

# Douglas L Porter

## List of Publications by Citations

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76  
papers

2,381  
citations

24  
h-index

48  
g-index

86  
ext. papers

2,570  
ext. citations

3.1  
avg. IF

4.61  
L-index

#	Paper	IF	Citations
76	Mechanisms of Toughening Partially Stabilized Zirconia (PSZ). <i>Journal of the American Ceramic Society</i> , <b>1977</b> , 60, 183-184	3.8	355
75	Microstructural Development in MgO-Partially Stabilized Zirconia (Mg-PSZ). <i>Journal of the American Ceramic Society</i> , <b>1979</b> , 62, 298-305	3.8	304
74	Fuels for sodium-cooled fast reactors: US perspective. <i>Journal of Nuclear Materials</i> , <b>2007</b> , 371, 202-231	3.3	180
73	Transformation-toughening in partially-stabilized zirconia (PSZ). <i>Acta Metallurgica</i> , <b>1979</b> , 27, 1649-1654		168
72	Metallic fuels for advanced reactors. <i>Journal of Nuclear Materials</i> , <b>2009</b> , 392, 139-150	3.3	128
71	Swelling behavior of U-Pu-Zr fuel. <i>Metallurgical and Materials Transactions A - Physical Metallurgy and Materials Science</i> , <b>1990</b> , 21, 517-528		81
70	Experimental studies of U-Pu-Zr fast reactor fuel pins in the experimental breeder reactor-II. <i>Metallurgical and Materials Transactions A - Physical Metallurgy and Materials Science</i> , <b>1990</b> , 21, 1863-1870		72
69	A US perspective on fast reactor fuel fabrication technology and experience part I: metal fuels and assembly design. <i>Journal of Nuclear Materials</i> , <b>2009</b> , 389, 458-469	3.3	71
68	Lanthanides in metallic nuclear fuels: Their behavior and methods for their control. <i>Journal of Nuclear Materials</i> , <b>2011</b> , 419, 263-271	3.3	60
67	Irradiation behavior of metallic fast reactor fuels. <i>Journal of Nuclear Materials</i> , <b>1992</b> , 188, 3-9	3.3	55
66	Ferrite formation in neutron-irradiated type 304L stainless steel. <i>Journal of Nuclear Materials</i> , <b>1979</b> , 79, 406-411	3.3	48
65	Irradiation creep and swelling of AISI 316 to exposures of 130 dpa at 385-400°C. <i>Journal of Nuclear Materials</i> , <b>1988</b> , 155-157, 1006-1013	3.3	43
64	In-reactor precipitation and ferritic transformation in neutron-irradiated stainless steels. <i>Journal of Nuclear Materials</i> , <b>1979</b> , 83, 90-97	3.3	41
63	The effect of dose rate on the response of austenitic stainless steels to neutron radiation. <i>Journal of Nuclear Materials</i> , <b>2006</b> , 348, 148-164	3.3	40
62	Fuel constituent redistribution during the early stages of U-Pu-Zr irradiation. <i>Metallurgical and Materials Transactions A - Physical Metallurgy and Materials Science</i> , <b>1990</b> , 21, 1871-1876		37
61	Scanning electron microscopy examination of a Fast Flux Test Facility irradiated U-10Zr fuel cross section clad with HT-9. <i>Journal of Nuclear Materials</i> , <b>2017</b> , 494, 227-239	3.3	36
60	Irradiation creep and swelling of annealed Type 304L stainless steel at ~ 390°C and high neutron fluence. <i>Journal of Nuclear Materials</i> , <b>1991</b> , 179-181, 581-584	3.3	33

