

Ken McClements

List of Publications by Year in descending order

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138
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138
all docs

138
docs citations

138
times ranked

2350
citing authors

#	ARTICLE	IF	CITATIONS
1	Overview of the JET results in support to ITER. Nuclear Fusion, 2017, 57, 102001.	3.5	150
2	Ion cyclotron emission measurements during JET deuterium-tritium experiments. Nuclear Fusion, 1993, 33, 1365-1387.	3.5	129
3	The excitation of obliquely propagating fast Alfvén waves at fusion ion cyclotron harmonics. Physics of Plasmas, 1994, 1, 1918-1928.	1.9	96
4	Propagating EUV disturbances in the Solar corona: Two-wavelength observations. Astronomy and Astrophysics, 2003, 404, L1-L4.	5.1	89
5	Surfatron and Stochastic Acceleration of Electrons at Supernova Remnant Shocks. Physical Review Letters, 2001, 87, 255002.	7.8	80
6	Solar Flares as Cascades of Reconnecting Magnetic Loops. Physical Review Letters, 2003, 90, 131101.	7.8	76
7	Collisionless shock and supernova remnant simulations on VULCAN. Physics of Plasmas, 2001, 8, 2439-2445.	1.9	72
8	Alfvénic behaviour of alpha particle driven ion cyclotron emission in TFTR. Nuclear Fusion, 1995, 35, 1597-1602.	3.5	71
9	Integrated plasma physics modelling for the Culham steady state spherical tokamak fusion power plant. Nuclear Fusion, 2004, 44, 917-929.	3.5	71
10	Overview of the JET results with the ITER-like wall. Nuclear Fusion, 2013, 53, 104002.	3.5	70
11	Acceleration of cosmic ray electrons by ion-excited waves at quasiperpendicular shocks. Monthly Notices of the Royal Astronomical Society, 1997, 291, 241-249.	4.4	62
12	Overview of recent experimental results on MAST. Nuclear Fusion, 2003, 43, 1665-1673.	3.5	57
13	Interpretation of ion cyclotron emission from sub-Alfvénic fusion products in the Tokamak Fusion Test Reactor. Physics of Plasmas, 1996, 3, 543-553.	1.9	51
14	Physics of energetic particle-driven instabilities in the START spherical tokamak. Plasma Physics and Controlled Fusion, 1999, 41, 661-678.	2.1	51
15	Overview of the JET results. Nuclear Fusion, 2015, 55, 104001.	3.5	50
16	A model for the generation of obliquely propagating ULF waves near the magnetic equator. Journal of Geophysical Research, 1994, 99, 23685.	3.3	48
17	Quasi-stationary high β plasmas and fast particle instabilities in the COMPASS-D tokamak with ECRH and LHCD. Nuclear Fusion, 2000, 40, 1569-1573.	3.5	48
18	Experiment on collisionless plasma interaction with applications to supernova remnant physics. Physics of Plasmas, 2004, 11, 3386-3393.	1.9	48

