Stuart Maloy

List of Publications by Year
in descending order

253 papers	7,362 citations	61984 43 h-index	85541 71 g-index
275 all docs	275 docs citations	275 times ranked	4051 citing authors

#	Article	IF	Citations
1	Outstanding radiation resistance of tungsten-based high-entropy alloys. Science Advances, 2019, 5, eaav2002.	10.3	360
2	In situ nanocompression testing of irradiatedÂcopper. Nature Materials, 2011, 10, 608-613.	27.5	268
3	Emulation of reactor irradiation damage using ion beams. Scripta Materialia, 2014, 88, 33-36.	5.2	229
4	He ion irradiation damage in Fe/W nanolayer films. Journal of Nuclear Materials, 2009, 389, 233-238.	2.7	179
5	Issues to consider using nano indentation on shallow ion beam irradiated materials. Journal of Nuclear Materials, 2012, 425, 136-139.	2.7	176
6	Carbon Additions to Molybdenum Disilicide: Improved High-Temperature Mechanical Properties. Journal of the American Ceramic Society, 1991, 74, 2704-2706.	3.8	162
7	Elastic properties of C40 transition metal disilicides. Acta Materialia, 1996, 44, 3035-3048.	7.9	136
8	Structural, elastic, and electronic properties of Fe3C from first principles. Journal of Applied Physics, 2008, 103, .	2.5	134
9	The mechanical properties of 316L/304L stainless steels, Alloy 718 and Mod 9Crâ€“1Mo after irradiation in a spallation environment. Journal of Nuclear Materials, 2001, 296, 119-128.	2.7	113
10	Models of liquid metal corrosion. Journal of Nuclear Materials, 2010, 404, 82-96.	2.7	113
11	Nanoindentation on ion irradiated steels. Journal of Nuclear Materials, 2009, 389, 239-247.	2.7	111
12	Heavy-ion irradiation defect accumulation in ZrN characterized by TEM, GIXRD, nanoindentation, and helium desorption. Journal of Nuclear Materials, 2013, 435, 77-87.	2.7	109
13	An exploratory study to determine applicability of nano-hardness and micro-compression measurements for yield stress estimation. Journal of Nuclear Materials, 2008, 375, 135-143.	2.7	96
14	Loop and void damage during heavy ion irradiation on nanocrystalline and coarse grained tungsten: Microstructure, effect of dpa rate, temperature, and grain size. Acta Materialia, 2018, 149, 206-219.	7.9	92
15	High temperature plastic anisotropy in MoSi2 single crystals. Acta Metallurgica Et Materialia, 1995, 43, 657-668.	1.8	90
16	Superior radiation-resistant nanoengineered austenitic 304L stainless steel for applications in extreme radiation environments. Scientific Reports, 2015, 5, 7801.	3.3	82
17	Grain size threshold for enhanced irradiation resistance in nanocrystalline and ultrafine tungsten. Materials Research Letters, 2017, 5, 343-349.	8.7	81
18	Application of small-scale testing for investigation of ion-beam-irradiated materials. Journal of Materials Research, 2012, 27, 2724-2736.	2.6	80

#	Article	IF	Citations
19	Corrosion of ODS steels in leadâ€“bismuth eutectic. Journal of Nuclear Materials, 2008, 373, 246-253.	2.7	79
20	Enhanced radiation tolerance of ultrafine grained Feâ€“Crâ€“Ni alloy. Journal of Nuclear Materials, 2012, 420, 235-240.	2.7	78
21	Microstructural analysis of an HT9 fuel assembly duct irradiated in FFTF to 155dpa at 443Â°C. Journal of Nuclear Materials, 2009, 393, 235-241.	2.7	75
22	Temperature dependent dispersoid stability in ion-irradiated ferritic-martensitic dual-phase oxide-dispersion-strengthened alloy: Coherent interfaces vs. incoherent interfaces. Acta Materialia, 2016, 116, 29-42.	7.9	73
23	High temperature oxidation of molybdenum in water vapor environments. Journal of Nuclear Materials, 2014, 448, 441-447.	2.7	72
24	In situ study of defect migration kinetics in nanoporous Ag with enhanced radiation tolerance. Scientific Reports, 2014, 4, 3737.	3.3	67
25	On the slip systems in MoSi2. Acta Metallurgica Et Materialia, 1992, 40, 3159-3165.	1.8	65
26	Effects of carbon additions on the high temperature mechanical properties of molybdenum disilicide. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 1992, 155, 159-163.	5.6	62
27	The influence of shock-pulse shape on the structure/property behavior of copper and 316 L austenitic stainless steel. Acta Materialia, 2005, 53, 3293-3303.	7.9	61
28	Unprecedented irradiation resistance of nanocrystalline tungsten with equiaxed nanocrystalline grains to dislocation loop accumulation. Acta Materialia, 2019, 165, 118-128.	7.9	61
29	Mechanical Performance of Ferritic Martensitic Steels for High Dose Applications in Advanced Nuclear Reactors. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2013, 44, 70-83.	2.2	60
30	Microstructure and mechanical properties of FeCrAl alloys under heavy ion irradiations. Journal of Nuclear Materials, 2018, 503, 250-262.	2.7	60
31	Influence of shock prestraining on the formation of shear localization in 304 stainless steel. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2005, 36, 1471-1486.	2.2	59
32	Radiation response of alloy T91 at damage levels up to 1000 peak dpa. Journal of Nuclear Materials, 2016, 482, 257-265.	2.7	59
33	Cladding and duct materials for advanced nuclear recycle reactors. Jom, 2008, 60, 15-23.	1.9	58
34	Determination of helium and hydrogen yield from measurements on pure metals and alloys irradiated by mixed high energy proton and spallation neutron spectra in LANSCE. Journal of Nuclear Materials, 2001, 296, 66-82.	2.7	57
35	Phase stability of an HT-9 duct irradiated in FFTF. Journal of Nuclear Materials, 2012, 430, 194-204.	2.7	55
36	Transmission electron microscopy (TEM) on oxide layers formed on D9 stainless steel in lead bismuth eutectic (LBE). Corrosion Science, 2013, 66, 196-202.	6.6	54

