

Armin Manhard

List of Publications by Year in descending order

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55
papers

1,593
citations

279487

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315357

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55
all docs

55
docs citations

55
times ranked

1176
citing authors

#	ARTICLE	IF	CITATIONS
1	Irradiation effects in tungsten – From surface effects to bulk mechanical properties. Nuclear Materials and Energy, 2022, 30, 101093.	0.6	5
2	Deuterium retention in tungsten fiber-reinforced tungsten composites. Nuclear Materials and Energy, 2021, 27, 100972.	0.6	3
3	Convolutional neural networks for the in-situ investigation of blistering on plasma-exposed metal surfaces. Nuclear Materials and Energy, 2021, , 101082.	0.6	1
4	Hydrogen atom-ion synergy in surface lattice modification at sub-threshold energy. Acta Materialia, 2020, 201, 55-62.	3.8	16
5	Addressing H-Material Interaction in Fast Diffusion Materials – A Feasibility Study on a Complex Phase Steel. Materials, 2020, 13, 4677.	1.3	10
6	Cross section of ^{15}N - ^{2}D nuclear reactions from 3.3 to 7.0 MeV for simultaneous hydrogen and deuterium quantitation in surface layers with ^{15}N ion beams. Nuclear Instruments & Methods in Physics Research B, 2020, 478, 56-61.	0.6	1
7	An SEM compatible plasma cell for <i>in situ</i> studies of hydrogen-material interaction. Review of Scientific Instruments, 2020, 91, 043705.	0.6	13
8	Deuterium retention in solid and liquid tin after low-temperature plasma exposure. Nuclear Fusion, 2020, 60, 106007.	1.6	15
9	Tungsten heavy alloy: an alternative plasma-facing material in terms of hydrogen isotope retention. Nuclear Fusion, 2020, 60, 126044.	1.6	8
10	Deuterium retention in tungsten based materials for fusion applications. Nuclear Materials and Energy, 2019, 18, 245-249.	0.6	14
11	High-flux hydrogen irradiation-induced cracking of tungsten reproduced by low-flux plasma exposure. Nuclear Fusion, 2019, 59, 056023.	1.6	17
12	Influence of sub-surface damage evolution on low-energy-plasma-driven deuterium permeation through tungsten. Nuclear Fusion, 2018, 58, 056027.	1.6	21
13	Blisters formed by D plasma exposure in an electron-transparent tungsten sample. Nuclear Materials and Energy, 2018, 17, 248-252.	0.6	11
14	Deuterium retention behavior of pure and Y_2O_3 -doped tungsten investigated by nuclear reaction analysis and thermal desorption spectroscopy. Nuclear Materials and Energy, 2018, 15, 32-42.	0.6	11
15	Microstructure and defect analysis in the vicinity of blisters in polycrystalline tungsten. Nuclear Materials and Energy, 2017, 12, 714-719.	0.6	21
16	Measuring deuterium permeation through tungsten near room temperature under plasma loading using a getter layer and ion-beam based detection. Nuclear Materials and Energy, 2017, 12, 703-708.	0.6	4
17	Deuterium implantation into Y_2O_3 -doped and pure tungsten: Deuterium retention and blistering behavior. Journal of Nuclear Materials, 2017, 487, 75-83.	1.3	16
18	Influence of near-surface blisters on deuterium transport in tungsten. Nuclear Fusion, 2017, 57, 086015.	1.6	33

