

Amnon Fruchtman

List of Publications by Year in descending order

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72
papers

1,459
citations

304743

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all docs

72
docs citations

72
times ranked

621
citing authors

#	ARTICLE	IF	CITATIONS
1	Self-Generated Plasma Rotation in a Z-Pinch Implosion with Preembedded Axial Magnetic Field. Physical Review Letters, 2022, 128, 015001.	7.8	10
2	Observation of Self-Generated Plasma Rotation and its Effects in A Z-Pinch With Preembedded Axial Magnetic Field. , 2022, , .		0
3	Study of a Current Loss at A Z-Pinch Stagnation Due to Fast Current Redistribution. , 2022, , .		1
4	Physics of Eâ€‰%Ã—â€‰%B discharges relevant to plasma propulsion and similar technologies. Physics of Plasmas, 2020, 27, .	1.9	89
5	Local measurements of the spatial magnetic field distribution in a z-pinch plasma during and near stagnation using polarization spectroscopy. Physics of Plasmas, 2020, 27, .	1.9	18
6	Effects of a Preembedded Axial Magnetic Field on the Current Distribution in a Z -Pinch Implosion. Physical Review Letters, 2019, 122, 045001.	7.8	29
7	Current channel evolution in ideal Z pinch for general velocity profiles. Physics of Plasmas, 2019, 26, .	1.9	5
8	Cumulative displacement induced by a magnetosonic soliton bouncing in a bounded plasma slab. Physics of Plasmas, 2018, 25, 062118.	1.9	3
9	Electric force on plasma ions and the momentum of the ion-neutrals flow. Journal of Applied Physics, 2018, 123, 173302.	2.5	1
10	Fast magnetic field penetration into low resistivity plasma. Journal of Plasma Physics, 2017, 83, .	2.1	2
11	Neutral gas depletion in low temperature plasma. Journal Physics D: Applied Physics, 2017, 50, 473002.	2.8	39
12	Diamagnetism and neutrals depletion in a plasma. Physics of Plasmas, 2017, 24, 103523.	1.9	12
13	The structure of a magnetic-field front propagating non-diffusively in low-resistivity multi-species plasma. Physics of Plasmas, 2016, 23, .	1.9	5
14	Electron density evolution during a fast, non-diffusive propagation of a magnetic field in a multi-ion-species plasma. Physics of Plasmas, 2016, 23, .	1.9	5
15	Suppression of diamagnetism by neutrals pressure in partially ionized, high-beta plasma. Physics of Plasmas, 2016, 23, .	1.9	15
16	Breakdown of the Brillouin limit and classical fluxes in rotating collisional plasmas. Physics of Plasmas, 2015, 22, .	1.9	13
17	Enhanced Thrust Due to Ionâ€™Neutral Collisions for Electric Propulsion. Plasma Chemistry and Plasma Processing, 2014, 34, 647-660.	2.4	5
18	Enhanced momentum delivery by electric force to ions due to collisions of ions with neutrals. Physics of Plasmas, 2013, 20, .	1.9	8

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19	Tendency of a rotating electron plasma to approach the Brillouin limit. <i>Physics of Plasmas</i> , 2013, 20, .	1.9	6
20	A magnetic nozzle calculation of the force on a plasma. <i>Physics of Plasmas</i> , 2012, 19, .	1.9	76
21	Active feedback stabilization of the flute instability in a mirror machine using field-aligned coils. <i>Nuclear Fusion</i> , 2012, 52, 123008.	3.5	3
22	Potential of an emissive cylindrical probe in plasma. <i>Physical Review E</i> , 2011, 84, 025402.	2.1	35
23	Ion acceleration in supersonically rotating magnetized-electron plasma. <i>Plasma Physics and Controlled Fusion</i> , 2011, 53, 124038.	2.1	33
24	Neutral-gas depletion and repletion in plasmas. <i>Physics of Plasmas</i> , 2010, 17, 043502.	1.9	3
25	Experimental study of a radial plasma source. <i>Physics of Plasmas</i> , 2009, 16, 043507.	1.9	21
26	Ambipolar and nonambipolar cross-field diffusions. <i>Plasma Sources Science and Technology</i> , 2009, 18, 025033.	3.1	46
27	Enhancement of electric force by ion-neutral collisions. <i>Applied Physics Letters</i> , 2009, 95, .	3.3	20
28	Energizing and depletion of neutrals by a collisional plasma. <i>Plasma Sources Science and Technology</i> , 2008, 17, 024016.	3.1	22
29	Neutral Depletion in a Collisionless Plasma. <i>IEEE Transactions on Plasma Science</i> , 2008, 36, 403-413.	1.3	81
30	Magnetic field propagation in a two ion species planar plasma opening switch. <i>Physics of Plasmas</i> , 2007, 14, 053504.	1.9	10
31	Two-dimensional equilibrium of a low temperature magnetized plasma. <i>Plasma Sources Science and Technology</i> , 2005, 14, 152-167.	3.1	61
32	Enhanced Plasma Transport Due To Neutral Depletion. <i>Physical Review Letters</i> , 2005, 95, 115002.	7.8	78
33	Plasma dynamics in pulsed strong magnetic fields. <i>Physics of Plasmas</i> , 2004, 11, 2411-2418.	1.9	20
34	Investigation of the ion dynamics in a multispecies plasma under pulsed magnetic fields. <i>Physics of Plasmas</i> , 2004, 11, 4515-4526.	1.9	17
35	Limits on the efficiency of several electric thruster configurations. <i>Physics of Plasmas</i> , 2003, 10, 2100-2107.	1.9	23
36	Observation of faster-than-diffusion magnetic field penetration into a plasma. <i>Physics of Plasmas</i> , 2003, 10, 112-125.	1.9	37

