

# Johann Riesch

## List of Publications by Year in descending order

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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	Charpy impact tests of tungsten fiber-reinforced composite from $\sim 150$ $^{\circ}\text{C}$ to $1000$ $^{\circ}\text{C}$ . Materials Letters, 2022, 311, 131526.	2.6	3
2	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
3	Irradiation effects in tungsten-From surface effects to bulk mechanical properties. Nuclear Materials and Energy, 2022, 30, 101093.	1.3	5
4	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
5	Novel ceramic matrix composites with tungsten and molybdenum fiber reinforcement. Journal of the European Ceramic Society, 2021, 41, 3030-3036.	5.7	9
6	Deuterium retention in tungsten fiber-reinforced tungsten composites. Nuclear Materials and Energy, 2021, 27, 100972.	1.3	3
7	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
8	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
9	Interlayer properties of tungsten fibre-reinforced composites and their determination by different methods. Nuclear Materials and Energy, 2021, 28, 101060.	1.3	4
10	Modeling and experimental validation of a $W_{1-x}Mo_x$ W-fabrication by chemical vapor deposition and infiltration. Nuclear Materials and Energy, 2021, 28, 101048.	1.3	6
11	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
12	Tungsten fiber reinforced tungsten (Wf/W) using yarn based textile preforms. Physica Scripta, 2021, 96, 124063.	2.5	4
13	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
14	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
15	EBSD characterization of pure and K-doped tungsten fibers annealed at different temperatures. Journal of Nuclear Materials, 2020, 537, 152201.	2.7	7
16	Fiber Volume Fraction Influence on Randomly Distributed Short Fiber Tungsten Fiber-Reinforced Tungsten Composites. Advanced Engineering Materials, 2020, 22, 1901242.	3.5	11
17	The use of tungsten yarns in the production for $W_{1-x}Mo_x$ /W. Physica Scripta, 2020, T171, 014061.	2.5	7
18	Development of tungsten fiber-reinforced tungsten with a porous matrix. Physica Scripta, 2020, T171, 014030.	2.5	12

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19	Deuterium permeation behavior through yttria-stabilized zirconia coating fabricated by magnetron sputtering. <i>Fusion Engineering and Design</i> , 2020, 157, 111769.	1.9	9
20	Deposition of Tungsten Thin Films by Magnetron Sputtering for Large-Scale Production of Tungsten-Based Transition-Edge Sensors. <i>Journal of Low Temperature Physics</i> , 2020, 199, 401-407.	1.4	6
21	Estimation of the fracture toughness of tungsten fibre-reinforced tungsten composites. <i>Engineering Fracture Mechanics</i> , 2020, 232, 107011.	4.3	21
22	Insight into single-fiber push-out test of tungsten fiber-reinforced tungsten. <i>Composite Interfaces</i> , 2019, 26, 107-126.	2.3	8
23	Evolution of microstructure, texture and grain boundary character distribution of potassium doped tungsten fibers annealed at variable temperatures. <i>Journal of Physics: Conference Series</i> , 2019, 1270, 012038.	0.4	3
24	On the nature of carbon embrittlement of tungsten fibers during powder metallurgical processes. <i>Fusion Engineering and Design</i> , 2019, 145, 18-22.	1.9	21
25	Fracture behavior of random distributed short tungsten fiber-reinforced tungsten composites. <i>Nuclear Fusion</i> , 2019, 59, 086034.	3.5	16
26	Production of tungsten-fibre reinforced tungsten composites by a novel continuous chemical vapour deposition process. <i>Fusion Engineering and Design</i> , 2019, 146, 1426-1430.	1.9	11
27	Micro- and macro- elastic properties of tungsten fiber-reinforced tungsten composites probed by nano-indentation and laser ultrasonics. <i>Nuclear Materials and Energy</i> , 2019, 19, 262-266.	1.3	4
28	Materials development for new high heat-flux component mock-ups for DEMO. <i>Fusion Engineering and Design</i> , 2019, 146, 1431-1436.	1.9	21
29	Micromechanical and microstructural properties of tungsten fibers in the as-produced and annealed state: Assessment of the potassium doping effect. <i>International Journal of Refractory Metals and Hard Materials</i> , 2019, 81, 253-271.	3.8	8
30	Spark Plasma Sintering Produced W-Fiber-Reinforced Tungsten Composites. , 2019, , 239-261.		5
31	Fracture surfaces of tungsten wires used in fiber-reinforced plasma facing components: Effect of potassium doping and high temperature annealing. <i>Fusion Engineering and Design</i> , 2019, 146, 991-994.	1.9	4
32	Correlation of microstructural and mechanical properties of K-doped tungsten fibers used as reinforcement of tungsten matrix for high temperature applications. <i>International Journal of Refractory Metals and Hard Materials</i> , 2019, 79, 204-216.	3.8	19
33	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
34	Plastic deformation of recrystallized tungsten-potassium wires: Constitutive deformation law in the temperature range 22â€“600â€“C. <i>International Journal of Refractory Metals and Hard Materials</i> , 2018, 73, 38-45.	3.8	13
35	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. <i>Nuclear Materials and Energy</i> , 2018, 15, 1-12.	1.3	18
36	The effect of heat treatments on pure and potassium doped drawn tungsten wires: Part I - Microstructural characterization. <i>Materials Science &amp; Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2018, 737, 422-433.	5.6	34

