

# James Wilson

## List of Publications by Year in descending order

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125  
papers

2,104  
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172207

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docs citations

127  
times ranked

1185  
citing authors

#	ARTICLE	IF	CITATIONS
1	Potential Impacts of Liquid-Metal Plasma-Facing Components on Heating and Current Drive Actuators for a Fusion Nuclear Science Facility. Fusion Science and Technology, 2020, 76, 53-61.	0.6	0
2	Phase coherence of parametric-decay modes during high-harmonic fast-wave heating in the National Spherical Torus Experiment. Physics of Plasmas, 2016, 23, 062519.	0.7	0
3	Resonance in fast-wave amplitude in the periphery of cylindrical plasmas and application to edge losses of wave heating power in tokamaks. Physics of Plasmas, 2016, 23, 070702.	0.7	6
4	Non-resonant destabilization of (1/1) internal kink mode by suprathreshold electron pressure. Physics of Plasmas, 2015, 22, 050701.	0.7	9
5	Progress on ion cyclotron range of frequencies heating physics and technology in support of the International Tokamak Experimental Reactor. Physics of Plasmas, 2015, 22, .	0.7	25
6	The contribution of radio-frequency rectification to field-aligned losses of high-harmonic fast wave power to the divertor in the National Spherical Torus eXperiment. Physics of Plasmas, 2015, 22, 042506.	0.7	14
7	20 years of research on the Alcator C-Mod tokamak. Physics of Plasmas, 2014, 21, .	0.7	88
8	SPIRAL field mapping on NSTX for comparison to divertor RF heat deposition. , 2014, , .		2
9	Towards identifying the mechanisms underlying field-aligned edge-loss of HHFW power on NSTX. , 2014, , .		3
10	Effects of thermal expansion of the crystal lattice on x-ray crystal spectrometers used for fusion research. Plasma Physics and Controlled Fusion, 2013, 55, 125011.	0.9	7
11	The effects of the scattering by edge plasma density fluctuations on lower hybrid wave propagation. Plasma Physics and Controlled Fusion, 2013, 55, 074003.	0.9	39
12	Formation and Stability of Impurity "Snakes" in Tokamak Plasmas. Physical Review Letters, 2013, 110, 065006.	2.9	43
13	On the formation and stability of long-lived impurity-ion snakes in Alcator C-Mod. Nuclear Fusion, 2013, 53, 043019.	1.6	23
14	Overview of experimental results and code validation activities at Alcator C-Mod. Nuclear Fusion, 2013, 53, 104004.	1.6	13
15	Mission and Readiness Assessment for Fusion Nuclear Facilities. Fusion Science and Technology, 2013, 64, 463-472.	0.6	2
16	High non-inductive fraction H-mode discharges generated by high-harmonic fast wave heating and current drive in the National Spherical Torus Experiment. Physics of Plasmas, 2012, 19, .	0.7	22
17	Paraxial Wentzel-Kramers-Brillouin method applied to the lower hybrid wave propagation. Physics of Plasmas, 2012, 19, 082510.	0.7	19
18	Current ramp-up with lower hybrid current drive in EAST. Physics of Plasmas, 2012, 19, 122507.	0.7	10

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19	High-Harmonic Fast-Wave Power Flow along Magnetic Field Lines in the Scrape-Off Layer of NSTX. Physical Review Letters, 2012, 109, 045001.	2.9	55
20	Lower hybrid current drive at high density in the multi-pass regime. Physics of Plasmas, 2012, 19, 062505.	0.7	31
21	Full wave effects on the lower hybrid wave spectrum and driven current profile in tokamak plasmas. Physics of Plasmas, 2011, 18, 080705.	0.7	36
22	Lower Hybrid Wave Induced SOL Emissivity Variation at High Density on the Alcator C-Mod Tokamak. AIP Conference Proceedings, 2011, , .	0.3	2
23	Recent Results on Coupling Fast Waves to High Performance Plasmas on DIII-D. AIP Conference Proceedings, 2011, , .	0.3	9
24	The Effect of ELMs on HHFW Heating of NBI Generated H-modes. AIP Conference Proceedings, 2011, , .	0.3	1
25	Slow Wave Excitation in the ICRF and HHFW Regimes. AIP Conference Proceedings, 2011, , .	0.3	0
26	New IQ demodulator development in diagnostic equipment for fusion energy research. , 2011, , .		0
27	Design, and initial experiment results of a novel LH launcher on Alcator C-Mod. Nuclear Fusion, 2011, 51, 103024.	1.6	30
28	Investigation of lower hybrid physics through power modulation experiments on Alcator C-Mod. Physics of Plasmas, 2011, 18, .	0.7	27
29	Advances in high-harmonic fast wave physics in the National Spherical Torus Experiment. Physics of Plasmas, 2010, 17, 056114.	0.7	34
30	Absorption of lower hybrid waves in the scrape off layer of a diverted tokamak. Physics of Plasmas, 2010, 17, 082508.	0.7	117
31	10.1063/1.3371956.1. , 2010, , .		0
32	Integrated numerical design of an innovative Lower Hybrid launcher for Alcator C-Mod. , 2009, , .		3
33	Recent Fast Wave Coupling and Heating Studies on NSTX, with Possible Implications for ITER. , 2009, , .		14
34	Plasma wave simulation based on versatile FEM solver on Alcator C-mod. AIP Conference Proceedings, 2009, , .	0.3	4
35	Recent Improvements in Fast Wave Heating in NSTX. , 2009, , .		4
36	Modification of Current Profile, Toroidal Rotation and Pedestal by Lower Hybrid Waves in Alcator C-Mod. AIP Conference Proceedings, 2009, , .	0.3	4

