

Michael E Mauel

List of Publications by Year in descending order

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147
papers

4,067
citations

218677

26
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118850

62
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150
all docs

150
docs citations

150
times ranked

2889
citing authors

#	ARTICLE	IF	CITATIONS
1	Advanced Technology Paths to Global Climate Stability: Energy for a Greenhouse Planet. Science, 2002, 298, 981-987.	12.6	1,195
2	Enhanced Confinement and Stability in DIII-D Discharges with Reversed Magnetic Shear. Physical Review Letters, 1995, 75, 4421-4424.	7.8	573
3	Effect of toroidal plasma flow and flow shear on global magnetohydrodynamic MHD modes. Physics of Plasmas, 1995, 2, 2236-2241.	1.9	201
4	Modeling of active control of external magnetohydrodynamic instabilities. Physics of Plasmas, 2001, 8, 2170-2180.	1.9	175
5	Rotational and magnetic shear stabilization of magnetohydrodynamic modes and turbulence in DIII-D high performance discharges. Physics of Plasmas, 1996, 3, 1951-1958.	1.9	122
6	Turbulent inward pinch of plasma confined by a levitated dipole magnet. Nature Physics, 2010, 6, 207-212.	16.7	93
7	Demonstration of high-performance negative central magnetic shear discharges in the DIII-D tokamak. Physics of Plasmas, 1996, 3, 1983-1991.	1.9	81
8	High poloidal beta equilibria in the Tokamak Fusion Test Reactor limited by a natural inboard poloidal field null. Physics of Fluids B, 1991, 3, 2277-2284.	1.7	63
9	Suppression of resistive wall instabilities with distributed, independently controlled, active feedback coils. Physics of Plasmas, 2000, 7, 3133-3136.	1.9	61
10	Magnetohydrodynamic stability in a levitated dipole. Physics of Plasmas, 1999, 6, 3431-3434.	1.9	60
11	Overview of TFTR transport studies. Plasma Physics and Controlled Fusion, 1991, 33, 1509-1536.	2.1	59
12	Active control of 2/1 magnetic islands in a tokamak. Physics of Plasmas, 1998, 5, 1855-1863.	1.9	55
13	Production and study of high-beta plasma confined by a superconducting dipole magnet. Physics of Plasmas, 2006, 13, 056111.	1.9	55
14	Dynamical plasma response of resistive wall modes to changing external magnetic perturbations. Physics of Plasmas, 2004, 11, 2573-2579.	1.9	49
15	Observations of enhanced core confinement in negative magnetic shear discharges with an L mode edge on DIII-D. Nuclear Fusion, 1996, 36, 1271-1280.	3.5	47
16	Electron-cyclotron heating in a pulsed mirror experiment. Physics of Fluids, 1984, 27, 2899.	1.4	43
17	Observation of wall stabilization and active control of low- n magnetohydrodynamic instabilities in a tokamak. Physics of Plasmas, 1996, 3, 1926-1934.	1.9	39
18	Production and identification of the ion-temperature-gradient instability. Physical Review Letters, 1991, 66, 429-432.	7.8	38