59	Experience with advanced driver fuels in EBR-II. <i>Journal of Nuclear Materials</i> , <b>1993</b> , 204, 119-123	3-3	33
58	Irradiation creep and embrittlement behavior of AISI 316 stainless steel at very high neutron fluences. <i>Journal of Nuclear Materials</i> , <b>1988</b> , 159, 114-121	3-3	33
57	An approach to fuel development and qualification. <i>Journal of Nuclear Materials</i> , <b>2007</b> , 371, 232-242	3-3	30
56	Reduction of FCCI effects in lanthanide/iron diffusion couples by doping with palladium. <i>Journal of Nuclear Materials</i> , <b>2013</b> , 440, 178-192	3-3	27
55	A third stage of irradiation creep involving its cessation at high neutron exposures. <i>Journal of Nuclear Materials</i> , <b>1987</b> , 148, 279-287	3-3	27
54	Metallic fast reactor fuel fabrication for the global nuclear energy partnership. <i>Journal of Nuclear Materials</i> , <b>2009</b> , 392, 158-163	3-3	26
53	Metallography and fuel cladding chemical interaction in fast flux test facility irradiated metallic U-10Zr MFF-3 and MFF-5 fuel pins. <i>Journal of Nuclear Materials</i> , <b>2016</b> , 473, 167-177	3-3	24
52	316 stainless steel cavity swelling in a PWR. <i>Journal of Nuclear Materials</i> , <b>1995</b> , 224, 207-215	3-3	24
51	Metallic Fuels: The EBR-II Legacy and Recent Advances. <i>Procedia Chemistry</i> , <b>2012</b> , 7, 513-520		23
50	Microstructural characterization of high burn-up mixed oxide fast reactor fuel. <i>Journal of Nuclear Materials</i> , <b>2013</b> , 441, 267-273	3-3	23
49	THE FRACTURE TOUGHNESS OF CERAMICS <b>1978</b> , 529-556		23
48	Microstructure and mechanical behavior of neutron irradiated ultrafine grained ferritic steel. <i>Materials Science &amp; Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , <b>2014</b> , 615, 128-138	5-3	22
47	Direct evidence for stress-enhanced swelling in type 316 stainless steel. <i>Journal of Nuclear Materials</i> , <b>1983</b> , 116, 272-276	3-3	22
46	A US perspective on fast reactor fuel fabrication technology and experience. Part II: Ceramic fuels. <i>Journal of Nuclear Materials</i> , <b>2009</b> , 393, 1-11	3-3	21
45	Full-length U/Pu <sub>10</sub> Zr (x = 0, 8, 19 wt.%) fast reactor fuel test in FFTF. <i>Journal of Nuclear Materials</i> , <b>2012</b> , 427, 46-57	3-3	20
44	Soluble interleukin-2 receptor concentration as a biochemical indicator for acute graft-versus-host disease after allogeneic bone marrow transplantation. <i>Journal of Hematotherapy and Stem Cell Research</i> , <b>2000</b> , 9, 393-400		19
43	Nuclear fuel considerations for the 21st century. <i>Progress in Nuclear Energy</i> , <b>2002</b> , 40, 513-521	2-3	17
42	Relationship between in-reactor stress relaxation and irradiation creep. <i>Journal of Nuclear Materials</i> , <b>1998</b> , 252, 89-97	3-3	16

41	New developments in irradiation-induced microstructural evolution of austenitic alloys and their consequences on mechanical properties. <i>Radiation Effects</i> , <b>1987</b> , 101, 37-53		15
40	Reply to Further Discussion of Precipitation in Partially Stabilized Zirconia. <i>Journal of the American Ceramic Society</i> , <b>1977</b> , 60, 280-280	3.8	13
39	Irradiation creep of annealed 304L stainless steel at low dose levels. <i>Journal of Nuclear Materials</i> , <b>2003</b> , 317, 167-174	3.3	12
38	Whole-core damage analysis of EBR-II driver fuel elements following SHRT program. <i>Nuclear Engineering and Design</i> , <b>1987</b> , 101, 67-74	1.8	12
37	Reducing fuel-cladding chemical interaction: The effect of palladium on the reactivity of neodymium on iron in diffusion couples. <i>Journal of Nuclear Materials</i> , <b>2013</b> , 432, 539-544	3.3	11
36	Characterization of phases in crud from boiling-water reactors by transmission electron microscopy. <i>Journal of Nuclear Materials</i> , <b>2007</b> , 362, 104-115	3.3	11
35	The Role of Grain Size on Neutron Irradiation Response of Nanocrystalline Copper. <i>Materials</i> , <b>2016</b> , 9,	3.5	10
34	Performance of low smeared density sodium-cooled fast reactor metal fuel. <i>Journal of Nuclear Materials</i> , <b>2015</b> , 465, 464-470	3.3	9
33	Postirradiation examination on metallic fuel in the AFC-2 irradiation test series. <i>Journal of Nuclear Materials</i> , <b>2018</b> , 509, 454-464	3.3	8
32	Volatile species retention during metallic fuel casting. <i>Journal of Nuclear Materials</i> , <b>2013</b> , 441, 530-534	3.3	8
31	Neutron irradiation and compatibility testing of Li <sub>2</sub> O. <i>Journal of Nuclear Materials</i> , <b>1984</b> , 123, 929-933	3.3	7
30	U-10Zr and U-5Fs: Fuel/cladding chemical interaction behavior differences. <i>Journal of Nuclear Materials</i> , <b>2020</b> , 528, 151840	3.3	7
29	Initial demonstration of automated fuel performance modeling with 1977 EBR-II metallic fuel pins using BISON code with FIPD and IMIS databases. <i>Nuclear Engineering and Design</i> , <b>2021</b> , 382, 111393	1.8	7
28	Comments on Precipitation in Partially Stabilized Zirconia. <i>Journal of the American Ceramic Society</i> , <b>1976</b> , 59, 179-179	3.8	6
27	HT9 swelling in high burnup fast reactor fuel pin components. <i>Journal of Nuclear Materials</i> , <b>2019</b> , 519, 205-216	3.3	5
26	Reply by. <i>Journal of the American Ceramic Society</i> , <b>1976</b> , 59, 179-182	3.8	5
25	Interaction of Void-Induced Phase Instability and Subsequent Void Growth in AISI 304 Stainless Steel. <i>Journal of Nuclear Materials</i> , <b>1984</b> , 123, 884-884-10		
24	Cladding Profilometry Analysis of Experimental Breeder Reactor-II Metallic Fuel Pins with HT9, D9, and SS316 Cladding. <i>Energies</i> , <b>2021</b> , 14, 515	3.1	5

