

John C Wright

List of Publications by Year in descending order

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124
papers

2,370
citations

186265

28
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233421

45
g-index

124
all docs

124
docs citations

124
times ranked

1663
citing authors

#	ARTICLE	IF	CITATIONS
1	Overview of the SPARC tokamak. Journal of Plasma Physics, 2020, 86, .	2.1	181
2	Overview of the JET results in support to ITER. Nuclear Fusion, 2017, 57, 102001.	3.5	150
3	Absorption of lower hybrid waves in the scrape off layer of a diverted tokamak. Physics of Plasmas, 2010, 17, 082508.	1.9	117
4	20 years of research on the Alcator C-Mod tokamak. Physics of Plasmas, 2014, 21, .	1.9	88
5	Full wave simulations of fast wave mode conversion and lower hybrid wave propagation in tokamaks. Physics of Plasmas, 2004, 11, 2473-2479.	1.9	77
6	An assessment of full wave effects on the propagation and absorption of lower hybrid waves. Physics of Plasmas, 2009, 16, .	1.9	73
7	Efficient generation of energetic ions in multi-ion plasmas by radio-frequency heating. Nature Physics, 2017, 13, 973-978.	16.7	73
8	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.	1.1	72
9	Overview of the JET results with the ITER-like wall. Nuclear Fusion, 2013, 53, 104002.	3.5	70
10	Sheared Poloidal Flow Driven by Mode Conversion in Tokamak Plasmas. Physical Review Letters, 2003, 90, 195001.	7.8	64
11	Plasma wave simulation based on a versatile finite element method solver. Physics of Plasmas, 2010, 17, .	1.9	60
12	Overview of physics results from the conclusive operation of the National Spherical Torus Experiment. Nuclear Fusion, 2013, 53, 104007.	3.5	53
13	Lower hybrid current drive experiments on Alcator C-Mod: Comparison with theory and simulation. Physics of Plasmas, 2008, 15, .	1.9	50
14	Predictions of core plasma performance for the SPARC tokamak. Journal of Plasma Physics, 2020, 86, .	2.1	45
15	Physics and applications of three-ion ICRF scenarios for fusion research. Physics of Plasmas, 2021, 28, .	1.9	42
16	Overview of results from the National Spherical Torus Experiment (NSTX). Nuclear Fusion, 2009, 49, 104016.	3.5	41
17	Observation of ion cyclotron range of frequencies mode conversion plasma flow drive on Alcator C-Mod. Physics of Plasmas, 2009, 16, 056102.	1.9	40
18	Simulation of high-power electromagnetic wave heating in the ITER burning plasma. Physics of Plasmas, 2008, 15, 072513.	1.9	39

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19	The effects of the scattering by edge plasma density fluctuations on lower hybrid wave propagation. Plasma Physics and Controlled Fusion, 2013, 55, 074003.	2.1	39
20	Self-consistent full-wave and Fokker-Planck calculations for ion cyclotron heating in non-Maxwellian plasmas. Physics of Plasmas, 2006, 13, 056101.	1.9	38
21	Lower hybrid heating and current drive on the Alcator C-Mod tokamak. Nuclear Fusion, 2009, 49, 115015.	3.5	38
22	Global-wave solutions with self-consistent velocity distributions in ion cyclotron heated plasmas. Nuclear Fusion, 2006, 46, S397-S408.	3.5	34
23	Impact of ICRF on the scrape-off layer and on plasma wall interactions: From present experiments to fusion reactor. Nuclear Materials and Energy, 2019, 18, 131-140.	1.3	34
24	A finite element procedure for multiscale wave equations with application to plasma waves. Computers and Structures, 2010, 88, 87-94.	4.4	33
25	Lower hybrid current drive at high density in the multi-pass regime. Physics of Plasmas, 2012, 19, 062505.	1.9	31
26	Ion cyclotron range of frequency mode conversion physics in Alcator C-Mod: Experimental measurements and modeling. Physics of Plasmas, 2005, 12, 056104.	1.9	29
27	Observation and modelling of ion cyclotron range of frequencies waves in the mode conversion region of Alcator C-Mod. Plasma Physics and Controlled Fusion, 2005, 47, 1207-1228.	2.1	29
28	Overview of the Alcator C-Mod Research Program. Nuclear Fusion, 2009, 49, 104014.	3.5	29
29	RF wave simulation for cold edge plasmas using the MFEM library. EPJ Web of Conferences, 2017, 157, 03048.	0.3	29
30	Overview of the Alcator C-Mod program. Nuclear Fusion, 2005, 45, S109-S117.	3.5	28
31	Ion cyclotron range of frequencies mode conversion electron heating in deuterium-hydrogen plasmas in the Alcator C-Mod tokamak. Plasma Physics and Controlled Fusion, 2003, 45, 1013-1026.	2.1	27
32	Investigation of lower hybrid physics through power modulation experiments on Alcator C-Mod. Physics of Plasmas, 2011, 18, .	1.9	27
33	Physics basis for the ICRF system of the SPARC tokamak. Journal of Plasma Physics, 2020, 86, .	2.1	27
34	Development of a plasma current ramp-up technique for spherical tokamaks by the lower hybrid wave. Nuclear Fusion, 2011, 51, 063017.	3.5	25
35	Benchmarking ICRF full-wave solvers for ITER. Nuclear Fusion, 2012, 52, 023023.	3.5	25
36	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, .	1.9	22

