Mikhail Tokar

List of Publications by Year
in descending order

84 papers	1,047 citations	516710 16 h-index	454955 30 g-index
84 all docs	84 docs citations	84 times ranked	725 citing authors

#	Article	IF	Citations
1	High Confinement and High Density with Stationary Plasma Energy and Strong Edge Radiation in the TEXTOR-94 Tokamak. Physical Review Letters, 1996, 77, 2487-2490.	7.8	114
2	Model for the Transition to the Radiatively Improved Mode in a Tokamak. Physical Review Letters, 2000, 84, 895-898.	7.8	89
3	High confinement and high density with stationary plasma energy and strong edge radiation cooling in the upgraded Torus Experiment for Technology Oriented Research (TEXTOR-94). Physics of Plasmas, 1997, 4, 1690-1698.	1.9	54
4	Transport studies of high-Zelements in neon edge radiation cooled discharges in TEXTOR-94. Plasma Physics and Controlled Fusion, 1997, 39, 1615-1634.	2.1	51
5	Mechanisms of Edge-Localized-Mode Mitigation by External-Magnetic-Field Perturbations. Physical Review Letters, 2007, 98, 095001.	7.8	46
6	The possible nature of the localized recycling effect on the plasma edge in Tokamaks. Plasma Physics and Controlled Fusion, 1993, 35, 1119-1135.	2.1	39
7	Evidence of suppression of ITG-instability in the radiatively improved mode in TEXTOR-94. Plasma Physics and Controlled Fusion, 1999, 41, L9-L15.	2.1	37
8	Particle transfer in edge transport barrier with stochastic magnetic field. Physics of Plasmas, 2008, 15, 072515.	1.9	37
9	Synergy of Anomalous Transport and Radiation in the Density Limit. Physical Review Letters, 2003, 91, 095001.	7.8	32
10	The role of plasmaâ€“wall interactions in thermal instabilities at the tokamak edge. Physics of Plasmas, 2003, 10, 4378-4386.	1.9	30
11	The influence of impurities on limiter tokamak plasmas and relevant mechanisms. Plasma Physics and Controlled Fusion, 1995, 37, A241-A253.	2.1	27
12	Confinement mechanisms in the radiatively improved mode. Plasma Physics and Controlled Fusion, 1999, 41, B317-B327.	2.1	25
13	Nature of the Isotope Effect on Transport in Tokamaks. Physical Review Letters, 2004, 92, 215001.	7.8	24
14	Influence of the Dynamic Ergodic Divertor on the Density Limit in TEXTOR. Physical Review Letters, 2005, 94, 105003.	7.8	24
15	Predictive modelling of impurity seeded plasmas in JET. Plasma Physics and Controlled Fusion, 2002, 44, 1903-1910.	2.1	20
16	Modelling of confinement degradation in the radiative improved mode caused by a strong gas puff. Plasma Physics and Controlled Fusion, 2001, 43, 945-957.	2.1	18
17	Improved two-point model for limiter scrape-off layer. Physics of Plasmas, 2004, 11, 4610-4615.	1.9	16
18	Comparison of impurity transport model with measurements of He-like spectra of argon at the tokamak TEXTOR. Plasma Physics and Controlled Fusion, 2006, 48, 1633-1646.	2.1	16