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19	Dynamics and control of resistive wall modes with magnetic feedback control coils: experiment and theory. Nuclear Fusion, 2005, 45, 285-293.	3.5	38
20	The formation and evolution of negative central magnetic shear current profiles on DIII-D. Plasma Physics and Controlled Fusion, 1996, 38, 869-881.	2.1	33
21	Observation of Nonlinear Frequency-Sweeping Suppression with rf Diffusion. Physical Review Letters, 2003, 90, 185001.	7.8	33
22	Observation of Chaotic Particle Transport Induced by Drift-Resonant Fluctuations in a Magnetic Dipole Field. Physical Review Letters, 1995, 74, 1351-1354.	7.8	30
23	Whistler instability in an electron-cyclotron-resonance-heated, mirror-confined plasma. Physics of Fluids B, 1990, 2, 242-252.	1.7	29
24	Measurement of internal magnetic field pitch using Li pellet injection on TFTR (invited). Review of Scientific Instruments, 1990, 61, 2908-2913.	1.3	26
25	Deuterium-tritium high confinement (H-mode) studies in the Tokamak Fusion Test Reactor. Physics of Plasmas, 1995, 2, 2366-2374.	1.9	26
26	The Levitated Dipole Experiment (LDX) magnet system. IEEE Transactions on Applied Superconductivity, 1999, 9, 378-381.	1.7	26
27	Design and initial operation of the LDX facility. Fusion Engineering and Design, 2006, 81, 2371-2380.	1.9	26
28	Observation of ballooning modes in high-temperature tokamak plasmas. Physical Review Letters, 1992, 69, 2376-2379.	7.8	25
29	Dipole equilibrium and stability. Nuclear Fusion, 2001, 41, 301-308.	3.5	25
30	The high beta tokamak-extended pulse magnetohydrodynamic mode control research program. Plasma Physics and Controlled Fusion, 2011, 53, 074016.	2.1	25
31	Wave-induced chaotic radial transport of energetic electrons in a laboratory toroidal experiment. Physics of Plasmas, 1995, 2, 4185-4194.	1.9	23
32	Recent D-T results on TFTR. Plasma Physics and Controlled Fusion, 1995, 37, A69-A85.	2.1	22
33	Measurement of the global structure of interchange modes driven by energetic electrons trapped in a magnetic dipole. Physics of Plasmas, 2002, 9, 2507-2517.	1.9	22
34	Plasma potential enhancement by rf heating near the ion-cyclotron frequency. Physics of Fluids, 1986, 29, 902.	1.4	21
35	Investigation of ballooning modes in high poloidal beta plasmas in the Tokamak Fusion Test Reactor*. Physics of Fluids B, 1993, 5, 2571-2577.	1.7	21
36	Stabilization of kink instabilities by eddy currents in a segmented wall and comparison with ideal MHD theory. Nuclear Fusion, 1998, 38, 1029-1042.	3.5	21

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37	A Kalman filter for feedback control of rotating external kink instabilities in the presence of noise. <i>Physics of Plasmas</i> , 2009, 16, 056112.	1.9	21
38	Effect of magnetic islands on the local plasma behavior in a tokamak experiment. <i>Physics of Plasmas</i> , 2002, 9, 3938-3945.	1.9	20
39	Suppression of rotating external kink instabilities using optimized mode control feedback. <i>Physics of Plasmas</i> , 2005, 12, 040703.	1.9	20
40	High-speed, multi-input, multi-output control using GPU processing in the HBT-EP tokamak. <i>Fusion Engineering and Design</i> , 2012, 87, 1895-1899.	1.9	20
41	Observation of Centrifugally Driven Interchange Instabilities in a Plasma Confined by a Magnetic Dipole. <i>Physical Review Letters</i> , 2005, 94, 175002.	7.8	18
42	An experiment to measure collisionless radial transport of energetic electrons confined by a dipole magnetic field. <i>IEEE Transactions on Plasma Science</i> , 1992, 20, 626-630.	1.3	17
43	Suppression of nonlinear frequency-sweeping of resonant interchange modes in a magnetic dipole with applied radio frequency fields. <i>Physics of Plasmas</i> , 2003, 10, 1549-1555.	1.9	15
44	Experiments and modelling of external kink mode control using modular internal feedback coils. <i>Nuclear Fusion</i> , 2007, 47, 1293-1299.	3.5	15
45	Measurement of 3D plasma response to external magnetic perturbations in the presence of a rotating external kink. <i>Physics of Plasmas</i> , 2013, 20, 102503.	1.9	15
46	Initial high beta operation of the HBT-EP Tokamak. <i>Journal of Fusion Energy</i> , 1993, 12, 303-310.	1.2	13
47	Observation of wave-induced chaotic radial transport in a laboratory terrella experiment. <i>Physics of Plasmas</i> , 1996, 3, 2143-2148.	1.9	13
48	Turbulent fluctuations during pellet injection into a dipole confined plasma torus. <i>Physics of Plasmas</i> , 2017, 24, .	1.9	13
49	A fluid description for the discharge equilibrium of a divergent electron cyclotron resonance plasma source. <i>Physics of Fluids B</i> , 1992, 4, 4177-4186.	1.7	12
50	On Arnol'd diffusion in a perturbed magnetic dipole field. <i>Geophysical Research Letters</i> , 1992, 19, 941-944.	4.0	12
51	Nonstationary signal analysis of magnetic islands in plasmas. <i>Review of Scientific Instruments</i> , 1999, 70, 4545-4551.	1.3	12
52	High temperature superconducting levitation coil for the Levitated Dipole Experiment (LDX). <i>IEEE Transactions on Applied Superconductivity</i> , 2001, 11, 2004-2009.	1.7	12
53	Global and local characterization of turbulent and chaotic structures in a dipole-confined plasma. <i>Physics of Plasmas</i> , 2009, 16, 055902.	1.9	12
54	Adaptive control of rotating magnetic perturbations in HBT-EP using GPU processing. <i>Plasma Physics and Controlled Fusion</i> , 2013, 55, 084003.	2.1	12

