

Till HÄjschen

List of Publications by Year in descending order

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Version: 2024-02-01

56
papers

1,646
citations

279798

23
h-index

302126

39
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56
all docs

56
docs citations

56
times ranked

1082
citing authors

#	ARTICLE	IF	CITATIONS
1	In situ synchrotron tomography estimation of toughening effect by semi-ductile fibre reinforcement in a tungsten-fibre-reinforced tungsten composite system. <i>Acta Materialia</i> , 2013, 61, 7060-7071.	7.9	105
2	Materials for DEMO and reactor applications – boundary conditions and new concepts. <i>Physica Scripta</i> , 2016, T167, 014002.	2.5	85
3	Development of tungsten fibre-reinforced tungsten composites towards their use in DEMO – potassium doped tungsten wire. <i>Physica Scripta</i> , 2016, T167, 014006.	2.5	77
4	Plasma – wall interaction studies within the EUROfusion consortium: progress on plasma-facing components development and qualification. <i>Nuclear Fusion</i> , 2017, 57, 116041.	3.5	75
5	Advanced tungsten materials for plasma-facing components of DEMO and fusion power plants. <i>Fusion Engineering and Design</i> , 2016, 109-111, 1046-1052.	1.9	70
6	Feasibility study of a tungsten wire-reinforced tungsten matrix composite with ZrO _x interfacial coatings. <i>Composites Science and Technology</i> , 2010, 70, 1482-1489.	7.8	69
7	Influence of the interface strength on the mechanical properties of discontinuous tungsten fiber-reinforced tungsten composites produced by field assisted sintering technology. <i>Composites Part A: Applied Science and Manufacturing</i> , 2018, 107, 342-353.	7.6	68
8	EUROFER as wall material: Reduced sputtering yields due to W surface enrichment. <i>Journal of Nuclear Materials</i> , 2014, 454, 1-6.	2.7	67
9	Enhanced toughness and stable crack propagation in a novel tungsten fibre-reinforced tungsten composite produced by chemical vapour infiltration. <i>Physica Scripta</i> , 2014, T159, 014031.	2.5	58
10	Chemically deposited tungsten fibre-reinforced tungsten – The way to a mock-up for divertor applications. <i>Nuclear Materials and Energy</i> , 2016, 9, 75-83.	1.3	55
11	Microstructure, mechanical behaviour and fracture of pure tungsten wire after different heat treatments. <i>International Journal of Refractory Metals and Hard Materials</i> , 2017, 68, 29-40.	3.8	53
12	Results on the use of tungsten heavy alloys in the divertor of ASDEX Upgrade. <i>Journal of Nuclear Materials</i> , 2018, 511, 567-573.	2.7	50
13	Interfacial fracture behavior of tungsten wire/tungsten matrix composites with copper-coated interfaces. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2010, 527, 1623-1629.	5.6	46
14	Tensile deformation behavior of tungsten fibre-reinforced tungsten composite specimens in as-fabricated state. <i>Fusion Engineering and Design</i> , 2017, 124, 396-400.	1.9	46
15	Implantation and erosion of nitrogen in tungsten. <i>New Journal of Physics</i> , 2014, 16, 093018.	2.9	42
16	Shear debonding behavior of a carbon-coated interface in a tungsten fiber-reinforced tungsten matrix composite. <i>Journal of Nuclear Materials</i> , 2011, 417, 472-476.	2.7	37
17	Properties of drawn W wire used as high performance fibre in tungsten fibre-reinforced tungsten composite. <i>IOP Conference Series: Materials Science and Engineering</i> , 2016, 139, 012043.	0.6	36
18	Improved pseudo-ductile behavior of powder metallurgical tungsten short fiber-reinforced tungsten (W/W). <i>Nuclear Materials and Energy</i> , 2018, 15, 214-219.	1.3	36

