J M Canik

List of Publications by Year
in descending order

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80	2,499	172457	214800
papers	citations	29 h-index	47 g-index

82	82	82	1677
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Super-X divertors and high power density fusion devices. Physics of Plasmas, 2009, 16, .	1.9	192
2	Overview of the physics and engineering design of NSTX upgrade. Nuclear Fusion, 2012, 52, 083015.	3.5	177
3	Fusion nuclear science facilities and pilot plants based on the spherical tokamak. Nuclear Fusion, 2016, 56, 106023.	3.5	119
4	Plasma response to lithium-coated plasma-facing components in the National Spherical Torus Experiment. Plasma Physics and Controlled Fusion, 2009, 51, 124054.	2.1	99
5	Observation of Edge Instability Limiting the Pedestal Growth in Tokamak Plasmas. Physical Review Letters, 2014, 112, 115001.	7.8	78
6	Continuous Improvement of H-Mode Discharge Performance with Progressively Increasing Lithium Coatings in the National Spherical Torus Experiment. Physical Review Letters, 2011, 107, 145004.	7.8	77
7	Experimental Demonstration of Improved Neoclassical Transport with Quasihelical Symmetry. Physical Review Letters, 2007, 98, 085002.	7.8	74
8	Correlations between quasi-coherent fluctuations and the pedestal evolution during the inter-edge	1.9	69
9	Design and analysis of the W7-X divertor scraper element. Fusion Engineering and Design, 2013, 88, 1773-1777.	1.9	68
10	On Demand Triggering of Edge Localized Instabilities Using External Nonaxisymmetric Magnetic Perturbations in Toroidal Plasmas. Physical Review Letters, 2010, 104, 045001.	7.8	66
11	Edge transport and turbulence reduction with lithium coated plasma facing components in the National Spherical Torus Experiment. Physics of Plasmas, 2011, 18, .	1.9	59
12	Overview of physics results from the conclusive operation of the National Spherical Torus Experiment. Nuclear Fusion, 2013, 53, 104007.	3.5	53
13	Edge microstability of NSTX plasmas without and with lithium-coated plasma-facing components. Nuclear Fusion, 2013, 53, 113016.	3.5	52
14	MAST-upgrade divertor facility and assessing performance of long-legged divertors. Journal of Nuclear Materials, 2013, 438, S356-S359.	2.7	47
15	Overview of NSTX Upgrade initial results and modelling highlights. Nuclear Fusion, 2017, 57, 102006.	3.5	45
16	Edge transport studies in the edge and scrape-off layer of the National Spherical Torus Experiment with Langmuir probes. Physics of Plasmas, 2014, 21, .	1.9	44
17	The relation between upstream density and temperature widths in the scrape-off layer and the power width in an attached divertor. Nuclear Fusion, 2010, 50, 125003.	3.5	43
18	A Fusion Nuclear Science Facility for a fast-track path to DEMO. Fusion Engineering and Design, 2014, 89, 876-881.	1.9	43

