Barry Marsden

List of Publications by Year
in descending order

35 papers	1,072 citations	430843 18 h-index	395678 33 g-index
35 all docs	35 docs citations	35 times ranked	794 citing authors

#	Article	IF	Citations
1	Graphite thermal expansion relationship for different temperature ranges. Carbon, 2005, 43, 2902-2906.	10.3	164
2	Microcracks in nuclear graphite and highly oriented pyrolytic graphite (HOPG). Journal of Nuclear Materials, 2008, 381, 199-203.	2.7	83
3	The microstructure of nuclear graphite binders. Carbon, 2008, 46, 62-71.	10.3	83
4	A numerical study on the application of the Weibull theory to brittle materials. Engineering Fracture Mechanics, 2001, 68, 1171-1179.	4.3	82
5	The development of a stress analysis code for nuclear graphite components in gas-cooled reactors. Journal of Nuclear Materials, 2006, 350, 208-220.	2.7	60
6	Numerical modelling of the effects of porosity changes on the mechanical properties of nuclear graphite. Journal of Nuclear Materials, 2006, 352, 1-5.	2.7	51
7	The microstructural modelling of nuclear grade graphite. Journal of Nuclear Materials, 2006, 353, 12-18.	2.7	47
8	Observation of microstructure deformation and damage in nuclear graphite. Engineering Fracture Mechanics, 2008, 75, 3633-3645.	4.3	46
9	Microstructural characterisation of nuclear grade graphite. Journal of Nuclear Materials, 2008, 381, 152-157.	2.7	43
10	Neutron irradiation damage of nuclear graphite studied by high-resolution transmission electron microscopy and Raman spectroscopy. Journal of Nuclear Materials, 2015, 467, 557-565.	2.7	43
11	Changes in the coefficient of thermal expansion in stressed Gilsocarbon graphite. Carbon, 2006, 44, 1250-1257.	10.3	38
12	Failure predictions for nuclear graphite using a continuum damage mechanics model. Journal of Nuclear Materials, 2004, 324, 116-124.	2.7	27
13	Microstructural modelling of nuclear graphite using multi-phase models. Journal of Nuclear Materials, 2008, 380, 46-58.	2.7	27
14	Failure analysis of the effects of porosity in thermally oxidised nuclear graphite using finite element modelling. Journal of Nuclear Materials, 2008, 381, 1-8.	2.7	26
15	Fracture behaviour of an anisotropic polygranular graphite (PGA). Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2012, 558, 265-277.	5.6	26
16	The mechanical testing of nuclear graphite. Journal of Nuclear Materials, 2003, 322, 126-137.	2.7	25
17	Three-dimensional characterization and thermal property modelling of thermally oxidized nuclear graphite. Acta Materialia, 2008, 56, 4242-4254.	7.9	24
18	Modelling the coefficient of thermal expansion in graphite crystals: implications of lattice strain due to irradiation and pressure. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2018, 474, 20180075.	2.1	23

#	Article	IF	Citations
19	The effect of the threshold stress on the determination of the Weibull parameters in probabilistic failure analysis. Engineering Fracture Mechanics, 2003, 70, 2559-2567.	4.3	21
20	Numerical simulation of strength test on graphite moderator bricks using a continuum damage mechanics model. Engineering Fracture Mechanics, 2006, 73, 318-330.	4.3	18
21	4D synchrotron X-ray microtomography of fracture in nuclear graphite after neutron irradiation and radiolytic oxidation. Carbon, 2020, 168, 230-244.	10.3	18
22	The relationship between irradiation induced dimensional change and the coefficient of thermal expansion: a modified Simmons relationship. Nuclear Engineering and Design, 2003, 222, 319-330.	1.7	14
23	Effects of dimensional change strain in nuclear graphite component stress analysis. Nuclear Engineering and Design, 2007, 237, 897-904.	1.7	13
24	Application of a micromechanics model to the overall properties of heterogeneous graphite. Journal of Nuclear Materials, 2008, 381, 124-128.	2.7	10
25	Calibration of dimensional change in finite element models using AGR moderator brick measurements. Journal of Nuclear Materials, 2014, 451, 179-188.	2.7	10
26	The origins and use of the equivalent temperature concept. Journal of Nuclear Materials, 2008, 381, 106-113.	2.7	7
27	Application of an independent parallel reactions model on the annealing kinetics to irradiated graphite waste. Journal of Nuclear Materials, 2008, 381, 83-91.	2.7	7
28	A numerical study of internal brick stresses in AGR moderator bricks. Nuclear Engineering and Design, 2016, 309, 277-293.	1.7	7
29	High dose 30 MeV 58Ni5+ ion irradiation causes microstructure evolution in nuclear graphite at 400 Â°C. Journal of Nuclear Materials, 2022, 559, 153460.	2.7	7
30	Prediction of fuel channelâ€"graphite gas-gap behaviour in RBMK reactors. Nuclear Engineering and Design, 2003, 223, 117-132.	1.7	5
31	Analyses of a restrained growth graphite irradiation creep experiment. Nuclear Engineering and Design, 2008, 238, 3026-3030.	1.7	5
32	A core-monitoring based methodology for predictions of graphite weight loss in AGR moderator bricks. Nuclear Engineering and Design, 2017, 314, 56-66.	1.7	5
33	Origin and validity of graphite dosimetry units and related conversion factors. Annals of Nuclear Energy, 2016, 94, 241-250.	1.8	4
34	Finite element modelling of multilayer Advanced Gas-cooled Reactor bricks and creep interaction. Nuclear Engineering and Design, 2017, 324, 390-401.	1.7	3
35	Time of flight measurements of unirradiated and irradiated nuclear graphite under cyclic compressive load. Journal of Nuclear Materials, 2017, 487, 50-67.	2.7	0