

# Hans Maier

## List of Publications by Year in descending order

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papers

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76196

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114  
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114  
docs citations

114  
times ranked

2810  
citing authors

#	ARTICLE	IF	CITATIONS
1	Deuterium retention in tungsten fiber-reinforced tungsten composites. Nuclear Materials and Energy, 2021, 27, 100972.	0.6	3
2	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
3	Deuterium retention in solid and liquid tin after low-temperature plasma exposure. Nuclear Fusion, 2020, 60, 106007.	1.6	15
4	Tungsten heavy alloy: an alternative plasma-facing material in terms of hydrogen isotope retention. Nuclear Fusion, 2020, 60, 126044.	1.6	8
5	Deuterium retention in tungsten based materials for fusion applications. Nuclear Materials and Energy, 2019, 18, 245-249.	0.6	14
6	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
7	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
8	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
9	Investigations on tungsten heavy alloys for use as plasma facing material. Fusion Engineering and Design, 2017, 124, 450-454.	1.0	62
10	Material testing facilities and programs for plasma-facing component testing. Nuclear Fusion, 2017, 57, 092012.	1.6	68
11	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
12	Tungsten coating by ATC plasma spraying on CFC for WEST tokamak. Physica Scripta, 2017, T170, 014008.	1.2	5
13	Kinetics of carbide formation in the molybdenum-tungsten coatings used in the ITER-like Wall. Physica Scripta, 2016, T167, 014048.	1.2	5
14	Thermal shock behaviour of H and H/He-exposed tungsten at high temperature. Physica Scripta, 2016, T167, 014008.	1.2	4
15	H/He irradiation on tungsten exposed to ELM-like thermal shocks. Fusion Engineering and Design, 2016, 109-111, 169-174.	1.0	10
16	Erosion of tungsten and steel in the main chamber of ASDEX Upgrade. Journal of Nuclear Materials, 2015, 463, 162-165.	1.3	11
17	Impact of combined transient plasma/heat loads on tungsten performance below and above recrystallization temperature. Nuclear Fusion, 2015, 55, 123004.	1.6	45
18	Filament transport, warm ions and erosion in ASDEX Upgrade L-modes. Nuclear Fusion, 2015, 55, 033018.	1.6	34

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19	Erosion study of Fe-W binary mixed layer prepared as model system for RAFM steel. Journal of Nuclear Materials, 2015, 463, 272-275.	1.3	35
20	Determination of the temperature dependence of tungsten erosion. Journal of Nuclear Materials, 2015, 463, 337-340.	1.3	6
21	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
22	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
23	Tungsten coatings under high thermal loads in JET and Magnum-PSI. Physica Scripta, 2014, T159, 014025.	1.2	7
24	Tungsten erosion under combined hydrogen/helium high heat flux loading. Physica Scripta, 2014, T159, 014019.	1.2	9
25	Erosion behavior of actively cooled tungsten under H/He high heat flux load. Journal of Nuclear Materials, 2013, 438, S921-S924.	1.3	13
26	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
27	Fabrication and deuterium permeation properties of erbia-metal multilayer coatings. Journal of Nuclear Materials, 2013, 442, S592-S596.	1.3	22
28	A brief summary of the progress on the EFDA tungsten materials program. Journal of Nuclear Materials, 2013, 442, S173-S180.	1.3	69
29	Overview on plasma operation with a full tungsten wall in ASDEX Upgrade. Journal of Nuclear Materials, 2013, 438, S34-S41.	1.3	156
30	Carbide formation in tungsten coatings on carbon-fibre reinforced carbon substrates. Thin Solid Films, 2013, 531, 21-25.	0.8	6
31	Experimental resolution of deuterium and hydrogen depth profiling with the nuclear reactions $D(3He,p)^{12}C$ and $p(15N,\alpha)^{12}C$ . Nuclear Instruments & Methods in Physics Research B, 2013, 317, 121-125.	0.6	5
32	ICRF operation with improved antennas in ASDEX Upgrade with W wall. Nuclear Fusion, 2013, 53, 093018.	1.6	60
33	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
34	Recent progress in research on tungsten materials for nuclear fusion applications in Europe. Journal of Nuclear Materials, 2013, 432, 482-500.	1.3	610
35	Plasma Facing Materials for the JET ITER-Like Wall. Fusion Science and Technology, 2012, 62, 1-8.	0.6	26
36	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