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37	An overview of recent physics results from NSTX. Nuclear Fusion, 2015, 55, 104002.	3.5	21
38	Modelling of the EAST lower-hybrid current drive experiment using GENRAY/CQL3D and TORLH/CQL3D. Plasma Physics and Controlled Fusion, 2014, 56, 125003.	2.1	20
39	Paraxial Wentzel-Kramers-Brillouin method applied to the lower hybrid wave propagation. Physics of Plasmas, 2012, 19, 082510.	1.9	19
40	The lower hybrid wave cutoff: A case study in eikonal methods. Physics of Plasmas, 2010, 17, 052107.	1.9	18
41	Investigation of ion cyclotron range of frequencies mode conversion at the ion-ion hybrid layer in Alcator C-Mod. Physics of Plasmas, 2004, 11, 2466-2472.	1.9	17
42	Experimental and numerical characterization of ion-cyclotron heated protons on the Alcator C-Mod tokamak. Plasma Physics and Controlled Fusion, 2007, 49, 873-904.	2.1	17
43	Fast-ion physics in SPARC. Journal of Plasma Physics, 2020, 86, .	2.1	17
44	Sawtooth period changes with mode conversion current drive on Alcator C-Mod. Plasma Physics and Controlled Fusion, 2007, 49, 219-235.	2.1	15
45	ICRF heating schemes for the ITER non-active phase. EPJ Web of Conferences, 2017, 157, 03046.	0.3	15
46	Challenges in Self-Consistent Full-Wave Simulations of Lower Hybrid Waves. IEEE Transactions on Plasma Science, 2010, 38, 2136-2143.	1.3	14
47	Measurements of ion cyclotron range of frequencies mode converted wave intensity with phase contrast imaging in Alcator C-Mod and comparison with full-wave simulations. Physics of Plasmas, 2012, 19, .	1.9	14
48	Alcator C-Mod: research in support of ITER and steps beyond. Nuclear Fusion, 2015, 55, 104020.	3.5	14
49	Overview of experimental results and code validation activities at Alcator C-Mod. Nuclear Fusion, 2013, 53, 104004.	3.5	13
50	VITALS: A Surrogate-Based Optimization Framework for the Accelerated Validation of Plasma Transport Codes. Fusion Science and Technology, 2018, 74, 65-76.	1.1	13
51	Fast wave heating in the NSTX-Upgrade device. , 2014, , .		12
52	Recent advances in physics and technology of ion cyclotron resonance heating in view of future fusion reactors. Plasma Physics and Controlled Fusion, 2017, 59, 054002.	2.1	12
53	Recent progress in modeling ICRF-edge plasma interactions with application to ASDEX Upgrade. Nuclear Fusion, 0, , .	3.5	11
54	Overview of physics results from NSTX. Nuclear Fusion, 2011, 51, 094011.	3.5	10