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37	Control of Internal Profiles via LHCD on Alcator C-Mod. , 2009, , .		0
38	Measurement of Fast Electron Transport by Lower Hybrid Modulation Experiments in Alcator C-Mod. , 2009, , .		2
39	Observations of Lower Hybrid Wave Absorption in the Scrape Off Layer of a Diverted Tokamak. AIP Conference Proceedings, 2009, , .	0.3	7
40	Observation of Self-Generated Flows in Tokamak Plasmas with Lower-Hybrid-Driven Current. Physical Review Letters, 2009, 102, 035002.	2.9	54
41	Simulation results for new NSTX HHFW antenna straps design by using microwave studio. , 2009, , .		0
42	High harmonic fast wave heating efficiency enhancement and current drive at longer wavelength on the National Spherical Torus Experiment. Physics of Plasmas, 2008, 15, .	0.7	70
43	Lower hybrid current drive experiments on Alcator C-Mod: Comparison with theory and simulation. Physics of Plasmas, 2008, 15, .	0.7	50
44	ICRF Heating with $I_{\text{c}}[sub\text{ci}]$ in Alcator C-Mod. AIP Conference Proceedings, 2007, , .	0.3	0
45	Lower Hybrid Current Drive Experiments in Alcator C-Mod. AIP Conference Proceedings, 2007, , .	0.3	1
46	Stochastic RF Heating of Thermal Ions. AIP Conference Proceedings, 2007, , .	0.3	0
47	Lower Hybrid Coupling Experiments on Alcator C-Mod. AIP Conference Proceedings, 2007, , .	0.3	4
48	Wave-Particle Studies in the Ion Cyclotron and Lower Hybrid Ranges of Frequencies in Alcator C-Mod. Fusion Science and Technology, 2007, 51, 401-436.	0.6	72
49	Fast electron temperature measurements using a $\hat{\epsilon}$ multicolor $\hat{\epsilon}$ optical soft x-ray array. Journal of Applied Physics, 2007, 102, 073304.	1.1	25
50	Effect of plasma shaping on performance in the National Spherical Torus Experiment. Physics of Plasmas, 2006, 13, 056122.	0.7	33
51	Reflectometer sensing of rf waves in front of the high harmonic fast wave antenna on NSTX. Review of Scientific Instruments, 2006, 77, 10E933.	0.6	19
52	Parametric Decay During HHFW on NSTX. AIP Conference Proceedings, 2005, , .	0.3	22
53	Electron Energy Confinement For HHFW Heating and Current Drive Phasing on NSTX. AIP Conference Proceedings, 2005, , .	0.3	6
54	Advanced ST plasma scenario simulations for NSTX. Nuclear Fusion, 2005, 45, 814-824.	1.6	14

