Weston M Stacey

List of Publications by Year
in descending order

139	1,224	430874	526287
papers	citations	18 h-index	27 g-index

146	146	146	415
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Viscous effects in a collisional tokamak plasma with strong rotation. Physics of Fluids, 1985, 28, 2800-2807.	1.4	79
2	A coupled plasma-neutrals model for divertor simulations. Physics of Plasmas, 1998, 5, 1015-1026.	1.9	46
3	The effect of ion orbit loss and X-loss on the interpretation of ion energy and particle transport in the DIII-D edge plasma. Physics of Plasmas, 2011, 18, .	1.9	46
4	A TRU-Zr Metal-Fuel Sodium-Cooled Fast Subcritical Advanced Burner Reactor. Nuclear Technology, 2008, 162, 53-79.	1.2	39
5	A Fusion Transmutation of Waste Reactor. Fusion Science and Technology, 2002, 41, 116-140.	1.1	38
6	Interpretation of edge pedestal rotation measurements in DIII-D. Physics of Plasmas, 2008, 15, .	1.9	35
7	Ion Particle Transport in the Tokamak Edge Plasma. Contributions To Plasma Physics, 2008, 48, 94-98.	1.1	32
8	A neoclassical calculation of toroidal rotation profiles and comparison with DIII-D measurements. Physics of Plasmas, 2006, 13, 062508.	1.9	30
9	Comparative Fuel Cycle Analysis of Critical and Subcritical Fast Reactor Transmutation Systems. Nuclear Technology, 2003, 144, 83-106.	1.2	27
10	Extension and comparison of neoclassical models for poloidal rotation in tokamaks. Physics of Plasmas, 2008, 15, 012501.	1.9	27
11	Intrinsic rotation produced by ion orbit loss and X-loss. Physics of Plasmas, 2012, 19, .	1.9	27
12	Neoclassical calculation of poloidal rotation and poloidal density asymmetries in tokamaks. Physics of Plasmas, 2002, 9, 3874-3883.	1.9	24
13	Poloidal rotation and density asymmetries in a tokamak plasma with strong toroidal rotation. Physics of Fluids B, 1992, 4, 3302-3309.	1.7	22
14	Interpretation of rotation and momentum transport in the DIII-D edge plasma and comparison with neoclassical theory. Nuclear Fusion, 2014, 54, 073021.	3.5	21
15	A Subcritical, Gas-Cooled Fast Transmutation Reactor with a Fusion Neutron Source. Nuclear Technology, 2005, 150, 162-188.	1.2	20
16	Interpretation of particle pinches and diffusion coefficients in the edge pedestal of DIII-D H-mode plasmas. Physics of Plasmas, 2009, 16, 102504.	1.9	20
17	Nuclear Reactor Physics 3e. , 2018, , .		20
18	Georgia Tech Studies of Sub-Critical Advanced Burner Reactors with a D-T Fusion Tokamak Neutron Source for the Transmutation of Spent Nuclear Fuel. Journal of Fusion Energy, 2009, 28, 328-333.	1.2	19