#	Article	IF	Citations
19	The super X divertor (SXD) and a compact fusion neutron source (CFNS). Nuclear Fusion, 2010, 50, 035003.	3.5	42
20	Overview of results from the National Spherical Torus Experiment (NSTX). Nuclear Fusion, 2009, 49, 104016.	3.5	41
21	Triggered Confinement Enhancement and Pedestal Expansion in High-Confinement-Mode Discharges in the National Spherical Torus Experiment. Physical Review Letters, 2010, 105, 135004.	7.8	41
22	Measurements and 2-D modeling of recycling and edge transport in discharges with lithium-coated PFCs in NSTX. Journal of Nuclear Materials, 2011, 415, S409-S412.	2.7	41
23	Transport simulations of linear plasma generators with the B2.5-Eirene and EMC3-Eirene codes. Journal of Nuclear Materials, 2015, 463, 510-514.	2.7	40
24	Quasi-coherent fluctuations limiting the pedestal growth on Alcator C-Mod: experiment and modelling. Nuclear Fusion, 2015, 55, 053003.	3.5	35
25	Effect of changes in separatrix magnetic geometry on divertor behaviour in DIII-D. Nuclear Fusion, 2013, 53, 113024.	3.5	34
26	Recent progress in the NSTX/NSTX-U lithium programme and prospects for reactor-relevant liquid-lithium based divertor development. Nuclear Fusion, 2013, 53, 113030.	3.5	32
27	Experimental Evidence of Reduced Plasma Flow Damping with Quasisymmetry. Physical Review Letters, 2005, 94, 015002.	7.8	31
28	Reduced particle and heat transport with quasisymmetry in the Helically Symmetric Experiment. Physics of Plasmas, 2007, 14, 056107.	1.9	31
29	Modeling of detachment experiments at DIII-D. Journal of Nuclear Materials, 2015, 463, 569-572.	2.7	29
30	Predicting High Harmonic Ion Cyclotron Heating Efficiency in Tokamak Plasmas. Physical Review Letters, 2011, 107, 145001.	7.8	28
31	A fusion development facility on the critical path to fusion energy. Nuclear Fusion, 2011, 51, 083019.	3.5	28
32	Progress in characterization of the pedestal stability and turbulence during the edge-localized-mode cycle on National Spherical Torus Experiment. Nuclear Fusion, 2013, 53, 093026.	3.5	28
33	Three-dimensional distortions of the tokamak plasma boundary: boundary displacements in the presence of resonant magnetic perturbations. Nuclear Fusion, 2014, 54, 083006.	3.5	27
34	Real time wall conditioning with lithium powder injection in long pulse H-mode plasmas in EAST with tungsten divertor. Nuclear Materials and Energy, 2019, 19, 124-130.	1.3	25
35	Measurements and modeling of plasma flow damping in the Helically Symmetric eXperiment. Physics of Plasmas, 2005, 12, 056116.	1.9	23
36	Particle control and plasma performance in the Lithium Tokamak eXperiment. Physics of Plasmas, 2013, 20, .	1.9	23

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37	Connection between plasma response and resonant magnetic perturbation (RMP) edge localized mode (ELM) suppression in DIII-D. Plasma Physics and Controlled Fusion, 2015, 57, 104006.	2.1	23
38	Overview of physics results from MAST towards ITER/DEMO and the MAST Upgrade. Nuclear Fusion, 2013, 53, 104008.	3.5	21
39	An overview of recent physics results from NSTX. Nuclear Fusion, 2015, 55, 104002.	3.5	21
40	Evidence of Toroidally Localized Turbulence with Applied 3D Fields in the DIII-D Tokamak. Physical Review Letters, 2016, 117, 135001.	7.8	21
41	Effect of Quasihelical Symmetry on Trapped-Electron Mode Transport in the HSX Stellarator. Physical Review Letters, 2008, 101, 215002.	7.8	20
42	Injected mass deposition thresholds for lithium granule instigated triggering of edge localized modes on EAST. Nuclear Fusion, 2018, 58, 036007.	3.5	20
43	NSTX/NSTX-U theory, modeling and analysis results. Nuclear Fusion, 2019, 59, 112007.	3.5	20
44	Effect of nonaxisymmetric magnetic perturbations on divertor heat and particle flux profiles in National Spherical Torus Experiment. Physics of Plasmas, 2011, 18, .	1.9	19
45	Particle-in-cell Î´f gyrokinetic simulations of the microtearing mode. Physics of Plasmas, 2016, 23, .	1.9	19
46	SOL effects on the pedestal structure in DIII-D discharges. Nuclear Fusion, 2017, 57, 076025.	3.5	19
47	Implications of NSTX lithium results for magnetic fusion research. Fusion Engineering and Design, 2010, 85, 882-889.	1.9	17
48	Pedestal characterization and stability of small-ELM regimes in NSTX. Nuclear Fusion, 2011, 51, 103022.	3.5	17
49	Dependence of recycling and edge profiles on lithium evaporation in high triangularity, high performance NSTX H-mode discharges. Journal of Nuclear Materials, 2015, 463, 1134-1137.	2.7	17
50	Advancing Fusion with Machine Learning Research Needs Workshop Report. Journal of Fusion Energy, 2020, 39, 123-155.	1.2	17
51	Modeling the effect of lithium-induced pedestal profiles on scrape-off-layer turbulence and the heat flux width. Physics of Plasmas, 2015, 22, 092311.	1.9	16
52	Stellarator Research Opportunities: A Report of the National Stellarator Coordinating Committee. Journal of Fusion Energy, 2018, 37, 51-94.	1.2	15
53	Alcator C-Mod: research in support of ITER and steps beyond. Nuclear Fusion, 2015, 55, 104020.	3.5	14
54	Radiative heat exhaust in Alcator C-Mod I-mode plasmas. Nuclear Fusion, 2019, 59, 046018.	3.5	14

