

Nikolay K Kharchev

List of Publications by Citations

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98
papers

582
citations

12
h-index

17
g-index

104
ext. papers

660
ext. citations

1.3
avg, IF

3.04
L-index

#	Paper	IF	Citations
98	High power density electron cyclotron experiments in the L2M stellarator. <i>Nuclear Fusion</i> , 1997 , 37, 233-239	3.39	28
97	HIBP diagnostics on T-10. <i>Review of Scientific Instruments</i> , 1995 , 66, 317-319	1.7	28
96	Heavy ion beam probing diagnostics to study potential and turbulence in toroidal plasmas. <i>Nuclear Fusion</i> , 2017 , 57, 072004	3.3	27
95	Backscattering of gyrotron radiation and short-wavelength turbulence during electron cyclotron resonance plasma heating in the L-2M stellarator. <i>Plasma Physics Reports</i> , 2013 , 39, 444-455	1.2	27
94	Effect of vacuum chamber boronization on the plasma parameters in the L-2M stellarator. <i>Plasma Physics Reports</i> , 2005 , 31, 452-461	1.2	22
93	ECRH effect on the electric potential and turbulence in the TJ-II stellarator and T-10 tokamak plasmas. <i>Plasma Physics and Controlled Fusion</i> , 2018 , 60, 084008	2	19
92	Statistical properties and radial structure of plasma turbulence in the boundary region of the L-2M stellarator. <i>Plasma Physics and Controlled Fusion</i> , 1998 , 40, 1241-1250	2	18
91	A new MIG-3 gyrotron complex for creation and heating of plasma in the L-2M stellarator and the first experimental results. <i>Plasma Physics Reports</i> , 2013 , 39, 1088-1095	1.2	16
90	Effect of ECRH regime on characteristics of short-wave turbulence in plasma of the L-2M stellarator. <i>Plasma Physics and Controlled Fusion</i> , 2010 , 52, 055008	2	14
89	. <i>IEEE Transactions on Plasma Science</i> , 1994 , 22, 363-368	1.3	13
88	Response of a gyrotron to small-amplitude low-frequency-modulated microwaves reflected from a plasma. <i>Technical Physics</i> , 2001 , 46, 595-600	0.5	12
87	Boron Nitride and Titanium Diboride Synthesis Initiated by Microwave Discharge in TiB Powder Mixture in Nitrogen Atmosphere. <i>Journal of Nanoelectronics and Optoelectronics</i> , 2013 , 8, 58-66	1.3	12
86	The use of Doppler reflectometry in the L-2M stellarator. <i>Plasma Physics Reports</i> , 2005 , 31, 554-561	1.2	11
85	Recent ECRH Experiments in the L-2 M Stellarator with the Use of a New High-Power Gyrotron. <i>Plasma and Fusion Research</i> , 2011 , 6, 2402142-2402142	0.5	11
84	Heavy ion beam probe design and operation on the T-10 tokamak. <i>Fusion Engineering and Design</i> , 2019 , 146, 850-853	1.7	10
83	Influence of Controlled Reflected Power on Gyrotron Performance. <i>Journal of Infrared, Millimeter, and Terahertz Waves</i> , 2015 , 36, 1145-1156	2.2	10
82	Density profile reconstruction using HIBP in ECRH plasmas in the TJ-II stellarator. <i>Journal of Instrumentation</i> , 2019 , 14, C09033-C09033	1	10