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19	Lower hybrid resonance acceleration of electrons and ions in solar flares and the associated microwave emission. <i>Astrophysical Journal</i> , 1993, 409, 465.	4.5	48
20	Ion cyclotron emission due to collective instability of fusion products and beam ions in TFTR and JET. <i>Nuclear Fusion</i> , 1995, 35, 1733-1742.	3.5	46
21	Neutral beam stabilization of sawtooth oscillations in JET. <i>Plasma Physics and Controlled Fusion</i> , 2002, 44, 205-222.	2.1	45
22	Ion Cyclotron Emission from JET D-T Plasmas. <i>Physical Review Letters</i> , 1999, 82, 2099-2102.	7.8	43
23	Field-Guided Proton Acceleration at Reconnecting x-Points in Flares. <i>Solar Physics</i> , 2003, 214, 339-352.	2.5	43
24	Fast particle-driven ion cyclotron emission (ICE) in tokamak plasmas and the case for an ICE diagnostic in ITER. <i>Nuclear Fusion</i> , 2015, 55, 043013.	3.5	42
25	A mechanism for beam-driven excitation of ion cyclotron harmonic waves in the Tokamak Fusion Test Reactor. <i>Physics of Plasmas</i> , 1994, 1, 3407-3413.	1.9	41
26	Ion cyclotron harmonic wave generation by ring protons in space plasmas. <i>Journal of Geophysical Research</i> , 1993, 98, 11689-11700.	3.3	40
27	Large-scale numerical simulations of ion beam instabilities in unmagnetized astrophysical plasmas. <i>Physics of Plasmas</i> , 2000, 7, 5171-5181.	1.9	40
28	Control of sawteeth and triggering of NTMs with ion cyclotron resonance frequency waves in JET. <i>Nuclear Fusion</i> , 2002, 42, 1324-1334.	3.5	40
29	A model for ideal $m=1$ internal kink stabilization by minority ion cyclotron resonant heating. <i>Physics of Plasmas</i> , 1995, 2, 1623-1636.	1.9	39
30	Overview of JET results. <i>Nuclear Fusion</i> , 2003, 43, 1540-1554.	3.5	38
31	Steady state operation of spherical tokamaks. <i>Nuclear Fusion</i> , 2000, 40, 1223-1244.	3.5	36
32	Observations of core ion cyclotron emission on ASDEX Upgrade tokamak. <i>Review of Scientific Instruments</i> , 2018, 89, 10J101.	1.3	35
33	Electron and Ion Heating Characteristics during Magnetic Reconnection in the MAST Spherical Tokamak. <i>Physical Review Letters</i> , 2015, 115, 215004.	7.8	34
34	Electron Kinetics Inferred from Observations of Microwave Bursts During Edge Localized Modes in the Mega-Amp Spherical Tokamak. <i>Physical Review Letters</i> , 2015, 114, 125004.	7.8	34
35	Scenario development for the observation of alpha-driven instabilities in JET DT plasmas. <i>Nuclear Fusion</i> , 2018, 58, 082005.	3.5	34
36	Azimuthally symmetric magnetohydrodynamic and two-fluid equilibria with arbitrary flows. <i>Monthly Notices of the Royal Astronomical Society</i> , 2001, 323, 733-742.	4.4	33

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37	Two-fluid simulations of driven reconnection in the mega-ampere spherical tokamak. <i>Physics of Plasmas</i> , 2013, 20, 122302.	1.9	33
38	The detection of wave activity in the solar corona using UV line spectra. <i>Solar Physics</i> , 1991, 131, 41-48.	2.5	32
39	Identifying the impact of rotation, anisotropy, and energetic particle physics in tokamaks. <i>Plasma Physics and Controlled Fusion</i> , 2011, 53, 074021.	2.1	32
40	Overview of new MAST physics in anticipation of first results from MAST Upgrade. <i>Nuclear Fusion</i> , 2019, 59, 112011.	3.5	30
41	The influence of fast ions on the magnetohydrodynamic stability of negative shear profiles. <i>Physics of Plasmas</i> , 1997, 4, 2181-2187.	1.9	29
42	Electron Acceleration at Reconnecting X-points in Solar Flares. <i>Astrophysical Journal</i> , 2005, 625, 496-505.	4.5	29
43	INERTIAL ALFVÉN WAVE ACCELERATION OF SOLAR FLARE ELECTRONS. <i>Astrophysical Journal</i> , 2009, 693, 1494-1499.	4.5	28
44	Sub-microsecond temporal evolution of edge density during edge localized modes in KSTAR tokamak plasmas inferred from ion cyclotron emission. <i>Nuclear Fusion</i> , 2017, 57, 124004.	3.5	28
45	Energetic ion behaviour in MAST. <i>Plasma Physics and Controlled Fusion</i> , 2015, 57, 014006.	2.1	28
46	On steady poloidal and toroidal flows in tokamak plasmas. <i>Physics of Plasmas</i> , 2010, 17, 082509.	1.9	25
47	Magneto-hydro-dynamic limits in spherical tokamaks. <i>Physics of Plasmas</i> , 1999, 6, 1958-1968.	1.9	24
48	Fast particle effects on the sawtooth stability of JET DT discharges*. <i>Nuclear Fusion</i> , 2002, 42, 281-289.	3.5	24
49	Analysis of ion cyclotron heating and current drive at $\omega \approx 2\omega_{cH}$ for sawtooth control in JET plasmas*. <i>Plasma Physics and Controlled Fusion</i> , 2002, 44, 1521-1542.	2.1	24
50	Improved H-mode access in connected DND in MAST. <i>Plasma Physics and Controlled Fusion</i> , 2005, 47, 843-867.	2.1	24
51	Collective electric field effects on the confinement of fast ions in tokamaks. <i>Physics of Plasmas</i> , 2006, 13, 042503.	1.9	24
52	Excitation of axisymmetric Alfvénic modes in Ohmic tokamak discharges. <i>Nuclear Fusion</i> , 2002, 42, 1155-1161.	3.5	23
53	MAST and the impact of low aspect ratio on tokamak physics. <i>Plasma Physics and Controlled Fusion</i> , 2004, 46, B477-B494.	2.1	23
54	Ion cyclotron emission from fusion-born ions in large tokamak plasmas: a brief review from JET and TFTR to ITER. <i>Plasma Physics and Controlled Fusion</i> , 2015, 57, 044002.	2.1	23

