Dmitry Rudakov

List of Publications by Year
in descending order

76	2,058	279798	254184
papers	citations	23 h-index	43 g-index

77	77	77	1283
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Separatrix-to-Wall Simulations of Impurity Transport with a Fully Three-Dimensional Wall in DIII-D. Fusion Science and Technology, 2023, 79, 36-45.	1.1	1
2	The role of B _T-dependent flows on W accumulation at the edge of the confined plasma. Nuclear Fusion, 2022, 62, 026037.	3.5	6
3	Developing solid-surface plasma facing components for pilot plants and reactors with replenishable wall claddings and continuous surface conditioning. Part A: concepts and questions. Plasma Physics and Controlled Fusion, 2022, 64, 055018.	2.1	6
4	Developing solid-surface plasma facing components for pilot plants and reactors with replenishable wall claddings and continuous surface conditioning. Part B: required research in present tokamaks. Plasma Physics and Controlled Fusion, 2022, 64, 055003.	2.1	0
5	A Method to Identify the Heat Flux From Photons and Neutrals at the Divertor Target. IEEE Transactions on Plasma Science, 2022, 50, 4257-4261.	1.3	1
6	Modelling dust transport in DIII-D with DTOKS-Upgrade. Plasma Physics and Controlled Fusion, 2021, 63, 045002.	2.1	5
7	3D modeling of boron transport in DIII-D L-mode wall conditioning experiments. Nuclear Materials and Energy, 2021, 26, 100900.	1.3	10
8	Evaluation of silicon carbide as a divertor armor material in DIII-D H-mode discharges. Nuclear Fusion, 2021, 61, 066005.	3.5	16
9	Experimental verification of ion impact angle distribution at divertor surfaces using micro-engineered targets on DiMES at DIII-D. Nuclear Materials and Energy, 2021, 27, 100965.	1.3	7
10	ELM and inter-ELM heat and particle flux to a secondary divertor in the DIII-D tokamak. Nuclear Fusion, 2021, 61, 086024.	3.5	4
11	Modeling of ExB effects on tungsten re-deposition and transport in the DIII-D divertor. Nuclear Fusion, 2021, 61, 096018.	3.5	13
12	ERO modeling and analysis of tungsten erosion and migration from a toroidally symmetric source in the DIII-D divertor. Nuclear Fusion, 2020, 60, 016018.	3.5	13
13	Development of Surface Eroding Thermocouples in Small Angle Slot Divertor in DIII-D. IEEE Transactions on Plasma Science, 2020, 48, 1804-1809.	1.3	5
14	Robust impurity detection and tracking for tokamaks. Physical Review E, 2020, 102, 043311.	2.1	4
15	Reproduction of collector probe deposition profiles using the far-SOL impurity transport code 3DLIM. Nuclear Materials and Energy, 2020, 25, 100811.	1.3	6
16	Localized divertor leakage measurements using isotopic tungsten sources during edge-localized mode-y H-mode discharges on DIII-D. Nuclear Fusion, 2020, 60, 016028.	3.5	13
17	Study of argon expulsion from the post-disruption runaway electron plateau following low-Z massive gas injection in DIII-D. Physics of Plasmas, 2020, 27, .	1.9	20
18	Net versus gross erosion of silicon carbide in DIII-D divertor. Physica Scripta, 2020, T171, 014064.	2.5	5