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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.	2.7	35
20	Tungsten fibre-reinforced composites for advanced plasma facing components. Nuclear Materials and Energy, 2017, 12, 1308-1313.	1.3	30
21	Behavior of tungsten fiber-reinforced tungsten based on single fiber push-out study. Nuclear Materials and Energy, 2016, 9, 416-421.	1.3	27
22	Textile preforms for tungsten fibre-reinforced composites. Journal of Composite Materials, 2018, 52, 3875-3884.	2.4	27
23	Surface modification and deuterium retention in reduced activation ferritic martensitic steels exposed to low-energy, high flux D plasma and D ₂ gas. Physica Scripta, 2014, T159, 014049.	2.5	26
24	Powder Metallurgical Tungsten Fiber-Reinforced Tungsten. Materials Science Forum, 0, 825-826, 125-133.	0.3	26
25	Development and characterization of powder metallurgically produced discontinuous tungsten fiber reinforced tungsten composites. Physica Scripta, 2017, T170, 014005.	2.5	23
26	Interaction of deuterium plasma with sputter-deposited tungsten nitride films. Nuclear Fusion, 2016, 56, 016004.	3.5	22
27	Impact of heat treatment on tensile properties of 97W 2Ni 1Fe heavy alloy. Journal of Nuclear Materials, 2018, 512, 1-7.	2.7	22
28	On the nature of carbon embrittlement of tungsten fibers during powder metallurgical processes. Fusion Engineering and Design, 2019, 145, 18-22.	1.9	21
29	Materials development for new high heat-flux component mock-ups for DEMO. Fusion Engineering and Design, 2019, 146, 1431-1436.	1.9	21
30	Estimation of the fracture toughness of tungsten fibre-reinforced tungsten composites. Engineering Fracture Mechanics, 2020, 232, 107011.	4.3	21
31	Oxygen exchange kinetics of La _{0.6} Sr _{0.4} CoO _{3-δ} affected by changes of the surface composition due to chromium and silicon poisoning. Solid State Ionics, 2017, 299, 26-31.	2.7	20
32	Design of tungsten fiber-reinforced tungsten composites with porous matrix. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2021, 817, 141361.	5.6	20
33	Thermal stability of the engineered interfaces in Wf/W composites. Journal of Materials Science, 2012, 47, 4706-4715.	3.7	18
34	Tensile behaviour of drawn tungsten wire used in tungsten fibre-reinforced tungsten composites. Physica Scripta, 2017, T170, 014032.	2.5	18
35	Fracture behavior of random distributed short tungsten fiber-reinforced tungsten composites. Nuclear Fusion, 2019, 59, 086034.	3.5	16
36	First experiments with Cs doped Mo as surface converter for negative hydrogen ion sources. Journal of Applied Physics, 2015, 118, .	2.5	15

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37	Erosion of EUROFER steel by mass-selected deuterium ion bombardment. Nuclear Materials and Energy, 2018, 16, 114-122.	1.3	15
38	Phase decomposition of La ₂ NiO ₄ + δ under Cr- and Si-poisoning conditions. Solid State Ionics, 2018, 322, 44-53.	2.7	13
39	Interdiffusion and phase formation at iron-tungsten interfaces. Nuclear Materials and Energy, 2019, 19, 189-194.	1.3	13
40	Modeling and validation of chemical vapor deposition of tungsten for tungsten fiber reinforced tungsten composites. Surface and Coatings Technology, 2020, 381, 124745.	4.8	13
41	The effects of heat treatment at temperatures of 1100°C to 1300°C on the tensile properties of high-strength drawn tungsten fibres. Nuclear Materials and Energy, 2018, 16, 163-167.	1.3	12
42	Development of tungsten fiber-reinforced tungsten with a porous matrix. Physica Scripta, 2020, T171, 014030.	2.5	12
43	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.	1.3	11
44	Production of tungsten-fibre reinforced tungsten composites by a novel continuous chemical vapour deposition process. Fusion Engineering and Design, 2019, 146, 1426-1430.	1.9	11
45	Fiber Volume Fraction Influence on Randomly Distributed Short Fiber Tungsten Fiber-Reinforced Tungsten Composites. Advanced Engineering Materials, 2020, 22, 1901242.	3.5	11
46	Impact of surface enrichment and morphology on sputtering of EUROFER by deuterium. Nuclear Materials and Energy, 2020, 23, 100749.	1.3	9
47	Insight into single-fiber push-out test of tungsten fiber-reinforced tungsten. Composite Interfaces, 2019, 26, 107-126.	2.3	8
48	The use of tungsten yarns in the production for W _f /W. Physica Scripta, 2020, T171, 014061.	2.5	7
49	Study of the temperature-dependent nitrogen retention in tungsten surfaces using X-ray photoelectron spectroscopy. Nuclear Materials and Energy, 2018, 17, 48-55.	1.3	5
50	Comparison experiment on the sputtering of EUROFER, RUSFER and CLAM steels by deuterium ions. Nuclear Materials and Energy, 2022, 30, 101118.	1.3	5
51	Irradiation effects in tungsten – From surface effects to bulk mechanical properties. Nuclear Materials and Energy, 2022, 30, 101093.	1.3	5
52	Microstructural stability of spark-plasma-sintered W _f /W composite with zirconia interface coating under high-heat-flux hydrogen beam irradiation. Nuclear Materials and Energy, 2017, 13, 74-80.	1.3	4
53	Interlayer properties of tungsten fibre-reinforced composites and their determination by different methods. Nuclear Materials and Energy, 2021, 28, 101060.	1.3	4
54	Self-consistent ion beam analysis: An approach by multi-objective optimization. Nuclear Instruments & Methods in Physics Research B, 2021, 506, 32-40.	1.4	3

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55	Particle generation in pulsed plasmas. Plasma Devices and Operations, 2008, 16, 11-24.	0.6	1
56	Advective-acoustic cycle in a shallow water standing accretion shock experiment. Physical Review E, 2020, 102, 063103.	2.1	1