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55	137â€GHz gyrotron diagnostic for instability studies in Tara. Review of Scientific Instruments, 1986, 57, 1983-1985.	1.3	11
56	Operation at the tokamak equilibrium poloidal beta-limit in TFTR. Nuclear Fusion, 1992, 32, 1468-1473.	3.5	11
57	Magnetic field perturbations in closed-field-line systems with zero toroidal magnetic field. Physics of Plasmas, 2004, 11, 2318-2321.	1.9	11
58	Excitation of the centrifugally driven interchange instability in a plasma confined by a magnetic dipole. Physics of Plasmas, 2005, 12, 055703.	1.9	11
59	A Description of a D- ³ He Fusion Reactor Based on a Dipole Magnetic Field. Fusion Science and Technology, 1992, 22, 27-34.	0.6	10
60	Design, fabrication and test of the react and wind, Nb ₃ Sn, LDX floating coil. IEEE Transactions on Applied Superconductivity, 2001, 11, 2010-2013.	1.7	10
61	Feedback suppression of rotating external kink instabilities in the presence of noise. Physics of Plasmas, 2008, 15, 080704.	1.9	10
62	Plasmas, 2015, 22, 056102.	1.9	10
63	Laboratory Observations of Wave-Induced Radial Transport within an "Artificial Radiation Belt". European Physical Journal Special Topics, 1997, 07, C4-307-C4-318.	0.2	10
64	High poloidal beta longâ€pulse experiments in the Tokamak Fusion Test Reactor*. Physics of Fluids B, 1993, 5, 2525-2531.	1.7	9
65	The feedback phase instability in the HBT-EP tokamak. Nuclear Fusion, 2000, 40, 1791-1794.	3.5	8
66	Stabilization of a low-frequency instability in a dipole plasma. Journal of Plasma Physics, 2008, 74, 733-740.	2.1	8
67	Multichannel microwave interferometer for the levitated dipole experiment. Review of Scientific Instruments, 2009, 80, 043502.	1.3	8
68	Fluctuation driven transport and stationary profiles. Physics of Plasmas, 2011, 18, 050703.	1.9	8
69	High resolution detection and excitation of resonant magnetic perturbations in a wall-stabilized tokamak. Physics of Plasmas, 2012, 19, .	1.9	8
70	Fast, multi-channel real-time processing of signals with microsecond latency using graphics processing units. Review of Scientific Instruments, 2014, 85, 045114.	1.3	8
71	Improved feedback control of wall stabilized kink modes with different plasmaâ€wall couplings and mode rotation. Plasma Physics and Controlled Fusion, 2016, 58, 045001.	2.1	8
72	Ballooning mode stability of elongated high-beta tokamaks. Physics of Fluids, 1987, 30, 3843.	1.4	7

