

Michael J D Rushton

List of Publications by Citations

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

51
papers

1,048
citations

16
h-index

31
g-index

52
ext. papers

1,181
ext. citations

4
avg, IF

4.6
L-index

#	Paper	IF	Citations
51	A many-body potential approach to modelling the thermomechanical properties of actinide oxides. <i>Journal of Physics Condensed Matter</i> , 2014 , 26, 105401	1.8	126
50	Effect of strain on the oxygen diffusion in yttria and gadolinia co-doped ceria. <i>Solid State Ionics</i> , 2013 , 230, 37-42	3.3	94
49	Effects of Gallium Doping in Garnet-Type Li7La3Zr2O12 Solid Electrolytes. <i>Chemistry of Materials</i> , 2015 , 27, 2821-2831	9.6	88
48	Impact of uniaxial strain and doping on oxygen diffusion in CeO2. <i>Scientific Reports</i> , 2014 , 4, 6068	4.9	85
47	Genetics of superionic conductivity in lithium lanthanum titanates. <i>Physical Chemistry Chemical Physics</i> , 2015 , 17, 178-83	3.6	72
46	Predicted pyrochlore to fluorite disorder temperature for A2Zr2O7 compositions. <i>Journal of Materials Research</i> , 2004 , 19, 1603-1604	2.5	67
45	Thermophysical properties and oxygen transport in the (U,Pu)O2 lattice. <i>Journal of Nuclear Materials</i> , 2015 , 461, 206-214	3.3	64
44	Thermophysical and anion diffusion properties of (U,Th)O. <i>Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences</i> , 2014 , 470, 20140427	2.4	42
43	Nuclear wastefrom materials: Atomistic simulation case studies. <i>Journal of Nuclear Materials</i> , 2013 , 441, 29-39	3.3	37
42	Simulation of defects and defect processes in fluorite and fluorite related oxides: Implications for radiation tolerance. <i>Nuclear Instruments & Methods in Physics Research B</i> , 2007 , 255, 151-157	1.2	29
41	Linking atomic and mesoscopic scales for the modelling of the transport properties of uranium dioxide under irradiation. <i>Journal of Nuclear Materials</i> , 2015 , 462, 475-495	3.3	26
40	Thermal conductivity and energetic recoils in UO2 using a many-body potential model. <i>Journal of Physics Condensed Matter</i> , 2014 , 26, 495401	1.8	26
39	Development of Xe and Kr empirical potentials for CeO2, ThO2, UO2 and PuO2, combining DFT with high temperature MD. <i>Journal of Physics Condensed Matter</i> , 2016 , 28, 405401	1.8	23
38	From solid solution to cluster formation of Fe and Cr in Zr. <i>Journal of Nuclear Materials</i> , 2015 , 467, 320-331	3.3	22
37	Predicted structure, thermo-mechanical properties and Li ion transport in LiAlF4 glass. <i>Journal of Non-Crystalline Solids</i> , 2012 , 358, 1917-1923	3.9	18
36	Prediction and characterisation of radiation damage in fluorapatite. <i>Journal of Materials Chemistry A</i> , 2015 , 3, 1164-1173	13	16
35	Effect of A-site cation disorder on oxygen diffusion in perovskite-type Ba0.5Sr0.5Co1-xFexO2.5. <i>Journal of Materials Chemistry A</i> , 2013 , 1, 10345	13	15