#	ARTICLE	IF	CITATIONS
19	Plasma-wall interaction of advanced materials. Nuclear Materials and Energy, 2017, 12, 307-312.	0.6	20
20	Recent progress in the understanding of H transport and trapping in W. Physica Scripta, 2017, T170, 014037.	1.2	24
21	Blister formation on rough and technical tungsten surfaces exposed to deuterium plasma. Nuclear Fusion, 2017, 57, 126012.	1.6	19
22	Sputtering of rough surfaces: a 3D simulation study. Physica Scripta, 2017, T170, 014056.	1.2	24
23	Overview of ASDEX Upgrade results. Nuclear Fusion, 2017, 57, 102015.	1.6	53
24	Deuterium supersaturation in low-energy plasma-loaded tungsten surfaces. Nuclear Fusion, 2017, 57, 016026.	1.6	42
25	Preparation of erosion and deposition investigations on plasma facing components in Wendelstein 7-X. Physica Scripta, 2017, T170, 014010.	1.2	10
26	Plasma-wall interaction studies within the EUROfusion consortium: progress on plasma-facing components development and qualification. Nuclear Fusion, 2017, 57, 116041.	1.6	75
27	Effects of surface modifications on deuterium retention in F82H and EUROFER exposed to low-energy deuterium plasmas. Fusion Engineering and Design, 2016, 112, 236-239.	1.0	21
28	Electrochemical study of hydrogen permeation through tungsten near room temperature. Journal of Nuclear Materials, 2015, 463, 1057-1061.	1.3	6
29	The effect of ion flux on plasma-induced modification and deuterium retention in tungsten and tungsten-tantalum alloys. Journal of Nuclear Materials, 2015, 464, 69-72.	1.3	25
30	Recovery temperatures of defects in tungsten created by self-implantation. Journal of Nuclear Materials, 2015, 463, 329-332.	1.3	28
31	Quantitative Microstructure and Defect Density Analysis of Polycrystalline Tungsten Reference Samples after Different Heat Treatments. Praktische Metallographie/Practical Metallography, 2015, 52, 437-466.	0.1	40
32	Depth profiling of the modification induced by high-flux deuterium plasma in tungsten and tungsten-tantalum alloys. Nuclear Fusion, 2014, 54, 123013.	1.6	27
33	Deuterium retention in TiC and TaC doped tungsten under low-energy ion irradiation. Physica Scripta, 2014, T159, 014050.	1.2	22
34	Suppression of hydrogen-induced blistering of tungsten by pre-irradiation at low temperature. Nuclear Fusion, 2014, 54, 122003.	1.6	22
35	Surface morphology and deuterium retention of tungsten after low- and high-flux deuterium plasma exposure. Nuclear Fusion, 2014, 54, 083014.	1.6	60
36	Influence of nitrogen pre-implantation on deuterium retention in tungsten. Physica Scripta, 2014, T159, 014023.	1.2	22

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37	Deuterium implantation into tungsten nitride: Negligible diffusion at 300K. Journal of Nuclear Materials, 2014, 451, 352-355.	1.3	33
38	Deuterium retention and morphological modifications of the surface in five grades of tungsten after deuterium plasma exposure. Journal of Nuclear Materials, 2014, 452, 248-256.	1.3	66
39	Blistering and re-deposition on tungsten exposed to ASDEX Upgrade divertor plasma. Journal of Nuclear Materials, 2013, 438, S220-S223.	1.3	34
40	Hydrogen retention in tungsten materials studied by Laser Induced Desorption. Journal of Nuclear Materials, 2013, 438, S1155-S1159.	1.3	15
41	Effect of hydrogen on the slip resistance of tungsten single crystals. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2013, 559, 467-473.	2.6	15
42	A Step-By-Step Analysis of the Polishing Process for Tungsten Specimens. Praktische Metallographie/Practical Metallography, 2013, 50, 5-16.	0.1	57
43	Erosion of tungsten-doped amorphous carbon films in oxygen plasma. Journal of Nuclear Materials, 2012, 420, 101-109.	1.3	5
44	Erosion of tungsten-doped amorphous carbon films exposed to deuterium plasmas. Journal of Nuclear Materials, 2012, 426, 277-286.	1.3	4
45	Comparison of hydrogen retention in W and W/Ta alloys. Journal of Nuclear Materials, 2012, 426, 247-253.	1.3	82
46	Molecular dynamics study of grain boundary diffusion of hydrogen in tungsten. Physica Scripta, 2011, 2011, 014036.	1.2	32
47	Effect of nitrogen seeding into deuterium plasma on deuterium retention in tungsten. Physica Scripta, 2011, T145, 014034.	1.2	28
48	Sub-surface structures of ITER-grade W (Japan) and re-crystallized W after ITER-similar low-energy and high-flux D plasma loadings. Physica Scripta, 2011, T145, 014039.	1.2	32
49	Statistical analysis of blister bursts during temperature-programmed desorption of deuterium-implanted polycrystalline tungsten. Physica Scripta, 2011, T145, 014038.	1.2	25
50	Influence of the microstructure on the deuterium retention in tungsten. Journal of Nuclear Materials, 2011, 415, S632-S635.	1.3	92
51	D2 gas-filled blisters on deuterium-bombarded tungsten. Journal of Nuclear Materials, 2011, 414, 69-72.	1.3	77
52	Quantification of the deuterium ion fluxes from a plasma source. Plasma Sources Science and Technology, 2011, 20, 015010.	1.3	95
53	Interaction of nitrogen plasmas with tungsten. Nuclear Fusion, 2010, 50, 025006.	1.6	73
54	Hydrocarbon injection for quantification of chemical erosion yields in tokamaks. Journal of Nuclear Materials, 2007, 363-365, 1119-1128.	1.3	56

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55	Determination of photon efficiencies and hydrocarbon influxes in the detached outer divertor plasma of ASDEX Upgrade. Physica Scripta, 2007, T128, 40-44.	1.2	12