

Adam G Mclean

List of Publications by Year in descending order

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papers

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113
all docs

113
docs citations

113
times ranked

1433
citing authors

#	ARTICLE	IF	CITATIONS
1	Far SOL transport and main wall plasma interaction in DIII-D. Nuclear Fusion, 2005, 45, 1589-1599.	1.6	123
2	Measurements of impurity and heat dynamics during noble gas jet-initiated fast plasma shutdown for disruption mitigation in DIII-D. Nuclear Fusion, 2005, 45, 1046-1055.	1.6	85
3	The safety and efficacy of MMF in lupus nephritis: a pilot study. Lupus, 2001, 10, 606-611.	0.8	80
4	NSTX plasma operation with a Liquid Lithium Divertor. Fusion Engineering and Design, 2012, 87, 1724-1731.	1.0	72
5	Dust measurements in tokamaks (invited). Review of Scientific Instruments, 2008, 79, 10F303.	0.6	67
6	Snowflake divertor configuration studies in National Spherical Torus Experiment. Physics of Plasmas, 2012, 19, .	0.7	67
7	Spectroscopic measurement of atomic and molecular deuterium fluxes in the DIII-D plasma edge. Plasma Physics and Controlled Fusion, 2006, 48, 1165-1180.	0.9	58
8	$\frac{E}{\hbar} - \frac{B}{\hbar}$ Flux Driven Detachment Bifurcation in the DIII-D Tokamak. Physical Review Letters, 2018, 121, 075001.	0.9	58
9	Electron pressure balance in the SOL through the transition to detachment. Journal of Nuclear Materials, 2015, 463, 533-536.	1.3	56
10	Overview of physics results from the conclusive operation of the National Spherical Torus Experiment. Nuclear Fusion, 2013, 53, 104007.	1.6	53
11	Dependence of divertor heat flux widths on heating power, flux expansion, and plasma current in the NSTX. Journal of Nuclear Materials, 2011, 415, S360-S364.	1.3	52
12	First tests of molybdenum mirrors for ITER diagnostics in DIII-D divertor. Review of Scientific Instruments, 2006, 77, 10F126.	0.6	46
13	First tests of diagnostic mirrors in a tokamak divertor: An overview of experiments in DIII-D. Fusion Engineering and Design, 2008, 83, 79-89.	1.0	37
14	Recent progress in the NSTX/NSTX-U lithium programme and prospects for reactor-relevant liquid-lithium based divertor development. Nuclear Fusion, 2013, 53, 113030.	1.6	32
15	Heat flux management via advanced magnetic divertor configurations and divertor detachment. Journal of Nuclear Materials, 2015, 463, 1186-1190.	1.3	30
16	Modeling of detachment experiments at DIII-D. Journal of Nuclear Materials, 2015, 463, 569-572.	1.3	29
17	Exposures of tungsten nanostructures to divertor plasmas in DIII-D. Physica Scripta, 2016, T167, 014055.	1.2	29
18	Impact of drifts on divertor power exhaust in DIII-D. Nuclear Materials and Energy, 2019, 19, 230-238.	0.6	29

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19	A dual-band adaptor for infrared imaging. <i>Review of Scientific Instruments</i> , 2012, 83, 053706.	0.6	28
20	Separating divertor closure effects on divertor detachment and pedestal shape in DIII-D. <i>Physics of Plasmas</i> , 2020, 27, .	0.7	28
21	“Snowflake” divertor configuration in NSTX. <i>Journal of Nuclear Materials</i> , 2011, 415, S365-S368.	1.3	26
22	The influence of three-dimensional stochastic magnetic boundaries on plasma edge transport and the resulting plasma wall interaction. <i>Journal of Nuclear Materials</i> , 2011, 415, S886-S893.	1.3	26
23	Comparison of 2D simulations of detached divertor plasmas with divertor Thomson measurements in the DIII-D tokamak. <i>Nuclear Materials and Energy</i> , 2017, 12, 44-50.	0.6	26
24	Analysis of a tungsten sputtering experiment in DIII-D and code/data validation of high redeposition/reduced erosion. <i>Fusion Engineering and Design</i> , 2015, 94, 67-71.	1.0	25
25	Tungsten erosion by unipolar arcing in DIII-D. <i>Physica Scripta</i> , 2017, T170, 014034.	1.2	25
26	Advanced divertor configurations with large flux expansion. <i>Journal of Nuclear Materials</i> , 2013, 438, S96-S101.	1.3	24
27	Wide-angle ITER-prototype tangential infrared and visible viewing system for DIII-D. <i>Review of Scientific Instruments</i> , 2014, 85, 11D855.	0.6	24
28	Dependence of neutral pressure on detachment in the small angle slot divertor at DIII-D. <i>Nuclear Materials and Energy</i> , 2019, 19, 487-492.	0.6	24
29	The effect of divertor closure on detachment onset in DIII-D. <i>Nuclear Materials and Energy</i> , 2019, 19, 67-71.	0.6	24
30	Modification of the electron energy distribution function during lithium experiments on the National Spherical Torus Experiment. <i>Fusion Engineering and Design</i> , 2012, 87, 1711-1718.	1.0	23
31	Particle control and plasma performance in the Lithium Tokamak eXperiment. <i>Physics of Plasmas</i> , 2013, 20, .	0.7	23
32	2D divertor heat flux distribution using a 3D heat conduction solver in National Spherical Torus Experiment. <i>Review of Scientific Instruments</i> , 2013, 84, 023505.	0.6	23
33	Net versus gross erosion of high-Z materials in the divertor of DIII-D. <i>Physica Scripta</i> , 2014, T159, 014030.	1.2	23
34	Radiative snowflake divertor studies in DIII-D. <i>Journal of Nuclear Materials</i> , 2015, 463, 1191-1195.	1.3	23
35	Upgraded divertor Thomson scattering system on DIII-D. <i>Review of Scientific Instruments</i> , 2016, 87, 11E508.	0.6	23
36	Advances in radiated power control at DIII-D. <i>Nuclear Materials and Energy</i> , 2019, 18, 285-290.	0.6	23