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55	Overview of progress in European medium sized tokamaks towards an integrated plasma-edge/wall solution ^a. Nuclear Fusion, 2017, 57, 102014.	3.5	23
56	Sawtooth Evolution during JET Ion-Cyclotron-Resonance-Heated Pulses. Physical Review Letters, 2000, 84, 1204-1207.	7.8	22
57	Interpretation of measurements of ICRF heated minority proton distributions in JET. Nuclear Fusion, 1997, 37, 473-480.	3.5	21
58	Nonlinear wave propagation and reconnection at magnetic X-points in the Hall MHD regime. Astronomy and Astrophysics, 2012, 544, A24.	5.1	21
59	Overview of physics results from MAST towards ITER/DEMO and the MAST Upgrade. Nuclear Fusion, 2013, 53, 104008.	3.5	21
60	MAST Accomplishments and Upgrade for Fusion Next-Steps. IEEE Transactions on Plasma Science, 2014, 42, 402-414.	1.3	21
61	Simulation studies of electron acceleration by ion ring distributions in solar flares. Solar Physics, 1990, 130, 229-241.	2.5	20
62	Ion cyclotron wave emission at the quasi- \perp perpendicular bow shock. Journal of Geophysical Research, 1993, 98, 15531-15539.	3.3	20
63	Modeling of sawtooth destabilization during radio-frequency heating experiments in tokamak plasmas. Physics of Plasmas, 1996, 3, 2994-3003.	1.9	20
64	Toroidal and poloidal flows in single-fluid and two-fluid tokamak equilibria. Physics of Plasmas, 2006, 13, 062502.	1.9	20
65	Fast-ion deuterium alpha spectroscopic observations of the effects of fishbones in the Mega-Ampere Spherical Tokamak. Plasma Physics and Controlled Fusion, 2013, 55, 085009.	2.1	20
66	Self-organization during spherical torus formation by flux rope merging in the Mega Ampere Spherical Tokamak. Plasma Physics and Controlled Fusion, 2014, 56, 064009.	2.1	20
67	Energetic particles in spherical tokamak plasmas. Plasma Physics and Controlled Fusion, 2017, 59, 053001.	2.1	20
68	Overview of MAST results. Nuclear Fusion, 2005, 45, S157-S167.	3.5	19
69	Two-fluid and magnetohydrodynamic modelling of magnetic reconnection in the MAST spherical tokamak and the solar corona. Plasma Physics and Controlled Fusion, 2016, 58, 014041.	2.1	19
70	Nonlinear wave interactions generate high-harmonic cyclotron emission from fusion-born protons during a KSTAR ELM crash. Nuclear Fusion, 2018, 58, 096027.	3.5	19
71	Observations of the Ca xiv resonance line during the impulsive phase of solar flares. Solar Physics, 1989, 123, 161-176.	2.5	18
72	Investigating fusion plasma instabilities in the Mega Amp Spherical Tokamak using mega electron volt proton emissions (invited). Review of Scientific Instruments, 2014, 85, 11D701.	1.3	18

