial magnetic fields in HED plasmas. , 2021, , .		0
10	Measurements of ion velocity distributions in a large scale laser-produced plasma. <i>Review of Scientific Instruments</i> , 2020, 91, 103103.	0.6	3
11	Laser-produced plasmas as drivers of laboratory collisionless quasi-parallel shocks. <i>Physics of Plasmas</i> , 2020, 27, 042103.	0.7	5
12	Kinetic simulations of piston-driven collisionless shock formation in magnetized laboratory plasmas. <i>Physics of Plasmas</i> , 2020, 27, .	0.7	12
13	Laboratory Observations of Ultra-low-frequency Analog Waves Driven by the Right-hand Resonant Ion Beam Instability. <i>Astrophysical Journal Letters</i> , 2020, 891, L11.	3.0	12
14	Direct Observations of Particle Dynamics in Magnetized Collisionless Shock Precursors in Laser-Produced Plasmas. <i>Physical Review Letters</i> , 2019, 122, 245001.	2.9	33
15	Observations of a field-aligned ion/ion-beam instability in a magnetized laboratory plasma. <i>Physics of Plasmas</i> , 2018, 25, .	0.7	19
16	A platform for high-repetition-rate laser experiments on the Large Plasma Device. <i>High Power Laser Science and Engineering</i> , 2018, 6, .	2.0	14
17	Regimes of magnetic reconnection in colliding laser-produced magnetized plasma bubbles. <i>Physics of Plasmas</i> , 2018, 25, .	0.7	3
18	Kinetic simulation of magnetic field generation and collisionless shock formation in expanding laboratory plasmas. <i>Physics of Plasmas</i> , 2018, 25, .	0.7	26

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19	Biermann-Battery-Mediated Magnetic Reconnection in 3D Colliding Plasmas. <i>Physical Review Letters</i> , 2018, 121, 095001.	2.9	12
20	Collisionless momentum transfer in space and astrophysical explosions. <i>Nature Physics</i> , 2017, 13, 573-577.	6.5	26
21	Bias Voltage Control in Pulsed Applications for Mach-Zehnder Electrooptic Intensity Modulators. <i>IEEE Transactions on Control Systems Technology</i> , 2017, 25, 1890-1895.	3.2	10
22	On the generation of magnetized collisionless shocks in the large plasma device. <i>Physics of Plasmas</i> , 2017, 24, .	0.7	26
23	Fast gated imaging of the collisionless interaction of a laser-produced and magnetized ambient plasma. <i>High Energy Density Physics</i> , 2017, 22, 17-20.	0.4	7
24	Laboratory study of collisionless coupling between explosive debris plasma and magnetized ambient plasma. <i>Physics of Plasmas</i> , 2017, 24, .	0.7	7
25	High-Mach number, laser-driven magnetized collisionless shocks. <i>Physics of Plasmas</i> , 2017, 24, .	0.7	23
26	Generation and Evolution of High-Mach-Number Laser-Driven Magnetized Collisionless Shocks in the Laboratory. <i>Physical Review Letters</i> , 2017, 119, 025001.	2.9	66
27	Spatially resolved Thomson scattering measurements of the transition from the collective to the non-collective regime in a laser-produced plasma. <i>Review of Scientific Instruments</i> , 2016, 87, 11E701.	0.6	5
28	Characterization of laser-produced carbon plasmas relevant to laboratory astrophysics. <i>Journal of Applied Physics</i> , 2016, 120, .	1.1	24
29	Experimental study of subcritical laboratory magnetized collisionless shocks using a laser-driven magnetic piston. <i>Physics of Plasmas</i> , 2015, 22, .	0.7	22
30	Laser-driven, magnetized quasi-perpendicular collisionless shocks on the Large Plasma Device. <i>Physics of Plasmas</i> , 2014, 21, .	0.7	22
31	Observation of collisionless shocks in a large current-free laboratory plasma. <i>Geophysical Research Letters</i> , 2014, 41, 7413-7418.	1.5	62
32	Spectroscopic measurement of high-frequency electric fields in the interaction of explosive debris plasma with magnetized background plasma. <i>Physics of Plasmas</i> , 2014, 21, .	0.7	2
33	Enhanced collisionless shock formation in a magnetized plasma containing a density gradient. <i>Physical Review E</i> , 2014, 90, 041101.	0.8	8
34	Hybrid simulation of shock formation for super-Alfvénic expansion of laser ablated debris through an ambient, magnetized plasma. <i>Physics of Plasmas</i> , 2013, 20, .	0.7	29
35	Dynamics of exploding plasmas in a large magnetized plasma. <i>Physics of Plasmas</i> , 2013, 20, .	0.7	45
36	Generation of magnetized collisionless shocks by a novel, laser-driven magnetic piston. <i>Physics of Plasmas</i> , 2012, 19, .	0.7	34

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37	Demonstration of a low electromagnetic pulse laser-driven argon gas jet x-ray source. Applied Physics Letters, 2012, 101, .	1.5	19
38	Magnetic field measurements in low density plasmas using paramagnetic Faraday rotator glass. Review of Scientific Instruments, 2012, 83, 10D503.	0.6	2
39	Thomson Scattering Measurements of Temperature and Density in a Low-Density, Laser-Driven Magnetized Plasma. Journal of Instrumentation, 2012, 7, P02002-P02002.	0.5	8
40	High-energy Nd:glass laser facility for collisionless laboratory astrophysics. Journal of Instrumentation, 2012, 7, P03010-P03010.	0.5	34
41	Feasibility of characterizing laser-ablated carbon plasmas via planar laser induced fluorescence. Review of Scientific Instruments, 2012, 83, 10E515.	0.6	5
42	Collisionless Shocks in a Large Magnetized Laser-Plasma Plume. IEEE Transactions on Plasma Science, 2011, 39, 2406-2407.	0.6	9
43	Ion velocity distribution measurements in a magnetized laser plasma expansion. Journal of Instrumentation, 2010, 5, P06004-P06004.	0.5	3
44	A scalable multipass laser cavity based on injection by frequency conversion for noncollective Thomson scattering. Review of Scientific Instruments, 2010, 81, 10D518.	0.6	6
45	Mapping the ionization state of laser-irradiated Ar gas jets with multiwavelength monochromatic x-ray imaging. Review of Scientific Instruments, 2010, 81, 10E526.	0.6	3
46	Collisionless interaction of an energetic laser produced plasma with a large magnetoplasma. Astrophysics and Space Science, 2009, 322, 155-159.	0.5	40
47	Design, construction, and calibration of a three-axis, high-frequency magnetic probe (B-dot probe) as a diagnostic for exploding plasmas. Review of Scientific Instruments, 2009, 80, 113505.	0.6	73
48	Mars Reconnaissance Orbiter Mars Color Imager (MARCI): Instrument description, calibration, and performance. Journal of Geophysical Research, 2009, 114, .	3.3	79