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37	Development of W coatings for fusion applications. Fusion Engineering and Design, 2011, 86, 1677-1680.	1.0	56
38	Advanced x-ray imaging of metal-coated/impregnated plasma-facing composite materials. Physica Scripta, 2011, T145, 014073.	1.2	3
39	Modeling of Tritium Permeation Through Erbium Oxide Coatings. Fusion Science and Technology, 2011, 60, 389-393.	0.6	26
40	Performance of W coatings on CFC with respect to carbide formation. Journal of Nuclear Materials, 2011, 415, S310-S312.	1.3	11
41	Influence of deposition temperature and bias voltage on the crystalline phase of Er <sub>2</sub> O <sub>3</sub> thin films deposited by filtered cathodic arc. Journal of Nuclear Materials, 2011, 417, 798-801.	1.3	3
42	Investigation of W components exposed to high thermal and high H/He fluxes. Journal of Nuclear Materials, 2011, 417, 495-498.	1.3	37
43	Microstructure change and deuterium permeation behavior of erbium oxide coating. Journal of Nuclear Materials, 2011, 417, 1241-1244.	1.3	72
44	Review on the EFDA programme on tungsten materials technology and science. Journal of Nuclear Materials, 2011, 417, 463-467.	1.3	157
45	A solid tungsten divertor for ASDEX Upgrade. Physica Scripta, 2011, T145, 014068.	1.2	14
46	MATERIALS FOR THE PLASMA-INTERACTIVE COMPONENTS OF FUSION DEVICES. High Temperature Material Processes, 2011, 15, 313-320.	0.2	0
47	Overview of the JET ITER-like Wall Project. Fusion Engineering and Design, 2010, 85, 1581-1586.	1.0	67
48	Ten years of W programme in ASDEX Upgrade – challenges and conclusions. Physica Scripta, 2009, T138, 014038.	1.2	60
49	Current status of the JET ITER-like Wall Project. Physica Scripta, 2009, T138, 014030.	1.2	42
50	Monoclinic B-phase erbium sesquioxide (Er <sub>2</sub> O <sub>3</sub> ) thin films by filtered cathodic arc deposition. Scripta Materialia, 2009, 61, 789-792.	2.6	34
51	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
52	Industrial scale 10 <sup>1</sup> / <sub>4</sub> mW coating of CFC tiles for ITER-like Wall Project at JET. Fusion Engineering and Design, 2009, 84, 1662-1665.	1.0	59
53	Development of divertor tungsten coatings for the JET ITER-like wall. Journal of Nuclear Materials, 2009, 390-391, 934-937.	1.3	49
54	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

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55	Qualification of tungsten coatings on plasma-facing components for JET. Physica Scripta, 2009, T138, 014031.	1.2	29
56	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
57	Thermal Influence on Erbium Oxide Coating for Tritium Permeation Barrier. Fusion Science and Technology, 2009, 56, 309-313.	0.6	19
58	Overview of the ITER-like wall project. Physica Scripta, 2007, T128, 137-143.	1.2	183
59	Investigation of tungsten coatings on graphite and CFC. Physica Scripta, 2007, T128, 150-156.	1.2	40
60	Tungsten and beryllium armour development for the JET ITER-like wall project. Nuclear Fusion, 2007, 47, 222-227.	1.6	32
61	Tungsten coatings deposited on CFC tiles by the combined magnetron sputtering and ion implantation technique. Physica Scripta, 2007, T128, 171-174.	1.2	65
62	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
63	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
64	Final steps to an all tungsten divertor tokamak. Journal of Nuclear Materials, 2007, 363-365, 52-59.	1.3	80
65	Tungsten erosion in the outer divertor of JET. Journal of Nuclear Materials, 2007, 363-365, 101-106.	1.3	46
66	Formation of deuterium- <sup>13</sup> C inventories in gaps of plasma facing components. Journal of Nuclear Materials, 2007, 363-365, 870-876.	1.3	45
67	Erbium oxide as a new promising tritium permeation barrier. Journal of Nuclear Materials, 2007, 367-370, 1033-1037.	1.3	103
68	Operational conditions in a W-clad tokamak. Journal of Nuclear Materials, 2007, 367-370, 1497-1502.	1.3	45
69	Tungsten coatings for the JET ITER-like wall project. Journal of Nuclear Materials, 2007, 363-365, 1246-1250.	1.3	35
70	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
71	Plasma surface interaction with tungsten in ASDEX Upgrade. Journal of Nuclear Materials, 2005, 337-339, 852-856.	1.3	25
72	Tungsten limiter tests in ASDEX Upgrade. Journal of Nuclear Materials, 2005, 337-339, 104-108.	1.3	7

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73	Fabrication of yttrium oxide and erbium oxide coatings by PVD methods. Fusion Engineering and Design, 2005, 75-79, 737-740.	1.0	40
74	Development of Tungsten Coatings for Application in Fusion Experiments. Materials Science Forum, 2005, 475-479, 1377-1382.	0.3	15
75	Deuterium permeation through Eurofer and $\hat{\Gamma}$ -alumina coated Eurofer. Journal of Nuclear Materials, 2004, 328, 103-106.	1.3	141
76	Crystallization behavior of arc-deposited ceramic barrier coatings. Journal of Nuclear Materials, 2004, 329-333, 1403-1406.	1.3	53
77	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
78	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
79	Gas-driven Deuterium Permeation through Al <sub>2</sub> O <sub>3</sub> Coated Samples. Physica Scripta, 2004, , 119.	1.2	28
80	New results from the tungsten programme at ASDEX Upgrade. Journal of Nuclear Materials, 2003, 313-316, 116-126.	1.3	73
81	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
82	Tungsten as plasma-facing material in ASDEX Upgrade. Fusion Engineering and Design, 2003, 65, 367-374.	1.0	57
83	Tungsten coating on JET divertor tiles for erosion/deposition studies. Fusion Engineering and Design, 2003, 66-68, 241-245.	1.0	33
84	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
85	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
86	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
87	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
88	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
89	Properties of tungsten coatings deposited onto fine grain graphite by different methods. Surface and Coatings Technology, 2001, 142-144, 733-737.	2.2	58
90	Characterization of $\hat{\Gamma}$ -phase aluminum oxide films deposited by filtered vacuum arc. Surface and Coatings Technology, 2001, 142-144, 260-264.	2.2	71

