Neil C Hyatt

List of Publications by Year
in descending order

Source: https://exaly.com/author-pdf/3588476/publications.pdf

Version: 2024-02-01

237	4,370	159358	161609
papers	citations	30 h-index	54 g-index

256	256	256	3514
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Immobilisation of radioactive waste in glasses, glass composite materials and ceramics. Advances in Applied Ceramics, 2006, 105, 3-12.	0.6	328
2	Effects of sintering temperature on the internal barrier layer capacitor (IBLC) structure in CaCu3Ti4O12 (CCTO) ceramics. Journal of the European Ceramic Society, 2012, 32, 3313-3323.	2.8	277
3	Characterisation of magnesium potassium phosphate cements blended with fly ash and ground granulated blast furnace slag. Cement and Concrete Research, 2015, 74, 78-87.	4.6	234
4	Pressure-induced intermediate-to-low spin state transition inLaCoO3. Physical Review B, 2003, 67, .	1.1	178
5	Development of magnesium phosphate cements for encapsulation of radioactive waste. Advances in Applied Ceramics, 2011, 110, 151-156.	0.6	87
6	Environment and oxidation state of molybdenum in simulated high level nuclear waste glass compositions. Journal of Nuclear Materials, 2005, 340, 179-186.	1.3	72
7	Dissolution of vitrified wastes in a high-pH calcium-rich solution. Journal of Nuclear Materials, 2013, 435, 112-122.	1.3	70
8	An improved laboratory-based x-ray absorption fine structure and x-ray emission spectrometer for analytical applications in materials chemistry research. Review of Scientific Instruments, 2019, 90, 024106.	0.6	70
9	Cation disorder in Bi2Ln2Ti3O12 Aurivillius phases (Ln = La, Pr, Nd and Sm). Materials Research Bulletin, 2003, 38, 837-846.	2.7	57
10	Nanoscale mechanism of UO2 formation through uranium reduction by magnetite. Nature Communications, 2020, 11, 4001.	5.8	57
11	Role of Microstructure and Surface Defects on the Dissolution Kinetics of CeO₂, a UO₂ Fuel Analogue. ACS Applied Materials & Interfaces, 2016, 8, 10562-10571.	4.0	56
12	The structural role of Zr within alkali borosilicate glasses for nuclear waste immobilisation. Journal of Non-Crystalline Solids, 2011, 357, 1647-1656.	1.5	53
13	The HADES Facility for High Activity Decommissioning Engineering & Science: part of the UK National Nuclear User Facility. IOP Conference Series: Materials Science and Engineering, 2020, 818, 012022.	0.3	53
14	Crystallisation of a simulated borosilicate high-level waste glass produced on a full-scale vitrification line. Journal of Non-Crystalline Solids, 2011, 357, 2989-3001.	1.5	51
15	Molten salt synthesis of MAX phases in the Ti-Al-C system. Journal of the European Ceramic Society, 2018, 38, 4585-4589.	2.8	49
16	Effect of Zn- and Ca-oxides on the structure and chemical durability of simulant alkali borosilicate glasses for immobilisation of UK high level wastes. Journal of Nuclear Materials, 2015, 462, 321-328.	1.3	45
17	Dissolution of <scp>UK</scp> Highâ€Level Waste Glass Under Simulated Hyperalkaline Conditions of a Colocated Geological Disposal Facility. International Journal of Applied Glass Science, 2013, 4, 341-356.	1.0	44
18	Structural Transformations and Disordering in Zirconolite (CaZrTi₂O₇) at High Pressure. Inorganic Chemistry, 2013, 52, 1550-1558.	1.9	40