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37	An experimental comparison of gross and net erosion of Mo in the DIII-D divertor. <i>Journal of Nuclear Materials</i> , 2013, 438, S309-S312.	1.3	22
38	Experimental validation of a model for particle recycling and tungsten erosion during ELMs in the DIII-D divertor. <i>Nuclear Materials and Energy</i> , 2018, 17, 164-173.	0.6	22
39	Overview of the recent DiMES and MiMES experiments in DIII-D. <i>Physica Scripta</i> , 2009, T138, 014007.	1.2	20
40	Simulation of localized fast-ion heat loads in test blanket module simulation experiments on DIII-D. <i>Nuclear Fusion</i> , 2013, 53, 123018.	1.6	20
41	Diverted negative triangularity plasmas on DIII-D: the benefit of high confinement without the liability of an edge pedestal. <i>Nuclear Fusion</i> , 2021, 61, 116010.	1.6	20
42	Effect of nonaxisymmetric magnetic perturbations on divertor heat and particle flux profiles in National Spherical Torus Experiment. <i>Physics of Plasmas</i> , 2011, 18, .	0.7	19
43	Observation of non-Maxwellian electron distributions in the NSTX divertor. <i>Journal of Nuclear Materials</i> , 2013, 438, S384-S387.	1.3	19
44	Investigation of He-W interactions using DiMES on DIII-D. <i>Physica Scripta</i> , 2016, T167, 014054.	1.2	19
45	EDGE2D-EIRENE predictions of molecular emission in DIII-D high-recycling divertor plasmas. <i>Nuclear Materials and Energy</i> , 2019, 19, 211-217.	0.6	19
46	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. <i>Nuclear Materials and Energy</i> , 2019, 19, 287-294.	0.6	19
47	Application of the radiating divertor approach to innovative tokamak divertor concepts. <i>Journal of Nuclear Materials</i> , 2015, 463, 1225-1228.	1.3	18
48	Interpretations of the impact of cross-field drifts on divertor flows in DIII-D with UEDGE. <i>Nuclear Materials and Energy</i> , 2017, 12, 1136-1140.	0.6	18
49	Testing the role of molecular physics in dissipative divertor operations through helium plasmas at DIII-D. <i>Physics of Plasmas</i> , 2017, 24, .	0.7	18
50	DiMES PMI research at DIII-D in support of ITER and beyond. <i>Fusion Engineering and Design</i> , 2017, 124, 196-201.	1.0	18
51	DiMES studies of temperature dependence of carbon erosion and re-deposition in the lower divertor of DIII-D under detachment. <i>Physica Scripta</i> , 2007, T128, 29-34.	1.2	17
52	Compatibility of detached divertor operation with robust edge pedestal performance. <i>Journal of Nuclear Materials</i> , 2015, 463, 519-523.	1.3	17
53	Scrape-off layer transport and deposition studies in DIII-D. <i>Physics of Plasmas</i> , 2007, 14, 056120.	0.7	16
54	A review of direct experimental measurements of detachment. <i>Plasma Physics and Controlled Fusion</i> , 2018, 60, 044008.	0.9	16

