Hans Maier

List of Publications by Year in descending order

Source: https://exaly.com/author-pdf/10196469/publications.pdf

Version: 2024-02-01

114 papers	4,566 citations	76196 40 h-index	110170 64 g-index
114 all docs	114 docs citations	114 times ranked	2810 citing authors

#	Article	IF	Citations
1	Recent progress in research on tungsten materials for nuclear fusion applications in Europe. Journal of Nuclear Materials, 2013, 432, 482-500.	1.3	610
2	Overview of the ITER-like wall project. Physica Scripta, 2007, T128, 137-143.	1.2	183
3	Review on the EFDA programme on tungsten materials technology and science. Journal of Nuclear Materials, 2011, 417, 463-467.	1.3	157
4	Overview on plasma operation with a full tungsten wall in ASDEX Upgrade. Journal of Nuclear Materials, 2013, 438, S34-S41.	1.3	156
5	Deuterium permeation through Eurofer and Î±-alumina coated Eurofer. Journal of Nuclear Materials, 2004, 328, 103-106.	1.3	141
6	Conclusions about the use of tungsten in the divertor of ASDEX Upgrade. Journal of Nuclear Materials, 1999, 266-269, 207-216.	1.3	126
7	Erbium oxide as a new promising tritium permeation barrier. Journal of Nuclear Materials, 2007, 367-370, 1033-1037.	1.3	103
8	Deuterium permeation behavior of erbium oxide coating on austenitic, ferritic, and ferritic/martensitic steels. Fusion Engineering and Design, 2009, 84, 590-592.	1.0	83
9	Final steps to an all tungsten divertor tokamak. Journal of Nuclear Materials, 2007, 363-365, 52-59.	1.3	80
10	New results from the tungsten programme at ASDEX Upgrade. Journal of Nuclear Materials, 2003, 313-316, 116-126.	1.3	73
11	Microstructure change and deuterium permeation behavior of erbium oxide coating. Journal of Nuclear Materials, 2011, 417, 1241-1244.	1.3	72
12	Characterization of Î±-phase aluminum oxide films deposited by filtered vacuum arc. Surface and Coatings Technology, 2001, 142-144, 260-264.	2.2	71
13	A brief summary of the progress on the EFDA tungsten materials program. Journal of Nuclear Materials, 2013, 442, S173-S180.	1.3	69
14	Material testing facilities and programs for plasma-facing component testing. Nuclear Fusion, 2017, 57, 092012.	1.6	68
15	Overview of the JET ITER-like Wall Project. Fusion Engineering and Design, 2010, 85, 1581-1586.	1.0	67
16	R&D on full tungsten divertor and beryllium wall for JET ITER-like wall project. Fusion Engineering and Design, 2007, 82, 1839-1845.	1.0	66
17	Tungsten coatings deposited on CFC tiles by the combined magnetron sputtering and ion implantation technique. Physica Scripta, 2007, T128, 171-174.	1.2	65
18	Investigations on tungsten heavy alloys for use as plasma facing material. Fusion Engineering and Design, 2017, 124, 450-454.	1.0	62

#	Article	IF	Citations
19	Ten years of W programme in ASDEX Upgradeâ€"challenges and conclusions. Physica Scripta, 2009, T138, 014038.	1.2	60
20	ICRF operation with improved antennas in ASDEX Upgrade with W wall. Nuclear Fusion, 2013, 53, 093018.	1.6	60
21	Industrial scale 10Î¼mW coating of CFC tiles for ITER-like Wall Project at JET. Fusion Engineering and Design, 2009, 84, 1662-1665.	1.0	59
22	Properties of tungsten coatings deposited onto fine grain graphite by different methods. Surface and Coatings Technology, 2001, 142-144, 733-737.	2.2	58
23	Crystal structure characterisation of filtered arc deposited alumina coatings: temperature and bias voltage. Surface and Coatings Technology, 2003, 174-175, 606-610.	2.2	57
24	Tungsten as plasma-facing material in ASDEX Upgrade. Fusion Engineering and Design, 2003, 65, 367-374.	1.0	57
25	Development of W coatings for fusion applications. Fusion Engineering and Design, 2011, 86, 1677-1680.	1.0	56
26	Suppression of large edge localized modes in high confinement DIII-D plasmas with a stochastic magnetic boundary. Journal of Nuclear Materials, 2005, 337-339, 691-696.	1.3	54
27	Crystallization behavior of arc-deposited ceramic barrier coatings. Journal of Nuclear Materials, 2004, 329-333, 1403-1406.	1.3	53
28	Two-Level System Dynamics in the Long-Time Limit: A Power-Law Time Dependence. Physical Review Letters, 1996, 76, 2085-2088.	2.9	52
29	Results on the use of tungsten heavy alloys in the divertor of ASDEX Upgrade. Journal of Nuclear Materials, 2018, 511, 567-573.	1.3	50
30	Development of divertor tungsten coatings for the JET ITER-like wall. Journal of Nuclear Materials, 2009, 390-391, 934-937.	1.3	49
31	Overview of ASDEX Upgrade results. Nuclear Fusion, 1999, 39, 1321-1336.	1.6	47
32	Carbon layers in the divertor of ASDEX Upgrade. Journal of Nuclear Materials, 2001, 290-293, 317-320.	1.3	46
33	Tungsten erosion in the outer divertor of JET. Journal of Nuclear Materials, 2007, 363-365, 101-106.	1.3	46
34	Hydrogen permeation barrier performance characterization of vapor deposited amorphous aluminum oxide films using coloration of tungsten oxide. Surface and Coatings Technology, 2002, 153, 114-118.	2.2	45
35	Formation of deuteriumâ€"carbon inventories in gaps of plasma facing components. Journal of Nuclear Materials, 2007, 363-365, 870-876.	1.3	45
36	Operational conditions in a W-clad tokamak. Journal of Nuclear Materials, 2007, 367-370, 1497-1502.	1.3	45