#	Article	IF	Citations
19	Comparision of neoclassical rotation theory with experiment under a variety of conditions in DIII-D. Physics of Plasmas, 2002, 9, 1622-1628.	1.9	18
20	A Tokamak Tritium Production Reactor. Fusion Science and Technology, 1997, 32, 563-589.	0.6	17
21	Interpretation of changes in diffusive and non-diffusive transport in the edge plasma during pedestal buildup following a low-high transition in DIII-D. Physics of Plasmas, 2013, 20, 012509.	1.9	17
22	Structure of the edge density pedestal in tokamaks. Physics of Plasmas, 2004, 11, 4295-4304.	1.9	16
23	Nuclear Power Reactors. , 0, , 249-282.		16
24	X-transport of ions in diverted tokamaks, with application to DIII-D. Physics of Plasmas, 2011, 18, .	1.9	16
25	Effect of ion orbit loss on the structure in the H-mode tokamak edge pedestal profiles of rotation velocity, radial electric field, density, and temperature. Physics of Plasmas, 2013, 20, .	1.9	16
26	Resolution of Fission and Fusion Technology Integration Issues: An Upgraded Design Concept for the Subcritical Advanced Burner Reactor. Nuclear Technology, 2014, 187, 15-43.	1.2	16
27	Improvements to an ion orbit loss calculation in the tokamak edge. Physics of Plasmas, 2016, 23, 122505.	1.9	16
28	Poloidal rotation, density asymmetries, and momentum confinement in tokamak experiments. Physics of Fluids B, 1993, 5, 1828-1835.	1.7	15
29	Investigation of edge pedestal structure in DIII-D. Physics of Plasmas, 2006, 13, 012513.	1.9	15
30	Representation of the plasma fluid equations in â€œMiller equilibriumâ€•analytical flux surface geometry. Physics of Plasmas, 2009, 16, 082501.	1.9	15
31	Analysis of neutral particle recycling and pedestal fueling in a H-mode DIII-D discharge. Physics of Plasmas, 2010, 17, .	1.9	15
32	The distribution of ion orbit loss fluxes of ions and energy from the plasma edge across the last closed flux surface into the scrape-off layer. Physics of Plasmas, 2015, 22, 042504.	1.9	15
33	A framework for the development and testing of an edge pedestal model: Formulation and initial comparison with DIII-D data. Physics of Plasmas, 2003, 10, 2412-2421.	1.9	14
34	A Superconducting Tokamak Fusion Transmutation of Waste Reactor. Fusion Science and Technology, 2004, 45, 55-59.	1.1	14
35	Nuclear Reactor Dynamics. , 0, , 143-195.		14
36	Neoclassical theory of the plasma edge. Physics of Fluids B, 1993, 5, 1413-1420.	1.7	13

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37	A Subcritical, Helium-Cooled Fast Reactor for the Transmutation of Spent Nuclear Fuel. Nuclear Technology, 2006, 156, 99-123.	1.2	13
38	Inclusion of ion orbit loss and intrinsic rotation in plasma fluid rotation theory. Physics of Plasmas, 2016, 23, .	1.9	13
39	A Survey of Thermal Instabilities in Tokamak Plasmas: Theory, Comparison with Experiment, and Predictions for Future Devices. Fusion Science and Technology, 2007, 52, 29-67.	1.1	12
40	Investigation of transport in the DIII-D edge pedestal. Physics of Plasmas, 2004, 11, 1511-1519.	1.9	11
41	Sub-Critical Transmutation Reactors with Tokamak Fusion Neutron Sources. Fusion Science and Technology, 2005, 47, 1210-1218.	1.1	11
42	Experimentally inferred thermal diffusivities in the edge pedestal between edge-localized modes in DIII-D. Physics of Plasmas, 2007, 14, 122504.	1.9	11
43	Corrected Fluid Equations for the Plasma Edge. Fusion Science and Technology, 1995, 27, 277-291.	0.6	10
44	Nuclear Design and Analysis of the Fusion Transmutation of Waste Reactor. Fusion Science and Technology, 2004, 45, 51-54.	1.1	10
45	Viscous damping of toroidal angular momentum in tokamaks. Physics of Plasmas, 2014, 21, 092517.	1.9	10
46	Variational Estimates for Use with the Improved Quasistatic Method for Reactor Dynamics. Nuclear Science and Engineering, 1997, 126, 282-292.	1.1	9
47	Radioactive Waste Disposal Characteristics of Candidate Tokamak Demonstration Reactors. Fusion Science and Technology, 1997, 31, 35-62.	0.6	9
48	Applications of the Miller equilibrium to extend tokamak computational models. Physics of Plasmas, 2008, 15, 122505.	1.9	9
49	Future Technology Requirements For Magnetic Fusion-An Evaluation Based On Conceptual Design Studies. Nuclear Technology/Fusion, 1984, 5, 266-290.	0.5	8
50	Tokamak Transmutation Facility Studies. Fusion Science and Technology, 2001, 39, 525-529.	0.6	8
51	Application of a particle, momentum, and energy balance model to calculate the structure of the edge pedestal in DIII-D. Physics of Plasmas, 2005, 12, 042504.	1.9	8
52	Advances in the Subcritical, Gas-Cooled, Fast Transmutation Reactor Concept. Nuclear Technology, 2007, 159, 72-105.	1.2	8
53	Tokamak Fusion Neutron Source for a Fast Transmutation Reactor. Fusion Science and Technology, 2007, 52, 727-730.	1.1	8
54	Force balance and ion particle transport differences in high and low confinement tokamak edge pedestals. Physics of Plasmas, 2010, 17, .	1.9	8

