Thomas Schwarz-Selinger

List of Publications by Year
in descending order

62 papers	1,816 citations	218677 26 h-index	289244 40 g-index
63 all docs	63 docs citations	63 times ranked	989 citing authors

#	Article	IF	Citations
1	Plasma chemical vapor deposition of hydrocarbon films: The influence of hydrocarbon source gas on the film properties. Journal of Applied Physics, 1999, 86, 3988-3996.	2.5	221
2	Surface loss probabilities of hydrocarbon radicals on amorphous hydrogenated carbon film surfaces: Consequences for the formation of re-deposited layers in fusion experiments. Nuclear Fusion, 1999, 39, 1451-1462.	3.5	99
3	Quantification of the deuterium ion fluxes from a plasma source. Plasma Sources Science and Technology, 2011, 20, 015010.	3.1	95
4	Plasmaâ€"wall interaction studies within the EUROfusion consortium: progress on plasma-facing components development and qualification. Nuclear Fusion, 2017, 57, 116041.	3.5	75
5	Redeposition of amorphous hydrogenated carbon films during thermal decomposition. Journal of Nuclear Materials, 2008, 376, 160-168.	2.7	67
6	Simultaneous interaction of methyl radicals and atomic hydrogen with amorphous hydrogenated carbon films. Journal of Applied Physics, 2001, 89, 2979-2986.	2.5	65
7	Novel method for absolute quantification of the flux and angular distribution of a radical source for atomic hydrogen. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2000, 18, 995-1001.	2.1	63
8	Transport of hydrogen in metals with occupancy dependent trap energies. Journal of Applied Physics, 2014, 116, .	2.5	55
9	Surface loss probabilities of the dominant neutral precursors for film growth in methane and acetylene discharges. Applied Physics Letters, 1999, 74, 3800-3802.	3.3	52
10	Cross section data for the D(3He,p)4He nuclear reaction from 0.25 to 6 MeV. Nuclear Instruments & Methods in Physics Research B, 2016, 371, 41-45.	1.4	46
11	Deuterium retention in MeV self-implanted tungsten: Influence of damaging dose rate. Nuclear Materials and Energy, 2017, 12, 683-688.	1.3	43
12	In situ NRA study of hydrogen isotope exchange in self-ion damaged tungsten exposed to neutral atoms. Journal of Nuclear Materials, 2016, 469, 133-144.	2.7	41
13	Quantification of a radical beam source for methyl radicals. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2001, 19, 101-107.	2.1	37
14	Hydrogen isotope accumulation in the helium implantation zone in tungsten. Nuclear Fusion, 2017, 57, 064002.	3.5	37
15	Influence of the presence of deuterium on displacement damage in tungsten. Nuclear Materials and Energy, 2018, 17, 228-234.	1.3	35
16	Motion of W and He atoms during formation of W fuzz. Nuclear Fusion, 2018, 58, 066005.	3.5	34
17	Temperature dependence of D atom adsorption on polycrystalline tungsten. Applied Surface Science, 2013, 282, 478-486.	6.1	33
18	Influence of near-surface blisters on deuterium transport in tungsten. Nuclear Fusion, 2017, 57, 086015.	3.5	33

#	ARTICLE	IF	CITATIONS
19	Displacement damage stabilization by hydrogen presence under simultaneous W ion damage and D ion exposure. Nuclear Fusion, 2019, 59, 086050.	3.5	32
20	Deuterium retention in tungsten irradiated by different ions. Nuclear Fusion, 2020, 60, 096002.	3.5	32
21	The influence of the annealing temperature on deuterium retention in self-damaged tungsten. Physica Scripta, 2016, T167, 014031.	2.5	30
22	Analysis of multicomponent mass spectra applying Bayesian probability theory. Journal of Mass Spectrometry, 2001, 36, 866-874.	1.6	29
23	Temperature dependence of the chemical sputtering of amorphous hydrogenated carbon films by hydrogen. Journal of Nuclear Materials, 2008, 376, 33-37.	2.7	29
24	Deuterium atom loading of self-damaged tungsten at different sample temperatures. Journal of Nuclear Materials, 2017, 496, 1-8.	2.7	29
25	Recovery temperatures of defects in tungsten created by self-implantation. Journal of Nuclear Materials, 2015, 463, 329-332.	2.7	28
26	Deuterium retention in tungsten simultaneously damaged by high energy W ions and loaded by D atoms. Nuclear Materials and Energy, 2017, 12, 169-174.	1.3	28
27	Quantitatively measuring the influence of helium in plasma-exposed tungsten. Nuclear Materials and Energy, 2017, 12, 372-378.	1.3	26
28	Parameter-free quantitative simulation of high-dose microstructure and hydrogen retention in ion-irradiated tungsten. Physical Review Materials, 2021, 5, .	2.4	26
29	Impact of surface morphology on sputtering during high-fluence plasma exposure. Physica Scripta, 2014, T159, 014040.	2.5	22
30	Interaction of deuterium plasma with sputter-deposited tungsten nitride films. Nuclear Fusion, 2016, 56, 016004.	3.5	22
31	ITER monoblock performance under lifetime loading conditions in Magnum-PSI. Physica Scripta, 2020, T171, 014065.	2.5	22
32	Influence of sub-surface damage evolution on low-energy-plasma-driven deuterium permeation through tungsten. Nuclear Fusion, 2018, 58, 056027.	3.5	21
33	Influence of grain size on deuterium transport and retention in self-damaged tungsten. Journal of Nuclear Materials, 2019, 513, 198-208.	2.7	19
34	Solute diffusion of hydrogen isotopes in tungstenâ€"a gas loading experiment. Physica Scripta, 2020, T171, 014034.	2.5	18
35	New rate equation model to describe the stabilization of displacement damage by hydrogen atoms during ion irradiation in tungsten. Nuclear Fusion, 2020, 60, 036024.	3.5	16
36	Influence of surface roughness on the sputter yield of Mo under keV D ion irradiation. Journal of Nuclear Materials, 2021, 555, 153135.	2.7	16