#	Article	IF	Citations
19	Corrosion of glass contact refractories for the vitrification of radioactive wastes: a review. International Materials Reviews, 2011, 56, 226-242.	9.4	39
20	Preparation, characterisation and dissolution of a CeO2 analogue for UO2 nuclear fuel. Journal of Nuclear Materials, 2013, 432, 182-188.	1.3	39
21	Plutonium management policy in the United Kingdom: The need for a dual track strategy. Energy Policy, 2017, 101, 303-309.	4.2	39
22	The influence of glass composition on crystalline phase stability in glass-ceramic wasteforms. Journal of Nuclear Materials, 2015, 456, 461-466.	1.3	38
23	Synthesis, structure and characterisation of the n=4 Aurivillius phase Bi5Ti3CrO15. Journal of Solid State Chemistry, 2011, 184, 252-263.	1.4	37
24	Physical and optical properties of the International Simple Glass. Npj Materials Degradation, 2019, 3, .	2.6	37
25	Early age hydration and application of blended magnesium potassium phosphate cements for reduced corrosion of reactive metals. Cement and Concrete Research, 2021, 143, 106375.	4.6	37
26	Proper Ferroelectricity in the Dionâ€“Jacobson Material CsBi2Ti2NbO10: Experiment and Theory. Chemistry of Materials, 2015, 27, 8298-8309.	3.2	36
27	Impact of rare earth ion size on the phase evolution of MoO3-containing aluminoborosilicate glass-ceramics. Journal of Nuclear Materials, 2018, 510, 539-550.	1.3	35
28	Forty years of durability assessment of nuclear waste glass by standard methods. Npj Materials Degradation, 2021, 5, .	2.6	35
29	The effects of Î³-radiation on model vitreous wasteforms intended for the disposal of intermediate and high level radioactive wastes in the United Kingdom. Journal of Nuclear Materials, 2012, 429, 353-367.	1.3	34
30	Corrosion of the International Simple Glass under acidic to hyperalkaline conditions. Npj Materials Degradation, 2018, 2, .	2.6	34
31	Rapid synthesis of Pb5(VO4)3I, for the immobilisation of iodine radioisotopes, by microwave dielectric heating. Journal of Nuclear Materials, 2011, 414, 352-359.	1.3	32
32	Rapid low temperature synthesis of a titanate pyrochlore by molten salt mediated reaction. Journal of the European Ceramic Society, 2012, 32, 3211-3219.	2.8	30
33	Contribution of Energetically Reactive Surface Features to the Dissolution of CeO₂ and ThO₂ Analogues for Spent Nuclear Fuel Microstructures. ACS Applied Materials & Interfaces, 2014, 6, 12279-12289.	4.0	30
34	Synthesis and characterisation of Ca1-xCexZrTi2-2xCr2xO7: Analogue zirconolite wasteform for the immobilisation of stockpiled UK plutonium. Journal of the European Ceramic Society, 2020, 40, 5909-5919.	2.8	29
35	Characterization of and Structural Insight into Struvite-K, MgKPO₄Â·6H₂O, an Analogue of Struvite. Inorganic Chemistry, 2021, 60, 195-205.	1.9	29
36	Mechanical properties of nuclear waste glasses. Journal of Nuclear Materials, 2011, 408, 188-193.	1.3	28

