

Nathan Howard

List of Publications by Year in descending order

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41
papers

1,036
citations

516710

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434195

31
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41
all docs

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docs citations

41
times ranked

904
citing authors

#	ARTICLE	IF	CITATIONS
1	Overview of the SPARC tokamak. Journal of Plasma Physics, 2020, 86, .	2.1	181
2	The role of zonal flows in the saturation of multi-scale gyrokinetic turbulence. Physics of Plasmas, 2016, 23, .	1.9	91
3	X-ray imaging crystal spectroscopy for use in plasma transport research. Review of Scientific Instruments, 2012, 83, 113504.	1.3	63
4	Multi-scale gyrokinetic simulations: Comparison with experiment and implications for predicting turbulence and transport. Physics of Plasmas, 2016, 23, .	1.9	59
5	Ohmic energy confinement saturation and core toroidal rotation reversal in Alcator C-Mod plasmas. Physics of Plasmas, 2012, 19, .	1.9	56
6	Vacuum ultraviolet impurity spectroscopy on the Alcator C-Mod tokamak. Review of Scientific Instruments, 2010, 81, 10D736.	1.3	52
7	Synergistic cross-scale coupling of turbulence in a tokamak plasma. Physics of Plasmas, 2014, 21, .	1.9	52
8	Predictions of core plasma performance for the SPARC tokamak. Journal of Plasma Physics, 2020, 86, .	2.1	45
9	Characterization of impurity confinement on Alcator C-Mod using a multi-pulse laser blow-off system. Review of Scientific Instruments, 2011, 82, 033512.	1.3	39
10	Explaining Cold-Pulse Dynamics in Tokamak Plasmas Using Local Turbulent Transport Models. Physical Review Letters, 2018, 120, 075001.	7.8	34
11	Multi-scale gyrokinetic simulation of Alcator C-Mod tokamak discharges. Physics of Plasmas, 2014, 21, .	1.9	29
12	Dependence of the impurity transport on the dominant turbulent regime in ELM-y H-mode discharges on the DIII-D tokamak. Physics of Plasmas, 2020, 27, .	1.9	22
13	Validation of nonlinear gyrokinetic simulations of L- and I-mode plasmas on Alcator C-Mod. Physics of Plasmas, 2017, 24, .	1.9	21
14	X-ray observations of Ca ¹⁹⁺ , Ca ¹⁸⁺ and satellites from Alcator C-Mod tokamak plasmas. Journal of Physics B: Atomic, Molecular and Optical Physics, 2014, 47, 075701.	1.5	20
15	Inference of experimental radial impurity transport on Alcator C-Mod: Bayesian parameter estimation and model selection. Nuclear Fusion, 2020, 60, 126014.	3.5	20
16	Fidelity of reduced and realistic electron mass ratio multi-scale gyrokinetic simulations of tokamak discharges. Plasma Physics and Controlled Fusion, 2015, 57, 065009.	2.1	18
17	Quantitative comparison of electron temperature fluctuations to nonlinear gyrokinetic simulations in C-Mod Ohmic L-mode discharges. Physics of Plasmas, 2016, 23, .	1.9	16
18	Projections of H-mode access and edge pedestal in the SPARC tokamak. Journal of Plasma Physics, 2020, 86, .	2.1	16