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55	A direct calculation of current drive by fast magnetosonic waves in toroidal geometry. Nuclear Fusion, 1997, 37, 1349-1353.	3.5	9
56	Ultrahigh resolution simulations of mode converted ion cyclotron waves and lower hybrid waves. Computer Physics Communications, 2004, 164, 330-335.	7.5	9
57	Overview of the Alcator C-MOD research programme. Nuclear Fusion, 2007, 47, S598-S607.	3.5	9
58	Automated metadata, provenance cataloging and navigable interfaces: Ensuring the usefulness of extreme-scale data. Fusion Engineering and Design, 2014, 89, 745-749.	1.9	9
59	Quasilinear diffusion coefficients in a finite Larmor radius expansion for ion cyclotron heated plasmas. Physics of Plasmas, 2017, 24, .	1.9	9
60	Numerical model of the radio-frequency magnetic presheath including wall impurities. Physics of Plasmas, 2019, 26, .	1.9	9
61	Simulation of fast Alfvén wave interaction with beam ions over a range of cyclotron harmonics in DIII-D tokamak. Nuclear Fusion, 2006, 46, S409-S415.	3.5	8
62	Time dependent evolution of RF-generated non-thermal particle distributions in fusion plasmas. Plasma Physics and Controlled Fusion, 2014, 56, 045007.	2.1	8
63	3D full wave fast wave modeling with realistic antenna geometry and SOL plasma. AIP Conference Proceedings, 2020, , .	0.4	8
64	Evolution of nonthermal particle distributions in radio frequency heating of fusion plasmas. Journal of Physics: Conference Series, 2007, 78, 012006.	0.4	7
65	Observations of Lower Hybrid Wave Absorption in the Scrape Off Layer of a Diverted Tokamak. AIP Conference Proceedings, 2009, , .	0.4	7
66	The effects of finite electron temperature and diffraction on lower hybrid wave propagation. Plasma Physics and Controlled Fusion, 2014, 56, 035006.	2.1	7
67	Validation of full-wave simulations for mode conversion of waves in the ion cyclotron range of frequencies with phase contrast imaging in Alcator C-Mod. Physics of Plasmas, 2015, 22, 082502.	1.9	7
68	Full-wave Electromagnetic Field Simulations of Lower Hybrid Waves in Tokamaks. AIP Conference Proceedings, 2005, , .	0.4	6
69	A block-tridiagonal solver with two-level parallelization for finite element-spectral codes. Computer Physics Communications, 2014, 185, 2598-2608.	7.5	6
70	Measurement and modeling of the radio frequency sheath impedance in a large magnetized plasma. Physics of Plasmas, 2020, 27, 072506.	1.9	6
71	Antenna to Core: A New Approach to RF Modelling. EPJ Web of Conferences, 2017, 157, 02011.	0.3	6
72	Full-wave Simulations of LH wave propagation in toroidal plasma with non-Maxwellian electron distributions. AIP Conference Proceedings, 2007, , .	0.4	5

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73	Simulation study of proposed off-midplane lower hybrid current drive in KSTAR. Plasma Physics and Controlled Fusion, 2016, 58, 075003.	2.1	5
74	Comparison of the Monte Carlo ion cyclotron heating model with the full-wave linear absorption model. Physics of Plasmas, 2009, 16, 052513.	1.9	4
75	Full wave simulations of lower hybrid wave propagation in tokamaks. , 2009, , .		4
76	HHFW Heating and Current Drive Studies of NSTX H-Mode Plasmas. AIP Conference Proceedings, 2011, , .	0.4	4
77	Investigation of the validity of quasilinear theory for electron Landau damping in a tokamak using a broad-band wave effect. Physics of Plasmas, 2011, 18, 012503.	1.9	4
78	The MPO system for automatic workflow documentation. Fusion Engineering and Design, 2016, 112, 1007-1013.	1.9	4
79	A positive-definite form of bounce-averaged quasilinear velocity diffusion for the parallel inhomogeneity in a tokamak. Plasma Physics and Controlled Fusion, 2018, 60, 025007.	2.1	4
80	Instruments, 1995, 66, 1180-1183.	1.3	3
81	Electromagnetic mode conversion: understanding waves that suddenly change their nature. Journal of Physics: Conference Series, 2005, 16, 35-39.	0.4	3
82	Physics Research in the SciDAC Center for Wave-Plasma Interactions. AIP Conference Proceedings, 2007, , .	0.4	3
83	Integrated physics advances in simulation of wave interactions with extended MHD phenomena. Journal of Physics: Conference Series, 2007, 78, 012003.	0.4	3
84	ICRF Mode Conversion Studies with Phase Contrast Imaging and Comparisons with Full-Wave Simulations. , 2011, , .		3
85	Effect of the scrape-off layer in AORSA full wave simulations of fast wave minority, mid/high harmonic, and helicon heating regimes. AIP Conference Proceedings, 2015, , .	0.4	3
86	Self-Consistent Full-Wave / Fokker-Planck Calculations for Ion Cyclotron Heating in Non-Maxwellian Plasmas. AIP Conference Proceedings, 2005, , .	0.4	2
87	Numerical Studies of poloidal field effects on ICRF mode conversion. AIP Conference Proceedings, 2005, , .	0.4	2
88	Velocity-Space Diffusion Coefficients Due to Full-Wave ICRF Fields in Toroidal Geometry. AIP Conference Proceedings, 2005, , .	0.4	2
89	Simulation of wave interactions with MHD. Journal of Physics: Conference Series, 2008, 125, 012039.	0.4	2
90	Measurement of Fast Electron Transport by Lower Hybrid Modulation Experiments in Alcator C-Mod. , 2009, , .		2