34	A comparison of empirical potential models for the simulation of dislocations in uranium dioxide. <i>Progress in Nuclear Energy</i> , 2014 , 72, 27-32	2.3	14
33	Trapping of volatile fission products by C60. <i>Carbon</i> , 2018 , 132, 477-485	10.4	12
32	Migration of fluorine in fluorapatite by a concerted mechanism. <i>Journal of Materials Chemistry</i> , 2012 , 22, 6097		12
31	Predicted energies and structures of. <i>Journal of Solid State Chemistry</i> , 2010 , 183, 2261-2267	3.3	12
30	Stoichiometry deviation in amorphous zirconium dioxide.. <i>RSC Advances</i> , 2019 , 9, 16320-16327	3.7	11
29	Influence of boron isotope ratio on the thermal conductivity of uranium diboride (UB ₂) and zirconium diboride (ZrB ₂). <i>Journal of Nuclear Materials</i> , 2020 , 528, 151892	3.3	11
28	Oxidation of UC: An in situ high temperature environmental scanning electron microscopy study. <i>Journal of Nuclear Materials</i> , 2017 , 494, 127-137	3.3	10
27	Surface dependent segregation of Y ₂ O ₃ in t-ZrO ₂ . <i>Philosophical Magazine Letters</i> , 2005 , 85, 445-453	1	10
26	Effect of trivalent dopants on local coordination and electronic structure in crystalline and amorphous ZnO. <i>Thin Solid Films</i> , 2014 , 555, 117-121	2.2	9
25	Void evolution in tungsten and tungsten-5wt.% tantalum under in-situ proton irradiation at 800 and 1000 °C. <i>Journal of Nuclear Materials</i> , 2019 , 526, 151730	3.3	8
24	Predicted Mechanism for Enhanced Durability of Zinc Containing Silicate Glasses. <i>Journal of the American Ceramic Society</i> , 2013 , 96, 1450-1455	3.8	8
23	In-situ TEM investigation of nano-scale helium bubble evolution in tantalum-doped tungsten at 800°C. <i>Journal of Nuclear Materials</i> , 2021 , 550, 152910	3.3	8
22	Self-diffusion in garnet-type LiLaZrO solid electrolytes. <i>Scientific Reports</i> , 2021 , 11, 451	4.9	8
21	Partial ordering of glass networks adjacent to simulated glass-crystal interfaces. <i>Journal of Non-Crystalline Solids</i> , 2011 , 357, 3278-3287	3.9	7
20	Predicted Changes to Alkali Concentration Adjacent to Glass-Crystal Interfaces. <i>Journal of the American Ceramic Society</i> , 2008 , 91, 1659-1664	3.8	7
19	A critical assessment of interatomic potentials for ceria with application to its elastic properties revisited. <i>Journal of Materials Science: Materials in Electronics</i> , 2013 , 24, 4590-4592	2.1	5
18	Thermal footprint of a geological disposal facility containing EURO-GANEX wasteforms. <i>Progress in Nuclear Energy</i> , 2020 , 118, 103065	2.3	5
17	A concerted mechanism for Cl ⁻ migration in chlorapatite. <i>Journal of Materials Chemistry A</i> , 2014 , 2, 16157-16164	1.6	4

16	The influence of dipole polarisation on threshold displacement energies in UO ₂ . <i>Nuclear Instruments & Methods in Physics Research B</i> , 2012 , 274, 195-199	1.2	4
15	Thermal conductivity and the isotope effect in Li ₂ O. <i>Fusion Engineering and Design</i> , 2012 , 87, 1834-1838	1.7	4
14	Thermal conductivity variation in uranium dioxide with gadolinia additions. <i>Journal of Nuclear Materials</i> , 2020 , 540, 152258	3.3	4
13	Structure and properties of amorphous uranium dioxide. <i>Acta Materialia</i> , 2021 , 202, 366-375	8.4	4
12	Oxygen diffusion in Gd-doped mixed oxides. <i>Journal of Nuclear Materials</i> , 2018 , 498, 300-306	3.3	3
11	Fundamental Point Defect Properties in Ceramics 2012 , 47-64		3
10	Atomic-scale description of interfaces in rutile/sodium silicate glass-crystal composites. <i>Physical Chemistry Chemical Physics</i> , 2018 , 20, 17624-17636	3.6	3
9	Evidence of excess oxygen accommodation in yttria partially-stabilized zirconia. <i>Scripta Materialia</i> , 2020 , 175, 7-10	5.6	3
8	Optimization of a new interatomic potential to investigate the thermodynamic properties of hypo-stoichiometric mixed oxide fuel UPuO. <i>Journal of Physics Condensed Matter</i> , 2020 ,	1.8	2
7	The predicted shapes of voids and Xe bubbles in UO ₂ . <i>Journal of Nuclear Materials</i> , 2021 , 543, 152622	3.3	2
6	Diffusion in doped and undoped amorphous zirconia. <i>Journal of Nuclear Materials</i> , 2021 , 555, 153108	3.3	2
5	Molecular dynamics simulations of radiation damage in YBa ₂ Cu ₃ O ₇ . <i>Superconductor Science and Technology</i> , 2022 , 35, 035010	3.1	1
4	Ceramics in the nuclear fuel cycle 2020 , 63-87		1
3	Changes to Alkali Ion Content Adjacent to Crystal-Glass Interfaces. <i>Materials Research Society Symposia Proceedings</i> , 2008 , 1107, 1		
2	Fundamental Point Defect Properties in Ceramics 2020 , 50-73		
1	The accommodation of lithium in bulk ZrO ₂ . <i>Solid State Ionics</i> , 2021 , 373, 115813	3.3	