23	The effects of long-time irradiation and thermal aging on 304 stainless steel. <i>Journal of Nuclear Materials</i> , <b>2000</b> , 282, 171-179	3-3	4
22	Microstructural examination of fast-neutron irradiated Li <sub>2</sub> O. <i>Journal of Nuclear Materials</i> , <b>1985</b> , 133-134, 209-215	3-3	4
21	Extending Sodium Fast Reactor Driver Fuel Use to Higher Temperatures. <i>Nuclear Technology</i> , <b>2011</b> , 173, 218-225	1.4	3
20	Swelling and Mechanical Property Changes in Russian and American Austenitic Steels in EBR-II and BN350. <i>Nuclear Technology</i> , <b>2003</b> , 144, 369-378	1.4	3
19	Irradiation-induced microstructural changes in neutron-irradiated cold-worked and aged type 316 stainless steel. <i>Journal of Nuclear Materials</i> , <b>1980</b> , 92, 155-159	3-3	3
18	History Dependence and Consequences of the Microchemical Evolution of AISI 316295-295-15		3
17	Swelling of AISI Type 304L Stainless Steel in Response to Simultaneous Variations in Stress and Displacement Rate 212-212-9		3
16	Fabrication and testing of U <sup>235</sup> Mo monolithic plate fuel with Zircaloy cladding. <i>Journal of Nuclear Materials</i> , <b>2016</b> , 479, 402-410	3-3	3
15	Fatigue testing of metallurgically-bonded EBR-II superheater tubes. <i>Journal of Nuclear Materials</i> , <b>2008</b> , 376, 38-46	3-3	2
14	Measurement of Helium Generation in AISI 304 Reflector and Blanket Assemblies after Long-term Irradiation in EBR-II 109-109-8		2
13	Irradiation performance of nonfertile (Pu-MA-Zr) fast reactor metal fuels. <i>Journal of Nuclear Materials</i> , <b>2020</b> , 542, 152480	3-3	2
12	Elemental Solubility Tendency for the Phases of Uranium by Classical Models Used to Predict Alloy Behavior <b>2012</b> , 357-370		1
11	EBR-II Superheater Duplex Tube Examination. <i>Nuclear Technology</i> , <b>2008</b> , 164, 465-473	1.4	1
10	Enhanced irradiation creep deformation due to gradual temperature reductions. <i>Journal of Nuclear Materials</i> , <b>1982</b> , 110, 95-107	3-3	1
9	Measurement of Helium Generation in AISI 304 Reflector and Blanket Assemblies after Long-term Irradiation in EBR-II. <i>Journal of ASTM International</i> , <b>2007</b> , 4, 100342		1
8	Behavior of metallic fast reactor fuels during an overpower transient. <i>Journal of Nuclear Materials</i> , <b>2021</b> , 557, 153304	3-3	1
7	Fuel Design and Fabrication: Fast-Reactor Metal Fuels <b>2021</b> , 308-317		1
6	Metallic Fuel Performance Benchmarks for Versatile Test Reactor Applications. <i>Nuclear Science and Engineering</i> , 1-25	1.2	1

- 5 Fuel Performance Design Basis for the Versatile Test Reactor. *Nuclear Science and Engineering*, 1-13 1.2 ○
- 4 Automatic information extraction from neutron radiography imaging to estimate axial fuel expansion in EBR-II. *Journal of Nuclear Materials*, **2021**, 557, 153250 3.3 ○
- 3 Fatigue crack analysis of EBR-II Ni-bonded duplex tubing. *Journal of Nuclear Materials*, **2011**, 410, 76-83 3.3
- 2 The early characterization of irradiation effects in stainless steels at the Experimental Breeder Reactor-II. *Jom*, **2008**, 60, 34-37 2.1
- 1 An Analysis of Fluff Formation in Metallic Fuel via Data Analyses from EBR-II Experiments and BISON Fuel Code Modeling. *Journal of Nuclear Materials*, **2022**, 153813 3.3