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55	Predictions of the poloidal asymmetries and transport frequencies in KSTAR. Physics of Plasmas, 2014, 21, 012504.	1.9	8
56	Extension of the flow-rate-of-strain tensor formulation of plasma rotation theory to non-axisymmetric tokamaks. Physics of Plasmas, 2015, 22, .	1.9	8
57	Calculation of the radial electric field from a modified Ohm's law. Physics of Plasmas, 2017, 24, .	1.9	8
58	Higher order approximations of the transmission and escape probability method for neutral particle transport in edge plasmas. Physics of Plasmas, 2006, 13, 062509.	1.9	7
59	Fuel Cycle Analysis of the SABR Subcritical Transmutation Reactor Concept. Nuclear Technology, 2010, 172, 48-59.	1.2	7
60	Principles and rationale of the Fusion-Fission Hybrid burner reactor. AIP Conference Proceedings, 2012, , .	0.4	7
61	Analysis of toroidal phasing of resonant magnetic perturbation effects on edge transport in the DIII-D tokamak. Physics of Plasmas, 2013, 20, .	1.9	7
62	The SABrR Concept for a Fission-Fusion Hybrid²³⁸U-to-²³⁹Pu Fissile Production Reactor. Nuclear Technology, 2014, 187, 1-14.	1.2	7
63	Evolution of edge pedestal transport between edge-localized modes in DIII-D. Physics of Plasmas, 2015, 22, .	1.9	7
64	Improved analytical flux surface representation and calculation models for poloidal asymmetries. Physics of Plasmas, 2016, 23, 052505.	1.9	7
65	Interface Current Integral Transport Methods for the Calculation of Neutral Atom Transport in the Edge Region of Fusion Plasmas. Fusion Science and Technology, 2001, 40, 66-78.	1.1	6
66	Rotation Velocities and Radial Electric Field in the Plasma Edge. Contributions To Plasma Physics, 2006, 46, 597-603.	1.1	6
67	Fuel Cycle Analysis of a Subcritical Fast Helium-Cooled Transmutation Reactor with a Fusion Neutron Source. Nuclear Technology, 2007, 158, 94-108.	1.2	6
68	A New Variational Functional for Space-Time Neutronics. Nuclear Science and Engineering, 1997, 125, 101-106.	1.1	5
69	Recent Developments in Plasma Edge Theory. Contributions To Plasma Physics, 2016, 56, 495-503.	1.1	5
70	Solving the Spent Nuclear Fuel Problem by Fissioning Transuranics in Subcritical Advanced Burner Reactors Driven by Tokamak Fusion Neutron Sources. Nuclear Technology, 2017, 200, 15-26.	1.2	5
71	Extensions of ion orbit loss theory. Physics of Plasmas, 2014, 21, 014502.	1.9	4
72	Structure in the Edge Plasma Profiles in Tokamaks. Contributions To Plasma Physics, 2014, 54, 524-528.	1.1	4