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73	Effects of the Hot Electron Interchange Instability on Plasma Confined in a Dipolar Magnetic Field. <i>Journal of Fusion Energy</i> , 2007, 26, 139-144.	1.2	7
74	A digital control system for external magnetohydrodynamic modes in tokamak plasmas. <i>Review of Scientific Instruments</i> , 2009, 80, 043503.	1.3	7
75	Transport Induced by Large Scale Convective Structures in a Dipole-Confined Plasma. <i>Physical Review Letters</i> , 2010, 105, 205004.	7.8	7
76	Stationary density profiles in the Levitated Dipole Experiment: toward fusion without tritium fuel. <i>Plasma Physics and Controlled Fusion</i> , 2010, 52, 124036.	2.1	7
77	In situ "artificial plasma" calibration of tokamak magnetic sensors. <i>Review of Scientific Instruments</i> , 2013, 84, 063502.	1.3	7
78	Pressure profiles of plasmas confined in the field of a magnetic dipole. <i>Plasma Physics and Controlled Fusion</i> , 2014, 56, 095021.	2.1	7
79	Numerical simulation of phase-space flows in the Collisionless Terrella experiment. <i>IEEE Transactions on Plasma Science</i> , 2002, 30, 8-9.	1.3	6
80	High-speed optical diagnostic that uses interference filters to measure Doppler shifts. <i>Review of Scientific Instruments</i> , 2004, 75, 4077-4081.	1.3	6
81	A high-power spatial filter for Thomson scattering stray light reduction. <i>Review of Scientific Instruments</i> , 2011, 82, 033501.	1.3	6
82	Mode rotation control in a tokamak with a feedback-driven biased electrode. <i>Review of Scientific Instruments</i> , 2019, 90, 023503.	1.3	6
83	A dimensionality reduction algorithm for mapping tokamak operational regimes using a variational autoencoder (VAE) neural network. <i>Nuclear Fusion</i> , 2021, 61, 126063.	3.5	6
84	Density Profiles in the Levitated Dipole Experiment. <i>Journal of Fusion Energy</i> , 2008, 27, 11-15.	1.2	5
85	Design and installation of a ferromagnetic wall in tokamak geometry. <i>Review of Scientific Instruments</i> , 2015, 86, 103504.	1.3	5
86	Preface to the Special Issue: Strategic Opportunities for Fusion Energy. <i>Journal of Fusion Energy</i> , 2016, 35, 1-3.	1.2	5
87	TARA diagnostic set. <i>Review of Scientific Instruments</i> , 1985, 56, 960-962.	1.3	4
88	Energetic particle stabilization of ballooning modes in finite-aspect-ratio tokamaks. <i>Physics of Fluids</i> , 1988, 31, 332.	1.4	4
89	Confinement and stability of DIII-D negative central shear discharges. <i>Plasma Physics and Controlled Fusion</i> , 1996, 38, 1439-1443.	2.1	4
90	Status of the floating coil of the Levitated Dipole Experiment. <i>IEEE Transactions on Applied Superconductivity</i> , 2002, 12, 666-669.	1.7	4