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73	Investigation of merging/reconnection heating during solenoid-free startup of plasmas in the MAST Spherical Tokamak. Nuclear Fusion, 2017, 57, 056037.	3.5	18
74	Plasma physics in noninertial frames. Physics of Plasmas, 2009, 16, 092506.	1.9	16
75	Overview of MAST results. Nuclear Fusion, 2015, 55, 104008.	3.5	16
76	Overview of recent physics results from MAST. Nuclear Fusion, 2017, 57, 102007.	3.5	16
77	Velocity-space tomography using prior information at MAST. Review of Scientific Instruments, 2018, 89, 10D125.	1.3	16
78	Beam-Ion Acceleration during Edge Localized Modes in the ASDEX Upgrade Tokamak. Physical Review Letters, 2018, 121, 025002.	7.8	16
79	Electron Inertial Effects on Rapid Energy Redistribution at Magnetic X-points. Astrophysical Journal, 2004, 609, 423-438.	4.5	15
80	Measurements and modelling of fast-ion redistribution due to resonant MHD instabilities in MAST. Plasma Physics and Controlled Fusion, 2015, 57, 125009.	2.1	15
81	Recent progress of magnetic reconnection research in the MAST spherical tokamak. Physics of Plasmas, 2017, 24, .	1.9	15
82	Fusion product losses due to fishbone instabilities in deuterium JET plasmas. Nuclear Fusion, 2018, 58, 014003.	3.5	15
83	The effects of resonant magnetic perturbations and charge-exchange reactions on fast ion confinement and neutron emission in the Mega Amp Spherical Tokamak. Plasma Physics and Controlled Fusion, 2018, 60, 095005.	2.1	15
84	Interpretation of suprathreshold emission at deuteron cyclotron harmonics from deuterium plasmas heated by neutral beam injection in the KSTAR tokamak. Nuclear Fusion, 2019, 59, 106021.	3.5	15
85	Three-dimensional visualization of electron acceleration in a magnetized plasma. IEEE Transactions on Plasma Science, 2002, 30, 20-21.	1.3	14
86	Observations and modelling of ion cyclotron emission observed in JET plasmas using a sub-harmonic arc detection system during ion cyclotron resonance heating. Nuclear Fusion, 2018, 58, 096020.	3.5	14
87	High frequency Alfvén eigenmodes detected with ion-cyclotron-emission diagnostics during NBI and ICRF heated plasmas on the ASDEX Upgrade tokamak. Nuclear Fusion, 2020, 60, 126043.	3.5	14
88	Explanation of core ion cyclotron emission from beam-ion heated plasmas in ASDEX Upgrade by the magnetoacoustic cyclotron instability. Nuclear Fusion, 2021, 61, 026004.	3.5	14
89	The orbital dynamics and collisional transport of trace massive impurity ions in rotating tokamaks. Plasma Physics and Controlled Fusion, 2009, 51, 115009.	2.1	13
90	Mitigation of MHD induced fast-ion redistribution in MAST and implications for MAST-Upgrade design. Nuclear Fusion, 2015, 55, 013021.	3.5	13

