Michael J D Rushton

List of Publications by Year
in descending order

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52	1,358	430442	344852
papers	citations	18 h-index	36 g-index

52	52	52	1557
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	A many-body potential approach to modelling the thermomechanical properties of actinide oxides. Journal of Physics Condensed Matter, 2014, 26, 105401.	0.7	161
2	Effects of Gallium Doping in Garnet-Type Li₇La₃Zr₂O₁₂ Solid Electrolytes. Chemistry of Materials, 2015, 27, 2821-2831.	3.2	120
3	Effect of strain on the oxygen diffusion in yttria and gadolinia co-doped ceria. Solid State Ionics, 2013, 230, 37-42.	1.3	114
4	Impact of uniaxial strain and doping on oxygen diffusion in CeO2. Scientific Reports, 2014, 4, 6068.	1.6	106
5	Genetics of superionic conductivity in lithium lanthanum titanates. Physical Chemistry Chemical Physics, 2015, 17, 178-183.	1.3	85
6	Predicted pyrochlore to fluorite disorder temperature for A2Zr2O7 compositions. Journal of Materials Research, 2004, 19, 1603-1604.	1.2	77
7	Thermophysical properties and oxygen transport in the (U ,Pu1â^')O2 lattice. Journal of Nuclear Materials, 2015, 461, 206-214.	1.3	75
8	Thermophysical and anion diffusion properties of (U _x ,Th _{1â^' x}) Tj ETQq0 0 0 rgBT /Overlock 2014, 470, 20140427.	1.0	49
9	Nuclear wasteform materials: Atomistic simulation case studies. Journal of Nuclear Materials, 2013, 441, 29-39.	1.3	45
10	Simulation of defects and defect processes in fluorite and fluorite related oxides: Implications for radiation tolerance. Nuclear Instruments & Methods in Physics Research B, 2007, 255, 151-157.	0.6	34
11	Linking atomic and mesoscopic scales for the modelling of the transport properties of uranium dioxide under irradiation. Journal of Nuclear Materials, 2015, 462, 475-495.	1.3	32
12	Development of Xe and Kr empirical potentials for CeO₂, ThO₂, UO₂and PuO₂, combining DFT with high temperature MD. Journal of Physics Condensed Matter, 2016, 28, 405401.	0.7	29
13	Thermal conductivity and energetic recoils in UO₂using a many-body potential model. Journal of Physics Condensed Matter, 2014, 26, 495401.	0.7	28
14	Stoichiometry deviation in amorphous zirconium dioxide. RSC Advances, 2019, 9, 16320-16327.	1.7	25
15	From solid solution to cluster formation of Fe and Cr in Î± -Zr. Journal of Nuclear Materials, 2015, 467, 320-331.	1.3	23
16	Effect of A-site cation disorder on oxygen diffusion in perovskite-type Ba0.5Sr0.5Co1â^'xFexO2.5. Journal of Materials Chemistry A, 2013, 1, 10345.	5.2	22
17	Prediction and characterisation of radiation damage in fluorapatite. Journal of Materials Chemistry A, 2015, 3, 1164-1173.	5.2	21
18	Predicted structure, thermo-mechanical properties and Li ion transport in LiAlF4 glass. Journal of Non-Crystalline Solids, 2012, 358, 1917-1923.	1.5	19