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73	A Strategic Opportunity for Magnetic Fusion Energy Development. Journal of Fusion Energy, 2016, 35, 111-116.	1.2	4
74	A Variational Synthesis Nodal Discrete Ordinates Method. Nuclear Science and Engineering, 1999, 132, 181-193.	1.1	3
75	Fluid Theory. , 0, , 85-101.		3
76	Sub-Critical Transmutation Reactors with Tokamak Fusion Neutron Sources Based on ITER Physics and Technology. Fusion Science and Technology, 2007, 52, 719-726.	1.1	3
77	Dynamic Safety Analysis of the SABR Subcritical Transmutation Reactor Concept. Nuclear Technology, 2010, 171, 123-135.	1.2	3
78	The effects of rotation, electric field, and recycling neutrals on determining the edge pedestal density profile. Physics of Plasmas, 2010, 17, 052506.	1.9	3
79	Numerical Investigation of the Generalized Pinch-Diffusion Equations in the Edge Pedestal. Fusion Science and Technology, 2012, 61, 227-235.	1.1	3
80	Interpretation of Diffusive and Nondiffusive Transport in Tokamak Edge Pedestal Measurements. Fusion Science and Technology, 2013, 63, 34-42.	1.1	3
81	Transmutation Fuel Cycle Analyses of the SABR Fission-Fusion Hybrid Burner Reactor for Transuranic and Minor Actinide Fuels. Nuclear Technology, 2013, 182, 274-285.	1.2	3
82	A Tokamak Tritium Production Reactor Design II. Fusion Science and Technology, 1998, 33, 443-455.	0.6	2
83	Effect on the divertor and scrape-off layer plasma properties of the distribution of power and particle influxes from the core. Physics of Plasmas, 2009, 16, 032506.	1.9	2
84	Effect of non-diffusive processes on transport and its interpretation in the tokamak plasma edge. Physics of Plasmas, 2013, 20, .	1.9	2
85	Sensitivity of the interpretation of the experimental ion thermal diffusivity to the determination of the ion conductive heat flux. Physics of Plasmas, 2014, 21, 042508.	1.9	2
86	Dynamic Safety Analysis of a Subcritical Advanced Burner Reactor. Nuclear Technology, 2017, 200, 250-268.	1.2	2
87	A Particle-, Momentum-, and Energy-Conserving Fluid Transport Theory for the Tokamak Plasma Edge. Fusion Science and Technology, 2019, 75, 251-263.	1.1	2
88	Plasma Rotation*. , 0, , 251-266.		1
89	Fusion Reactors and Neutron Sources. , 0, , 501-517.		1
90	Neutron Diffusion Theory. , 0, , 43-100.		1

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91	Reactor Safety. , 0, , 283-302.		1
92	Neutron Transport Theory. , 0, , 303-383.		1
93	Fuel Burnup. , 0, , 197-247.		1
94	A fluid model for the edge pressure pedestal height and width in tokamaks based on the transport constraint of particle, energy, and momentum balance. Physics of Plasmas, 2016, 23, 062515.	1.9	1
95	Confinement Tuning of a 0-D Plasma Dynamics Model. Fusion Science and Technology, 2017, 72, 162-175.	1.1	1
96	On the physics of the pressure and temperature gradients in the edge of tokamak plasmas. Nuclear Fusion, 2018, 58, 046006.	3.5	1
97	Change in ion orbit loss, intrinsic rotation and particle pinch across the Lâ€“H transition in DIII-D plasmas. Plasma Physics and Controlled Fusion, 2019, 61, 055007.	2.1	1
98	Particle transport and density gradient scale lengths in the edge pedestal. Contributions To Plasma Physics, 2004, 44, 100-104.	1.1	0
99	Turbulent Transport. , 0, , 267-284.		0
100	Appendix F: Further Reading. , 0, , 539-541.		0
101	Appendix E: Plasma Formulas1. , 0, , 537-538.		0
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106	Kinetic Theory. , 0, , 65-83.		0
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112	Plasma-Material Interaction. , 0, , 315-330.		0
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126	Perturbation and Variational Methods. , 0, , 483-514.		0

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127	Homogenization. , 0, , 515-540.		0
128	Nodal and Synthesis Methods. , 0, , 541-597.		0
129	Spaceâ€“Time Neutron Kinetics. , 0, , 599-667.		0
130	Neutron Chain Fission Reactors. , 0, , 33-42.		0
131	Neutron Energy Distribution. , 0, , 101-142.		0
132	Appendix C: Step Functions, Delta Functions, and Other Functions. , 0, , 677-680.		0
133	Necessary Extensions and Modification of Fluid Transport Theory for the Tokamak Plasma Edge. Fusion Science and Technology, 2018, 74, 198-210.	1.1	0
134	The dependence of ion orbit loss on ion charge and mass. Physics of Plasmas, 2018, 25, 122506.	1.9	0
135	A Composite Neoclassical Toroidal Viscosity Model Incorporating Torques from both Axisymmetric and Nonaxisymmetric Tokamak Magnetic Fields. Fusion Science and Technology, 2019, 75, 245-250.	1.1	0
136	Radial Transport Fluxes and Distributions Determined by Requirements for Particle, Momentum, and Energy Conservation. Fusion Science and Technology, 2020, 76, 153-156.	1.1	0
137	A Nodal Model for Tokamak Burning Plasma Space-Time Dynamics. Fusion Science and Technology, 2021, 77, 109-118.	1.1	0
138	Appendix B: Some Useful Mathematical Formulas. , 0, , 675-676.		0
139	Appendix D: Some Properties of Special Functions. , 0, , 681-685.		0