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19	Observations of wall conditioning by means of boron powder injection in DIII-D H-mode plasmas. Nuclear Fusion, 2020, 60, 126010.	3.5	27
20	Modeling, analysis, and code/data validation of DIII-D tokamak divertor experiments on ELM and non-ELM plasma tungsten sputtering erosion. Nuclear Fusion, 2020, 60, 126026.	3.5	7
21	Impact of ELM control techniques on tungsten sputtering in the DIII-D divertor and extrapolations to ITER. Physics of Plasmas, 2019, 26, .	1.9	19
22	Study of argon assimilation into the post-disruption runaway electron plateau in DIII-D and comparison with a 1D diffusion model. Nuclear Fusion, 2019, 59, 106014.	3.5	14
23	Use of isotopic tungsten tracers and a stable-isotope-mixing model to characterize divertor source location in the DIII-D metal rings campaign. Nuclear Materials and Energy, 2019, 19, 358-363.	1.3	13
24	Atomic insight into concurrent He, D, and T sputtering and near-surface implantation of 3C-SiC crystallographic surfaces. Nuclear Materials and Energy, 2019, 19, 1-6.	1.3	12
25	Transport of tungsten to collector probes in DIII-D. Nuclear Materials and Energy, 2019, 18, 87-92.	1.3	12
26	Evidence of near-SOL tungsten accumulation using a far-SOL collector probe array and OEDGE modelling in the DIII-D metal rings L-mode discharges. Nuclear Materials and Energy, 2019, 19, 287-294.	1.3	19
27	Reduced model of high-Z impurity redeposition and erosion in tokamak divertor and its application to DIII-D experiments. Plasma Physics and Controlled Fusion, 2019, 61, 125015.	2.1	6
28	A review of direct experimental measurements of detachment. Plasma Physics and Controlled Fusion, 2018, 60, 044008.	2.1	16
29	Experimental validation of a model for particle recycling and tungsten erosion during ELMs in the DIII-D divertor. Nuclear Materials and Energy, 2018, 17, 164-173.	1.3	22
30	Utilization of outer-midplane collector probes with isotopically enriched tungsten tracer particles for impurity transport studies in the scrape-off layer of DIII-D (invited). Review of Scientific Instruments, 2018, 89, 10I115.	1.3	18
31	Advances in understanding of high-Zmaterial erosion and re-deposition in low-Zwall environment in DIII-D. Nuclear Fusion, 2017, 57, 056016.	3.5	16
32	Estimation of plasma ion saturation current and reduced tip arcing using Langmuir probe harmonics. Review of Scientific Instruments, 2017, 88, 033505.	1.3	0
33	High-Z material erosion and its control in DIII-D carbon divertor. Nuclear Materials and Energy, 2017, 12, 247-252.	1.3	4
34	DiMES PMI research at DIII-D in support of ITER and beyond. Fusion Engineering and Design, 2017, 124, 196-201.	1.9	18
35	OEDGE modeling for the planned tungsten ring experiment on DIII-D. Nuclear Materials and Energy, 2017, 12, 755-761.	1.3	10
36	Dynamic control of low-Z material deposition and tungsten erosion by strike point sweeping on DIII-D. Nuclear Materials and Energy, 2017, 12, 392-398.	1.3	5

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37	Study of Z scaling of runaway electron plateau final loss energy deposition into wall of DIII-D. Physics of Plasmas, 2017, 24, .	1.9	16
38	The inter-ELM tungsten erosion profile in DIII-D H-mode discharges and benchmarking with ERO+OEDGE modeling. Nuclear Fusion, 2017, 57, 056034.	3.5	47
39	Tungsten erosion by unipolar arcing in DIII-D. Physica Scripta, 2017, T170, 014034.	2.5	25
40	Measurements of tungsten migration in the DIII-D divertor. Physica Scripta, 2017, T170, 014041.	2.5	10
41	Exposures of tungsten nanostructures to divertor plasmas in DIII-D. Physica Scripta, 2016, T167, 014055.	2.5	29
42	Simulation of gross and net erosion of high-Z materials in the DIII-D divertor. Nuclear Fusion, 2016, 56, 016021.	3.5	41
43	Control of high-Z PFC erosion by local gas injection in DIII-D. Journal of Nuclear Materials, 2015, 463, 605-610.	2.7	9
44	Measurement of runaway electron energy distribution function during high-Z gas injection into	1.9	50
45	Analysis of a tungsten sputtering experiment in DIII-D and code/data validation of high redeposition/reduced erosion. Fusion Engineering and Design, 2015, 94, 67-71.	1.9	25
46	Net versus gross erosion of high-Zmaterials in the divertor of DIII-D. Physica Scripta, 2014, T159, 014030.	2.5	23
47	An experimental comparison of gross and net erosion of Mo in the DIII-D divertor. Journal of Nuclear Materials, 2013, 438, S309-S312.	2.7	22
48	Measurements of net erosion and redeposition of molybdenum in DIII-D. Journal of Nuclear Materials, 2013, 438, S822-S826.	2.7	20
49	Arcing and its role in PFC erosion and dust production in DIII-D. Journal of Nuclear Materials, 2013, 438, S805-S808.	2.7	42
50	The effect of thermo-oxidation on plasma performance and in-vessel components in DIII-D. Nuclear Fusion, 2013, 53, 073008.	3.5	11
51	Control and dissipation of runaway electron beams created during rapid shutdown experiments in DIII-D. Nuclear Fusion, 2013, 53, 083004.	3.5	96
52	Dust in magnetic fusion devices. Plasma Physics and Controlled Fusion, 2011, 53, 083001.	2.1	158
53	Dust appearance rates during neutral beam injection and after oxygen bake in the DIII-D tokamak. Journal of Nuclear Materials, 2011, 415, S1102-S1105.	2.7	2
54	Quantification of chemical erosion in the DIII-D divertor and implications for ITER. Journal of Nuclear Materials, 2011, 415, S141-S144.	2.7	2