81	Correlation properties of Geodesic Acoustic Modes in the T-10 tokamak. <i>Journal of Physics: Conference Series</i> , 2015 , 591, 012003	0.3	10
80	Application of microwave discharge for the synthesis of TiB ₂ and BN nano- and microcrystals in a mixture of Ti-B powders in a nitrogen atmosphere. <i>Plasma Physics Reports</i> , 2013 , 39, 843-848	1.2	9
79	Optimization of operation of a three-electrode gyrotron with the use of a flow-type calorimeter. <i>Review of Scientific Instruments</i> , 2013 , 84, 013507	1.7	9
78	Plasma energy balance in the L-2M stellarator. <i>Plasma Physics Reports</i> , 2007 , 33, 805-815	1.2	9
77	Discharge in a Subthreshold Microwave Beam as an Unusual Type of Ionization Wave. <i>Plasma Physics Reports</i> , 2018 , 44, 1146-1153	1.2	9
76	Heavy ion beam probe diagnostics on TJ-1 tokamak and the measurements of the plasma potential and density profiles. <i>Review of Scientific Instruments</i> , 1997 , 68, 312-315	1.7	8
75	Low-frequency structural plasma turbulence in the L-2M stellarator. <i>JETP Letters</i> , 2003 , 78, 502-510	1.2	8
74	3D structure of density fluctuations in the T-10 tokamak and new approach for current profile estimation. <i>Nuclear Fusion</i> , 2019 , 59, 066021	3.3	7
73	Statistical analysis and modelling of turbulent fluxes in the plasma of the L-2M stellarator and the FT-2 tokamak. <i>Plasma Physics and Controlled Fusion</i> , 2006 , 48, A393-A399	2	7
72	New approach to the probabilistic-statistical analysis of turbulent transport processes in plasma. <i>Plasma Physics Reports</i> , 2002 , 28, 111-124	1.2	7
71	Stochastic Structures in Low-Frequency Plasma Turbulence: Measurement of Characteristics and Determination of General Features. <i>Journal of Mathematical Sciences</i> , 2001 , 106, 2691-2703	0.4	7
70	Discharge in a Subthreshold Microwave Beam as an Effective Means for Mercaptan Decomposition. <i>Plasma Physics Reports</i> , 2019 , 45, 523-526	1.2	6
69	Plasma confinement during ECR heating with a volume power density of 3 mW/m ³ at the L-2M stellarator. <i>Journal of Physics: Conference Series</i> , 2017 , 907, 012016	0.3	6
68	Location of the Front of a Subthreshold Microwave Discharge and Some Specificities of Its Propagation. <i>Plasma Physics Reports</i> , 2019 , 45, 965-972	1.2	6
67	Effect of microwave reflection from the region of electron cyclotron resonance heating in the L-2M stellarator. <i>Plasma Physics Reports</i> , 2013 , 39, 882-887	1.2	6
66	Reaction of turbulence at the edge and in the center of the plasma column to pulsed impurity injection caused by the sputtering of the wall coating in L-2M stellarator. <i>Plasma Physics Reports</i> , 2017 , 43, 818-823	1.2	6
65	Detection of high k turbulence using two dimensional phase contrast imaging on LHD. <i>Review of Scientific Instruments</i> , 2008 , 79, 10E724	1.7	6
64	Stability and variations of plasma parameters in the L-2M stellarator during excitation of the induction current in the regime of ECR plasma heating. <i>Plasma Physics Reports</i> , 2008 , 34, 979-990	1.2	6