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55	Edge ion heating by launched high harmonic fast waves in the National Spherical Torus Experiment. Physics of Plasmas, 2005, 12, 056108.	0.7	27
56	Investigation of performance limiting phenomena in a variable phase ICRF antenna in Alcator C-Mod. Plasma Physics and Controlled Fusion, 2004, 46, 1479-1491.	0.9	33
57	Exploration of high harmonic fast wave heating on the National Spherical Torus Experiment. Physics of Plasmas, 2003, 10, 1733-1738.	0.7	31
58	The ITER-like ICRH Launcher Project For JET. AIP Conference Proceedings, 2003, , .	0.3	3
59	Loading and Asymmetry Measurements and Modeling for the National Spherical Torus Experiment Ion Cyclotron Range of Frequencies System. Fusion Science and Technology, 2003, 43, 503-513.	0.6	11
60	Profile modifications resulting from early high-harmonic fast wave heating in NSTX. AIP Conference Proceedings, 2001, , .	0.3	0
61	Recent ICRF results on Alcator C-Mod. AIP Conference Proceedings, 2001, , .	0.3	2
62	Mode conversion heating scenarios for the National Compact Stellarator experiment. AIP Conference Proceedings, 2001, , .	0.3	0
63	High-Harmonic Fast-Wave heating in NSTX. AIP Conference Proceedings, 2001, , .	0.3	3
64	Modeling the ICH antenna operation on Alcator C-Mod. AIP Conference Proceedings, 2001, , .	0.3	0
65	Analysis of high-harmonic fast wave propagation and absorption on NSTX. AIP Conference Proceedings, 2001, , .	0.3	3
66	Initial physics results from the National Spherical Torus Experiment. Physics of Plasmas, 2001, 8, 1977-1987.	0.7	46
67	Nature of Monster Sawteeth and Their Relationship to Alfvén Instabilities in Tokamaks. Physical Review Letters, 2000, 84, 1212-1215.	2.9	31
68	Role of Alfvén instabilities in energetic ion transport. , 1999, , .		0
69	High harmonic fast wave heating and current drive on NSTX-system and experimental plan. , 1999, , .		2
70	RF experiments on spherical torus plasmas. , 1999, , .		0
71	Observation of modes at frequencies near the second Alfvén gap in TFTR. , 1999, , .		0
72	ICRF heating in Alcator C-Mod: Present status and future prospects. , 1999, , .		0

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73	Role of Alfvén instabilities in energetic ion transport. Physics of Plasmas, 1999, 6, 1880-1884.	0.7	33
74	Direct Observation of Ion-Bernstein-Wave-Induced Poloidal Flow in TFTR. Physical Review Letters, 1999, 82, 331-334.	2.9	66
75	Fusion plasma experiments on TFTR: A 20 year retrospective. Physics of Plasmas, 1998, 5, 1577-1589.	0.7	91
76	Deuterium-tritium plasmas in novel regimes in the Tokamak Fusion Test Reactor. Physics of Plasmas, 1997, 4, 1714-1724.	0.7	27
77	Scaling of Confinement with Isotopic Content in Deuterium and Tritium Plasmas. Physical Review Letters, 1997, 79, 1050-1053.	2.9	3
78	Measurements of edge density profile modifications during IBW on TFTR. , 1997, , .		8
79	Mode conversion heating and current drive in TFTR. , 1997, , .		4
80	Initial results from a folded waveguide ICRF antenna development project. , 1997, , .		0
81	Role of plasma edge in the direct launch Ion Bernstein Wave experiment in TFTR. , 1997, , .		1
82	Investigation of RF absorption by fast ions and high temperature plasmas using the 'METS95' wave analysis tool. , 1997, , .		7
83	Heating and current drive on NSTX. , 1997, , .		1
84	Correlation between excitation of Alfvén modes and degradation of ICRF heating efficiency in TFTR. , 1997, , .		0
85	Alpha particle losses from Tokamak Fusion Test Reactor deuterium-tritium plasmas. Physics of Plasmas, 1996, 3, 1875-1880.	0.7	25
86	Confinement analysis in low-confinement mode of hydrogen isotope experiments on the Tokamak Fusion Test Reactor. Physics of Plasmas, 1996, 3, 4521-4535.	0.7	12
87	A folded waveguide ICRF antenna for PBX-M and TFTR. AIP Conference Proceedings, 1996, , .	0.3	4
88	Performance of ICRF-heated D-T plasmas fueled by neutral beam injection in TFTR. , 1996, , .		1
89	Evidence of coupling between toroidal Alfvén eigenmodes and kinetic Alfvén waves. , 1996, , .		0
90	TRANSP modeling of minority ion sawtooth mixing in ICRF+NBI heated discharges in TFTR. , 1996, , .		0