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37	Neutron irradiation effects in Fe and Fe-Cr at 300ÂÂ°C. Acta Materialia, 2016, 111, 407-416.	7.9	54
38	High strain rate deformation of Ti48Al2Nb2Cr. Acta Materialia, 1996, 44, 1741-1756.	7.9	53
39	Stability of nanosized oxides in ferrite under extremely high dose self ion irradiations. Journal of Nuclear Materials, 2017, 486, 86-95.	2.7	51
40	Modeling and simulation of irradiation hardening in structural ferritic steels for advanced nuclear reactors. Journal of Nuclear Materials, 2008, 377, 136-140.	2.7	49
41	Effect of tube processing methods on microstructure, mechanical properties and irradiation response of 14YWT nanostructured ferritic alloys. Acta Materialia, 2017, 134, 116-127.	7.9	49
42	Microstructure, chemistry and mechanical properties of Ni-based superalloy Rene N4 under irradiation at room temperature. Acta Materialia, 2015, 95, 357-365.	7.9	46
43	Atom probe study of irradiation-enhanced Î±â€² precipitation in neutron-irradiated Feâ€"Cr model alloys. Journal of Nuclear Materials, 2015, 462, 242-249.	2.7	46
44	Helium bubble nucleation in bcc iron studied by kinetic Monte Carlo simulations. Journal of Nuclear Materials, 2007, 361, 141-148.	2.7	45
45	Mechanical properties and microstructure in low-activation martensitic steels F82H and Optimax after 800-MeV proton irradiation. Journal of Nuclear Materials, 2000, 283-287, 513-517.	2.7	44
46	Dislocations, twins, grain boundaries and precipitates in MoSi2. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 1992, 155, 241-249.	5.6	43
47	Process development for 9Cr nanostructured ferritic alloy (NFA) with high fracture toughness. Journal of Nuclear Materials, 2014, 449, 290-299.	2.7	41
48	On the structure and chemistry of complex oxide nanofeatures in nanostructured ferritic alloy U14YWT. Philosophical Magazine, 2012, 92, 2089-2107.	1.6	40
49	Spherical nanoindentation of proton irradiated 304 stainless steel: A comparison of small scale mechanical test techniques for measuring irradiation hardening. Journal of Nuclear Materials, 2017, 493, 368-379.	2.7	40
50	On the LME susceptibility of Si enriched steels. Journal of Nuclear Materials, 2012, 429, 105-112.	2.7	39
51	Direct comparison of nanoindentation and tensile test results on reactor-irradiated materials. Journal of Nuclear Materials, 2018, 504, 135-143.	2.7	39
52	Mechanical properties of monocrystalline C11b MoSi2 with small aluminum additions. Scripta Materialia, 1997, 37, 1599-1604.	5.2	38
53	Dose dependence of mechanical properties in tantalum and tantalum alloys after low temperature irradiation. Journal of Nuclear Materials, 2008, 377, 72-79.	2.7	37
54	Microstructural stability of an HT-9 fuel assembly duct irradiated in FFTF. Journal of Nuclear Materials, 2011, 414, 237-242.	2.7	37

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55	Tensile deformation and fracture properties of a 14YWT nanostructured ferritic alloy. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2016, 675, 437-448.	5.6	37
56	Detailed transmission electron microscopy study on the mechanism of dislocation loop rafting in tungsten. Acta Materialia, 2018, 147, 277-283.	7.9	37
57	In-situ irradiation tolerance investigation of high strength ultrafine tungsten-titanium carbide alloy. Acta Materialia, 2019, 164, 547-559.	7.9	37
58	Correlation of radiation-induced changes in mechanical properties and microstructural development of Alloy 718 irradiated with mixed spectra of high-energy protons and spallation neutrons. Journal of Nuclear Materials, 2001, 296, 145-154.	2.7	36
59	Comparison of fission neutron and proton/spallation neutron irradiation effects on the tensile behavior of type 316 and 304 stainless steel. Journal of Nuclear Materials, 2003, 318, 283-291.	2.7	36
60	SANS and TEM of ferriticâ€"martensitic steel T91 irradiated in FFTF up to 184dpa at 413Â°C. Journal of Nuclear Materials, 2013, 440, 91-97.	2.7	36
61	High temperature microstructural stability and recrystallization mechanisms in 14YWT alloys. Acta Materialia, 2018, 148, 467-481.	7.9	36
62	High temperature tensile testing of modified 9Crâ€"1Mo after irradiation with high energy protons. Journal of Nuclear Materials, 2003, 318, 200-206.	2.7	35
63	Liquid metal embrittlement of silicon enriched steel for nuclear applications. Journal of Nuclear Materials, 2010, 398, 116-121.	2.7	35
64	Fabrication of a tantalum-clad tungsten target for LANSCE. Journal of Nuclear Materials, 2012, 431, 172-184.	2.7	35
65	Softening due to Grain Boundary Cavity Formation and its Competition with Hardening in Helium Implanted Nanocrystalline Tungsten. Scientific Reports, 2018, 8, 2897.	3.3	35
66	Degradation of HT9 under simultaneous ion beam irradiation and liquid metal corrosion. Journal of Nuclear Materials, 2016, 479, 382-389.	2.7	34
67	In Situ Micro-Pillar Compression to Examine Radiation-Induced Hardening Mechanisms of FeCrAl Alloys. Acta Materialia, 2021, 202, 255-265.	7.9	34
68	Fracture behavior of 9Cr nanostructured ferritic alloy with improved fracture toughness. Journal of Nuclear Materials, 2014, 449, 39-48.	2.7	33
69	Response of 14YWT alloys under neutron irradiation: A complementary study on microstructure and mechanical properties. Acta Materialia, 2019, 167, 181-196.	7.9	33
70	Temperature effects on the mechanical properties of candidate SNS target container materials after proton and neutron irradiation. Journal of Nuclear Materials, 2002, 303, 34-43.	2.7	32
71	Grain refinement of T91 alloy by equal channel angular pressing. Journal of Nuclear Materials, 2009, 389, 221-224.	2.7	32
72	Thermal stability of ultrafine grained Feâ€"Crâ€"Ni alloy. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2012, 542, 64-70.	5.6	32