#	Article	IF	Citations
37	Impact of combined transient plasma/heat loads on tungsten performance below and above recrystallization temperature. Nuclear Fusion, 2015, 55, 123004.	1.6	45
38	Current status of the JET ITER-like Wall Project. Physica Scripta, 2009, T138, 014030.	1.2	42
39	Similarities in divertor erosion/redeposition and deuterium retention patterns between the tokamaks ASDEX Upgrade, DIII-D and JET. Nuclear Fusion, 1999, 39, 1025-1029.	1.6	40
40	Erosion and deposition in the ASDEX Upgrade tungsten divertor experiment. Journal of Nuclear Materials, 1999, 266-269, 1003-1008.	1.3	40
41	Determination of the tungsten divertor retention at ASDEX Upgrade using a sublimation probe. Plasma Physics and Controlled Fusion, 2002, 44, 2091-2100.	0.9	40
42	Fabrication of yttrium oxide and erbium oxide coatings by PVD methods. Fusion Engineering and Design, 2005, 75-79, 737-740.	1.0	40
43	Investigation of tungsten coatings on graphite and CFC. Physica Scripta, 2007, T128, 150-156.	1.2	40
44	Investigation of W components exposed to high thermal and high H/He fluxes. Journal of Nuclear Materials, 2011, 417, 495-498.	1.3	37
45	Tungsten coatings for the JET ITER-like wall project. Journal of Nuclear Materials, 2007, 363-365, 1246-1250.	1.3	35
46	Erosion study of Feâ€“W binary mixed layer prepared as model system for RAFM steel. Journal of Nuclear Materials, 2015, 463, 272-275.	1.3	35
47	Plasma operation with tungsten tiles at the central column of ASDEX Upgrade. Journal of Nuclear Materials, 2001, 290-293, 206-210.	1.3	34
48	Overview of ASDEX Upgrade results. Nuclear Fusion, 2001, 41, 1369-1389.	1.6	34
49	Monoclinic B-phase erbium sesquioxide (Er2O3) thin films by filtered cathodic arc deposition. Scripta Materialia, 2009, 61, 789-792.	2.6	34
50	Filament transport, warm ions and erosion in ASDEX Upgrade L-modes. Nuclear Fusion, 2015, 55, 033018.	1.6	34
51	Tungsten coating on JET divertor tiles for erosion/deposition studies. Fusion Engineering and Design, 2003, 66-68, 241-245.	1.0	33
52	Tungsten and beryllium armour development for the JET ITER-like wall project. Nuclear Fusion, 2007, 47, 222-227.	1.6	32
53	Recent developments toward the use of tungsten as armour material in plasma facing components. Fusion Engineering and Design, 2007, 82, 1700-1705.	1.0	32
54	Optical Detection of Electric Two Level System Dipoles in a Polymeric Glass. Physical Review Letters, 1995, 74, 5252-5255.	2.9	29