#	ARTICLE	IF	CITATIONS
19	Predict-first experiments and modeling of perturbative cold pulses in the DIII-D tokamak. <i>Physics of Plasmas</i> , 2019, 26, .	1.9	14
20	Criteria for the importance of multi-scale interactions in turbulent transport simulations. <i>Plasma Physics and Controlled Fusion</i> , 2019, 61, 085022.	2.1	14
21	Impurity transport, turbulence transitions and intrinsic rotation in Alcator C-Mod plasmas. <i>Plasma Physics and Controlled Fusion</i> , 2014, 56, 124004.	2.1	13
22	Measurement of electron temperature fluctuations using a tunable correlation electron cyclotron emission system on Alcator C-Mod. <i>Review of Scientific Instruments</i> , 2014, 85, 11D811.	1.3	13
23	VITALS: A Surrogate-Based Optimization Framework for the Accelerated Validation of Plasma Transport Codes. <i>Fusion Science and Technology</i> , 2018, 74, 65-76.	1.1	13
24	Multispecies density peaking in gyrokinetic turbulence simulations of low collisionality Alcator C-Mod plasmas. <i>Physics of Plasmas</i> , 2015, 22, .	1.9	12
25	Multi-scale gyrokinetic simulations of an Alcator C-Mod, ELM-y H-mode plasma. <i>Plasma Physics and Controlled Fusion</i> , 2018, 60, 014034.	2.1	12
26	Gyrokinetic simulation of turbulence and transport in the SPARC tokamak. <i>Physics of Plasmas</i> , 2021, 28, .	1.9	12
27	Study of the L-mode tokamak plasma with local and global nonlinear gyrokinetic \hat{f} particle-in-cell simulation. <i>Physics of Plasmas</i> , 2014, 21, .	1.9	11
28	X-ray observations of medium Z H- and He-like ions with satellites from C-Mod tokamak plasmas. <i>Journal of Physics B: Atomic, Molecular and Optical Physics</i> , 2015, 48, 144013.	1.5	11
29	Edge turbulence measurements in L-mode and I-mode at ASDEX Upgrade. <i>Physics of Plasmas</i> , 2022, 29, 052504.	1.9	10
30	Interpreting radial correlation Doppler reflectometry using gyrokinetic simulations. <i>Plasma Physics and Controlled Fusion</i> , 2022, 64, 055019.	2.1	9
31	Feasibility study for a correlation electron cyclotron emission turbulence diagnostic based on nonlinear gyrokinetic simulations. <i>Plasma Physics and Controlled Fusion</i> , 2011, 53, 115003.	2.1	7
32	Impurity transport in Alcator C-Mod in the presence of poloidal density variation induced by ion cyclotron resonance heating. <i>Plasma Physics and Controlled Fusion</i> , 2014, 56, 124005.	2.1	7
33	Verification of GENE and GYRO with L-mode and I-mode plasmas in Alcator C-Mod. <i>Physics of Plasmas</i> , 2018, 25, 042505.	1.9	7
34	Quantitative comparisons of electron-scale turbulence measurements in NSTX via synthetic diagnostics for high- k scattering. <i>Plasma Physics and Controlled Fusion</i> , 2020, 62, 075001.	2.1	7
35	Validation study of GENE on ASDEX Upgrade using perturbative thermal diffusivity measured with partial sawtooth heat pulses. <i>Nuclear Fusion</i> , 2018, 58, 126001.	3.5	6
36	Validation of gyrokinetic simulations of a National Spherical Torus eXperiment H-mode plasma and comparisons with a high- k scattering synthetic diagnostic. <i>Plasma Physics and Controlled Fusion</i> , 2019, 61, 115015.	2.1	6

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37	The role of ion and electron-scale turbulence in setting heat and particle transport in the DIII-D ITER baseline scenario. Nuclear Fusion, 2021, 61, 106002.	3.5	5
38	X-ray observations of $\text{K}\text{-}\eta$ emission from medium- Z He-like ions in C-Mod tokamak plasmas. Journal of Physics B: Atomic, Molecular and Optical Physics, 2018, 51, 035702.	1.5	4
39	Particle transport constraints via Bayesian spectral fitting of multiple atomic lines. Review of Scientific Instruments, 2021, 92, 053508.	1.3	4
40	Validation of gyrokinetic simulations in NSTX and projections for high- k turbulence measurements in NSTX-U. Physics of Plasmas, 2020, 27, 122505.	1.9	4
41	Feasibility study for a high- k temperature fluctuation diagnostic based on soft x-ray imaging. Review of Scientific Instruments, 2021, 92, 053537.	1.3	1