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73	Nanoindentation creep study on an ion beam irradiated oxide dispersion strengthened alloy. Journal of Nuclear Materials, 2014, 451, 162-167.	2.7	32
74	Effect of tube processing methods on the texture and grain boundary characteristics of 14YWT nanostructured ferritic alloys. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2016, 661, 222-232.	5.6	32
75	Ion-irradiation-induced microstructural modifications in ferritic/martensitic steel T91. Journal of Nuclear Materials, 2017, 490, 305-316.	2.7	32
76	Micro- and mesoscale mechanical properties of an ultra-fine grained CrFeMnNi high entropy alloy produced by large strain machining. Scripta Materialia, 2020, 178, 508-512.	5.2	32
77	Microstructural evolution of Alloy 718 at high helium and hydrogen generation rates during irradiation with 600â€“800 MeV protons. Journal of Nuclear Materials, 2000, 283-287, 324-328.	2.7	31
78	Tensile testing of EP-823 and HT-9 after irradiation in STIP II. Journal of Nuclear Materials, 2006, 356, 56-61.	2.7	31
79	Core materials development for the fuel cycle R&D program. Journal of Nuclear Materials, 2011, 415, 302-305.	2.7	30
80	Effect of bulk oxygen on 14YWT nanostructured ferritic alloys. Journal of Nuclear Materials, 2014, 444, 35-38.	2.7	30
81	Effect of self-ion irradiation on the microstructural changes of alloy EK-181 in annealed and severely deformed conditions. Journal of Nuclear Materials, 2017, 487, 96-104.	2.7	30
82	The effects of fast reactor irradiation conditions on the tensile properties of two ferritic/martensitic steels. Journal of Nuclear Materials, 2006, 356, 62-69.	2.7	29
83	Influence of Shock Prestraining and Grain Size on the Dynamic-Tensile-Extrusion Response of Copper: Experiments and Simulation. AIP Conference Proceedings, 2006, , .	0.4	29
84	Temperature threshold for preferential bubble formation on grain boundaries in tungsten under in-situ helium irradiation. Scripta Materialia, 2020, 180, 6-10.	5.2	29
85	Summary of the results from post-irradiation examination of spent targets at the FZ-Juelich. Journal of Nuclear Materials, 2003, 318, 56-69.	2.7	28
86	Characterization and comparative analysis of the tensile properties of five tempered martensitic steels and an oxide dispersion strengthened ferritic alloy irradiated at â‰ˆ295ÂÂ°C to â‰ˆ6.5Âdpa. Journal of Nuclear Materials, 2016, 468, 232-239.	2.7	28
87	Micropillar compression response of femtosecond laser-cut single crystal Cu and proton irradiated Cu. Scripta Materialia, 2019, 170, 145-149.	5.2	28
88	Revealing the synergistic effects of sequential and simultaneous dual beam irradiations in tungsten via in-situ TEM. Journal of Nuclear Materials, 2020, 538, 152150.	2.7	28
89	Impression creep behavior of SiC particle-MoSi₂ composites. Journal of Materials Research, 1996, 11, 1528-1536.	2.6	27
90	Heavy Liquid Metal Corrosion of Structural Materials in Advanced Nuclear Systems. Jom, 2013, 65, 1057-1066.	1.9	27