#	Article	IF	Citations
37	Combined neutron and X-ray diffraction determination of disorder in doped zirconolite-2M. American Mineralogist, 2012, 97, 291-298.	0.9	28
38	The fluorite related modulated structures of the Gd2(Zr2â^'xCex)O7 solid solution: An analogue for Pu disposition. Journal of Solid State Chemistry, 2012, 191, 2-9.	1.4	28
39	Iron phosphate glasses: Bulk properties and atomic scale structure. Journal of Nuclear Materials, 2017, 494, 342-353.	1.3	28
40	Reactive spark plasma synthesis of CaZrTi2O7 zirconolite ceramics for plutonium disposition. Journal of Nuclear Materials, 2018, 500, 11-14.	1.3	27
41	Microwave Dielectric Properties of Hexagonal 12R-Ba3LaNb3O12 Ceramics. Journal of the American Ceramic Society, 2006, 89, 332-335.	1.9	26
42	Dielectric Properties of the "Twinned" 8H-Hexagonal Perovskite Ba8Nb4Ti3O24. Journal of the American Ceramic Society, 2006, 89, 336-339.	1.9	26
43	Crystal structure and electrical characterisation of Bi2NbO5F: an Aurivillius oxide fluoride. Journal of Materials Chemistry, 2007, 17, 1193.	6.7	26
44	Oxidation Behavior and Mechanisms of TiAlN/VN Coatings. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2007, 38, 2464-2478.	1.1	26
45	The Use of Surrogates in Waste Immobilization Studies: A Case Study of Plutonium. Materials Research Society Symposia Proceedings, 2008, 1107, 1.	0.1	26
46	Microanalytical X-ray Imaging of Depleted Uranium Speciation in Environmentally Aged Munitions Residues. Environmental Science & Technology, 2014, 48, 1467-1474.	4.6	26
47	Evolution of phase assemblage of blended magnesium potassium phosphate cement binders at 200Â° and 1000Â°C. Advances in Applied Ceramics, 2015, 114, 386-392.	0.6	26
48	Characterisation of a high pH cement backfill for the geological disposal of nuclear waste: The Nirex Reference Vault Backfill. Applied Geochemistry, 2018, 89, 180-189.	1.4	26
49	A systematic investigation of the phase assemblage and microstructure of the zirconolite CaZr1-xCexTi2O7 system. Journal of Nuclear Materials, 2020, 535, 152137.	1.3	26
50	Crystal structure and non-stoichiometry of cerium brannerite: Ce0.975Ti2O5.95. Journal of Solid State Chemistry, 2012, 192, 172-178.	1.4	25
51	The initial dissolution rates of simulated UK Magnoxâ€"ThORP blend nuclear waste glass as a function of pH, temperature and waste loading. Mineralogical Magazine, 2015, 79, 1529-1542.	0.6	25
52	Review of zirconolite crystal chemistry and aqueous durability. Advances in Applied Ceramics, 2021, 120, 69-83.	0.6	25
53	Temperature transformation of blended magnesium potassium phosphate cement binders. Cement and Concrete Research, 2021, 141, 106332.	4.6	25
54	Remediation of soils contaminated with particulate depleted uranium by multi stage chemical extraction. Journal of Hazardous Materials, 2013, 263, 382-390.	6.5	24

#	Article	IF	Citations
55	Alteration layer formation of Ca- and Zn-oxide bearing alkali borosilicate glasses for immobilisation of UK high level waste: A vapour hydration study. Journal of Nuclear Materials, 2016, 479, 639-646.	1.3	24
56	Fenton and Fenton-like wet oxidation for degradation and destruction of organic radioactive wastes. Npj Materials Degradation, 2021, 5, .	2.6	24
57	High-Pressure and -Temperature Ion Exchange of Aluminosilicate and Gallosilicate Natrolite. Journal of the American Chemical Society, 2011, 133, 13883-13885.	6.6	23
58	The Structural Role of <scp>Zn</scp> in Nuclear Waste Glasses. International Journal of Applied Glass Science, 2011, 2, 343-353.	1.0	23
59	Formation of alteration products during dissolution of vitrified ILW in a high-pH calcium-rich solution. Journal of Nuclear Materials, 2013, 442, 33-45.	1.3	23
60	MoO3 incorporation in magnesium aluminosilicate glasses. Journal of Nuclear Materials, 2015, 458, 335-342.	1.3	23
61	Co2+/PMS based sulfate-radical treatment for effective mineralization of spent ion exchange resin. Chemosphere, 2022, 287, 132351.	4.2	22
62	Influence of octahedral tilting on the microwave dielectric properties of A3LaNb3O12 hexagonal perovskites (A=Ba, Sr). Applied Physics Letters, 2009, 94, .	1.5	21
63	The structure of ion beam amorphised zirconolite studied by grazing angle X-ray absorption spectroscopy. Nuclear Instruments & Methods in Physics Research B, 2010, 268, 1847-1852.	0.6	21
64	Oxidation state and local environment of selenium in alkali borosilicate glasses for radioactive waste immobilisation. Journal of Non-Crystalline Solids, 2011, 357, 2726-2734.	1.5	21
65	Real-Time Gamma Imaging of Technetium Transport through Natural and Engineered Porous Materials for Radioactive Waste Disposal. Environmental Science & Technology, 2013, 47, 13857-13864.	4.6	21
66	Investigation of the role of Mg and Ca in the structure and durability of aluminoborosilicate glass. Journal of Non-Crystalline Solids, 2019, 512, 41-52.	1.5	21
67	Ferroelectric-paraelectric phase transition in then=2Aurivillius phaseBi3Ti1.5W0.5O9: A neutron powder diffraction study. Physical Review B, 2005, 71, .	1.1	20
68	Silver Zeolites: Iodide Occlusion and conversion to Sodalite â€“ a potential ¹²⁹I waste form?. Materials Research Society Symposia Proceedings, 2006, 932, 1.	0.1	20
69	Chemical durability of vitrified wasteforms: effects of pH and solution composition. Mineralogical Magazine, 2012, 76, 2919-2930.	0.6	20
70	Synthesis and characterisation of Pu-doped zirconolites â€“(Ca_{1â^'x}Pu_x)Zr(Ti_{2-2x}Fe_{2x})O₇. IOP Conference Series: Materials Science and Engineering, 2010, 9, 012007.	0.3	19
71	Composition-Structure Relationships in Simplified Nuclear Waste Glasses: 2. The Effect of ZrO2 Additions. Journal of the American Ceramic Society, 2011, 94, 137-144.	1.9	19
72	The effect of uranium oxide additions on the structure of alkali borosilicate glasses. Journal of Non-Crystalline Solids, 2013, 378, 282-289.	1.5	19