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91	High-Speed imaging of the plasma response to resonant magnetic perturbations in HBT-EP. Plasma Physics and Controlled Fusion, 2015, 57, 045008.	2.1	4
92	Suppression of ITG turbulence due to spectral shift during biasing induced H-mode on HBT-EP. Physics of Plasmas, 2021, 28, .	1.9	4
93	Measurement of large displacements of the toroidal current centroid using an external coil diagnostic. Review of Scientific Instruments, 1988, 59, 1057-1062.	1.3	3
94	Scientific Challenges, Opportunities and Priorities for the U.S. Fusion Energy Sciences Program. Journal of Fusion Energy, 2005, 24, 13-114.	1.2	3
95	Observations and modeling of the electron cyclotron emission background in the Levitated Dipole Experiment. Journal of Physics: Conference Series, 2010, 227, 012021.	0.4	3
96	Imaging free-falling particles for multipoint measurement of plasma fluctuations. Review of Scientific Instruments, 2015, 86, 083510.	1.3	3
97	Observation of weakly damped modes using high resolution measurement of turbulence in a dipole confined plasma. Physics of Plasmas, 2020, 27, 014501.	1.9	3
98	Alternative concepts: A report to the Fusion Energy Sciences Advisory Committee. Journal of Fusion Energy, 1996, 15, 249-280.	1.2	2
99	Controllability and Reduced State Space Models for Feedback Control of the Resistive Wall Kink Mode. , 2006, , .		2
100	Equilibrium Reconstruction of Anisotropic Pressure Profile in the Levitated Dipole Experiment. Journal of Fusion Energy, 2007, 26, 99-102.	1.2	2
101	Varying Electron Cyclotron Resonance Heating on the Levitated Dipole Experiment. Journal of Fusion Energy, 2007, 26, 57-60.	1.2	2
102	Shaping effects on toroidal magnetohydrodynamic modes in the presence of plasma and wall resistivity. Physics of Plasmas, 2018, 25, 012517.	1.9	2
103	Suppression of MHD modes with active phase-control of probe-injected currents. Nuclear Fusion, 2021, 61, 096017.	3.5	2
104	Feedback stabilization of MHD instabilities. Nuclear Fusion, 1997, 37, 1647-1655.	3.5	1
105	The Report of the Subpanel to FESAC Concerning Alternative Concepts. Journal of Fusion Energy, 1999, 18, 161-193.	1.2	1
106	Title is missing!. Journal of Fusion Energy, 2000, 19, 169-228.	1.2	1
107	Fusion: choose Japan for international balance. Nature, 2004, 428, 365-365.	27.8	1
108	Millimeter-wave radiometer diagnostics of harmonic electron cyclotron emission in the Levitated Dipole Experiment. Review of Scientific Instruments, 2010, 81, 10D910.	1.3	1

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109	Mixing in fusion plasmas. Physica Scripta, 2015, 90, 030201.	2.5	1
110	The 2018 James Clerk Maxwell Prize for Plasma Physics. Physics of Plasmas, 2019, 26, 080201.	1.9	1
111	Announcement: The 2019 James Clerk Maxwell Prize for Plasma Physics. Physics of Plasmas, 2020, 27, 080201.	1.9	1
112	Self-organized confinement in whole-device modeling of laboratory magnetospheres. Physics of Plasmas, 2021, 28, .	1.9	1
113	Halo current rotation scaling in post-disruption plasmas. Nuclear Fusion, 2022, 62, 026044.	3.5	1
114	Review of the Fusion Materials Research Program. Journal of Fusion Energy, 2000, 19, 45-64.	1.2	0
115	Report of the FESAC Panel on a Burning Plasma Program Strategy to Advance Fusion Energy. Journal of Fusion Energy, 2001, 20, 85-112.	1.2	0
116	Report of the First Fusion Energy Sciences Committee of Visitors. Journal of Fusion Energy, 2003, 22, 127-138.	1.2	0
117	Report of the Second Fusion Energy Sciences Committee of Visitors. Journal of Fusion Energy, 2004, 23, 237-261.	1.2	0
118	Quench Detection for the Levitated Dipole Experiment (LDX) Charging Coil. IEEE Transactions on Applied Superconductivity, 2007, 17, 2482-2485.	1.7	0
119	137 and 165 GHz radiometer measurements of hot electrons in LDX. , 2009, , .		0
120	28 GHz Gyrotron ECRH on LDX. Journal of Fusion Energy, 2010, 29, 588-591.	1.2	0
121	Local regulation of interchange turbulence in a dipole-confined plasma torus using	1.9	0
122	Referee acknowledgment for 2015. Physics of Plasmas, 2016, 23, 039801.	1.9	0
123	Editor's Preface to the 23rd Volume of Physics of Plasmas. Physics of Plasmas, 2016, 23, 010401.	1.9	0
124	Announcement: The 2015 James Clerk Maxwell Prize for Plasma Physics. Physics of Plasmas, 2016, 23, 055401.	1.9	0
125	Foreword to Special Issue: Papers from the 57th Annual Meeting of the APS Division of Plasma Physics, November 16-20, 2015, Savannah, Georgia, USA. Physics of Plasmas, 2016, 23, 055301.	1.9	0
126	Referee acknowledgment for 2016. Physics of Plasmas, 2017, 24, 039801.	1.9	0

