Karel Å˜ezÃ¡Ä•

List of Publications by Year
in descending order

63 papers	829 citations	430874 18 h-index	552781 26 g-index
63 all docs	63 docs citations	63 times ranked	370 citing authors

#	Article	IF	Citations
1	Neutron Energy Distribution Function Reconstructed From Time-of-Flight Signals in Deuterium Gas-Puff Z-Pinch. IEEE Transactions on Plasma Science, 2009, 37, 425-432.	1.3	60
2	Improvement of time-of-flight methods for reconstruction of neutron energy spectra from D(d,n)³He fusion reactions. Plasma Physics and Controlled Fusion, 2012, 54, 105011.	2.1	42
3	Measurement of the target current by inductive probe during laser interaction on terawatt laser system PALS. Review of Scientific Instruments, 2014, 85, 103507.	1.3	41
4	Scenario of pinch evolution in a plasma focus discharge. Plasma Physics and Controlled Fusion, 2013, 55, 035011.	2.1	34
5	Efficient Neutron Production from a Novel Configuration of Deuterium Gas-Puff<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mi>Z</mml:mi></mml:math>-Pinch. Physical Review Letters, 2014, 112, 095001.	7.8	31
6	Ion acceleration mechanism in mega-ampere gas-puff z-pinches. New Journal of Physics, 2018, 20, 053064.	2.9	31
7	Fusion neutron detector for time-of-flight measurements in z-pinch and plasma focus experiments. Review of Scientific Instruments, 2011, 82, 033505.	1.3	29
8	Transformation of the Pinched Column at a Period of the Neutron Production. IEEE Transactions on Plasma Science, 2010, 38, 672-679.	1.3	27
9	Spontaneous Transformation in the Pinched Column of the Plasma Focus. IEEE Transactions on Plasma Science, 2011, 39, 562-568.	1.3	27
10	Filamentary structure of plasma produced by compression of puffing deuterium by deuterium or neon plasma sheath on plasma-focus discharge. Physics of Plasmas, 2014, 21, 122706.	1.9	27
11	Experimental evidence of thermonuclear neutrons in a modified plasma focus. Applied Physics Letters, 2011, 98, .	3.3	25
12	Efficient generation of fast neutrons by magnetized deuterons in an optimized deuterium gas-puff z-pinch. Plasma Physics and Controlled Fusion, 2015, 57, 044005.	2.1	25
13	Determination of Deuteron Energy Distribution From Neutron Diagnostics in a Plasma-Focus Device. IEEE Transactions on Plasma Science, 2009, 37, 83-87.	1.3	24
14	Neutron emission generated during wire array Z-pinch implosion onto deuterated fiber. Physics of Plasmas, 2008, 15, 032701.	1.9	23
15	Efficient production of 100â€‰keV deuterons in deuterium gas puff Z-pinches at 2â€‰MA current. Plasma Physics and Controlled Fusion, 2010, 52, 065013.	2.1	23
16	Deuterium gas puff Z-pinch at currents of 2 to 3 mega-ampere. Physics of Plasmas, 2012, 19, 032706.	1.9	23
17	Search for thermonuclear neutrons in a mega-ampere plasma focus. Plasma Physics and Controlled Fusion, 2012, 54, 015001.	2.1	22
18	Characterization of neutron emission from mega-ampere deuterium gas puff Z-pinch at microsecond implosion times. Plasma Physics and Controlled Fusion, 2013, 55, 085012.	2.1	20

#	Article	IF	Citations
19	Ion acceleration and neutron production in hybrid gas-puff z-pinches on the GIT-12 and HAWK generators. Matter and Radiation at Extremes, 2020, 5, .	3.9	18
20	Filamentation in the pinched column of the dense plasma focus. Physics of Plasmas, 2017, 24, 032706.	1.9	17
21	Existence of a return direction for plasma escaping from a pinched column in a plasma focus discharge. Physics of Plasmas, 2015, 22, 052706.	1.9	16
22	Deuterium z-pinch as a powerful source of multi-MeV ions and neutrons for advanced applications. Physics of Plasmas, 2016, 23, .	1.9	15
23	Increase in the neutron yield from a dense plasma-focus experiment performed with a conical tip placed in the centre of the anode end. Physics of Plasmas, 2017, 24, .	1.9	15
24	Evolution of a Pinch Column During the Acceleration of Fast Electrons and Deuterons in a Plasma-Focus Discharge. IEEE Transactions on Plasma Science, 2019, 47, 339-345.	1.3	15
25	Features of fast deuterons emitted from plasma focus discharges. Physics of Plasmas, 2019, 26, 032702.	1.9	14
26	The influence of the nitrogen admixture on the evolution of a deuterium pinch column. Physics of Plasmas, 2016, 23, 082704.	1.9	12
27	Production of relativistic electrons, MeV deuterons and protons by sub-nanosecond terawatt laser. Physics of Plasmas, 2018, 25, .	1.9	12
28	Acceleration of protons and deuterons up to 35 MeV and generation of 10¹³ neutrons in a megaampere deuterium gas-puff z-pinch. Plasma Physics and Controlled Fusion, 2019, 61, 014018.	2.1	12
29	Monte Carlo simulations for reconstruction of neutron time-resolving energy distribution in D-D fusion reactions. European Physical Journal D, 2006, 56, B357-B363.	0.4	11
30	Characterization of the Neutron Production in the Modified MA Plasma Focus. IEEE Transactions on Plasma Science, 2012, 40, 1075-1081.	1.3	9
31	Characterization of fast deuterons involved in the production of fusion neutrons in a dense plasma focus. Physics of Plasmas, 2018, 25, .	1.9	9
32	Energy Transformations in Column of Plasma-Focus Discharges With Megaampere Currents. IEEE Transactions on Plasma Science, 2012, 40, 481-486.	1.3	8
33	Investigation of Magnetic Fields in Z-Pinches via Multi-MeV Proton Deflectometry. IEEE Transactions on Plasma Science, 2018, 46, 3891-3900.	1.3	8
34	Interaction of Cu and plastic plasmas as a method of forming laser produced Cu plasma streams with a narrow jet or pipe geometry. Physics of Plasmas, 2011, 18, 044503.	1.9	7
35	Search for Drive Parameter of Neutron-Optimized Z-Pinches and Dense Plasma Foci. IEEE Transactions on Plasma Science, 2013, 41, 3129-3134.	1.3	7
36	Transformation of the ordered internal structures during the acceleration of fast charged particles in a dense plasma focus. Physics of Plasmas, 2017, 24, 072706.	1.9	7

