Johann Riesch

List of Publications by Year
in descending order

68 papers	2,592 citations	279798 23 h-index	197818 49 g-index
70 all docs	70 docs citations	70 times ranked	1520 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.	2.7	610
2	Recent progress in R&D on tungsten alloys for divertor structural and plasma facing materials. Journal of Nuclear Materials, 2013, 442, S181-S189.	2.7	272
3	Development of advanced high heat flux and plasma-facing materials. Nuclear Fusion, 2017, 57, 092007.	3.5	189
4	In situ synchrotron tomography estimation of toughening effect by semi-ductile fibre reinforcement in a tungsten-fibre-reinforced tungsten composite system. Acta Materialia, 2013, 61, 7060-7071.	7.9	105
5	Materials for DEMO and reactor applicationsâ€"boundary conditions and new concepts. Physica Scripta, 2016, T167, 014002.	2.5	85
6	Development of tungsten fibre-reinforced tungsten composites towards their use in DEMOâ€"potassium doped tungsten wire. Physica Scripta, 2016, T167, 014006.	2.5	77
7	Plasmaâ€"wall interaction studies within the EUROfusion consortium: progress on plasma-facing components development and qualification. Nuclear Fusion, 2017, 57, 116041.	3.5	75
8	Advanced tungsten materials for plasma-facing components of DEMO and fusion power plants. Fusion Engineering and Design, 2016, 109-111, 1046-1052.	1.9	70
9	A brief summary of the progress on the EFDA tungsten materials program. Journal of Nuclear Materials, 2013, 442, S173-S180.	2.7	69
10	Influence of the interface strength on the mechanical properties of discontinuous tungsten fiber-reinforced tungsten composites produced by field assisted sintering technology. Composites Part A: Applied Science and Manufacturing, 2018, 107, 342-353.	7.6	68
11	Enhanced toughness and stable crack propagation in a novel tungsten fibre-reinforced tungsten composite produced by chemical vapour infiltration. Physica Scripta, 2014, T159, 014031.	2.5	58
12	Chemically deposited tungsten fibre-reinforced tungsten â€" The way to a mock-up for divertor applications. Nuclear Materials and Energy, 2016, 9, 75-83.	1.3	55
13	Microstructure, mechanical behaviour and fracture of pure tungsten wire after different heat treatments. International Journal of Refractory Metals and Hard Materials, 2017, 68, 29-40.	3.8	53
14	Tensile deformation behavior of tungsten fibre-reinforced tungsten composite specimens in as-fabricated state. Fusion Engineering and Design, 2017, 124, 396-400.	1.9	46
15	Advanced materials for a damage resilient divertor concept for DEMO: Powder-metallurgical tungsten-fibre reinforced tungsten. Fusion Engineering and Design, 2017, 124, 964-968.	1.9	40
16	Properties of drawn W wire used as high performance fibre in tungsten fibre-reinforced tungsten composite. IOP Conference Series: Materials Science and Engineering, 2016, 139, 012043.	0.6	36
17	Improved pseudo-ductile behavior of powder metallurgical tungsten short fiber-reinforced tungsten (W/W). Nuclear Materials and Energy, 2018, 15, 214-219.	1.3	36
18	The effect of heat treatments on pure and potassium doped drawn tungsten wires: Part I - Microstructural characterization. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2018, 737, 422-433.	5.6	34