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91	Shear punch and tensile measurements of mechanical property changes induced in various austenitic alloys by high-energy mixed proton and neutron irradiation at low temperatures. Journal of Nuclear Materials, 2000, 283-287, 418-422.	2.7	26
92	The mechanical properties of an Alloy 718 window after irradiation in a spallation environment. Journal of Nuclear Materials, 2001, 296, 139-144.	2.7	26
93	The effect of 800MeV proton irradiation on the mechanical properties of tungsten at room temperature and at 475Â°C. Journal of Nuclear Materials, 2005, 343, 219-226.	2.7	26
94	Texture evolution and microcracking mechanisms in as-extruded and cross-rolled conditions of a 14YWT nanostructured ferritic alloy. Acta Materialia, 2018, 152, 338-357.	7.9	26
95	Microstructure in Martensitic Steel DIN 1.4926 after 800 MeV proton irradiation. Journal of Nuclear Materials, 1999, 265, 203-207.	2.7	25
96	Thermal desorption spectroscopy of high fluence irradiated ultrafine and nanocrystalline tungsten: helium trapping and desorption correlated with morphology. Nuclear Fusion, 2018, 58, 016020.	3.5	25
97	Nanohardness measurements of heavy ion irradiated coarse- and nanocrystalline-grained tungsten at room and high temperature. Journal of Nuclear Materials, 2018, 509, 276-284.	2.7	25
98	Microstructure response of ferritic/martensitic steel HT9 after neutron irradiation: effect of dose. Journal of Nuclear Materials, 2019, 523, 421-433.	2.7	25
99	Spatial and temporal variation of hardness of a printed steel part. Acta Materialia, 2021, 209, 116775.	7.9	25
100	Microstructural evolution in modified 9Crâ€“1Mo ferritic/martensitic steel irradiated with mixed high-energy proton and neutron spectra at low temperatures. Journal of Nuclear Materials, 2002, 307-311, 266-271.	2.7	24
101	The influence of explosive-driven â€œtaylor-waveâ€•shock prestraining on the structure/property behavior of 304 stainless steel. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2004, 35, 2617-2624.	2.2	24
102	Temperature dependence of dissolution rate of a lead oxide mass exchanger in leadâ€“bismuth eutectic. Journal of Nuclear Materials, 2014, 450, 270-277.	2.7	24
103	Irradiation dose and temperature dependence of fracture toughness in high dose HT9 steel from the fuel duct of FFTF. Journal of Nuclear Materials, 2013, 432, 1-8.	2.7	23
104	In-situ tube burst testing and high-temperature deformation behavior of candidate materials for accident tolerant fuel cladding. Journal of Nuclear Materials, 2015, 466, 417-425.	2.7	23
105	Influence of injected interstitials on the void swelling in two structural variants of 304L stainless steel induced by self-ion irradiation at 500 Â°C. Nuclear Instruments & Methods in Physics Research B, 2017, 409, 323-327.	1.4	23
106	On delamination toughening of a 14YWT nanostructured ferritic alloy. Acta Materialia, 2017, 136, 61-73.	7.9	23
107	Tensile properties and microstructure of additively manufactured Grade 91 steel for nuclear applications. Journal of Nuclear Materials, 2021, 544, 152723.	2.7	23
108	{103}âŸ¨331âŸ© slip in MoSi2. Philosophical Magazine Letters, 1993, 67, 313-321.	1.2	22

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109	A computational method to identify interstitial sites in complex materials. Scripta Materialia, 2008, 58, 739-742.	5.2	22
110	Irradiation creep and density changes observed in MA957 pressurized tubes irradiated to doses of 40â€“110dpa at 400â€“750Â°C in FFTF. Journal of Nuclear Materials, 2012, 428, 170-175.	2.7	22
111	Neutron and X-ray diffraction analysis of the effect of irradiation dose and temperature on microstructure of irradiated HT-9 steel. Journal of Nuclear Materials, 2013, 443, 522-530.	2.7	22
112	Resilient ZnO nanowires in an irradiation environment: An in situ study. Acta Materialia, 2015, 95, 156-163.	7.9	22
113	Microstructural origins of radiation-induced changes in mechanical properties of 316 L and 304 L austenitic stainless steels irradiated with mixed spectra of high-energy protons and spallation neutrons. Journal of Nuclear Materials, 2001, 296, 112-118.	2.7	21
114	Macro and microscale mechanical testing and local electrode atom probe measurements of STIP irradiated F82H, Feâ€“8Cr ODS and Feâ€“8Crâ€“2W ODS. Journal of Nuclear Materials, 2011, 417, 274-278.	2.7	21
115	Investigation of Portevinâ˘Le Chatelier effect in HT-9 steel. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2015, 631, 120-125.	5.6	21
116	MoSi₂ Oxidation in 670â€“1498 K Water Vapor. Journal of the American Ceramic Society, 2016, 99, 1412-1419.	3.8	21
117	Microstructure response of ferritic/martensitic steel HT9 after neutron irradiation: Effect of temperature. Journal of Nuclear Materials, 2020, 528, 151845.	2.7	21
118	Impact properties of irradiated HT9 from the fuel duct of FFTF. Journal of Nuclear Materials, 2012, 421, 104-111.	2.7	20
119	Temperature and grain size dependent plastic instability and strain rate sensitivity of ultrafine grained austenitic Feâ€“14Crâ€“16Ni alloy. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2014, 597, 415-421.	5.6	20
120	A comparative assessment of the fracture toughness behavior of ferritic-martensitic steels and nanostructured ferritic alloys. Journal of Nuclear Materials, 2017, 484, 157-167.	2.7	20
121	Large and Small Scale Materials Testing of HT-9 Irradiated in the STIP Irradiation Program. Experimental Mechanics, 2011, 51, 1095-1102.	2.0	19
122	AFM and MFM characterization of oxide layers grown on stainless steels in lead bismuth eutectic. Journal of Nuclear Materials, 2008, 376, 289-292.	2.7	18
123	The design, setup and operational testing of the irradiation and corrosion experiment (ICE). Journal of Nuclear Materials, 2008, 376, 392-395.	2.7	18
124	Structural, electrical and magnetic measurements on oxide layers grown on 316L exposed to liquid leadâ€“bismuth eutectic. Journal of Nuclear Materials, 2012, 421, 140-146.	2.7	18
125	Chemical Reactions in the Processing of MoSi2 Carbon Compacts. Journal of the American Ceramic Society, 1993, 76, 2005-2009.	3.8	17
126	Deuterium retention and release from highly irradiated annealed tungsten after exposure to a deuterium DC glow discharge. Journal of Nuclear Materials, 2004, 329-333, 977-981.	2.7	17