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91	ICRF in D-T plasmas in TFTR. , 1996, , .		4
92	Computational model for fast wave current drive. , 1996, , .		1
93	Majority ion heating near the ion-ion hybrid layer in tokamaks. AIP Conference Proceedings, 1996, , .	0.3	0
94	Generalized theory of ICRF convection and modeling of observed density profile modifications on TFTR. , 1996, , .		1
95	Engineering Design of the National Spherical Tokamak Experiment. Fusion Science and Technology, 1996, 30, 1337-1341.	0.6	29
96	Ion cyclotron range of frequency experiments in the Tokamak Fusion Test Reactor with fast waves and mode converted ion Bernstein waves. Physics of Plasmas, 1996, 3, 2006-2012.	0.7	26
97	Mode Conversion Heating and Current Drive Experiments in TFTR. Physical Review Letters, 1996, 76, 764-767.	2.9	45
98	Deuterium-tritium experiments on TFTR. AIP Conference Proceedings, 1995, , .	0.3	0
99	Ion Cyclotron Range of Frequency Heating of a Deuterium-Tritium Plasma via the Second-Harmonic Tritium Cyclotron Resonance. Physical Review Letters, 1995, 75, 842-845.	2.9	37
100	Review of deuteriumâ€“tritium results from the Tokamak Fusion Test Reactor. Physics of Plasmas, 1995, 2, 2176-2188.	0.7	89
101	Toroidal AlfvÃ©n eigenmodeâ€“induced ripple trapping. Physics of Plasmas, 1995, 2, 2871-2873.	0.7	87
102	DT simulation of ICRF heated supershots in TFTR using TRANSP. AIP Conference Proceedings, 1994, , .	0.3	0
103	Modeling of high-power ICRF heating experiments on TFTR. AIP Conference Proceedings, 1994, , .	0.3	0
104	Microwave reflectometry for ICRF coupling studies on TFTR. AIP Conference Proceedings, 1994, , .	0.3	1
105	Fast wave direct electron heating in TFTR. AIP Conference Proceedings, 1994, , .	0.3	1
106	Regimes for electron heating via mode conversion in TFTR. AIP Conference Proceedings, 1994, , .	0.3	0
107	Preparations for deuteriumâ€“tritium experiments on the Tokamak Fusion Test Reactor*. Physics of Plasmas, 1994, 1, 1560-1567.	0.7	7
108	Anomalous losses of deuteriumâ€“deuterium fusion products in the Tokamak Fusion Test Reactor*. Physics of Plasmas, 1994, 1, 1469-1478.	0.7	29

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109	Ion cyclotron range of frequencies stabilization of sawteeth on Tokamak Fusion Test Reactor. Physics of Fluids B, 1992, 4, 2155-2164.	1.7	41
110	Status and Plans for TFTR. Fusion Science and Technology, 1992, 21, 1324-1331.	0.6	23
111	High- $Q$ plasmas in the TFTR tokamak. Physics of Fluids B, 1991, 3, 2308-2314.	1.7	17
112	Experiments utilizing ion cyclotron range of frequencies heating on the TFTR tokamak. Physics of Fluids B, 1991, 3, 2270-2276.	1.7	9
113	High- $\beta$ operation and magnetohydrodynamic activity on the TFTR tokamak. Physics of Fluids B, 1990, 2, 1287-1290.	1.7	35
114	Correlations of heat and momentum transport in the TFTR tokamak. Physics of Fluids B, 1990, 2, 1300-1305.	1.7	47
115	ICRF heating on TFTR with the ORNL antenna. AIP Conference Proceedings, 1989, , .	0.3	0
116	Design of the TFTR rf probe array (abstract). Review of Scientific Instruments, 1988, 59, 1890-1890.	0.6	0
117	ICRF coupling with a ridged waveguide on PLT. AIP Conference Proceedings, 1987, , .	0.3	0
118	Visible spectroscopy on RF heated discharges in the Princeton large Torus tokamak. AIP Conference Proceedings, 1987, , .	0.3	0
119	Suppression of large amplitude driven sawteeth by lower hybrid current drive. AIP Conference Proceedings, 1987, , .	0.3	0
120	TFTR ICRF antenna design. AIP Conference Proceedings, 1987, , .	0.3	4
121	Comparison of bounce-averaged quasilinear theory with charge exchange measurements during minority fundamental and majority second harmonic ICRF heating in PLT. AIP Conference Proceedings, 1985, , .	0.3	0
122	ICRF heating experiments on the PLT tokamak. AIP Conference Proceedings, 1985, , .	0.3	2
123	The MICADO-A Multi-ion species confinement analysis code for ICRF and IBW heating experiments. AIP Conference Proceedings, 1985, , .	0.3	0
124	The effects of ICRF heating on plasma edge conditions in PLT. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 1985, 3, 1211-1217.	0.9	19
125	Improvement for lower hybrid coupler with step transformers and power dividers. , 0, , .		0