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37	Ion Separation due to Magnetic Field Penetration into a Multispecies Plasma. Physical Review Letters, 2001, 87, 115004.	7.8	73
38	Control of the electric-field profile in the Hall thruster. Physics of Plasmas, 2001, 8, 1048-1056.	1.9	63
39	Variational principle for optimal accelerated neutralized flow. Physics of Plasmas, 2001, 8, 56-58.	1.9	17
40	Sheath propagation along the cathode of a plasma opening switch. IEEE Transactions on Plasma Science, 1999, 27, 1464-1468.	1.3	7
41	The energy balance in the plasma of a coaxial plasma opening switch. Physics of Plasmas, 1998, 5, 1133-1141.	1.9	14
42	Relativistic effects in energy extraction from alpha particles. Physics of Plasmas, 1997, 4, 138-145.	1.9	6
43	Particle-in-cell simulations of fast magnetic field penetration into plasmas due to the Hall electric field. Physics of Plasmas, 1996, 3, 3556-3563.	1.9	23
44	A vacuum sheath propagation along a cathode. Physics of Plasmas, 1996, 3, 3111-3115.	1.9	6
45	PIC simulations of EMH and MHD effects in the plasma opening switch. , 1995, , .		0
46	Observations of magnetic and electric fields in a nanosecond plasma opening switch experiment. , 1995, , .		0
47	Spectroscopic investigation of fast (ns) magnetic field penetration in a plasma. Physics of Plasmas, 1995, 2, 2583-2589.	1.9	30
48	Spectroscopic investigations of the plasma behavior in a plasma opening switch experiment. Physics of Plasmas, 1995, 2, 2122-2137.	1.9	27
49	On the conduction of a current in a plasma-filled diode. Physics of Plasmas, 1995, 2, 1296-1304.	1.9	2
50	Fast decay of plasma return currents due to whistler waves. Physics of Plasmas, 1994, 1, 2480-2487.	1.9	5
51	Different class of two-dimensional shocks in magnetized plasmas. Physical Review E, 1994, 50, 2997-3005.	2.1	17
52	Magnetic field penetration due to the Hall field in (almost) collisionless plasmas*. Physics of Fluids B, 1993, 5, 2371-2377.	1.7	31
53	A model for energetic ion generation in an anode plasma. Physics of Fluids B, 1993, 5, 3399-3407.	1.7	3
54	Modification of short scale-length tearing modes by the Hall field. Physics of Fluids B, 1993, 5, 1408-1412.	1.7	23

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55	Fast magnetic field penetration into a cylindrical plasma of a nonuniform density. <i>Physics of Fluids B</i> , 1993, 5, 2841-2852.	1.7	23
56	Two-dimensional fast penetration of a magnetic field into a homogeneous plasma. <i>Physical Review Letters</i> , 1992, 69, 2070-2073.	7.8	42
57	The snowplow in plasmas of nonuniform density. <i>Physics of Fluids B</i> , 1992, 4, 855-858.	1.7	10
58	The wiggler-free electron laser: A single-particle model. <i>Physics of Fluids B</i> , 1992, 4, 4101-4110.	1.7	4
59	Magnetic field penetration and electron heating in weakly nonuniform plasmas. <i>Physics of Fluids B</i> , 1992, 4, 117-123.	1.7	24
60	Power dissipated during rapid magnetization or demagnetization of plasmas. <i>Physical Review A</i> , 1992, 45, 3938-3942.	2.5	18
61	Deviations from the frozen-in law in the presence of small (but nonzero) resistivity. <i>Physics of Fluids B</i> , 1992, 4, 3446-3447.	1.7	5
62	Visible-light spectroscopy of pulsed-power plasmas (invited). <i>Review of Scientific Instruments</i> , 1992, 63, 5127-5131.	1.3	9
63	The effect of displacement current on whistler propagation of a fast-rising magnetic field. <i>Physics of Fluids B</i> , 1992, 4, 375-380.	1.7	2
64	Evolution of a magnetic field and plasma pushing in the presence of a parallel magnetic field. <i>Physics of Fluids B</i> , 1992, 4, 363-367.	1.7	2
65	Penetration and expulsion of magnetic fields in plasmas due to the Hall field. <i>Physics of Fluids B</i> , 1991, 3, 1908-1912.	1.7	80
66	Fast magnetic field penetration into plasmas due to the Hall field. <i>Physics of Fluids B</i> , 1991, 3, 1546-1551.	1.7	33
67	The lower-hybrid drift instability in a slab geometry. <i>Physics of Fluids B</i> , 1989, 1, 422-429.	1.7	5
68	Development Of A Tandem Electrostatic Accelerator Quasi-CW FEL. , 0, , .		0
69	Simulations Of Fast Magnetic Field Penetration Into A Plasma. , 0, , .		0
70	2D magnetic field evolution and electron energies in plasma opening switches. , 0, , .		0
71	The time-dependent electron density and magnetic field distributions in a 70-ns plasma opening switch. , 0, , .		3
72	Spectroscopic investigations of the magnetic field and electron density evolution in a microsecond POS [pulsed power switches]. , 0, , .		0