Craig Beidler

List of Publications by Year
in descending order

66 papers	2,857 citations	147801 31 h-index	175258 52 g-index
67 all docs	67 docs citations	67 times ranked	1081 citing authors

#	ARTICLE	IF	CITATIONS
1	Confinement in electron heated plasmas in Wendelstein 7-X and ASDEX Upgrade; the necessity to control turbulent transport. Nuclear Fusion, 2022, 62, 016015.	3.5	7
2	Plasma flow measurements based on charge exchange recombination spectroscopy in the Wendelstein 7-X stellarator. Nuclear Fusion, 2022, 62, 106005.	3.5	2
3	Measurements of the parameter dependencies of the bootstrap current in the W7-X stellarator. Nuclear Fusion, 2021, 61, 036024.	3.5	13
4	Wendelstein 7-X on the path to long-pulse high-performance operation. Fusion Engineering and Design, 2021, 167, 112381.	1.9	10
5	Understanding detachment of the W7-X island divertor. Nuclear Fusion, 2021, 61, 086012.	3.5	29
6	Ion temperature clamping in Wendelstein 7-X electron cyclotron heated plasmas. Nuclear Fusion, 2021, 61, 116072.	3.5	27
7	Demonstration of reduced neoclassical energy transport in Wendelstein 7-X. Nature, 2021, 596, 221-226.	27.8	69
8	Bolometer tomography on Wendelstein 7-X for study of radiation asymmetry. Nuclear Fusion, 2021, 61, 116043.	3.5	8
9	Plasma radiation behavior approaching high-radiation scenarios in W7-X. Nuclear Fusion, 2021, 61, 126002.	3.5	5
10	A general stellarator version of the systems code PROCESS. Nuclear Fusion, 2021, 61, 126021.	3.5	6
11	Validation of theory-based models for the control of plasma currents in W7-X divertor plasmas. Nuclear Fusion, 2021, 61, 126022.	3.5	4
12	Impact of Magnetic Field Configuration on Heat Transport in Stellarators and Heliotrons. Physical Review Letters, 2021, 127, 225001.	7.8	8
13	Turbulence Mechanisms of Enhanced Performance Stellarator Plasmas. Physical Review Letters, 2020, 125, 075001.	7.8	32
14	Enhanced energy confinement after series of pellets in Wendelstein 7-X. Plasma Physics and Controlled Fusion, 2020, 62, 055012.	2.1	17
15	Investigation of the neoclassical ambipolar electric field in ion-root plasmas on W7-X. Nuclear Fusion, 2020, 60, 036021.	3.5	16
16	Statistical description of collisionless <i>Î±</i>-particle transport in cases of broken symmetry: from ITER to quasi-toroidally symmetric stellarators. Nuclear Fusion, 2020, 60, 056009.	3.5	2
17	Increasing the density in Wendelstein 7-X: benefits and limitations. Nuclear Fusion, 2020, 60, 036020.	3.5	27
18	Performance of Wendelstein 7-X stellarator plasmas during the first divertor operation phase. Physics of Plasmas, 2019, 26, .	1.9	83

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19	Pellet fueling experiments in Wendelstein 7-X. Plasma Physics and Controlled Fusion, 2019, 61, 095012.	2.1	27
20	First Observation of a Stable Highly Dissipative Divertor Plasma Regime on the Wendelstein 7-X Stellarator. Physical Review Letters, 2019, 123, 025002.	7.8	33
21	Observation of anomalous impurity transport during low-density experiments in W7-X with laser blow-off injections of iron. Nuclear Fusion, 2019, 59, 046009.	3.5	38
22	Optimisation of stellarator equilibria with ROSE. Nuclear Fusion, 2019, 59, 016010.	3.5	41
23	Properties of a new quasi-axisymmetric configuration. Nuclear Fusion, 2019, 59, 026014.	3.5	58
24	Electron-cyclotron-resonance heating in Wendelstein 7-X: A versatile heating and current-drive method and a tool for in-depth physics studies. Plasma Physics and Controlled Fusion, 2019, 61, 014037.	2.1	43
25	Core radial electric field and transport in Wendelstein 7-X plasmas. Physics of Plasmas, 2018, 25, .	1.9	47
26	Global energy confinement in the initial limiter configuration of Wendelstein 7-X. Nuclear Fusion, 2018, 58, 106029.	3.5	16
27	(Expected difficulties with) density-profile control in W7-X high-performance plasmas. Plasma Physics and Controlled Fusion, 2018, 60, 105008.	2.1	11
28	Magnetic configuration effects on the Wendelstein 7-X stellarator. Nature Physics, 2018, 14, 855-860.	16.7	110
29	Energy confinement of hydrogen and deuterium electron-root plasmas in the Large Helical Device. Nuclear Fusion, 2018, 58, 106025.	3.5	9
30	The effect of transient density profile shaping on transport in large stellarators and heliotrons. Nuclear Fusion, 2017, 57, 066016.	3.5	7
31	Electrostatic potential variation on the flux surface and its impact on impurity transport. Nuclear Fusion, 2017, 57, 056004.	3.5	39
32	Confinement in Wendelstein 7-X limiter plasmas. Nuclear Fusion, 2017, 57, 086010.	3.5	15
33	System Code Analysis of HELIAS-Type Fusion Reactor and Economic Comparison With Tokamaks. IEEE Transactions on Plasma Science, 2016, 44, 1576-1585.	1.3	7
34	From W7-X to a HELIAS fusion power plant: motivation and options for an intermediate-step burning-plasma stellarator. Plasma Physics and Controlled Fusion, 2016, 58, 074006.	2.1	37
35	On the W7-X divertor performance under detached conditions. Nuclear Fusion, 2016, 56, 126011.	3.5	18
36	Wendelstein 7-X Programâ€”Demonstration of a Stellarator Option for Fusion Energy. IEEE Transactions on Plasma Science, 2016, 44, 1466-1471.	1.3	28