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127	Nanoscale characterization of HT-9 exposed to lead bismuth eutectic at 550Â°C for 3000h. Journal of Nuclear Materials, 2008, 381, 211-215.	2.7	17
128	Micro-structural characterization of laboratory heats of the Ferric/Martensitic steels HT-9 and T91. Journal of Nuclear Materials, 2010, 403, 7-14.	2.7	17
129	Intermediate temperature corrosion behaviour of Fe-12Cr-6Al-2Mo-0.2Si-0.03Y alloy (C26M) at 300â€"600â€¯Â°C. Corrosion Science, 2019, 157, 274-283.	6.6	17
130	Effect of dose on irradiation-induced loop density and Burgers vector in ion-irradiated ferritic/martensitic steel HT9. Philosophical Magazine, 2018, 98, 2440-2456.	1.6	16
131	Morphology and interface structure of Mo5Si3precipitates in MoSi2. Philosophical Magazine A: Physics of Condensed Matter, Structure, Defects and Mechanical Properties, 1995, 72, 997-1013.	0.6	15
132	He+ ion irradiation response of Feâ€"TiO2 multilayers. Journal of Nuclear Materials, 2013, 435, 96-101.	2.7	15
133	Stability of nanoclusters in an oxide dispersion strengthened alloy under neutron irradiation. Scripta Materialia, 2017, 138, 57-61.	5.2	15
134	Irradiation-resistant ferritic and martensitic steels as core materials for Generation IV nuclear reactors. , 2017, , 329-355.		15
135	Helium and hydrogen generation in pure metals irradiated with high-energy protons and spallation neutrons in LANSCE. Journal of Nuclear Materials, 2002, 307-311, 1471-1477.	2.7	14
136	Water corrosion measurements on tungsten irradiated with high energy protons and spallation neutrons. Journal of Nuclear Materials, 2012, 431, 140-146.	2.7	14
137	Thermal annealing recovery of fracture toughness in HT9 steel after irradiation to high doses. Journal of Nuclear Materials, 2014, 449, 263-272.	2.7	14
138	Radiation resistance of oxide dispersion strengthened alloys: Perspectives from in situ observations and rate theory calculations. Scripta Materialia, 2018, 148, 33-36.	5.2	14
139	Nanomechanical properties of pristine and heavy ion irradiated nanocrystalline tungsten. Scripta Materialia, 2019, 166, 159-163.	5.2	14
140	Helium implantation damage resistance in nanocrystalline W-Ta-V-Cr high entropy alloys. Materials Today Energy, 2021, 19, 100599.	4.7	14
141	Precipitation of Mo₅Si₃ in MoSi₂. Journal of Materials Research, 1993, 8, 1079-1085.	2.6	13
142	Hydrogen release from 800 MeV proton-irradiated tungsten. Journal of Nuclear Materials, 2002, 307-311, 1418-1423.	2.7	13
143	Oxygen effects on irradiated tantalum alloys. Journal of Nuclear Materials, 2009, 384, 25-29.	2.7	13
144	Stereographic Methods for 3D Characterization of Dislocations. Microscopy and Microanalysis, 2017, 23, 210-211.	0.4	13

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145	Manufacturing Oxide Dispersion-Strengthened (ODS) Steel Fuel Cladding Tubes Using the Cold Spray Process. Jom, 2019, 71, 2868-2873.	1.9	13
146	Single crystal elastic constants of NbSi₂. The Philosophical Magazine: Physics of Condensed Matter B, Statistical Mechanics, Electronic, Optical and Magnetic Properties, 1995, 71, 373-382.	0.6	12
147	Microstructural evolution of both as-irradiated and subsequently deformed microstructures of 316L stainless steel irradiated at 30â€“160Â°C at LANSCE. Journal of Nuclear Materials, 2005, 345, 136-145.	2.7	12
148	Plastic deformation in zirconium nitride observed by nanoindentation and TEM. Journal of Nuclear Materials, 2011, 416, 253-261.	2.7	12
149	Shear punch testing of candidate reactor materials after irradiation in fast reactors and spallation environments. Journal of Nuclear Materials, 2011, 417, 1005-1008.	2.7	12
150	Study of irradiated mod.9Crâ€“1Mo steel by synchrotron extended X-ray absorption fine structure. Journal of Nuclear Materials, 2013, 441, 674-680.	2.7	12
151	A novel approach for manufacturing oxide dispersion strengthened (ODS) steel cladding tubes using cold spray technology. Nuclear Engineering and Technology, 2019, 51, 1069-1074.	2.3	12
152	Correlation of in-situ transmission electron microscopy and microchemistry analysis of radiation-induced precipitation and segregation in ion irradiated advanced ferritic/martensitic steels. Scripta Materialia, 2019, 162, 460-464.	5.2	12
153	Î±â€² formation kinetics and radiation induced segregation in neutron irradiated 14YWT nanostructured ferritic alloys. Scientific Reports, 2019, 9, 8345.	3.3	12
154	Microscale shear specimens for evaluating the shear deformation in single-crystal and nanocrystalline Cu and at Cuâ€“Si interfaces. Journal of Materials Research, 2019, 34, 1574-1583.	2.6	12
155	Proton irradiation and characterization of additively manufactured 304L stainless steels. Journal of Nuclear Materials, 2020, 531, 152007.	2.7	12
156	High strain rate deformation of NiAl. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 1995, 192-193, 249-254.	5.6	11
157	The influence of explosive-driven shock prestraining at 35 GPa and of high deformation on the structure/property behavior of 316 L austenitic stainless steel. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2005, 36, 1825-1831.	2.2	11
158	The effects of helium on irradiation damage in single crystal iron. Journal of Nuclear Materials, 2007, 367-370, 451-456.	2.7	11
159	Investigation of temperature dependence of fracture toughness in high-dose HT9 steel using small-specimen reuse technique. Journal of Nuclear Materials, 2014, 444, 206-213.	2.7	11
160	Characterization of 14YWT oxide dispersion strengthened structural materials under electrically-assisted tension. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2019, 745, 484-494.	5.6	11
161	Comparison of void swelling of ferritic-martensitic and ferritic HT9 alloys after high-dose self-ion irradiation. Materials Characterization, 2021, 173, 110908.	4.4	11
162	Enhanced mechanical properties of additive manufactured Grade 91 steel. Scripta Materialia, 2021, 199, 113888.	5.2	11