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55	The surface eroding thermocouple for fast heat flux measurement in DIII-D. Review of Scientific Instruments, 2018, 89, 10J122.	0.6	15
56	Developing and validating advanced divertor solutions on DIII-D for next-step fusion devices. Nuclear Fusion, 2016, 56, 126010.	1.6	14
57	Snowflake Divertor Experiments in the DIII-D, NSTX, and NSTX-U Tokamaks Aimed at the Development of the Divertor Power Exhaust Solution. IEEE Transactions on Plasma Science, 2016, 44, 3445-3455.	0.6	14
58	Measuring the electron temperature and identifying plasma detachment using machine learning and spectroscopy. Review of Scientific Instruments, 2021, 92, 043520.	0.6	14
59	Lithium sputtering from lithium-coated plasma facing components in the NSTX divertor. Journal of Nuclear Materials, 2015, 463, 1165-1168.	1.3	13
60	Optimizing the Super H-mode pedestal to improve performance and facilitate divertor integration. Physics of Plasmas, 2020, 27, 102506.	0.7	13
61	Thomson scattering measurements on DIII-D using in-vessel laser mirrors and lenses to diagnose a new divertor location. Review of Scientific Instruments, 2018, 89, 10C111.	0.6	12
62	Recent progress of NSTX lithium program and opportunities for magnetic fusion research. Fusion Engineering and Design, 2012, 87, 1770-1776.	1.0	11
63	2D imaging of helium ion velocity in the DIII-D divertor. Physics of Plasmas, 2018, 25, 056110.	0.7	11
64	DIII-D research advancing the physics basis for optimizing the tokamak approach to fusion energy. Nuclear Fusion, 2022, 62, 042024.	1.6	11
65	Response of NSTX liquid lithium divertor to high heat loads. Journal of Nuclear Materials, 2013, 438, S313-S316.	1.3	10
66	Power deposition on the DIII-D inner wall limiter. Journal of Nuclear Materials, 2015, 463, 389-392.	1.3	10
67	Recent sheath physics studies on DIII-D. Journal of Nuclear Materials, 2015, 463, 436-439.	1.3	10
68	OEDGE modeling for the planned tungsten ring experiment on DIII-D. Nuclear Materials and Energy, 2017, 12, 755-761.	0.6	10
69	Measurements of tungsten migration in the DIII-D divertor. Physica Scripta, 2017, T170, 014041.	1.2	10
70	Effect of electron temperature fluctuations on slowly swept Langmuir probe measurements. Review of Scientific Instruments, 2004, 75, 4334-4337.	0.6	9
71	Characterization of divertor footprints and the pedestal plasmas in the presence of applied $n=3$ fields for the attached and detached conditions in NSTX. Plasma Physics and Controlled Fusion, 2014, 56, 015005.	0.9	9
72	Control of high-Z PFC erosion by local gas injection in DIII-D. Journal of Nuclear Materials, 2015, 463, 605-610.	1.3	9

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73	Modeling detachment physics in the NSTX snowflake divertor. Journal of Nuclear Materials, 2015, 463, 1200-1204.	1.3	9
74	Characterization of fueling NSTX H-mode plasmas diverted to a liquid lithium divertor. Journal of Nuclear Materials, 2013, 438, S488-S492.	1.3	8
75	Results from core-edge experiments in high Power, high performance plasmas on DIII-D. Nuclear Materials and Energy, 2017, 12, 1141-1145.	0.6	8
76	Experimentally-based ExB drifts in the DIII-D divertor and SOL calculated from integration of Ohm's law using Thomson scattering measurements of Te and ne. Nuclear Materials and Energy, 2017, 12, 876-881.	0.6	8
77	Measurement and modeling of aluminum sputtering and ionization in the DIII-D divertor including magnetic pre-sheath effects. Nuclear Fusion, 2018, 58, 106019.	1.6	8
78	Conceptual design of a divertor Thomson scattering diagnostic for NSTX-U. Review of Scientific Instruments, 2014, 85, 11E825.	0.6	7
79	Measurements of gross erosion of Al in the DIII-D divertor. Journal of Nuclear Materials, 2015, 463, 810-813.	1.3	7
80	Modification of adhered dust on plasma-facing surfaces due to exposure to ELMy H-mode plasma in DIII-D. Nuclear Materials and Energy, 2017, 12, 379-385.	0.6	7
81	Ion beam analysis of ^{13}C and deuterium deposition in DIII-D and their removal by in-situ oxygen baking. Physica Scripta, 2011, T145, 014025.	1.2	6
82	Characteristics of divertor heat and particle deposition with intrinsic and applied 3-D fields in NSTX H-mode plasmas. Journal of Nuclear Materials, 2011, 415, S918-S922.	1.3	6
83	Global particle balance measurements in DIII-D H-mode discharges. Journal of Nuclear Materials, 2011, 415, S740-S747.	1.3	6
84	Broadening of divertor heat flux profile with increasing number of ELM filaments in NSTX. Nuclear Fusion, 2014, 54, 122004.	1.6	6
85	Near-infrared spectroscopy for divertor plasma diagnosis and control in DIII-D tokamak. Review of Scientific Instruments, 2014, 85, 11E418.	0.6	6
86	Verification of Doppler coherence imaging for 2D ion velocity measurements on DIII-D. Review of Scientific Instruments, 2018, 89, 093502.	0.6	6
87	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.	0.9	6
88	Upper wide-angle viewing system for ITER. Review of Scientific Instruments, 2016, 87, 11D426.	0.6	5
89	Characterizing Low-Z erosion and deposition in the DIII-D divertor using aluminum. Nuclear Materials and Energy, 2017, 12, 441-446.	0.6	5
90	ELM-free and inter-ELM divertor heat flux broadening induced by edge harmonics oscillation in NSTX. Nuclear Fusion, 2017, 57, 126053.	1.6	5