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19	Modeling of impurity effect on drift instabilities in plasmas with many ion species. Physics of Plasmas, 2010, 17, 012101.	1.9	16
20	On threshold of radial detachment in tokamaks. Physics of Plasmas, 2000, 7, 2432-2438.	1.9	15
21	Role of thermal instabilities and anomalous transport in threshold of detachment and multifacetted asymmetric radiation from the edge (MARFE). Physics of Plasmas, 2005, 12, 052510.	1.9	15
22	Non-Linear phenomena in textor plasmas caused by impurity radiation. Physica Scripta, 1995, 51, 665-672.	2.5	14
23	An assessment for the erosion rate of DEMO first wall. Nuclear Fusion, 2018, 58, 016016.	3.5	14
24	A model for particle and heat losses by type I edge localized modes. Plasma Physics and Controlled Fusion, 2007, 49, 395-403.	2.1	13
25	Modification of local plasma parameters by impurity injection. Plasma Physics and Controlled Fusion, 2011, 53, 065015.	2.1	13
26	Time-dependent shell model for spreading of impurities locally injected into hot plasmas. Plasma Physics and Controlled Fusion, 2012, 54, 025003.	2.1	13
27	Time resolved imaging of laser induced ablation spectroscopy (LIAS) in TEXTOR and comparison with modeling. Physica Scripta, 2016, T167, 014034.	2.5	13
28	On the importance of parallel heat conduction and magnetic geometry for multifaceted radiation from the edge (MARFE). Physics of Plasmas, 2001, 8, 2866-2871.	1.9	12
29	Elucidation of the Heat-Flux Limit from Magnetic-Island Heating. Physical Review Letters, 2007, 99, 225001.	7.8	11
30	Numerical modeling of transport barrier formation. Journal of Computational Physics, 2010, 229, 2625-2633.	3.8	11
31	Modelling of plasma behaviour in the vicinity of intensive impurity sources. Plasma Physics and Controlled Fusion, 2010, 52, 075003.	2.1	9
32	Modeling of non-stationary local response on impurity penetration in plasma. Physics of Plasmas, 2012, 19, 042502.	1.9	9
33	Scrape-off layer modeling with kinetic or diffusion description of charge-exchange atoms. Physics of Plasmas, 2016, 23, .	1.9	9
34	Consideration of multifaceted asymmetric radiation from the edge (MARFE) as a dissipative structure. Physics of Plasmas, 2002, 9, 1646-1653.	1.9	8
35	Numerical solution of transport equations for plasmas with transport barriers. Computer Physics Communications, 2006, 175, 30-35.	7.5	8
36	Modelling of the plasma global response to a local cooling. Plasma Physics and Controlled Fusion, 2013, 55, 045013.	2.1	8

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37	A possible nature of â€œbreathingâ€•plasmas. Physics of Plasmas, 2000, 7, 4357-4359.	1.9	7
38	Influence of the boundary conditions on the H-mode power threshold. Physics of Plasmas, 2006, 13, 032504.	1.9	7
39	On Greenwald density limit in H-mode. Physics of Plasmas, 2009, 16, .	1.9	7
40	Modelling of local carbon deposition from methane and ethene injection through graphite and tungsten test limiters in TEXTOR. Plasma Physics and Controlled Fusion, 2010, 52, 045005.	2.1	7
41	On the difference of H-mode power threshold in divertor and limiter tokamaks. Plasma Physics and Controlled Fusion, 2006, 48, A309-A317.	2.1	6
42	A simplified, numerically verified model for the global plasma reaction on a local cooling. Physics of Plasmas, 2013, 20, 102502.	1.9	6
43	Evidence for reduction of the toroidal ITG instability in the transition from saturated to improved Ohmic confinement in the tokamak TEXTOR. Plasma Physics and Controlled Fusion, 2003, 45, 199-207.	2.1	5
44	Mechanism of central temperature peaking in impurity seeded plasmas. Plasma Physics and Controlled Fusion, 2003, 45, 1323-1332.	2.1	5
45	Interaction of plasma rotation and resonant magnetic perturbation fields in tokamaks. Nuclear Fusion, 2008, 48, 024008.	3.5	5
46	A fast model for spreading of neutral particles injected locally into hot plasma. Physics of Plasmas, 2014, 21, 082517.	1.9	5
47	Assessment for erosion of and impurity deposition on first mirrors in a fusion reactor. Nuclear Fusion, 2018, 58, 096007.	3.5	5
48	A mechanism of ion temperature peaking by impurity pellet injection in a heliotron plasma. Plasma Physics and Controlled Fusion, 2020, 62, 075008.	2.1	5
49	Timeâ€dependent plasma transport simulation for the study of edge impurity radiation dynamics with magnetic island in large helical device. Contributions To Plasma Physics, 2020, 60, e201900138.	1.1	5
50	Tokamak Edge Plasma Transition to the State with Detachment from Limiter. Contributions To Plasma Physics, 1988, 28, 355-358.	1.1	4
51	Numerical Realization of a Shell Model for Impurity Spreading in Plasmas. , 2011, , .		4
52	Numerical solution of momentum balance equations for plasmas with two ion species. Journal of Computational Physics, 2011, 230, 2696-2705.	3.8	4
53	Modeling of localized impulsive injection of neutrals and plasma response. Plasma Physics and Controlled Fusion, 2017, 59, 055005.	2.1	4
54	Impact of hydrogen fuelling on confinement properties in radiative improved mode. Plasma Physics and Controlled Fusion, 2003, 45, 1501-1510.	2.1	3