#	Article	IF	Citations
73	Multi-scale investigation of uranium attenuation by arsenic at an abandoned uranium mine, South Terras. Npj Materials Degradation, 2017, 1, .	2.6	19
74	Characterisation and disposability assessment of multi-waste stream in-container vitrified products for higher activity radioactive waste. Journal of Hazardous Materials, 2021, 401, 123764.	6.5	19
75	A Potential Wasteform for Cs Immobilization: Synthesis, Structure Determination, and Aqueous Durability of Cs₂TiNb₆O₁₈. Inorganic Chemistry, 2016, 55, 12686-12695.	1.9	18
76	Response to the discussion by Hongyan Ma and Ying Li of the paper â€œCharacterization of magnesium potassium phosphate cement blended with fly ash and ground granulated blast furnace slagâ€. Cement and Concrete Research, 2018, 103, 249-253.	4.6	18
77	Safe management of the UK separated plutonium inventory: a challenge of materials degradation. Npj Materials Degradation, 2020, 4, .	2.6	18
78	Insights into the fabrication and structure of plutonium pyrochlores. Journal of Materials Chemistry A, 2020, 8, 2387-2403.	5.2	17
79	Krypton irradiation damage in Nd-doped zirconolite and perovskite. Journal of Nuclear Materials, 2011, 415, 67-73.	1.3	16
80	A preliminary validation study of PuO2 incorporation into zirconolite glass-ceramics. MRS Advances, 2018, 3, 1065-1071.	0.5	16
81	Phase Transitions in Lanthanum-Doped Strontium Bismuth Tantalate. Chemistry of Materials, 2008, 20, 6427-6433.	3.2	15
82	Composition-Structure Relationships in Simplified Nuclear Waste Glasses: 1. Mixed Alkali Borosilicate Glasses. Journal of the American Ceramic Society, 2011, 94, 151-159.	1.9	15
83	Thermal treatment of simulant plutonium contaminated materials from the Sellafield site by vitrification in a blast-furnace slag. Journal of Nuclear Materials, 2014, 444, 186-199.	1.3	15
84	Expanding the nuclear forensic toolkit: chemical profiling of uranium ore concentrate particles by synchrotron X-ray microanalysis. RSC Advances, 2015, 5, 87908-87918.	1.7	15
85	The effect of pre-treatment parameters on the quality of glass-ceramic wasteforms for plutonium immobilisation, consolidated by hot isostatic pressing. Journal of Nuclear Materials, 2017, 485, 253-261.	1.3	15
86	Combined Quantitative X-ray Diffraction, Scanning Electron Microscopy, and Transmission Electron Microscopy Investigations of Crystal Evolution in CaOâ€“Al₂O₃â€“SiO₂â€“TiO₂â€“ZrO₂â€“Nd₂O<sub>3 System. Crystal Growth and Design, 2017, 17, 1079-1087.	1.4	15
87	Synthesis and characterisation of brannerite compositions (U0.9Ce0.1)1â^'xMxTi2O6 (M = Gd3+, Ca2+) for the immobilisation of MOX residues. RSC Advances, 2018, 8, 2092-2099.	1.7	15
88	Development, characterization and dissolution behavior of calcium-aluminoborate glass wasteforms to immobilize rare-earth oxides. Scientific Reports, 2018, 8, 5320.	1.6	15
89	Reactive spark plasma sintering of Cs-exchanged chabazite: characterisation and durability assessment for Fukushima Daiichi NPP clean-up. Journal of Nuclear Science and Technology, 2019, 56, 891-901.	0.7	15
90	On the role of transition metal elements as structure-stabilising agents in cuprate superconductors. Solid State Sciences, 1999, 1, 87-95.	0.8	14