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55	Poloidally and radially resolved parallel D+ velocity measurements in the DIII-D boundary and comparison to neoclassical computations. Physics of Plasmas, 2011, 18, 032510.	1.9	27
56	Intrinsic rotation generation in ELM-free H-mode plasmas in the DIII-D tokamakâ€"Experimental observations. Physics of Plasmas, 2011, 18, .	1.9	35
57	Overview of the recent DiMES and MiMES experiments in DIII-D. Physica Scripta, 2009, T138, 014007.	2.5	20
58	Experiments to measure hydrogen release from graphite walls during disruptions in DIII-D. Journal of Nuclear Materials, 2009, 390-391, 597-601.	2.7	13
59	Fast camera imaging of dust in the DIII-D tokamak. Journal of Nuclear Materials, 2009, 390-391, 216-219.	2.7	24
60	Indications of an inward pinch in the inner SOL of DIII-D from 13C deposition experiments. Journal of Nuclear Materials, 2009, 390-391, 376-379.	2.7	9
61	Plasma interactions with the outboard chamber wall in DIII-D. Journal of Nuclear Materials, 2009, 390-391, 785-788.	2.7	8
62	Recent progress in understanding the behavior of dust in fusion devices. Plasma Physics and Controlled Fusion, 2008, 50, 124054.	2.1	66
63	Fast imaging of edge localized mode structure and dynamics in DIII-D. Physics of Plasmas, 2008, 15, 032504.	1.9	38
64	OEDGE modeling of the DIII-D H-mode 13CH4 puffing experiment. Journal of Nuclear Materials, 2007, 363-365, 140-145.	2.7	17
65	Divertor and midplane materials evaluation system in DIII-D. Journal of Nuclear Materials, 2007, 363-365, 276-281.	2.7	10
66	Particle flux and radial profiles in the SOL of DIII-D during ELMing H-mode. Journal of Nuclear Materials, 2007, 363-365, 1066-1070.	2.7	12
67	Spectroscopic measurement of atomic and molecular deuterium fluxes in the DIII-D plasma edge. Plasma Physics and Controlled Fusion, 2006, 48, 1165-1180.	2.1	58
68	13C transport studies in L-mode divertor plasmas on DIII-D. Journal of Nuclear Materials, 2005, 337-339, 30-34.	2.7	38
69	Far scrape-off layer and near wall plasma studies in DIII-D. Journal of Nuclear Materials, 2005, 337-339, 717-721.	2.7	15
70	DIVIMP modeling of the toroidally symmetrical injection of 13CH4 into the upper SOL of DIII-D. Journal of Nuclear Materials, 2005, 337-339, 124-128.	2.7	27
71	OEDGE modeling of 13C deposition in the inner divertor of DIII-D. Journal of Nuclear Materials, 2005, 337-339, 79-83.	2.7	24
72	The magnitude of plasma flux to the main-wall in the DIII-D tokamak. Plasma Physics and Controlled Fusion, 2005, 47, 1579-1607.	2.1	40

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73	Far SOL transport and main wall plasma interaction in DIII-D. Nuclear Fusion, 2005, 45, 1589-1599.	3.5	123
74	Edge-localized mode dynamics and transport in the scrape-off layer of the DIII-D tokamak. Physics of Plasmas, 2005, 12, 072516.	1.9	66
75	Interpretive modeling of simple-as-possible-plasma discharges on DIII-D using the OEDGE code. Journal of Nuclear Materials, 2003, 313-316, 883-887.	2.7	65
76	Transport by intermittent convection in the boundary of the DIII-D tokamak. Physics of Plasmas, 2001, 8, 4826-4833.	1.9	322