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37	Limits of Confinement Enhancement for Stellarators. Fusion Science and Technology, 2015, 68, 727-740.	1.1	9
38	Systems studies of HELIAS power plants and comparison to tokamaks. , 2015, , .		0
39	HELIAS module development for systems codes. Fusion Engineering and Design, 2015, 91, 60-66.	1.9	66
40	Physics in the magnetic configuration space of W7-X. Plasma Physics and Controlled Fusion, 2015, 57, 014004.	2.1	86
41	Implementation and verification of a HELIAS module for the systems code PROCESS. Fusion Engineering and Design, 2015, 98-99, 2227-2230.	1.9	8
42	Selective ECR heating of trapped/passing electrons in the W7-X stellarator. , 2014, , .		1
43	Towards assembly completion and preparation of experimental campaigns of Wendelstein 7-X in the perspective of a path to a stellarator fusion power plant. Fusion Engineering and Design, 2013, 88, 461-465.	1.9	56
44	Inter-machine validation study of neoclassical transport modelling in medium- to high-density stellarator-heliotron plasmas. Nuclear Fusion, 2013, 53, 063022.	3.5	40
45	Stellarator and tokamak plasmas: a comparison. Plasma Physics and Controlled Fusion, 2012, 54, 124009.	2.1	111
46	Benchmarking of the mono-energetic transport coefficientsâ€"results from the International Collaboration on Neoclassical Transport in Stellarators (ICNTS). Nuclear Fusion, 2011, 51, 076001.	3.5	118
47	Calculation of the bootstrap current profile for the TJ-II stellarator. Plasma Physics and Controlled Fusion, 2011, 53, 115014.	2.1	27
48	Neoclassical transport simulations for stellarators. Physics of Plasmas, 2011, 18, .	1.9	84
49	Effects of Net Currents on the Magnetic Configuration of W7-X. Contributions To Plasma Physics, 2010, 50, 770-774.	1.1	30
50	Momentum correction techniques for neoclassical transport in stellarators. Physics of Plasmas, 2009, 16, .	1.9	50
51	Core electron-root confinement (CERC) in helical plasmas. Nuclear Fusion, 2007, 47, 1213-1219.	3.5	97
52	Assessment of Global Stellarator Confinement: Status of the International Stellarator Confinement Database. Fusion Science and Technology, 2007, 51, 1-7.	1.1	13
53	Physical model assessment of the energy confinement time scaling in stellarators. Nuclear Fusion, 2007, 47, 1265-1273.	3.5	34
54	Common Features of Core Electron-Root Confinement in Helical Devices. Fusion Science and Technology, 2006, 50, 327-342.	1.1	43

#	Article	IF	Citations
55	Current Control by ECCD for W7-X. Fusion Science and Technology, 2006, 50, 387-394.	1.1	53
56	Control of the radial electric field shear by modification of the magnetic field configuration in LHD. Nuclear Fusion, 2005, 45, 391-398.	3.5	51
57	Characterization of energy confinement in net-current free plasmas using the extended International Stellarator Database. Nuclear Fusion, 2005, 45, 1684-1693.	3.5	215
58	Experimental check of neoclassical predictions for the radial electric field in a stellarator. Nuclear Fusion, 2003, 43, L11-L13.	3.5	22
59	Concept of a Helias ignition experiment. Nuclear Fusion, 2003, 43, 889-898.	3.5	17
60	Stochastic diffusion of energetic ions in optimized stellarators. Physics of Plasmas, 2001, 8, 2731-2738.	1.9	39
61	The Helias reactor HSR4/18. Nuclear Fusion, 2001, 41, 1759-1766.	3.5	67
62	The neoclassical â€œElectron Rootâ€•feature in the Wendelstein-7-AS stellarator. Physics of Plasmas, 2000, 7, 295-311.	1.9	106
63	Density control problems in large stellarators with neoclassical transport. Plasma Physics and Controlled Fusion, 1999, 41, 1135-1153.	2.1	80
64	A general solution of the ripple-averaged kinetic equation (GSRAKE). Plasma Physics and Controlled Fusion, 1995, 37, 463-490.	2.1	86
65	Ripple transport in helical-axis advanced stellarators: a comparison with classical stellarator/torsatrons. Plasma Physics and Controlled Fusion, 1994, 36, 317-353.	2.1	63
66	Physics and Engineering Design for Wendelstein VII-X. Fusion Science and Technology, 1990, 17, 148-168.	0.6	235