#	Article	IF	Citations
91	An Investigation into the Oxidation State of Molybdenum in Simplifies High Level Nuclear Waste Glass Compositions. Materials Research Society Symposia Proceedings, 2003, 807, 654.	0.1	14
92	Zeolite - Salt Occlusion: A Potential Route for the Immobilisation of Iodine-129?. Materials Research Society Symposia Proceedings, 2003, 807, 212.	0.1	14
93	Tuning between Proper and Hybrid-Improper Mechanisms for Polar Behavior in CsLn2Ti2NbO10 Dion-Jacobson Phases. Chemistry of Materials, 2020, 32, 8700-8712.	3.2	14
94	Encapsulation of caesium-loaded Ionsiv in cement. Cement and Concrete Research, 2010, 40, 1271-1277.	4.6	13
95	Crystal and Electronic Structures of A₂NaIO₆ Periodate Double Perovskites (A = Sr, Ca, Ba): Candidate Wasteforms for I-129 Immobilization. Inorganic Chemistry, 2020, 59, 18407-18419.	1.9	13
96	The thermal decomposition of studtite: analysis of the amorphous phase. Journal of Radioanalytical and Nuclear Chemistry, 2021, 327, 1335-1347.	0.7	13
97	Synthesis, characterisation and corrosion behaviour of simulant Chernobyl nuclear meltdown materials. Npj Materials Degradation, 2020, 4, .	2.6	13
98	A feasibility investigation of speciation by Fe K-edge XANES using a laboratory X-ray absorption spectrometer. Journal of Geosciences (Czech Republic), 2020, , 27-35.	0.3	13
99	Sintering of CaF2 pellets as nuclear fuel analog for surface stability experiments. Journal of Nuclear Materials, 2011, 419, 46-51.	1.3	12
100	Solution composition and particle size effects on the dissolution and solubility of a ThO2 microstructural analogue for UO2 matrix of nuclear fuel. Radiochimica Acta, 2015, 103, 565-576.	0.5	12
101	Simulation of alpha decay of actinides in iron phosphate glasses by ion irradiation. Nuclear Instruments & Methods in Physics Research B, 2016, 371, 424-428.	0.6	12
102	Synthesis, structure, and characterization of the thorium zirconolite CaZr_{1â€x}Th_xTi₂O₇ system. Journal of the American Ceramic Society, 2021, 104, 2937-2951.	1.9	12
103	Thermal treatment of Cs-exchanged chabazite by hot isostatic pressing to support decommissioning of Fukushima Daiichi Nuclear Power Plant. Journal of Hazardous Materials, 2021, 413, 125250.	6.5	12
104	Phase Evolution in the CaZrTi₂O₇â€“Dy₂Ti₂O₇ System: A Potential Host Phase for Minor Actinide Immobilization. Inorganic Chemistry, 2022, 61, 5744-5756.	1.9	12
105	Investigation of Ce incorporation in zirconolite glass-ceramics for UK plutonium disposition. MRS Advances, 2017, 2, 699-704.	0.5	11
106	Nonresonant valence-to-core x-ray emission spectroscopy of niobium. Physical Review B, 2018, 97, .	1.1	11
107	Short communication: The dissolution of UK simulant vitrified high-level-waste in groundwater solutions. Journal of Nuclear Materials, 2020, 538, 152245.	1.3	11
108	Structure-compressibility relationships in layered cuprate materials. Physical Review B, 2001, 65, .	1.1	10