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91	ICRF Mode Conversion Flow Drive on Alcator C-Mod and Projections to Other Tokamaks. , 2009, , .		2
92	Comparison of ICRF-Induced Ion Diffusion Coefficients Calculated with the DC and AORSA Codes. , 2009, , .		2
93	Advances in simulation of wave interactions with extended MHD phenomena. Journal of Physics: Conference Series, 2009, 180, 012054.	0.4	2
94	Estimation of the ion toroidal rotation source due to momentum transfer from Lower Hybrid waves in Alcator C-Mod. AIP Conference Proceedings, 2011, , .	0.4	2
95	Progress on Quantitative Modeling of rf Sheaths. , 2011, , .		2
96	The MPO API: A tool for recording scientific workflows. Fusion Engineering and Design, 2014, 89, 754-757.	1.9	2
97	Coupling an ICRF core spectral solver to an edge FEM code. AIP Conference Proceedings, 2015, , .	0.4	2
98	ICRF mode conversion in three-ion species heating experiment and in flow drive experiment on the Alcator C-Mod tokamak. EPJ Web of Conferences, 2017, 157, 03030.	0.3	2
99	Ion cyclotron range of frequency heating for SPARC. AIP Conference Proceedings, 2020, , .	0.4	2
100	Study of Ion Cyclotron Range of Frequencies Mode Conversion in the Alcator C-Mod Tokamak. AIP Conference Proceedings, 2003, , .	0.4	1
101	Ultrahigh Resolution Simulations of Mode Converted ICRF and LH Waves with a Spectral Full Wave Code. AIP Conference Proceedings, 2003, , .	0.4	1
102	Monte-Carlo Orbit/Full Wave Simulation of Fast Alfvén Wave (FW) Damping on Resonant Ions in Tokamaks. AIP Conference Proceedings, 2005, , .	0.4	1
103	Lower Hybrid Current Drive Experiments in Alcator C-Mod. AIP Conference Proceedings, 2007, , .	0.4	1
104	Reconstructing lower hybrid fields from ray tracing data. , 2009, , .		1
105	Plans for Lower Hybrid Current Drive Experiment using a Dielectric Loaded Waveguide Array Antenna in TST-2. AIP Conference Proceedings, 2011, , .	0.4	1
106	A new quasilinear formulation for ICRF plasmas in a toroidal geometry. EPJ Web of Conferences, 2017, 157, 03028.	0.3	1
107	MPO: A System to Document and Analyze Distributed Heterogeneous Workflows. Lecture Notes in Computer Science, 2016, , 166-170.	1.3	1
108	Argon Pumpout by ICRF Waves in C-Mod L- and I-mode Plasmas. Nuclear Fusion, 0, , .	3.5	1

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109	Scientific Instruments, 1995, 66, 590-590.	1.3	0
110	Full-wave Electromagnetic Field Simulations of Lower Hybrid Waves in Tokamaks. AIP Conference Proceedings, 2007, , .	0.4	0
111	LHCD Scenarios for Spherical Tokamak Plasmas. AIP Conference Proceedings, 2007, , .	0.4	0
112	Quasilinear Evolution of Multiple Non-thermal Ion Distributions in ICRF Heating. AIP Conference Proceedings, 2007, , .	0.4	0
113	Mode Conversion Current Drive studies on Alcator C-Mod. AIP Conference Proceedings, 2007, , .	0.4	0
114	ICRF Heating with i_{ci} in Alcator C-Mod. AIP Conference Proceedings, 2007, , .	0.4	0
115	Stochastic RF Heating of Thermal Ions. AIP Conference Proceedings, 2007, , .	0.4	0
116	Control of Internal Profiles via LHCD on Alcator C-Mod. , 2009, , .		0
117	Full-Wave Studies of Lower Hybrid Wave Propagation in Tokamaks. , 2009, , .		0
118	Measurements of Mode Converted Ion Cyclotron Wave with Phase Contrast Imaging in Alcator C-Mod and Comparisons with Synthetic PCI Simulations in TORIC. , 2009, , .		0
119	Lower hybrid current drive in a high density diverted tokamak. AIP Conference Proceedings, 2011, , .	0.4	0
120	Lower hybrid wave propagation in tokamaks in weak and strong absorption regimes. , 2011, , .		0
121	Slow Wave Excitation in the ICRF and HHFW Regimes. AIP Conference Proceedings, 2011, , .	0.4	0
122	Interference effects on quasilinear diffusion of lower hybrid waves. , 2014, , .		0
123	Measurement and simulation of ICRF wave intensity with a recalibrated phase contrast imaging diagnostic on Alcator C-Mod. AIP Conference Proceedings, 2015, , .	0.4	0
124	A general purpose tool-set for representing data relationships: Converting data into knowledge. , 2016, , .		0