#	Article	IF	Citations
19	Mechanical properties of as-fabricated and 2300 Â°C annealed tungsten wire tested up to 600 Â°C. International Journal of Refractory Metals and Hard Materials, 2017, 66, 127-134.	3.8	32
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	Powder Metallurgical Tungsten Fiber-Reinforced Tungsten. Materials Science Forum, 0, 825-826, 125-133.	0.3	26
24	Development and characterization of powder metallurgically produced discontinuous tungsten fiber reinforced tungsten composites. Physica Scripta, 2017, T170, 014005.	2.5	23
25	The effect of heat treatments on pure and potassium doped drawn tungsten wires: Part II â€“ Fracture properties. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2018, 737, 434-447.	5.6	22
26	On the nature of carbon embrittlement of tungsten fibers during powder metallurgical processes. Fusion Engineering and Design, 2019, 145, 18-22.	1.9	21
27	Materials development for new high heat-flux component mock-ups for DEMO. Fusion Engineering and Design, 2019, 146, 1431-1436.	1.9	21
28	Estimation of the fracture toughness of tungsten fibre-reinforced tungsten composites. Engineering Fracture Mechanics, 2020, 232, 107011.	4.3	21
29	Plasma-wall interaction of advanced materials. Nuclear Materials and Energy, 2017, 12, 307-312.	1.3	20
30	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
31	Correlation of microstructural and mechanical properties of K-doped tungsten fibers used as reinforcement of tungsten matrix for high temperature applications. International Journal of Refractory Metals and Hard Materials, 2019, 79, 204-216.	3.8	19
32	Tensile behaviour of drawn tungsten wire used in tungsten fibre-reinforced tungsten composites. Physica Scripta, 2017, T170, 014032.	2.5	18
33	Crack bridging in as-fabricated and embrittled tungsten single fibre-reinforced tungsten composites shown by a novel in-situ high energy synchrotron tomography bending test. Nuclear Materials and Energy, 2018, 15, 1-12.	1.3	18
34	Fracture behavior of random distributed short tungsten fiber-reinforced tungsten composites. Nuclear Fusion, 2019, 59, 086034.	3.5	16
35	Recent progress in the assessment of irradiation effects for in-vessel fusion materials: tungsten and copper alloys. Nuclear Fusion, 2022, 62, 026045.	3.5	15
36	Plastic deformation of recrystallized tungsten-potassium wires: Constitutive deformation law in the temperature range 22â€“600â€¯Â°C. International Journal of Refractory Metals and Hard Materials, 2018, 73, 38-45.	3.8	13

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37	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
38	The effects of heat treatment at temperatures of 1100â€‰Â°C to 1300â€‰Â°C on the tensile properties of high-strength drawn tungsten fibres. Nuclear Materials and Energy, 2018, 16, 163-167.	1.3	12
39	Development of tungsten fiber-reinforced tungsten with a porous matrix. Physica Scripta, 2020, T171, 014030.	2.5	12
40	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
41	Fiber Volume Fraction Influence on Randomly Distributed Short Fiber Tungsten Fiberâ€Reinforced Tungsten Composites. Advanced Engineering Materials, 2020, 22, 1901242.	3.5	11
42	Advanced materials characterization and modeling using synchrotron, neutron, TEM, and novel micro-mechanical techniquesâ€”A European effort to accelerate fusion materials development. Journal of Nuclear Materials, 2013, 442, S834-S845.	2.7	10
43	Strength and deformation mechanism of tungsten wires exposed to high temperature annealing: Impact of potassium doping. International Journal of Refractory Metals and Hard Materials, 2018, 76, 226-233.	3.8	10
44	Deuterium permeation behavior through yttria-stabilized zirconia coating fabricated by magnetron sputtering. Fusion Engineering and Design, 2020, 157, 111769.	1.9	9
45	Novel ceramic matrix composites with tungsten and molybdenum fiber reinforcement. Journal of the European Ceramic Society, 2021, 41, 3030-3036.	5.7	9
46	Insight into single-fiber push-out test of tungsten fiber-reinforced tungsten. Composite Interfaces, 2019, 26, 107-126.	2.3	8
47	Micromechanical and microstructural properties of tungsten fibers in the as-produced and annealed state: Assessment of the potassium doping effect. International Journal of Refractory Metals and Hard Materials, 2019, 81, 253-271.	3.8	8
48	EBSD characterization of pure and K-doped tungsten fibers annealed at different temperatures. Journal of Nuclear Materials, 2020, 537, 152201.	2.7	7
49	The use of tungsten yarns in the production for W_f/W. Physica Scripta, 2020, T171, 014061.	2.5	7
50	Improving the W Coating Uniformity by a COMSOL Model-Based CVD Parameter Study for Denser Wf/W Composites. Metals, 2021, 11, 1089.	2.3	7
51	Quantitative depth-resolved photoelectron spectroscopy analysis of the interaction of energetic oxygen ions with the berylliumâ€“tungsten alloy Be2W. Journal of Nuclear Materials, 2013, 438, S766-S770.	2.7	6
52	Deposition of Tungsten Thin Films by Magnetron Sputtering for Large-Scale Production of Tungsten-Based Transition-Edge Sensors. Journal of Low Temperature Physics, 2020, 199, 401-407.	1.4	6
53	Microstructural evolution in single tungsten fiber-reinforced tungsten composites during annealing: recrystallization and abnormal grain growth. Journal of Nuclear Materials, 2021, 543, 152579.	2.7	6
54	Modeling and experimental validation of a W<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline" id="d1e1974" altimg="si81.svg"><mml:msub><mml:mrow /><mml:mrow><mml:mi>f</mml:mi></mml:mrow></mml:msub></mml:math>/W-fabrication by chemical vapor deposition and infiltration. Nuclear Materials and Energy, 2021, 28, 101048.	1.3	6