#	Article	IF	Citations
109	Influence of Lubricants and Attrition Milling Parameters on the Quality of Zirconolite Ceramics, Consolidated by Hot Isostatic Pressing, for Immobilization of Plutonium. International Journal of Applied Ceramic Technology, 2015, 12, E92.	1.1	10
110	Immobilisation of Prototype Fast Reactor raffinate in a barium borosilicate glass matrix. Journal of Nuclear Materials, 2018, 508, 203-211.	1.3	10
111	Resistance to amorphisation in Ca1-xLa2x/3TiO3 perovskites â€“ a bulk ion-irradiation study. Acta Materialia, 2019, 180, 180-188.	3.8	10
112	Effect of Ti4+ on the structure of nepheline (NaAlSiO4) glass. Geochimica Et Cosmochimica Acta, 2020, 290, 333-351.	1.6	10
113	Hot Isostatically Pressed Zirconolite Wasteforms for Actinide Immobilisation. IOP Conference Series: Materials Science and Engineering, 2020, 818, 012010.	0.3	10
114	Structure of NaFeSiO4, NaFeSi2O6, and NaFeSi3O8 glasses and glass-ceramics. American Mineralogist, 2020, 105, 1375-1384.	0.9	10
115	The dissolution of simulant UK Ca/Zn-modified nuclear waste glass: Insight into Stage III behavior. MRS Advances, 2020, 5, 103-109.	0.5	10
116	Encapsulation of TRISO particle fuel in durable soda-lime-silicate glasses. Journal of Nuclear Materials, 2013, 436, 139-149.	1.3	9
117	Hot-isostatically pressed wasteforms for Magnox sludge immobilisation. Journal of Nuclear Materials, 2018, 499, 233-241.	1.3	9
118	A new approach to the immobilisation of technetium and transuranics: Co-disposal in a zirconolite ceramic matrix. Journal of Nuclear Materials, 2020, 528, 151885.	1.3	9
119	Hot isostatic pressing: thermal treatment trials of inactive and radioactive simulant UK intermediate level waste. IOP Conference Series: Materials Science and Engineering, 2020, 818, 012009.	0.3	9
120	Slipcasting of MAX phase tubes for nuclear fuel cladding applications. Nuclear Materials and Energy, 2020, 22, 100725.	0.6	9
121	A Feasibility Investigation of Laboratory Based X-ray Absorption Spectroscopy in Support of Nuclear Waste Management. MRS Advances, 2020, 5, 27-35.	0.5	9
122	Local Structural Perturbations in HgBa2CuO4+Î´. Journal of Solid State Chemistry, 1999, 148, 119-128.	1.4	8
123	Synthesis and Characterization of Brannerite Wasteforms for the Immobilization of Mixed Oxide Fuel Residues. Procedia Chemistry, 2016, 21, 371-377.	0.7	8
124	Synthesis and Characterization of Brannerite Compositions for MOX Residue Disposal. MRS Advances, 2017, 2, 557-562.	0.5	8
125	Synthesis and characterisation of the hollandite solid solution Ba1.2-xCsxFe2.4-xTi5.6+xO16 for partitioning and conditioning of radiocaesium. Journal of Nuclear Materials, 2018, 503, 164-170.	1.3	8
126	The formation of stoichiometric uranium brannerite (UTi2O6) glass-ceramic composites from the component oxides in a one-pot synthesis. Journal of Nuclear Materials, 2020, 542, 152516.	1.3	8