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37	Deuterium retention in W and binary W alloys irradiated with high energy Fe ions. Journal of Nuclear Materials, 2021, 545, 152749.	2.7	15
38	Stabilization of defects by the presence of hydrogen in tungsten: simultaneous W-ion damaging and D-atom exposure. Nuclear Fusion, 2019, 59, 016011.	3.5	14
39	Deuterium transport and retention in the bulk of tungsten containing helium: the effect of helium concentration and microstructure. Nuclear Fusion, 2020, 60, 106029.	3.5	14
40	Study of thermal hydrogen atom interaction with undamaged and self-damaged tungsten. Journal of Nuclear Materials, 2013, 438, S1027-S1031.	2.7	13
41	Optimization of the depth resolution for deuterium depth profiling up to large depths. Nuclear Instruments & Methods in Physics Research B, 2016, 387, 103-114.	1.4	13
42	Experiments and modelling of multiple sequential MeV ion irradiations and deuterium exposures in tungsten. Journal of Nuclear Materials, 2021, 550, 152947.	2.7	13
43	Gross and net erosion balance of plasma-facing materials in full-W tokamaks. Nuclear Fusion, 2021, 61, 116006.	3.5	13
44	TEM investigation of the influence of dose rate on radiation damage and deuterium retention in tungsten. Materials Characterization, 2019, 154, 1-6.	4.4	12
45	Dislocation structure of tungsten irradiated by medium to high-mass ions. Nuclear Fusion, 2022, 62, 096003.	3.5	12
46	Can plasma experiments unravel microscopic surface processes in thin film growth and erosion? Implications of particleâ€“beam experiments on the understanding of a-C:H growth. Vacuum, 2003, 71, 361-376.	3.5	11
47	Kinetic model for hydrogen absorption in tungsten with coverage dependent surface mechanisms. Nuclear Fusion, 2020, 60, 106011.	3.5	11
48	Dependence of blistering and deuterium retention on damage depth in damaged tungsten exposed to deuterium plasma. Nuclear Fusion, 2021, 61, 056003.	3.5	11
49	Latest results of Eurofusion plasma-facing components research in the areas of power loading, material erosion and fuel retention. Nuclear Fusion, 2022, 62, 042013.	3.5	11
50	Effect of D on the evolution of radiation damage in W during high temperature annealing. Nuclear Fusion, 2020, 60, 106028.	3.5	11
51	Influence of MeV helium implantation on deuterium retention in self-ion implanted tungsten. Physica Scripta, 2014, T159, 014045.	2.5	10
52	Experimental determination of the 16O(3He,p0)18F differential cross section. Nuclear Instruments & Methods in Physics Research B, 2019, 450, 13-18.	1.4	10
53	Simulation of coupled sputter-diffusion effects. Physica Scripta, 2016, T167, 014023.	2.5	9
54	Microstructure evolution in helium implanted self-irradiated tungsten annealed at 1700ÂK studied by TEM. Materials Characterization, 2021, 174, 110991.	4.4	8

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55	Isolating the detrapping of deuterium in heavy ion damaged tungsten via partial thermal desorption. Journal of Nuclear Materials, 2019, 522, 158-167.	2.7	6
56	Influence of thin tungsten oxide films on hydrogen isotope uptake and retention in tungsten â€“ Evidence for permeation barrier effect. Nuclear Materials and Energy, 2021, 27, 100991.	1.3	5
57	Irradiation effects in tungstenâ€"From surface effects to bulk mechanical properties. Nuclear Materials and Energy, 2022, 30, 101093.	1.3	5
58	Influence of thin surface oxide films on hydrogen isotope release from ion-irradiated tungsten. Nuclear Materials and Energy, 2022, 30, 101137.	1.3	5
59	Surface relaxation during plasma chemical vapor deposition of diamond-like carbon films, investigated by in-situ ellipsometry. Thin Solid Films, 1997, 308-309, 195-198.	1.8	3
60	Reduced defect recovery in self-ion damaged W due to simultaneous deuterium exposure during annealing. Nuclear Fusion, 2022, 62, 036012.	3.5	2
61	Cross section of 15N-2D nuclear reactions from 3.3 to 7.0ÂMeV for simultaneous hydrogen and deuterium quantitation in surface layers with 15N ion beams. Nuclear Instruments & Methods in Physics Research B, 2020, 478, 56-61.	1.4	1
62	The synergies between displacement damage creation and hydrogen presence: the effect of D ion energy and flux. Physica Scripta, 0, , .	2.5	0