63	Influence of the plasma density and heating power on the intensity of electron cyclotron emission in the L-2M stellarator. <i>Plasma Physics Reports</i> , 2003 , 29, 1028-1033	1.2	6
62	New possibilities for the mathematical modeling of turbulent transport processes in plasma. <i>Plasma Physics Reports</i> , 2005 , 31, 57-74	1.2	6
61	Subthreshold Discharge Excited by a Microwave Beam in High-Pressure Gas as a System of a Multitude of Plasma Microexplosions <i>Plasma Physics Reports</i> , 2021 , 47, 86-91	1.2	6
60	Evolution of statistical properties of microturbulence during transient process under electron cyclotron resonance heating of the L-2M stellarator plasma. <i>Plasma Physics and Controlled Fusion</i> , 2019 , 61, 075006	2	5
59	Detection and investigation of chirping Alfvén eigenmodes with heavy ion beam probe in the TJ-II stellarator. <i>Nuclear Fusion</i> , 2018 , 58, 082019	3.3	5
58	Discharge in the Atmosphere in a Gaussian Beam of Subthreshold Millimeter Waves. <i>JETP Letters</i> , 2018 , 107, 219-222	1.2	5
57	Subthreshold self-sustained discharge initiated by a microwave beam in a large volume of high-pressure gas. <i>Journal of Physics: Conference Series</i> , 2017 , 907, 012022	0.3	5
56	Testing of the spectroscopic method for location of water microleakages in ITER at the L-2M stellarator. <i>Plasma Physics Reports</i> , 2012 , 38, 708-717	1.2	5
55	Calibration of the heavy ion beam probe parallel plate analyzer using the gas target and reference beam. <i>Review of Scientific Instruments</i> , 1997 , 68, 308-311	1.7	5
54	Studies of fluctuations in the high-temperature plasma of modern stellarators by the microwave scattering technique. <i>Plasma Physics Reports</i> , 2003 , 29, 363-379	1.2	5
53	Effect of the transverse magnetic field on turbulence and parameters of a plasma column in the L-2M stellarator. <i>Plasma Physics Reports</i> , 2000 , 26, 1-9	1.2	5
52	Relief Creation on Molybdenum Plates in Discharges Initiated by Gyrotron Radiation in Metal-Dielectric Powder Mixtures. <i>Radiophysics and Quantum Electronics</i> , 2016 , 58, 701-709	0.7	5
51	Measurements of 2D poloidal plasma profiles and fluctuations in ECRH plasmas using the heavy ion beam probe system in the TJ-II stellarator. <i>Physics of Plasmas</i> , 2020 , 27, 062502	2.1	4
50	Reflection and backscattering of microwaves under doubling of the plasma density and displacement of the gyroresonance region during electron cyclotron resonance heating of plasma in the L-2M stellarator. <i>Plasma Physics Reports</i> , 2016 , 42, 734-742	1.2	4
49	Displacement of the electron cyclotron resonance heating region and time evolution of the characteristics of short-wavelength turbulence in the 3D magnetic configuration of the L-2M stellarator. <i>Plasma Physics Reports</i> , 2014 , 40, 769-780	1.2	4
48	Turbulent transport processes in a plasma as a diffusion process with random time. <i>JETP Letters</i> , 2001 , 73, 126-130	1.2	4
47	Effect of unstable MHD modes on the confinement of a stellarator plasma. <i>JETP Letters</i> , 1999 , 69, 441-447	1.2	4
46	Features of a Supersonic Ionization Wave in Argon at Atmospheric Pressure in a Sub-Threshold Microwave Field. <i>Plasma Physics Reports</i> , 2020 , 46, 1220-1226	1.2	4