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127	Announcement: The 2016 Ronald C. Davidson Award for Plasma Physics. Physics of Plasmas, 2017, 24, .	1.9	0
128	Announcement: The 2016 James Clerk Maxwell Prize for Plasma Physics. Physics of Plasmas, 2017, 24, 055401.	1.9	0
129	Foreword to Special Issue: Papers from the 58th Annual Meeting of the APS Division of Plasma Physics, October 31â€“November 4, 2016, San Jose, California, USA. Physics of Plasmas, 2017, 24, 055301.	1.9	0
130	Referee acknowledgment for 2017. Physics of Plasmas, 2018, 25, 019801.	1.9	0
131	Editorial: Preface to the 25th Volume of Physics of Plasmas. Physics of Plasmas, 2018, 25, 010401.	1.9	0
132	Announcement: The 2017 Ronald C. Davidson Award for Plasma Physics. Physics of Plasmas, 2018, 25, 083503.	1.9	0
133	Foreword to Special Issue: Papers from the 59th Annual Meeting of the APS Division of Plasma Physics, October 23â€“27, 2017, Milwaukee, Wisconsin, USA. Physics of Plasmas, 2018, 25, .	1.9	0
134	Announcement: The 2017 James Clerk Maxwell Prize for Plasma Physics. Physics of Plasmas, 2018, 25, 055401.	1.9	0
135	Foreword to Special Issue: Papers from the 60th Annual Meeting of the APS Division of Plasma Physics, November 5â€“9, 2018, Portland, OR, USA. Physics of Plasmas, 2019, 26, .	1.9	0
136	Announcement: The 2018 Ronald C. Davidson Award for Plasma Physics. Physics of Plasmas, 2019, 26, 050201.	1.9	0
137	Referee acknowledgment for 2018. Physics of Plasmas, 2019, 26, .	1.9	0
138	Editorial: Preface to the 26th Volume of Physics of Plasmas. Physics of Plasmas, 2019, 26, .	1.9	0
139	Announcement: The 2019 Ronald C. Davidson Award for Plasma Physics. Physics of Plasmas, 2020, 27, 100201.	1.9	0
140	Foreword to Special Issue: Papers from the 61st Annual Meeting of the APS Division of Plasma Physics, October 21â€“25, 2019, Fort Lauderdale, FL, USA. Physics of Plasmas, 2020, 27, .	1.9	0
141	Editorial: Preface to the 27th Volume of Physics of Plasmas. Physics of Plasmas, 2020, 27, 010401.	1.9	0
142	Editorial: Preface to the 28th volume of Physics of Plasmas. Physics of Plasmas, 2021, 28, 010401.	1.9	0
143	Foreword to Special Issue: Papers from the 62nd Annual Meeting of the APS Division of Plasma Physics, November 9â€“13, 2020. Physics of Plasmas, 2021, 28, .	1.9	0
144	10.1063/5.0061234.1. , 2021, , .		0

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145	Announcement: The 2020 James Clerk Maxwell Prize for Plasma Physics. <i>Physics of Plasmas</i> , 2021, 28, 080201.	1.9	0
146	Announcement: The 2020 Ronald C. Davidson Award for Plasma Physics. <i>Physics of Plasmas</i> , 2021, 28, 100201.	1.9	0
147	Preface to the 29th volume of <i>Physics of Plasmas</i> . <i>Physics of Plasmas</i> , 2022, 29, 010401.	1.9	0