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163	Deformation twinning versus slip in Ni-based alloys, containing Pt2Mo-structured, Ni2Cr-typed precipitates. Materials and Design, 2021, 207, 109820.	7.0	11
164	In-Situ Helium Implantation and TEM Investigation of Radiation Tolerance to Helium Bubble Damage in Equiaxed Nanocrystalline Tungsten and Ultrafine Tungsten-TiC Alloy. Materials, 2020, 13, 794.	2.9	11
165	Gamma-induced positron annihilation spectroscopy and application to radiation-damaged alloys. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2006, 562, 688-691.	1.6	10
166	In situ neutron diffraction study on temperature dependent deformation mechanisms of ultrafine grained austenitic Feâ€"14Crâ€"16Ni alloy. International Journal of Plasticity, 2014, 53, 125-134.	8.8	10
167	Effect of shock loading on the microstructure, mechanical properties and grain boundary characteristics of HT-9 ferritic/martensitic steels. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2016, 651, 75-82.	5.6	10
168	Experimental methodology and theoretical framework in describing constrained plastic flow of FCC microscale tensile specimens. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2021, 799, 140124.	5.6	10
169	High energy X-ray diffraction study of the relationship between the macroscopic mechanical properties and microstructure of irradiated HT-9 steel. Journal of Nuclear Materials, 2016, 475, 46-56.	2.7	9
170	Nitrogen effects on radiation response in 12Cr ferritic/martensitic alloys. Scripta Materialia, 2020, 189, 145-150.	5.2	9
171	Irradiation stability and induced ferromagnetism in a nanocrystalline CoCrCuFeNi highly-concentrated alloy. Nanoscale, 2021, 13, 20437-20450.	5.6	9
172	Status of materials handbooks for particle accelerator and nuclear reactor applications. Journal of Nuclear Materials, 2008, 377, 94-96.	2.7	8
173	An intermetallic forming steel under radiation for nuclear applications. Journal of Nuclear Materials, 2015, 458, 361-368.	2.7	8
174	Chemical vapor deposition of Mo tubes for fuel cladding applications. Surface and Coatings Technology, 2018, 337, 510-515.	4.8	8
175	Sizing up mechanical testing: Comparison of microscale and mesoscale mechanical testing techniques on a FeCrAl welded tube. Journal of Materials Research, 2020, 35, 2817-2830.	2.6	8
176	Performance of a Clad Tungsten Rod Spallation Neutron Source Target. Nuclear Technology, 2005, 151, 303-313.	1.2	7
177	Tensile properties of the NLF reduced activation ferritic/martensitic steels after irradiation in a fast reactor spectrum to a maximum dose of 67dpa. Journal of Nuclear Materials, 2005, 341, 141-147.	2.7	7
178	In-situ observation of nano-oxide and defect evolution in 14YWT alloys. Materials Characterization, 2020, 170, 110686.	4.4	7
179	The effects of microstructures and radiation damage on the deformation behavior of a HT-9 alloy using microtensile testing. Materials Characterization, 2021, 174, 110972.	4.4	7
180	Ultrafine intralath precipitation of V(C,N) in 12Cr-1MoWV (wt.%) ferritic/martensitic steel. Scripta Materialia, 2021, 197, 113787.	5.2	7