45	Stability analysis of TJ-II stellarator NBI driven Alfvén eigenmodes in ECRH and ECCD experiments. <i>Nuclear Fusion</i> , 2021 , 61, 066019	3.3	4
44	Bispectral analysis of broadband turbulence and geodesic acoustic modes in the T-10 tokamak. <i>Journal of Plasma Physics</i> , 2021 , 87,	2.7	4
43	Conceptual design of the heavy ion beam probe diagnostic for the T-15MD tokamak. <i>Journal of Instrumentation</i> , 2019 , 14, C11027-C11027	1	4
42	Synthesis of Nitrogen Oxides in a Subthreshold Microwave Discharge in Air and in Air Mixtures with Methane. <i>Plasma Physics Reports</i> , 2020 , 46, 311-319	1.2	3
41	ECRH effect on the electric potential in toroidal plasmas (Overview of recent T-10 tokamak and TJ-II stellarator results). <i>EPJ Web of Conferences</i> , 2017 , 149, 03009	0.3	3
40	Measurements of Microwave Power Absorbed during ECR Plasma Heating at the L-2M Stellarator. <i>Plasma Physics Reports</i> , 2019 , 45, 1059-1065	1.2	3
39	Initiation of dusty structures in chain reactions under the action of gyrotron radiation on a mixture of metal and dielectric powders with an open boundary. <i>JETP Letters</i> , 2017 , 106, 262-267	1.2	3
38	Synthesis of micro- and nanostructures with controllable composition in the chain plasma-chemical reactions initiated by the radiation of a powerful gyrotron in the mixtures of metal-dielectric powders. <i>EPJ Web of Conferences</i> , 2017 , 149, 02016	0.3	3
37	Effect of turbulence in a transient process of electron-cyclotron heating in the L-2M stellarator. <i>JETP Letters</i> , 2015 , 102, 217-221	1.2	3
36	Collective backscattering of gyrotron radiation by small-scale plasma density fluctuations in large helical device. <i>Review of Scientific Instruments</i> , 2008 , 79, 10E721	1.7	3
35	Measurements of the microwave power absorbed by a plasma during second harmonic ECR heating in the L-2M stellarator. <i>Plasma Physics Reports</i> , 2002 , 28, 7-11	1.2	3
34	Parameters of a Subthreshold Microwave Discharge in Air and Carbon Dioxide as a Function of Microwave Field at Different Gas Pressures. <i>Plasma Physics Reports</i> , 2020 , 46, 927-935	1.2	3
33	Radial structure of quasi-coherent mode in ohmic plasma of the T-10 tokamak. <i>Journal of Physics: Conference Series</i> , 2019 , 1383, 012004	0.3	3
32	A Subthreshold High-Pressure Discharge Excited by a Microwave Beam: Physical Basics and Applications. <i>Plasma Physics Reports</i> , 2018 , 44, 615-625	1.2	3
31	Effect of electron-cyclotron resonance plasma heating conditions on the low-frequency modulation of the gyrotron power at the L-2M stellarator. <i>Plasma Physics Reports</i> , 2015 , 41, 607-616	1.2	2
30	Effect of electron-cyclotron resonance heating conditions on the local parameters of short-wavelength plasma turbulence in the L-2M stellarator. <i>Plasma Physics Reports</i> , 2014 , 40, 265-275	1.2	2
29	Second harmonic of gyrotron radiation: New potentialities of plasma diagnostics. <i>Plasma Physics Reports</i> , 2003 , 29, 1019-1027	1.2	2
28	Observation of nonlinear coupling between drift and ion-acoustic oscillations in low-frequency plasma turbulence. <i>Plasma Physics Reports</i> , 2001 , 27, 56-61	1.2	2