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19	Self-diffusion in garnet-type Li7La3Zr2O12 solid electrolytes. Scientific Reports, 2021, 11, 451.	1.6	19
20	Oxidation of UC: An in situ high temperature environmental scanning electron microscopy study. Journal of Nuclear Materials, 2017, 494, 127-137.	1.3	18
21	Migration of fluorine in fluorapatite â€“ a concerted mechanism. Journal of Materials Chemistry, 2012, 22, 6097.	6.7	16
22	Trapping of volatile fission products by C60. Carbon, 2018, 132, 477-485.	5.4	16
23	Structure and properties of amorphous uranium dioxide. Acta Materialia, 2021, 202, 366-375.	3.8	16
24	In-situ TEM investigation of nano-scale helium bubble evolution in tantalum-doped tungsten at 800Â°C. Journal of Nuclear Materials, 2021, 550, 152910.	1.3	16
25	A comparison of empirical potential models for the simulation of dislocations in uranium dioxide. Progress in Nuclear Energy, 2014, 72, 27-32.	1.3	15
26	Predicted energies and structures of. Journal of Solid State Chemistry, 2010, 183, 2261-2267.	1.4	13
27	Predicted Mechanism for Enhanced Durability of Zinc Containing Silicate Glasses. Journal of the American Ceramic Society, 2013, 96, 1450-1455.	1.9	13
28	Void evolution in tungsten and tungsten-5wt.% tantalum under in-situ proton irradiation at 800 and 1000â€Â°C. Journal of Nuclear Materials, 2019, 526, 151730.	1.3	13
29	Influence of boron isotope ratio on the thermal conductivity of uranium diboride (UB2) and zirconium diboride (ZrB2). Journal of Nuclear Materials, 2020, 528, 151892.	1.3	12
30	Surface dependent segregation of Y2O3 in t-ZrO2. Philosophical Magazine Letters, 2005, 85, 445-453.	0.5	11
31	Thermal conductivity variation in uranium dioxide with gadolinia additions. Journal of Nuclear Materials, 2020, 540, 152258.	1.3	11
32	Partial ordering of glass networks adjacent to simulated glassâ€“crystal interfaces. Journal of Non-Crystalline Solids, 2011, 357, 3278-3287.	1.5	10
33	Effect of trivalent dopants on local coordination and electronic structure in crystalline and amorphous ZnO. Thin Solid Films, 2014, 555, 117-121.	0.8	10
34	Diffusion in doped and undoped amorphous zirconia. Journal of Nuclear Materials, 2021, 555, 153108.	1.3	10
35	Predicted Changes to Alkali Concentration Adjacent to Glassâ€“Crystal Interfaces. Journal of the American Ceramic Society, 2008, 91, 1659-1664.	1.9	8
36	Oxygen diffusion in Gd-doped mixed oxides. Journal of Nuclear Materials, 2018, 498, 300-306.	1.3	7

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37	Evidence of excess oxygen accommodation in yttria partially-stabilized zirconia. Scripta Materialia, 2020, 175, 7-10.	2.6	7
38	Molecular dynamics simulations of radiation damage in YBa₂Cu₃O₇. Superconductor Science and Technology, 2022, 35, 035010.	1.8	6
39	Thermal conductivity and the isotope effect in Li2O. Fusion Engineering and Design, 2012, 87, 1834-1838.	1.0	5
40	The influence of dipole polarisation on threshold displacement energies in UO2. Nuclear Instruments & Methods in Physics Research B, 2012, 274, 195-199.	0.6	5
41	A critical assessment of interatomic potentials for ceria with application to its elastic properties revisited. Journal of Materials Science: Materials in Electronics, 2013, 24, 4590-4592.	1.1	5
42	Thermal footprint of a geological disposal facility containing EURO-GANEX wasteforms. Progress in Nuclear Energy, 2020, 118, 103065.	1.3	5
43	Optimization of a new interatomic potential to investigate the thermodynamic properties of hypo-stoichiometric mixed oxide fuel U_{1â^'y}Pu_yO_{2â^'x}. Journal of Physics Condensed Matter, 2020, 32, 505702.	0.7	5
44	A concerted mechanism for Clâ^'migration in chlorapatite. Journal of Materials Chemistry A, 2014, 2, 16157-16164.	5.2	4
45	The predicted shapes of voids and Xe bubbles in <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" altimg="si6.svg"><mml:msub><mml:mtext>UO</mml:mtext><mml:mn>2</mml:mn></mml:msub></mml:math>. Journal of Nuclear Materials, 2021, 543, 152622.	1.3	4
46	Fundamental Point Defect Properties in Ceramics. , 2012, , 47-64.		3
47	Atomic-scale description of interfaces in rutile/sodium silicate glassâ€“crystal composites. Physical Chemistry Chemical Physics, 2018, 20, 17624-17636.	1.3	3
48	The accommodation of lithium in bulk ZrO2. Solid State Ionics, 2021, 373, 115813.	1.3	3
49	Ceramics in the nuclear fuel cycle. , 2020, , 63-87.		2
50	Predicting the thermal expansion of body-centred cubic (BCC) high entropy alloys in the Moâ€“Nbâ€“Taâ€“Tiâ€“W system. JPhys Energy, 2022, 4, 034002.	2.3	2
51	Changes to Alkali Ion Content Adjacent to Crystal-Glass Interfaces. Materials Research Society Symposia Proceedings, 2008, 1107, 1.	0.1	0
52	Fundamental Point Defect Properties in Ceramics. , 2020, , 50-73.		0