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91	Application of a non-steady-state orbit-following Monte-Carlo code to neutron modeling in the MAST spherical tokamak. <i>Plasma Physics and Controlled Fusion</i> , 2016, 58, 105005.	2.1	13
92	Stabilization of the ideal $m=1$ internal kink by alpha particles and ICRF heated ions. <i>Nuclear Fusion</i> , 1995, 35, 1761-1768.	3.5	12
93	Full orbit computations of ripple-induced fusion $\hat{\pm}$ -particle losses from burning tokamak plasmas. <i>Physics of Plasmas</i> , 2005, 12, 072510.	1.9	12
94	Alfvén wave phase-mixing and damping in the ion cyclotron range of frequencies. <i>Astronomy and Astrophysics</i> , 2011, 525, A155.	5.1	12
95	Global two-fluid simulations of geodesic acoustic modes in strongly shaped tight aspect ratio tokamak plasmas. <i>Physics of Plasmas</i> , 2013, 20, .	1.9	12
96	Core plasma ion cyclotron emission driven by fusion-born ions. <i>Nuclear Fusion</i> , 2019, 59, 014001.	3.5	12
97	The effects of resonant magnetic perturbations on fast ion confinement in the Mega Amp Spherical Tokamak. <i>Plasma Physics and Controlled Fusion</i> , 2015, 57, 075003.	2.1	11
98	A rotary and reciprocating scintillator based fast-ion loss detector for the MAST-U tokamak. <i>Review of Scientific Instruments</i> , 2018, 89, 101112.	1.3	11
99	Excitation of ion cyclotron harmonic waves in cosmic ray shock precursors. <i>Monthly Notices of the Royal Astronomical Society</i> , 1996, 280, 219-226.	4.4	10
100	Rotation driven by fast ions in tokamaks. <i>Physics of Plasmas</i> , 2007, 14, .	1.9	10
101	Test-particle simulations of collisional impurity transport in rotating spherical tokamak plasmas. <i>Plasma Physics and Controlled Fusion</i> , 2008, 50, 065017.	2.1	10
102	Toroidal ripple transport of beam ions in the mega-ampère spherical tokamak. <i>Physics of Plasmas</i> , 2012, 19, 072514.	1.9	10
103	The role of the spherical tokamak in clarifying tokamak physics. <i>Plasma Physics and Controlled Fusion</i> , 1999, 41, B191-B207.	2.1	9
104	Spherical tokamak power plant design issues. <i>Fusion Engineering and Design</i> , 2000, 48, 255-263.	1.9	9
105	Response to "Comment on "Collisionless shock and supernova remnant simulations on VULCAN" [Phys. Plasmas 9, 727 (2002)]. <i>Physics of Plasmas</i> , 2002, 9, 729-730.	1.9	9
106	Fokker-Planck Modeling of Asymmetric Footpoint Hard X-Ray Emission in Solar Flares. <i>Astrophysical Journal</i> , 2005, 619, 1153-1159.	4.5	9
107	Overview of results and possibilities for fast particle research on JET. <i>Nuclear Fusion</i> , 2002, 42, 1014-1028.	3.5	8
108	The coupling of shear and fast Alfvén waves at a magnetic X-point. <i>Journal of Plasma Physics</i> , 2006, 72, 571.	2.1	8