#	Article	IF	Citations
55	Performance of tungsten coatings as plasma facing components used in ASDEX Upgrade. Journal of Nuclear Materials, 1998, 258-263, 921-926.	1.3	29
56	Development of tungsten coated first wall and high heat flux components for application in ASDEX Upgrade. Journal of Nuclear Materials, 2002, 307-311, 116-120.	1.3	29
57	Qualification of tungsten coatings on plasma-facing components for JET. Physica Scripta, 2009, T138, 014031.	1.2	29
58	Gas-driven Deuterium Permeation through Al2O3 Coated Samples. Physica Scripta, 2004, , 119.	1.2	28
59	Modeling of Tritium Permeation Through Erbium Oxide Coatings. Fusion Science and Technology, 2011, 60, 389-393.	0.6	26
60	Plasma Facing Materials for the JET ITER-Like Wall. Fusion Science and Technology, 2012, 62, 1-8.	0.6	26
61	Plasma surface interaction with tungsten in ASDEX Upgrade. Journal of Nuclear Materials, 2005, 337-339, 852-856.	1.3	25
62	Failure modes of vacuum plasma spray tungsten coating created on carbon fibre composites under thermal loads. Journal of Nuclear Materials, 2009, 392, 40-44.	1.3	25
63	Erosion and migration of tungsten employed at the main chamber first wall of ASDEX Upgrade. Journal of Nuclear Materials, 2003, 313-316, 327-332.	1.3	24
64	Equilibrium and nonequilibrium tunneling dynamics and spectral diffusion in the millikelvin regime. Journal of Luminescence, 1995, 64, 87-93.	1.5	22
65	Fabrication and deuterium permeation properties of erbia-metal multilayer coatings. Journal of Nuclear Materials, 2013, 442, S592-S596.	1.3	22
66	Investigation of European tungsten materials exposed to high heat flux H/He neutral beams. Journal of Nuclear Materials, 2013, 442, S256-S260.	1.3	21
67	Thermal Influence on Erbium Oxide Coating for Tritium Permeation Barrier. Fusion Science and Technology, 2009, 56, 309-313.	0.6	19
68	Tungsten erosion in the baffle and outboard regions of the ITER-like ASDEX Upgrade divertor. Journal of Nuclear Materials, 2004, 335, 515-519.	1.3	18
69	Interacting Tunneling States: A Hole-Burning Study of Spectral Diffusion. Molecular Crystals and Liquid Crystals, 1996, 291, 11-16.	0.3	15
70	Hydrogen isotope inventories in the ASDEX Upgrade tungsten coated divertor tiles. Journal of Nuclear Materials, 1999, 266-269, 1296-1302.	1.3	15
71	Erosion of tungsten coated tiles on the central column of ASDEX Upgrade. Nuclear Fusion, 2000, 40, 1441-1444.	1.6	15
72	Development of Tungsten Coatings for Application in Fusion Experiments. Materials Science Forum, 2005, 475-479, 1377-1382.	0.3	15

#	Article	IF	Citations
73	Deuterium retention in solid and liquid tin after low-temperature plasma exposure. Nuclear Fusion, 2020, 60, 106007.	1.6	15
74	Deuterium retention in tungsten based materials for fusion applications. Nuclear Materials and Energy, 2019, 18, 245-249.	0.6	14
75	A solid tungsten divertor for ASDEX Upgrade. Physica Scripta, 2011, T145, 014068.	1.2	14
76	Erosion behavior of actively cooled tungsten under H/He high heat flux load. Journal of Nuclear Materials, 2013, 438, S921-S924.	1.3	13
77	The impact of thermal fatigue and carbidization on the W coatings deposited on CFC tiles for the ITER-like Wall project at JET. Fusion Engineering and Design, 2013, 88, 1690-1693.	1.0	13
78	Synergistic effects of ELMs and steady state H and H/He irradiation on tungsten. Fusion Engineering and Design, 2015, 98-99, 2020-2024.	1.0	13
79	In-out asymmetry of divertor temperatures in tokamaks. Nuclear Fusion, 2001, 41, 1695-1701.	1.6	11
80	Performance and statistical quality assessment of CFC tile bonding on the pre-series elements of the Wendelstein 7-X divertor. Fusion Engineering and Design, 2011, 86, 1685-1688.	1.0	11
81	Performance of W coatings on CFC with respect to carbide formation. Journal of Nuclear Materials, 2011, 415, S310-S312.	1.3	11
82	Erosion of tungsten and steel in the main chamber of ASDEX Upgrade. Journal of Nuclear Materials, 2015, 463, 162-165.	1.3	11
83	Tungsten surface enrichment in EUROFER and Fe-W model systems studied by high-resolution time-of-flight rutherford backscattering spectroscopy. Nuclear Materials and Energy, 2018, 17, 147-151.	0.6	11
84	Long-time scale spectral diffusion in polymer glass. Journal of Chemical Physics, 2000, 113, 876-882.	1.2	10
85	Chemical Erosion Behaviour of Doped Graphites under Hydrogen Impact: A Comparison of Ion Beam Experiments and Planar Inductively Coupled RF Plasmas. Physica Scripta, 2004, T111, 123.	1.2	10
86	H/He irradiation on tungsten exposed to ELM-like thermal shocks. Fusion Engineering and Design, 2016, 109-111, 169-174.	1.0	10
87	First demonstration of non-destructive tests on tungsten-coated JET divertor CFC tiles in the electron beam facility JUDITH-2. Physica Scripta, 2009, T138, 014034.	1.2	9
88	Surface morphology changes of tungsten exposed to high heat loading with mixed hydrogen/helium beams. Journal of Nuclear Materials, 2014, 455, 681-684.	1.3	9
89	Tungsten erosion under combined hydrogen/helium high heat flux loading. Physica Scripta, 2014, T159, 014019.	1.2	9
90	Gamma-ray irradiation effect on deuterium retention in reduced activation ferritic/martensitic steel and ceramic coatings. Journal of Nuclear Materials, 2020, 539, 152321.	1.3	9