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91	Prediction of Cylinder Flow Pressures in Mass-Flow Bins Using Minimum Strain Energy. Journal of Engineering for Industry, 1976, 98, 1370-1374. OEDGE modeling of the DIII-D double null	0.8	4
92	Study of non-axisymmetric divertor footprints using 2-D IR and visible cameras and a 3-D heat conduction solver in NSTX. Journal of Nuclear Materials, 2013, 438, S317-S320.	1.3	4
93	High-Z material erosion and its control in DIII-D carbon divertor. Nuclear Materials and Energy, 2017, 12, 247-252.	0.6	4
94	Effect of 3D magnetic perturbations on divertor conditions and detachment in tokamak and stellarator. Plasma Physics and Controlled Fusion, 2017, 59, 084002.	0.9	4
95	Micro-trench measurements of the net deposition of carbon impurity ions in the DIII-D divertor and the resulting suppression of surface erosion. Physica Scripta, 0, , .	1.2	4
96	Assessment of Collateral Effects of Thermo-Oxidation on DIII-D In-Vessel Components in Preparation for In Situ Oxidation in DIII-D. Fusion Science and Technology, 2010, 58, 603-612.	0.6	3
97	Effect of n=3 perturbation field amplitudes below the ELM triggering threshold on edge and SOL transport in NSTX. Journal of Nuclear Materials, 2013, 438, S388-S392.	1.3	3
98	Effect of lithium in the DIII-D SOL and plasma-facing surfaces. Journal of Nuclear Materials, 2015, 463, 1160-1164.	1.3	3
99	Quantification of chemical erosion in the DIII-D divertor and implications for ITER. Journal of Nuclear Materials, 2011, 415, S141-S144.	1.3	2
100	Diagnostic options for radiative divertor feedback control on NSTX-U. Review of Scientific Instruments, 2012, 83, 10D716.	0.6	2
101	Measurement and modeling of surface temperature dynamics of the NSTX liquid lithium divertor. Journal of Nuclear Materials, 2013, 438, S397-S400.	1.3	2
102	Impact of ELM filaments on divertor heat flux dynamics in NSTX. Journal of Nuclear Materials, 2015, 463, 701-704.	1.3	2
103	Design update of the ITER upper wide angle viewing system. Fusion Engineering and Design, 2017, 123, 852-856.	1.0	2
104	Toroidal asymmetries in divertor impurity influxes in NSTX. Nuclear Materials and Energy, 2017, 12, 768-773.	0.6	2
105	Development of an integrated core-edge scenario using the super H-mode. Nuclear Fusion, 2021, 61, 126064.	1.6	2
106	Impurity ion flow and temperature measured in a detached divertor with externally applied non-axisymmetric fields on DIII-D. Journal of Nuclear Materials, 2015, 463, 524-527.	1.3	1
107	Impact of edge harmonic oscillations on the divertor heat flux in NSTX. Physics of Plasmas, 2022, 29, 012503.	0.7	1

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109	3D-DIVIMP(HC) code modeling of DIII-D DiMES porous plug injector experiments. Journal of Nuclear Materials, 2011, 415, S145-S148.	1.3	0
110	Characterization of transient particle loads during lithium experiments on the National Spherical Torus Experiment. Fusion Engineering and Design, 2012, 87, 1794-1800.	1.0	0
111	OEDGE modeling of DIII-D density scan discharges leading to detachment. Journal of Nuclear Materials, 2015, 463, 565-568.	1.3	0
112	Improved cross-calibration of Thomson scattering and electron cyclotron emission with ECH on DIII-D. Review of Scientific Instruments, 2016, 87, 11E517.	0.6	0