27	Observation of the coherence between the plasma density fluctuations in the core and at the edge of the plasma column in the L-2M stellarator. <i>JETP Letters</i> , 2000 , 72, 174-177	1.2	2
26	Structural ion-sound plasma turbulence as a self-similar random process. <i>JETP Letters</i> , 1999 , 70, 201-207	1.2	2
25	ECR Heating in L-2M Stellarator. <i>Fusion Science and Technology</i> , 1995 , 27, 270-272		2
24	Self-Action of a Gaussian Beam of Microwaves in the Subthreshold Field Generated by the Waves in Air. <i>Plasma Physics Reports</i> , 2021 , 47, 598-602	1.2	2
23	Experimental observation of the geodesic acoustic frequency limit for the NBI-driven Alfvén eigenmodes in TJ-II. <i>Physics of Plasmas</i> , 2021 , 28, 072510	2.1	2
22	Energy Loss and Microturbulence under Multipulse ECR Plasma Heating at the L-2M Stellarator. <i>Plasma Physics Reports</i> , 2019 , 45, 732-740	1.2	1
21	Toroidal inhomogeneity of plasma density fluctuations during ECR plasma heating in the L-2M stellarator. <i>Plasma Physics Reports</i> , 2017 , 43, 1052-1064	1.2	1
20	Spectra of low-frequency modulation of gyrotron radiation during electron-cyclotron resonance heating of plasma in the L-2M stellarator. <i>Plasma Physics Reports</i> , 2011 , 37, 381-390	1.2	1
19	Study of plasma confinement in the L-2M stellarator during the formation of an edge transport barrier. <i>Plasma Physics Reports</i> , 2010 , 36, 551-557	1.2	1
18	Observation of extended poloidal structures in the turbulent edge plasma of the L-2M stellarator. <i>JETP Letters</i> , 1998 , 67, 662-667	1.2	1
17	The L-5 stellarator: A compact torsatron with a controlled structure of the magnetic configuration. <i>Plasma Devices and Operations</i> , 2003 , 11, 161-184		1
16	Probability and Spectral Characteristics of Plasma Fluctuations in a High-Temperature Region of the L-2M Stellarator. <i>Journal of Mathematical Sciences</i> , 2002 , 111, 3846-3850	0.4	1
15	A New Approach to the Probability-Statistical Analysis of Turbulent Transport Processes in Plasma. <i>Journal of Mathematical Sciences</i> , 2002 , 112, 4205-4210	0.4	1
14	Subthreshold Discharge in a Microwave Beam as the Basis of a Plasmachemical Reactor for Cleaning Urban Air from Excess Hydrogen Sulfide. <i>Plasma Physics Reports</i> , 2021 , 47, 403-406	1.2	1
13	Characteristics of a Subthreshold Microwave Discharge in a Wave Beam in Air and the Efficiency of the Plasma-Chemical Reactor. <i>Plasma Physics Reports</i> , 2021 , 47, 498-502	1.2	1
12	Transport transitions at high electron cyclotron resonance heating powers at the L-2M stellarator. <i>Journal of Physics: Conference Series</i> , 2021 , 2055, 012005	0.3	0
11	Time-Space Evolution of the Parameters of Turbulent Density Fluctuations During Pulsed ECR Heating of the Plasma at the L-2M Stellarator. <i>Plasma Physics Reports</i> , 2020 , 46, 955-966	1.2	0
10	Electric Currents Induced upon Creation and Heating of Plasma by Means of Electron Cyclotron Resonance in L-2M Stellarator. <i>Plasma Physics Reports</i> , 2022 , 48, 183-192	1.2	0

9	2D distributions of potential and density mean-values and oscillations in the ECRH and NBI plasmas at the TJ-II stellarator. <i>Plasma Physics and Controlled Fusion</i> , 2022 , 64, 054009	2	0
8	Microwave Reflection from the Region of Electron Cyclotron Resonance Heating in the L-2M Stellarator. <i>Plasma and Fusion Research</i> , 2014 , 9, 3402128-3402128	0.5	
7	New experimental data on the possibility of influencing fluctuational particle fluxes in a L-2M stellarator edge plasma. <i>JETP Letters</i> , 1998 , 68, 585-591	1.2	
6	Plasmoid Generation behind the Front of a Subthreshold Discharge in Air under the Self-Action of a Microwave Beam. <i>Plasma Physics Reports</i> , 2021 , 47, 1042-1048	1.2	
5	Quasi-coherent mode evolution in discharges with positive radial electric field at the T-10 tokamak. <i>Journal of Physics: Conference Series</i> , 2021 , 2055, 012001	0.3	
4	Absorption of Microwaves in Different Regimes of Electron Cyclotron Plasma Heating at the L-2M Stellarator. <i>Plasma Physics Reports</i> , 2021 , 47, 786-793	1.2	
3	Study of electric currents excitation in the plasma of the L-2M stellarator with its electronic cyclotronic creation and heating. <i>Uspehi Prikladnoj Fiziki</i> , 2021 , 9, 310-324		
2	Changes in Structure of Subthreshold Discharge in Air Occurring with Decreasing Microwave Radiation Intensity. <i>Plasma Physics Reports</i> , 2022 , 48, 170-177	1.2	
1	Microwave Discharge in Gas above Regolith Surface. <i>Plasma Physics Reports</i> , 2022 , 48, 408-414	1.2	