#	Article	IF	Citations
181	Void swelling of conventional and composition engineered HT9 alloys after high-dose self-ion irradiation. Journal of Nuclear Materials, 2022, 560, 153492.	2.7	7
182	Materials Selection and Qualification Processes at a High-Power Spallation Neutron Source. Materials Characterization, 1999, 43, 97-123.	4.4	6
183	The Accelerator Production of Tritium Materials Test Program. Nuclear Technology, 2000, 132, 103-114.	1.2	6
184	The high temperature three point bend testing of proton irradiated 316L stainless steel and Mod 9Crâ€"1Mo. Journal of Nuclear Materials, 2005, 343, 191-196.	2.7	6
185	Small-Scale Testing of In-Core Fast Reactor Materials. Journal of Nuclear Science and Technology, 2011, 48, 575-579.	1.3	6
186	Proton irradiation damage of an annealed Alloy 718 beam window. Journal of Nuclear Materials, 2015, 459, 103-113.	2.7	6
187	Surface modification of low activation ferriticâ€"martensitic steel EK-181 (Rusfer) by high temperature pulsed plasma flows. Nuclear Instruments & Methods in Physics Research B, 2015, 365, 218-221.	1.4	6
188	Grazing incidence X-ray diffraction and transmission electron microscopy studies on the oxide formation of molybdenum in a water vapor environment. Scripta Materialia, 2016, 120, 49-53.	5.2	6
189	Insights from microstructure and mechanical property comparisons of three pilgered ferritic ODS tubes. Materials and Design, 2022, 213, 110333.	7.0	6
190	High-Throughput Nanoindentation Mapping of Additively Manufactured T91 Steel. Jom, 2022, 74, 1469-1476.	1.9	6
191	The performance of high-temperature superconductors in space radiation environments. IEEE Transactions on Applied Superconductivity, 2003, 13, 1600-1603.	1.7	5
192	Annealing effects on mechanical properties and microstructure of F82H irradiated at â©½260Â°C with 800MeV protons. Journal of Nuclear Materials, 2005, 343, 241-246.	2.7	5
193	In situ neutron diffraction and Elasticâ€"Plastic Self-Consistent polycrystal modeling of HT-9. Journal of Nuclear Materials, 2012, 425, 228-232.	2.7	5
194	Thermally Induced Interdiffusion and Precipitation in a Ni/Ni₃Al System. Materials Research Letters, 2015, 3, 169-176.	8.7	5
195	High-Efficiency Three-Dimensional Visualization of Complex Microstructures via Multidimensional STEM Acquisition and Reconstruction. Microscopy and Microanalysis, 2020, 26, 240-246.	0.4	5
196	Microstructural and micro-mechanical analysis of 14YWT nanostructured Ferritic alloy after varying thermo-mechanical processing paths into tubing. Materials Characterization, 2021, 171, 110744.	4.4	5
197	A NEA review on innovative structural materials solutions, including advanced manufacturing processes for nuclear applications based on technology readiness assessment. Nuclear Materials and Energy, 2021, 27, 101006.	1.3	5
198	Does sink efficiency unequivocally characterize how grain boundaries impact radiation damage?. Physical Review Materials, 2018, 2, .	2.4	5

#	Article	IF	Citations
199	The Effect of High Energy Protons and Neutrons on the Tensile Properties of Materials Selected for the Target and Blanket Components in the Accelerator Production of Tritium Project. , 2001, , 644-659.		5
200	Projection-capacitor discharge resistance welding of 430 stainless steel and 14YWT. Journal of Manufacturing Processes, 2022, 75, 1189-1201.	5.9	5
201	Creep Behavior of MoSi2-SiC Composites. Materials Research Society Symposia Proceedings, 1993, 322, 197.	0.1	4
202	TEM Characterization of Invariant Line Interfaces and Structural Ledges in a Mo-Si Alloy. Materials Science Forum, 1996, 207-209, 117-120.	0.3	4
203	Materials issues in a high power spallation target. Journal of Nuclear Materials, 2005, 343, 367.	2.7	4
204	Surface engineering of IN-718 by low-temperature carburisation: properties and thermal stability. Surface Engineering, 2019, 35, 281-293.	2.2	4
205	Effect of High-Density Nanoparticles on Recrystallization and Texture Evolution in Ferritic Alloys. Crystals, 2019, 9, 172.	2.2	4
206	Phase Stability of Ni/Ni3Al Multilayers Under Thermal Annealing and Irradiation. Jom, 2020, 72, 3995-4001.	1.9	4
207	Shear Punch Testing of Neutron-Irradiated HT-9 and 14YWT. Jom, 2020, 72, 1703-1709.	1.9	4
208	Fracture Toughness Characterization of 304L and 316L Austenitic Stainless Steels and Alloy 718 After Irradiation in High-Energy, Mixed Proton/Neutron Spectrum. , 2001, , 125-147.		4
209	Retention of Very High Levels of Helium and Hydrogen Generated in Various Structural Alloys by 800 MeV Protons and Spallation Neutrons. , 2001, , 612-630.		4
210	Microstructure evolution in MA956 neutron irradiated in ATR at 328ÂÂ°C to 4.36 dpa. Journal of Nuclear Materials, 2020, 533, 152094.	2.7	4
211	Hydrogen Release From 800-MeV Proton-Irradiated Tungsten Rods. Physica Scripta, 2001, T94, 137.	2.5	3
212	Positron annihilation spectroscopy of proton irradiated single crystal BCC iron. Journal of Nuclear Materials, 2006, 351, 149-154.	2.7	3
213	Investigation of hardening mechanisms and size effects in proton-irradiated HT-9 steels. Journal of Nuclear Materials, 2021, 548, 152866.	2.7	3
214	Helium-bubble-enhanced disordering of intermetallic phase under irradiation. Materials Characterization, 2021, 176, 111094.	4.4	3
215	Stable, Ductile and Strong Ultrafine HT-9 Steels via Large Strain Machining. Nanomaterials, 2021, 11, 2538.	4.1	3
216	Microstructural Alteration of Structural Alloys by Low Temperature Irradiation with High Energy Protons and Spallation Neutrons. , 2001, , 588-611.		3