#	Article	IF	Citations
37	Evolution of the Pinched Column During Hard X-ray and Neutron Emission in a Dense Plasma Focus. Journal of Fusion Energy, 2019, 38, 490-498.	1.2	7
38	Neutron Production at the Small Plasma-Focus Device With Antianode. IEEE Transactions on Plasma Science, 2009, 37, 1786-1791.	1.3	6
39	Target current: a useful parameter for characterizing laser ablation. Laser and Particle Beams, 2017, 35, 170-176.	1.0	6
40	Neutron Spectrum Measured by Activation Diagnostics in Deuterium Gas-Puff Experiments on the 3 MA GIT-12 Z-Pinch. IEEE Transactions on Plasma Science, 2017, 45, 3209-3217.	1.3	6
41	Characteristics of closed currents and magnetic fields outside the dense pinch column in a plasma focus discharge. Physics of Plasmas, 2020, 27, .	1.9	6
42	Spatial distribution of ion emission in gas-puff z-pinches and dense plasma foci. Plasma Physics and Controlled Fusion, 2020, 62, 035009.	2.1	6
43	Scenario of a magnetic dynamo and magnetic reconnection in a plasma focus discharge. Matter and Radiation at Extremes, 2020, 5, 046401.	3.9	5
44	Characteristics of fast deuteron sources generated in a dense plasma focus. European Physical Journal Plus, 2021, 136, 1.	2.6	5
45	Time delay of the hard X-ray and neutron emission at PF 1000 facility. European Physical Journal D, 2006, 56, B273-B279.	0.4	4
46	Response to â€œComment on â€˜Experimental evidence of thermonuclear neutrons in a modified plasma focusâ€™â€•[Appl. Phys. Lett. 100, 016101 (2012)]. Applied Physics Letters, 2012, 100, 016102.	3.3	4
47	Mapping of azimuthal B-fields in Z-pinch plasmas using Z-pinch-driven ion deflectometry. Physics of Plasmas, 2021, 28, .	1.9	4
48	Temporal behavior of hard x-ray and neutron production in plasma focus discharges. Physics of Plasmas, 2022, 29, .	1.9	4
49	Neutron fluence distribution in experiments with 3 MA deuterium gas-puff z-pinch. Physics of Plasmas, 2020, 27, 072705.	1.9	3
50	Optimizing of Experimental Load of PFZ-200 Plasma Focus. IEEE Transactions on Plasma Science, 2021, 49, 450-454.	1.3	3
51	K-shell radiation and neutron emission from z-pinch plasmas generated by hybrid gas-puff implosions onto on-axis wires. Physics of Plasmas, 2021, 28, 062708.	1.9	3
52	Production of energetic protons, deuterons, and neutrons up to 60 MeV via disruption of a current-carrying plasma column at 3 MA. New Journal of Physics, 2020, 22, 103036.	2.9	3
53	Neutron Production From a Small Modified Plasma Focus Device. IEEE Transactions on Plasma Science, 2012, 40, 3298-3302.	1.3	2
54	MCNP calculations of neutron emission anisotropy caused by the GIT-12 hardware. Nukleonika, 2015, 60, 323-326.	0.8	2

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55	Laser-Target Experiments at PALS for Deuterium Plasma Beam Fusion. Acta Physica Polonica A, 2020, 138, 579-585.	0.5	2
56	Influence of an external magnetic field on the dynamics of a modified plasma focus. Physica Scripta, 2014, T161, 014042.	2.5	1
57	Temporal distribution of linear densities of the plasma column in a plasma focus discharge. Nukleonika, 2015, 60, 315-318.	0.8	1
58	Reconstruction of Time-Resolved Neutron Energy Spectra in Z-Pinch Experiments Using Time-of-flight Method. , 2009, , .		0
59	Deuteron Acceleration and Fusion Neutron Production in Z-pinch plasmas. , 2009, , .		0
60	Initial conditions in the hawk dense plasma focus. , 2019, , .		0
61	Initial Results from a Dense Plasma Focus Driven by a High-Inductance Generator. , 2018, , .		0
62	Features of Neutron Emission in Experiments with Deuterium Hybrid Gas-Puff. , 2021, , .		0
63	Measurements of Early-Time Plasma Evolution in the Hawk Dense Plasma Focus. , 2018, , .		0