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91	Plasma-wall interaction at the ASDEX Upgrade tungsten heat shield. <i>Fusion Engineering and Design</i> , 2001, 56-57, 189-193.	1.0	4
92	Plasma operation with tungsten tiles at the central column of ASDEX Upgrade. <i>Journal of Nuclear Materials</i> , 2001, 290-293, 206-210.	1.3	34
93	Studies of tungsten erosion at the inner and outer main chamber wall of the ASDEX Upgrade tokamak. <i>Journal of Nuclear Materials</i> , 2001, 290-293, 326-330.	1.3	7
94	Carbon layers in the divertor of ASDEX Upgrade. <i>Journal of Nuclear Materials</i> , 2001, 290-293, 317-320.	1.3	46
95	Overview of ASDEX Upgrade results. <i>Nuclear Fusion</i> , 2001, 41, 1369-1389.	1.6	34
96	In-out asymmetry of divertor temperatures in tokamaks. <i>Nuclear Fusion</i> , 2001, 41, 1695-1701.	1.6	11
97	Erosion of tungsten coated tiles on the central column of ASDEX Upgrade. <i>Nuclear Fusion</i> , 2000, 40, 1441-1444.	1.6	15
98	Long-time scale spectral diffusion in polymer glass. <i>Journal of Chemical Physics</i> , 2000, 113, 876-882.	1.2	10
99	Overview of ASDEX Upgrade results. <i>Nuclear Fusion</i> , 1999, 39, 1321-1336.	1.6	47
100	Similarities in divertor erosion/redeposition and deuterium retention patterns between the tokamaks ASDEX Upgrade, DIII-D and JET. <i>Nuclear Fusion</i> , 1999, 39, 1025-1029.	1.6	40
101	Erosion and deposition in the ASDEX Upgrade tungsten divertor experiment. <i>Journal of Nuclear Materials</i> , 1999, 266-269, 1003-1008.	1.3	40
102	Hydrogen isotope inventories in the ASDEX Upgrade tungsten coated divertor tiles. <i>Journal of Nuclear Materials</i> , 1999, 266-269, 1296-1302.	1.3	15
103	Conclusions about the use of tungsten in the divertor of ASDEX Upgrade. <i>Journal of Nuclear Materials</i> , 1999, 266-269, 207-216.	1.3	126
104	Performance of tungsten coatings as plasma facing components used in ASDEX Upgrade. <i>Journal of Nuclear Materials</i> , 1998, 258-263, 921-926.	1.3	29
105	A comparison of B2-Eirene code results and ASDEX Upgrade Divertor II. <i>European Physical Journal D</i> , 1998, 48, 327-332.	0.4	4
106	Optical investigation of electric-field-induced relaxations in amorphous solids at low temperatures. <i>Journal of Luminescence</i> , 1998, 76-77, 283-287.	1.5	5
107	Optical Investigation of Low-Temperature Electric-Field-Induced Relaxations in Amorphous Solids. <i>Journal of Physical Chemistry B</i> , 1998, 102, 10150-10157.	1.2	5
108	Light-induced spectral diffusion in heavily doped polymers. <i>Physical Review B</i> , 1998, 57, R5567-R5570.	1.1	8

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109	Non-logarithmic spectral diffusion dynamics evidence for interactions between tunneling centers. Journal of Luminescence, 1997, 72-74, 413-414.	1.5	1
110	Two-Level System Dynamics in the Long-Time Limit: A Power-Law Time Dependence. Physical Review Letters, 1996, 76, 2085-2088.	2.9	52
111	Interacting Tunneling States: A Hole-Burning Study of Spectral Diffusion. Molecular Crystals and Liquid Crystals, 1996, 291, 11-16.	0.3	15
112	Equilibrium and nonequilibrium tunneling dynamics and spectral diffusion in the millikelvin regime. Journal of Luminescence, 1995, 64, 87-93.	1.5	22
113	Optical Detection of Electric Two Level System Dipoles in a Polymeric Glass. Physical Review Letters, 1995, 74, 5252-5255.	2.9	29
114	Wetting and Fracture Characteristics of TiC<sub>x</sub> Coated C/Cu Braze Joints. Advanced Materials Research, 0, 59, 230-236.	0.3	1