#	Article	IF	Citations
217	The Temperature and Strain Rate Dependence of the Flow Stress in MoSi2 Single Crystals. Materials Research Society Symposia Proceedings, 1993, 322, 21.	0.1	2
218	Relative Defect Density Measurements of Laser Shock Peened 316L Stainless Steel Using Positron Annihilation Spectroscopy. Journal of Nondestructive Evaluation, 2011, 30, 221-224.	2.4	2
219	The Suitability of the Materials Test Station for Fusion Materials Irradiations. Fusion Science and Technology, 2012, 62, 289-294.	1.1	2
220	Enhancement of Nanostructured Ferritic Alloy 14YWT Properties via Heat Treatment for Post-Consolidation Processing. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2021, 52, 2821-2829.	2.2	2
221	Joining of Nanostructured Ferritic 14YWT Alloys by Spark Plasma Technique. Journal of Materials Engineering and Performance, 2021, 30, 5736-5741.	2.5	2
222	Damage relief of ion-irradiated Inconel alloy 718 via annealing. Nuclear Instruments & Methods in Physics Research B, 2020, 479, 157-162.	1.4	2
223	Kinetics of the Migration and Clustering of Extrinsic Gas in bcc Metals. Journal of ASTM International, 2007, 4, 100698.	0.2	2
224	Demonstration of a High-Throughput Tensile Testing Technique Using Femtosecond Laser-Fabricated Tensile Bars in AISI 316 and Additively Manufactured Grade 91 Steel. Jom, 2021, 73, 4240-4247.	1.9	2
225	The influence of nitrogen and nitrides on the structure and properties of proton irradiated ferritic/martensitic steel. Journal of Nuclear Materials, 2022, 561, 153528.	2.7	2
226	A Novel Microshear Geometry for Exploring the Influence of Void Swelling on the Mechanical Properties Induced by MeV Heavy Ion Irradiation. Materials, 2022, 15, 4253.	2.9	2
227	Failure analysis of a radio-activated accelerator component. Journal of Failure Analysis and Prevention, 2003, 3, 71-80.	0.0	1
228	Summary of the 7th International Workshop on Spallation Materials Technology (IWSMT-7). Journal of Nuclear Materials, 2006, 356, 325-330.	2.7	1
229	Kinetics of the Nucleation and Growth of Helium Bubbles in bcc Iron. Materials Research Society Symposia Proceedings, 2006, 929, 1.	0.1	1
230	Defect studies of stainless steel via positron annihilation energy spectroscopy. Journal of Physics: Conference Series, 2011, 265, 012011.	0.4	1
231	Nanostructured Engineering Alloys for Nuclear Application. Materials Research Society Symposia Proceedings, 2011, 1298, 217.	0.1	1
232	Role of stored defects on the mechanical response of shock prestrained HT-9 Steel. AIP Conference Proceedings, 2012, , .	0.4	1
233	Development and analysis of diffusion bonding techniques for LBE-cooled spallation targets. Journal of Nuclear Materials, 2012, 431, 185-195.	2.7	1
234	Concepts for the Development of Nanoscale Stable Precipitation-Strengthened Steels Manufactured by Conventional Methods. Jom, 2014, 66, 2467-2475.	1.9	1

#	Article	IF	Citations
235	Emulating Neutron-Induced Void Swelling in Stainless Steels Using Ion Irradiation. Minerals, Metals and Materials Series, 2018, , 669-680.	0.4	1
236	Overview of Reactor Systems and Operational Environments for Structural Materials in Gen-IV Fission Reactors. , 2019, , 23-49.		1
237	Microstructure Development with Thermomechanical Processing in Alloy MA956. ISIJ International, 2020, 60, 546-555.	1.4	1
238	Small Specimen Reuse Technique to Evaluate Fracture Toughness of High Dose HT9 Steel. , 2014, , 1-22.		1
239	Emulating Neutron-Induced Void Swelling in Stainless Steels Using Ion Irradiation. Minerals, Metals and Materials Series, 2019, , 669-680.	0.4	1
240	Solid-State Welding of the Nanostructured Ferritic Alloy 14YWT Using a Capacitive Discharge Resistance Welding Technique. Metals, 2022, 12, 23.	2.3	1
241	Discussion session summary: radiation effects. Journal of Nuclear Materials, 2003, 318, 369-370.	2.7	0
242	Positron Annihilation Energy and Lifetime Spectroscopy Studies for Radiation Defects in Stainless Steel. , 2009, , .		0
243	Additive Manufacturing of structural materials for nuclear application and rapid mesoscale mechanical testing. Microscopy and Microanalysis, 2021, 27, 2154-2155.	0.4	0
244	Limitations of Thermal Stability Analysis via In-Situ TEM/Heating Experiments. Nanomaterials, 2021, 11, 2541.	4.1	0
245	Dislocation decomposition and dissociation in molybdenum disilicide. Proceedings Annual Meeting Electron Microscopy Society of America, 1993, 51, 912-913.	0.0	0
246	Dislocation Decomposition, Dissociation, and Deformation in MoSi2 AND Î±-Al2Q3 Single Crystals. , 1995, , 53-62.		0
247	Failure Analysis of a Radio-Activated Accelerator Component. , 2019, , .		0
248	Small-Scale Testing of In-Core Fast Reactor Materials. Journal of Nuclear Science and Technology, 2011, 48, 575-579.	1.3	0
249	Kinetics of the Migration and Clustering of Extrinsic Gas in bcc Metals. , 0, , 177-177-13.		0
250	High-Energy Spallation Neutron Effects on the Tensile Properties of Materials for the Target and Blanket Components for the Accelerator Production of Tritium Project. , 2001, , 660-671.		0
251	Hydrogen and Helium Gas Formation and their Release Kinetics in Tungsten Rods after Irradiation with 800 MeV Protons. , 2001, , 762-774.		0
252	Helium/Hydrogen Measurements in High-Energy Proton-Irradiated Tungsten. , 2000, , 1109-1121.		0

#	Article	IF	Citations
253	Spectral Unfolding of Mixed Proton/Neutron Fluences in the LANSCE Irradiation Environment. , 2001, , 167-174.		0