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37	The effect of heat treatments on pure and potassium doped drawn tungsten wires: Part II – Fracture properties. <i>Materials Science &amp; Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2018, 737, 434-447.	5.6	22
38	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
39	Strength and deformation mechanism of tungsten wires exposed to high temperature annealing: Impact of potassium doping. <i>International Journal of Refractory Metals and Hard Materials</i> , 2018, 76, 226-233.	3.8	10
40	The effects of heat treatment at temperatures of 1100°C to 1300°C on the tensile properties of high-strength drawn tungsten fibres. <i>Nuclear Materials and Energy</i> , 2018, 16, 163-167.	1.3	12
41	Textile preforms for tungsten fibre-reinforced composites. <i>Journal of Composite Materials</i> , 2018, 52, 3875-3884.	2.4	27
42	Tungsten fibre-reinforced composites for advanced plasma facing components. <i>Nuclear Materials and Energy</i> , 2017, 12, 1308-1313.	1.3	30
43	Development of advanced high heat flux and plasma-facing materials. <i>Nuclear Fusion</i> , 2017, 57, 092007.	3.5	189
44	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
45	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
46	Mechanical properties of as-fabricated and 2300 °C annealed tungsten wire tested up to 600 °C. <i>International Journal of Refractory Metals and Hard Materials</i> , 2017, 66, 127-134.	3.8	32
47	Advanced materials for a damage resilient divertor concept for DEMO: Powder-metallurgical tungsten-fibre reinforced tungsten. <i>Fusion Engineering and Design</i> , 2017, 124, 964-968.	1.9	40
48	Plasma-wall interaction of advanced materials. <i>Nuclear Materials and Energy</i> , 2017, 12, 307-312.	1.3	20
49	Tensile behaviour of drawn tungsten wire used in tungsten fibre-reinforced tungsten composites. <i>Physica Scripta</i> , 2017, T170, 014032.	2.5	18
50	Longitudinal and shear wave velocities in pure tungsten and tungsten fiber-reinforced tungsten composites. <i>Physica Scripta</i> , 2017, T170, 014024.	2.5	3
51	Development and characterization of powder metallurgically produced discontinuous tungsten fiber reinforced tungsten composites. <i>Physica Scripta</i> , 2017, T170, 014005.	2.5	23
52	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
53	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
54	Materials for DEMO and reactor applications – boundary conditions and new concepts. <i>Physica Scripta</i> , 2016, T167, 014002.	2.5	85

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55	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
56	Development of tungsten fibre-reinforced tungsten composites towards their use in DEMO—potassium doped tungsten wire. Physica Scripta, 2016, T167, 014006.	2.5	77
57	Chemically deposited tungsten fibre-reinforced tungsten — The way to a mock-up for divertor applications. Nuclear Materials and Energy, 2016, 9, 75-83.	1.3	55
58	Behavior of tungsten fiber-reinforced tungsten based on single fiber push-out study. Nuclear Materials and Energy, 2016, 9, 416-421.	1.3	27
59	Influence of Ti <sub>3</sub> SiC <sub>2</sub> Fiber Coating on Interface and Matrix Cracking in an SiC Fiber-Reinforced Polymer-Derived Ceramic. Advanced Engineering Materials, 2015, 17, 1142-1148.	3.5	5
60	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
61	Quantitative depth-resolved photoelectron spectroscopy analysis of the interaction of energetic oxygen ions with the beryllium—tungsten alloy Be <sub>2</sub> W. Journal of Nuclear Materials, 2013, 438, S766-S770.	2.7	6
62	A brief summary of the progress on the EFDA tungsten materials program. Journal of Nuclear Materials, 2013, 442, S173-S180.	2.7	69
63	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
64	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
65	Advanced materials characterization and modeling using synchrotron, neutron, TEM, and novel micro-mechanical techniques—A European effort to accelerate fusion materials development. Journal of Nuclear Materials, 2013, 442, S834-S845.	2.7	10
66	Recent progress in research on tungsten materials for nuclear fusion applications in Europe. Journal of Nuclear Materials, 2013, 432, 482-500.	2.7	610
67	Interaction of energetic oxygen ions with the beryllium tungsten alloy Be <sub>2</sub> W. Physica Scripta, 2011, T145, 014015.	2.5	5
68	Powder Metallurgical Tungsten Fiber-Reinforced Tungsten. Materials Science Forum, 0, 825-826, 125-133.	0.3	26