#	Article	IF	Citations
91	Light-induced spectral diffusion in heavily doped polymers. Physical Review B, 1998, 57, R5567-R5570.	1.1	8
92	Erosion and migration of tungsten employed at the central column heat shield of ASDEX Upgrade. Journal of Nuclear Materials, 2002, 307-311, 139-143.	1.3	8
93	Tungsten heavy alloy: an alternative plasma-facing material in terms of hydrogen isotope retention. Nuclear Fusion, 2020, 60, 126044.	1.6	8
94	Studies of tungsten erosion at the inner and outer main chamber wall of the ASDEX Upgrade tokamak. Journal of Nuclear Materials, 2001, 290-293, 326-330.	1.3	7
95	Tungsten limiter tests in ASDEX Upgrade. Journal of Nuclear Materials, 2005, 337-339, 104-108.	1.3	7
96	Tungsten coatings under high thermal loads in JET and Magnum-PSI. Physica Scripta, 2014, T159, 014025.	1.2	7
97	Carbide formation in tungsten coatings on carbon-fibre reinforced carbon substrates. Thin Solid Films, 2013, 531, 21-25.	0.8	6
98	Determination of the temperature dependence of tungsten erosion. Journal of Nuclear Materials, 2015, 463, 337-340.	1.3	6
99	Potential approach of IR-analysis for high heat flux quality assessment of divertor tungsten monoblock components. Fusion Engineering and Design, 2017, 124, 202-206.	1.0	6
100	Optical investigation of electric-field-induced relaxations in amorphous solids at low temperatures. Journal of Luminescence, 1998, 76-77, 283-287.	1.5	5
101	Optical Investigation of Low-Temperature Electric-Field-Induced Relaxations in Amorphous Solids. Journal of Physical Chemistry B, 1998, 102, 10150-10157.	1.2	5
102	Experimental resolution of deuterium and hydrogen depth profiling with the nuclear reactions D(3He,p)Î± and p(15N,Î±,Î³)12C. Nuclear Instruments & Methods in Physics Research B, 2013, 317, 121-125.	0.6	5
103	Kinetics of carbide formation in the molybdenumâ€“tungsten coatings used in the ITER-like Wall. Physica Scripta, 2016, T167, 014048.	1.2	5
104	Tungsten coating by ATC plasma spraying on CFC for WEST tokamak. Physica Scripta, 2017, T170, 014008.	1.2	5
105	A comparison of B2-Eirene code results and ASDEX Upgrade Divertor II. European Physical Journal D, 1998, 48, 327-332.	0.4	4
106	Plasmaâ€“wall interaction at the ASDEX Upgrade tungsten heat shield. Fusion Engineering and Design, 2001, 56-57, 189-193.	1.0	4
107	Thermal shock behaviour of H and H/He-exposed tungsten at high temperature. Physica Scripta, 2016, T167, 014008.	1.2	4
108	Advanced x-ray imaging of metal-coated/impregnated plasma-facing composite materials. Physica Scripta, 2011, T145, 014073.	1.2	3

#	Article	IF	Citations
109	Influence of deposition temperature and bias voltage on the crystalline phase of Er2O3 thin films deposited by filtered cathodic arc. Journal of Nuclear Materials, 2011, 417, 798-801.	1.3	3
110	Deuterium retention in tungsten fiber-reinforced tungsten composites. Nuclear Materials and Energy, 2021, 27, 100972.	0.6	3
111	High heat flux testing of mm thick tungsten coatings on carbon-fiber composites for the JT-60SA tokamak. Physica Scripta, 2017, T170, 014029.	1.2	2
112	Non-logarithmic spectral diffusion dynamics evidence for interactions between tunneling centers. Journal of Luminescence, 1997, 72-74, 413-414.	1.5	1
113	Wetting and Fracture Characteristics of TiC_x Coated C/Cu Braze Joints. Advanced Materials Research, 0, 59, 230-236.	0.3	1
114	MATERIALS FOR THE PLASMA-INTERACTIVE COMPONENTS OF FUSION DEVICES. High Temperature Material Processes, 2011, 15, 313-320.	0.2	0