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55	Interaction of energetic oxygen ions with the beryllium tungsten alloy Be2W. Physica Scripta, 2011, T145, 014015.	2.5	5
56	Influence of Ti₃SiC₂ Fiber Coating on Interface and Matrix Cracking in an SiC Fiberâ€Reinforced Polymerâ€Derived Ceramic. Advanced Engineering Materials, 2015, 17, 1142-1148.	3.5	5
57	Spark Plasma Sintering Produced W-Fiber-Reinforced Tungsten Composites. , 2019, , 239-261.		5
58	Irradiation effects in tungstenâ€"From surface effects to bulk mechanical properties. Nuclear Materials and Energy, 2022, 30, 101093.	1.3	5
59	Micro- and macro- elastic properties of tungsten fiber-reinforced tungsten composites probed by nano-indentation and laser ultrasonics. Nuclear Materials and Energy, 2019, 19, 262-266.	1.3	4
60	Fracture surfaces of tungsten wires used in fiber-reinforced plasma facing components: Effect of potassium doping and high temperature annealing. Fusion Engineering and Design, 2019, 146, 991-994.	1.9	4
61	Interlayer properties of tungsten fibre-reinforced composites and their determination by different methods. Nuclear Materials and Energy, 2021, 28, 101060.	1.3	4
62	Yttria-Coated Tungsten Fibers for Use in Tungsten Fiber-Reinforced Composites: A Comparative Study on PVD vs. CVD Routes. Coatings, 2021, 11, 1128.	2.6	4
63	Tungsten fiber reinforced tungsten (Wf/W) using yarn based textile preforms. Physica Scripta, 2021, 96, 124063.	2.5	4
64	Longitudinal and shear wave velocities in pure tungsten and tungsten fiber-reinforced tungsten composites. Physica Scripta, 2017, T170, 014024.	2.5	3
65	Evolution of microstructure, texture and grain boundary character distribution of potassium doped tungsten fibers annealed at variable temperatures. Journal of Physics: Conference Series, 2019, 1270, 012038.	0.4	3
66	Performance of tungsten fibers for Wf/W composites under cyclic tensile load. International Journal of Refractory Metals and Hard Materials, 2020, 86, 105094.	3.8	3
67	Deuterium retention in tungsten fiber-reinforced tungsten composites. Nuclear Materials and Energy, 2021, 27, 100972.	1.3	3
68	Charpy impact tests of tungsten fiberâ€"reinforced composite from â^'150 Â°C to 1000 Â°C. Materials Letters, 2022, 311, 131526.	2.6	3