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109	CENTORI: A global toroidal electromagnetic two-fluid plasma turbulence code. Computer Physics Communications, 2012, 183, 2346-2363.	7.5	8
110	Application of Tomographic Ion Doppler Spectroscopy to Merging Plasma Startup in the MAST Spherical Tokamak. Plasma and Fusion Research, 2016, 11, 1302093-1302093.	0.7	8
111	Energetic particles in laboratory, space and astrophysical plasmas. Plasma Physics and Controlled Fusion, 2017, 59, 014012.	2.1	8
112	Development of the ion cyclotron emission diagnostic for the W7-X stellarator. Review of Scientific Instruments, 2021, 92, 033546.	1.3	8
113	Origin of ion cyclotron emission at the proton cyclotron frequency from the core of deuterium plasmas in the ASDEX-Upgrade tokamak. Plasma Physics and Controlled Fusion, 2020, 62, 095022.	2.1	8
114	Diagnosing fast ion redistribution due to sawtooth instabilities using fast ion deuterium- $\hat{1}\pm$ spectroscopy in the mega amp spherical tokamak. Nuclear Fusion, 2020, 60, 126035.	3.5	8
115	Assessing the merits of resonant magnetic perturbations with different toroidal mode numbers for controlling edge localised modes. Nuclear Fusion, 2014, 54, 123003.	3.5	7
116	Ion Cyclotron Emission "a Natural Diagnostic for Fusion Alpha Particles. Fusion Science and Technology, 1994, 25, 334-340.	0.6	6
117	Electron inertial effects on the resistive magnetohydrodynamic spectrum of a magnetic X-point. Plasma Physics and Controlled Fusion, 2004, 46, 39-60.	2.1	6
118	The stability of electron beams in the flaring solar corona. Solar Physics, 1987, 109, 355-363.	2.5	5
119	Impurity transport driven by fishbones in MAST. Nuclear Fusion, 2015, 55, 032002.	3.5	5
120	Particle acceleration during merging-compression plasma start-up in the Mega Amp Spherical Tokamak. Plasma Physics and Controlled Fusion, 2018, 60, 025013.	2.1	5
121	The impact of energetic particles and rotation on tokamak plasmas. Journal of Physics: Conference Series, 2010, 260, 012013.	0.4	4
122	The unstable modes of a two-component electron plasma. Journal of Plasma Physics, 1988, 40, 493-503.	2.1	3
123	Experiment on Collisionless Plasma Interaction with Applications to Supernova Remnant Physics. Astrophysics and Space Science, 2005, 298, 93-98.	1.4	3
124	Comment on "Variational principles for stationary one- and two-fluid equilibria of axisymmetric laboratory and astrophysical plasmas" [Phys. Plasmas 11, L81 (2004)]. Physics of Plasmas, 2005, 12, 064701.	1.9	3
125	Collisionless fast particle transport in tokamak plasmas with rotating magnetic islands. Plasma Physics and Controlled Fusion, 2007, 49, 1415-1429.	2.1	3
126	Superthermal ion cyclotron harmonic emission from fusion and space plasmas: A single physical mechanism. Physica Scripta, 1994, T52, 135-138.	2.5	2

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127	Energetic particles in magnetic confinement systems: synergies beyond fusion. Nuclear Fusion, 2002, 42, 986-998.	3.5	2
128	Surfatron and stochastic acceleration of electrons in astrophysical plasmas. Journal of Plasma Physics, 2005, 71, 127-141.	2.1	2
129	Alfvén eigenmodes in magnetic X-point configurations with strong longitudinal fields. Journal of Plasma Physics, 2009, 75, 203-215.	2.1	2
130	Understanding the Higgs mechanism. Physics World, 2012, 25, 23-24.	0.0	2
131	Fast Alfvén Wave Heating and Acceleration of Ions in a Nonuniform Magnetoplasma. Astrophysical Journal, 2007, 658, 631-642.	4.5	1
132	Full orbit simulation of collisional transport of impurity ions in the MAST spherical tokamak. Plasma Physics and Controlled Fusion, 2011, 53, 054017.	2.1	1
133	Axisymmetric two-fluid plasma equilibria with momentum sources and sinks. Plasma Physics and Controlled Fusion, 2011, 53, 045009.	2.1	1
134	Overview of recent ICRF studies and RF-related wave-field measurements on ASDEX upgrade. AIP Conference Proceedings, 2020, , .	0.4	1
135	Abel inversion of soft x-ray fluctuations associated with fast particle-driven fishbone instabilities in MAST plasmas. Plasma Research Express, 2021, 3, 034001.	0.9	1
136	Interpretation of electromagnetic modes in the sub-TAE frequency range in JET plasmas with elevated monotonic q-profiles. Physics of Plasmas, 2021, 28, 102511.	1.9	1
137	<title>Supernova remnant simulation experiments on VULCAN</title>. , 2001, 4424, 484.		0
138	Supernova Remnant Relevant Laser-plasma Experiments. AIP Conference Proceedings, 2004, , .	0.4	0