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55	Theoretical Study of the Effect of the Dynamic Ergodic Divertor on MARFE Onset. Contributions To Plasma Physics, 2004, 44, 176-181.	1.1	3
56	Development of the Detachment under the Influence of the Supersonic Flow in the Divertor Region. Contributions To Plasma Physics, 2008, 48, 164-168.	1.1	3
57	Effect of magnetic geometry on transport of neutral particles locally entering confined plasma volume. Physics of Plasmas, 2009, 16, 094506.	1.9	3
58	Effect of poloidal inhomogeneity in plasma parameters on edge anomalous transport. Physics of Plasmas, 2009, 16, 044508.	1.9	3
59	Modeling of energy confinement improvement in high power JET discharges with neon seeding. Plasma Physics and Controlled Fusion, 2012, 54, 015004.	2.1	3
60	Tokar Replies:. Physical Review Letters, 2004, 93, .	7.8	2
61	Temperature of ion cyclotron heated impurity ions in fusion plasmas. Physics of Plasmas, 2005, 12, 072521.	1.9	2
62	Numerical solution of continuity equation with a flux non-linearly depending on the density gradient. Journal of Computational Physics, 2006, 220, 175-183.	3.8	2
63	Free energy minimization approach to penetration of resonant magnetic perturbations in tokamaks. Physics of Plasmas, 2009, 16, 122303.	1.9	2
64	Proposed mechanism for the formation of cold dense structures in plasmas. Physical Review E, 2012, 85, 046412.	2.1	2
65	"Shell" approach to modeling of impurity spreading from localized sources in plasma. International Journal of Modeling, Simulation, and Scientific Computing, 2014, 05, 1441005.	1.4	2
66	Quasi-three-dimensional modelling of penetration and influence of impurities in plasma. Plasma Physics and Controlled Fusion, 2014, 56, 124006.	2.1	2
67	An assessment of the first wall and limiter erosion during limiter discharge stages in DEMO. Nuclear Fusion, 2019, 59, 076002.	3.5	2
68	Self-Sustained Oscillations in a Plasma-Wall System with Strongly Inhomogeneous Diffusion of Charged Particles. Physical Review Letters, 2005, 95, 265002.	7.8	1
69	RITM-Code Modelling of Plasmas with Edge Transport Barrier. Contributions To Plasma Physics, 2006, 46, 685-691.	1.1	1
70	Modelling and Comparison with Experiment of Radial Profiles in a Tokamak with Magnetic Field Stochastization. Contributions To Plasma Physics, 2006, 46, 704-710.	1.1	1
71	Influence of the Wall Characteristics on the Development of MARFE in Tokamaks. Contributions To Plasma Physics, 2006, 46, 744-749.	1.1	1
72	Effective heat conduction in a configuration with nonoverlapped magnetic islands. Physics of Plasmas, 2008, 15, 034503.	1.9	1

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73	Numerical modeling of transport barrier formation. , 2012, , .		1
74	Approaches to modeling of plasmas containing impurity at arbitrary concentration. Plasma Physics and Controlled Fusion, 2016, 58, 025015.	2.1	1
75	Interplay of light and heavy impurities in a fusion device. Plasma Physics and Controlled Fusion, 2017, 59, 025001.	2.1	1
76	Accelerated procedure to solve kinetic equation for neutral atoms in a hot plasma. Journal of Physics: Conference Series, 2017, 936, 012009.	0.4	1
77	Accelerated procedure to solve kinetic equation for neutral atoms in a hot plasma. International Journal of Modeling, Simulation, and Scientific Computing, 2018, 09, 1850048.	1.4	1
78	Modeling of the resonant magnetic perturbation effect on detachment in the Large Helical Device. Plasma Physics and Controlled Fusion, 2020, 62, 085011.	2.1	1
79	An approach to implement a heat flux limit in a model for fusion relevant plasmas. Physics of Plasmas, 2022, 29, .	1.9	1
80	â€˜Phaseâ€™ model for structures generated by thermal instability in laboratory fusion plasma and ISM. Plasma Physics and Controlled Fusion, 2008, 50, 074002.	2.1	0
81	Numerical modeling of the plasma response to local cooling. Journal of Physics: Conference Series, 2013, 410, 012068.	0.4	0
82	"Shell" approach to modeling of impurity spreading from localized sources in plasma. Journal of Physics: Conference Series, 2014, 490, 012210.	0.4	0
83	Modelling of Global Heat Transfer by Local Cooling in Fusion Plasmas. , 2015, , .		0
84	Noise-Free Rapid Approach to Solve Kinetic Equations for Hot Atoms in Fusion Plasmas. , 0, , .		0