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55	Overview of Recent Results from HSX. Fusion Science and Technology, 2006, 50, 171-176.	1.1	13
56	Multi-physics modeling of the long-term evolution of helium plasma exposed surfaces. Physica Scripta, 2020, T171, 014041.	2.5	13
57	Linear gyrokinetic simulations of microinstabilities within the pedestal region of H-mode NSTX discharges in a highly shaped geometry. Physics of Plasmas, 2016, 23, 062520.	1.9	12
58	Comparison of electron cyclotron heating results in the helically symmetric experiment with and without quasi-symmetry. Plasma Physics and Controlled Fusion, 2003, 45, A133-A142.	2.1	11
59	Recent progress of NSTX lithium program and opportunities for magnetic fusion research. Fusion Engineering and Design, 2012, 87, 1770-1776.	1.9	11
60	Active Recycling Control Through Lithium Injection in EAST. IEEE Transactions on Plasma Science, 2018, 46, 1081-1085.	1.3	11
61	First Results of ELM Triggering With a Multichamber Lithium Granule Injector Into EAST Discharges. IEEE Transactions on Plasma Science, 2018, 46, 1076-1080.	1.3	11
62	Overview of physics results from NSTX. Nuclear Fusion, 2011, 51, 094011.	3.5	10
63	Pedestal Structure Model. Physical Review Letters, 2012, 108, 245003.	7.8	10
64	Fluid modeling of an ELMing H-mode and a RMP H-mode. Journal of Nuclear Materials, 2009, 390-391, 299-302.	2.7	9
65	Characterization of divertor footprints and the pedestal plasmas in the presence of appliedn= 3 fields for the attached and detached conditions in NSTX. Plasma Physics and Controlled Fusion, 2014, 56, 015005.	2.1	9
66	A Domestic Program for Liquid Metal PFC Research in Fusion. Journal of Fusion Energy, 2020, 39, 441-447.	1.2	9
67	ELM frequency enhancement and discharge modification through lithium granule injection into EAST H-modes. Nuclear Fusion, 2018, 58, 126021.	3.5	8
68	HÎ± detector system for the Helically Symmetric Experiment. Review of Scientific Instruments, 2004, 75, 2981-2984.	1.3	7
69	Feasibility of Power and Particle Handling in an ST-FNSF and the Effects of Divertor Geometry. IEEE Transactions on Plasma Science, 2014, 42, 573-579.	1.3	7
70	Anderson localization of ballooning modes, quantum chaos and the stability of compact quasiaxially symmetric stellarators. Physics of Plasmas, 2002, 9, 1990-1996.	1.9	5
71	Surface Erosion of Plasma-Facing Materials Using an Electrothermal Plasma Source and Ion Beam Micro-Trenches. Fusion Science and Technology, 2019, 75, 621-635.	1.1	5
72	Optimization of pumping performance in the EAST upgraded divertor. Plasma Physics and Controlled Fusion, 2019, 61, 065001.	2.1	5

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73	Integrated model predictions on the impact of substrate damage on gas dynamics during ITER burning-plasma operations. Nuclear Fusion, 2021, 61, 116051.	3.5	5
74	Edge turbulence measurements in electron-heated Helically Symmetric Experiment plasmas. Physics of Plasmas, 2009, 16, 082508.	1.9	4
75	Soft X-Ray Imaging Design and Analysis Methods on DIII-D. Plasma and Fusion Research, 2011, 6, 2402041-2402041.	0.7	2
76	Power and particle exhaust in an ST-FNSF. , 2013, , .		2
77	Investigation of island formation due to RMPs in DIII-D plasmas with the SIESTA resistive MHD equilibrium code. Journal of Plasma Physics, 2016, 82, .	2.1	2
78	Taming the Heat Flux Problem: Advanced Divertors Towards Fusion Power. Journal of Fusion Energy, 2016, 35, 27-30.	1.2	2
79	Quantification of the effect of uncertainty on impurity migration in PISCES-A simulated with GITR. Nuclear Fusion, 2022, 62, 056007.	3.5	2
80	Simulation of High-Harmonic Fast-Wave Heating on the National Spherical Tokamak Experiment. IEEE Transactions on Plasma Science, 2011, 39, 3020-3021.	1.3	0