

Steve G Roberts

List of Publications by Year in descending order

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41
papers

1,791
citations

304743

22
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302126

39
g-index

43
all docs

43
docs citations

43
times ranked

1540
citing authors

#	ARTICLE	IF	CITATIONS
1	High temperature annealing of ion irradiated tungsten. Acta Materialia, 2015, 90, 380-393.	7.9	162
2	Characterisation of radiation damage in W and W-based alloys from 2 MeV self-ion near-bulk implantations. Acta Materialia, 2015, 92, 163-177.	7.9	159
3	Ion-irradiation-induced clustering in W-Re and W-Re-Os alloys: A comparative study using atom probe tomography and nanoindentation measurements. Acta Materialia, 2015, 87, 121-127.	7.9	111
4	Ion-irradiation induced clustering in W-Re-Ta, W-Re and W-Ta alloys: An atom probe tomography and nanoindentation study. Acta Materialia, 2017, 124, 71-78.	7.9	107
5	Effects of irradiation temperature and dose rate on the mechanical properties of self-ion implanted Fe and Fe-Cr alloys. Journal of Nuclear Materials, 2013, 439, 33-40.	2.7	105
6	How oxidized grain boundaries fail. Acta Materialia, 2013, 61, 4707-4713.	7.9	101
7	Dislocation loop evolution during in-situ ion irradiation of model FeCrAl alloys. Acta Materialia, 2017, 136, 390-401.	7.9	97
8	Measuring anisotropy in Young's modulus of copper using microcantilever testing. Journal of Materials Research, 2009, 24, 3268-3276.	2.6	94
9	Understanding the effects of ion irradiation using nanoindentation techniques. Journal of Nuclear Materials, 2015, 462, 391-401.	2.7	90
10	Nanoindentation of model Fe-Cr alloys with self-ion irradiation. Journal of Nuclear Materials, 2013, 433, 174-179.	2.7	65
11	Processing and microstructure characterisation of oxide dispersion strengthened Fe-14Cr-0.4Ti-0.25Y ₂ O ₃ ferritic steels fabricated by spark plasma sintering. Journal of Nuclear Materials, 2015, 464, 61-68.	2.7	65
12	Mechanical and microstructural investigations of tungsten and doped tungsten materials produced via powder injection molding. Nuclear Materials and Energy, 2015, 3-4, 22-31.	1.3	60
13	Brittle-Ductile Transition and Dislocation Mobility in Sapphire. Journal of the American Ceramic Society, 1994, 77, 3099-3104.	3.8	56
14	High temperature indentation of helium-implanted tungsten. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2015, 625, 380-384.	5.6	50
15	Micro-mechanical measurement of fracture behaviour of individual grain boundaries in Ni alloy 600 exposed to a pressurized water reactor environment. Corrosion Science, 2016, 104, 9-16.	6.6	50
16	Determination of Surface Residual Stresses in Brittle Materials by Hertzian Indentation: Theory and Experiment. Journal of the American Ceramic Society, 1999, 82, 1809-1816.	3.8	49
17	Polishing Behavior and Surface Quality of Alumina and Alumina/Silicon Carbide Nanocomposites. Journal of the American Ceramic Society, 2000, 83, 1219-1225.	3.8	44
18	Microstructure and mechanical properties of cubic zirconia (8YSZ)/SiC nanocomposites. Journal of the European Ceramic Society, 2000, 20, 2457-2462.	5.7	40

#	ARTICLE	IF	CITATIONS
19	Ductile→brittle transition of polycrystalline iron and iron→chromium alloys. Journal of Nuclear Materials, 2008, 378, 305-311.	2.7	28
20	The micro-mechanical properties of ion irradiated tungsten. Physica Scripta, 2014, T159, 014056.	2.5	27
21	Effect of Alloy Composition & Helium ion-irradiation on the Mechanical Properties of Tungsten, Tungsten-Tantalum & Tungsten-Rhenium for Fusion Power Applications. Materials Research Society Symposia Proceedings, 2013, 1514, 99-104.	0.1	24
22	Effects of Yttrium on the Sintering and Microstructure of Alumina-Silicon Carbide "Nanocomposites". Journal of the American Ceramic Society, 2005, 88, 2354-2361.	3.8	22
23	Nanoindentation investigation of ion-irradiated Fe→Cr alloys using spherical indenters. Journal of Materials Research, 2012, 27, 85-90.	2.6	22
24	An in situ powder neutron diffraction study of nano-precipitate formation during processing of oxide-dispersion-strengthened ferritic steels. Journal of Alloys and Compounds, 2014, 582, 769-773.	5.5	22
25	The hardness and modulus of polycrystalline beryllium from nano-indentation. International Journal of Plasticity, 2019, 116, 62-80.	8.8	19
26	Nanoindentation and Micromechanical Testing of Iron-Chromium Alloys Implanted with Iron Ions. Advanced Materials Research, 0, 59, 304-307.	0.3	18
27	Imaging of radiation damage using complementary field ion microscopy and atom probe tomography. Ultramicroscopy, 2015, 159, 387-394.	1.9	18
28	Microstructural comparison of effects of hafnium and titanium additions in spark-plasma-sintered Fe-based oxide-dispersion strengthened alloys. Journal of Nuclear Materials, 2017, 487, 433-442.	2.7	15
29	Gas pressure sintering of Al ₂ O ₃ /TiCN composite. Ceramics International, 2005, 31, 1073-1076.	4.8	12
30	TEM characterization of simultaneous triple ion implanted ODS Fe ₁₂ Cr. Journal of Nuclear Materials, 2014, 455, 157-161.	2.7	12
31	FAFNIR: Strategy and risk reduction in accelerator driven neutron sources for fusion materials irradiation data. Fusion Engineering and Design, 2014, 89, 2108-2113.	1.9	11
32	Effects of single- and simultaneous triple-ion-beam irradiation on an oxide dispersion-strengthened Fe ₁₂ Cr steel. Journal of Materials Science, 2015, 50, 2306-2317.	3.7	11
33	Measuring Local Mechanical Properties using FIB Machined Cantilevers. Materials Research Society Symposia Proceedings, 2009, 1185, 13.	0.1	7
34	3D Dislocation dynamics modelling of interactions between prismatic loops and mobile dislocations in pure iron. Journal of Nuclear Materials, 2009, 386-388, 64-66.	2.7	5
35	Radiation induced hardening of beryllium during low temperature He implantation. Journal of Nuclear Materials, 2021, 555, 153130.	2.7	4
36	Development of a Novel Melt Spinning-Based Processing Route for Oxide Dispersion-Strengthened Steels. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2018, 49, 604-612.	2.2	3

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37	Mechanical Behavior of Ion-Irradiated Fe-Cr alloys Investigated by Spherical Indentation. Materials Research Society Symposia Proceedings, 2012, 1424, 1.	0.1	2
38	Micromechanical testing of oxidized grain boundaries in Nickel alloys from nuclear reactors. Materials Research Society Symposia Proceedings, 2013, 1519, 1.	0.1	2
39	Micromechanical testing of oxidised grain boundaries in Ni Alloy 600. Materials Research Society Symposia Proceedings, 2013, 1514, 119-124.	0.1	1
40	In-situ annealing of self-ion irradiation damage in tungsten. Materials Research Society Symposia Proceedings, 2014, 1712, 33.	0.1	1
41	Radiation resistance of nano-structured tungsten-rhenium sheet. Materials Research Society Symposia Proceedings, 2013, 1513, 1.	0.1	0