#	Article	IF	Citations
127	Safely probing the chemistry of Chernobyl nuclear fuel using micro-focus X-ray analysis. Journal of Materials Chemistry A, 2021, 9, 12612-12622.	5.2	8
128	Influence of accessory phases and surrogate type on accelerated leaching of zirconolite wasteforms. Npj Materials Degradation, 2021, 5, .	2.6	8
129	Symmetry and the Role of the Anion Sublattice in Aurivillius Oxyfluoride Bi2TiO4F2. Inorganic Chemistry, 2021, 60, 14105-14115.	1.9	8
130	Synthesis of Ca1-xCexZrTi2-2xAl2xO7 zirconolite ceramics for plutonium disposition. Journal of Nuclear Materials, 2021, 556, 153198.	1.3	8
131	Synthesis and characterisation of Ce-doped zirconolite Ca0.80Ce0.20ZrTi1.60M0.40O7 (Mâ€‰=â€‰Fe, Al) formed by reactive spark plasma sintering (RSPS). MRS Advances, 2022, 7, 75-80.	0.5	8
132	(Hg, Sb)Ba2Ca2Cu3O8+deltathick films on YSZ substrates. Superconductor Science and Technology, 2000, 13, 169-172.	1.8	7
133	High-pressure neutron diffraction study of the quasi-one-dimensional cuprateSr2CuO3. Physical Review B, 2004, 70, .	1.1	7
134	Transformation of Cs-IONSIVÂ® into a ceramic wasteform by hot isostatic pressing. Journal of Nuclear Materials, 2018, 498, 33-43.	1.3	7
135	Synthesis and in situ ion irradiation of A-site deficient zirconate perovskite ceramics. Journal of Materials Chemistry A, 2020, 8, 19454-19466.	5.2	7
136	The Effect of A-Site Cation on the Formation of Brannerite (ATi2O6, A = U, Th, Ce) Ceramic Phases in a Glass-Ceramic Composite System. MRS Advances, 2020, 5, 73-81.	0.5	7
137	Fenton-like treatment for reduction of simulated carbon-14 spent resin. Journal of Environmental Chemical Engineering, 2021, 9, 104740.	3.3	7
138	An in-situ TEM study into the role of disorder, temperature and ballistic collisions on the accumulation of helium bubbles and voids in glass-ceramic composites. Journal of Nuclear Materials, 2021, 548, 152836.	1.3	7
139	Synthesis, Characterization, and Crystal Structure of Dominant Uranium(V) Brannerites in the UTi_{2â€“x}Al_xO₆ System. Inorganic Chemistry, 2021, 60, 18112-18121.	1.9	7
140	Molybdenum in Nuclear Waste Glasses - Incorporation and Redox state. Materials Research Society Symposia Proceedings, 2002, 757, II5.4.1.	0.1	6
141	The Formation of Pitted Features on the International Simple Glass during Dynamic Experiments at Alkaline pH. MRS Advances, 2019, 4, 993-999.	0.5	6
142	Glass structure and crystallization in boro-alumino-silicate glasses containing rare earth and transition metal cations: a US-UK collaborative program. MRS Advances, 2019, 4, 1029-1043.	0.5	6
143	Rapid synthesis of zirconolite ceramic wasteform by microwave sintering for disposition of plutonium. Journal of Nuclear Materials, 2020, 539, 152332.	1.3	6
144	Solubility, speciation and local environment of chlorine in zirconolite glassâ€“ceramics for the immobilisation of plutonium residues. RSC Advances, 2020, 10, 32497-32510.	1.7	6

#	Article	IF	Citations
145	Objective colour analysis from digital images as a nuclear forensic tool. Forensic Science International, 2021, 319, 110678.	1.3	6
146	Crystallisation Within Simulated High Level Waste Borosilicate Glass. Materials Research Society Symposia Proceedings, 2004, 824, 252.	0.1	5
147	MÃ¶ssbauer studies of materials used to immobilise industrial wastes. Hyperfine Interactions, 2013, 217, 83-90.	0.2	5
148	Technetium-99m Transport and Immobilisation in Porous Media: Development of a Novel Nuclear Imaging Technique. Materials Research Society Symposia Proceedings, 2013, 1518, 123-129.	0.1	5
149	Graphite immobilisation in iron phosphate glass composite materials produced by microwave and conventional sintering routes. Journal of Nuclear Materials, 2014, 454, 343-351.	1.3	5
150	Solution Composition Effects on the Dissolution of a CeO2 analogue for UO2 and ThO2 nuclear fuels. Materials Research Society Symposia Proceedings, 2015, 1744, 185-190.	0.1	5
151	Structure analysis of vitusite glassâ€“ceramic waste forms using extended X-ray absorption fine structures. Ceramics International, 2017, 43, 4687-4691.	2.3	5
152	Synthesis of simulant â€˜lava-likeâ€™ fuel containing materials (LFCM) from the Chernobyl reactor Unit 4 meltdown. MRS Advances, 2017, 2, 609-614.	0.5	5
153	Short communication on further elucidating the structure of amorphous U2O7 by extended X-ray absorption spectroscopy and DFT simulations. Journal of Nuclear Materials, 2020, 542, 152476.	1.3	5
154	Radiation stability study on cerium loaded iron phosphate glasses by ion irradiation method. Journal of Radioanalytical and Nuclear Chemistry, 2020, 323, 1381-1386.	0.7	5
155	The dissolution of simulant UK Ca/Zn-modified nuclear waste glass: the effect of increased waste loading. MRS Advances, 2021, 6, 95-102.	0.5	5
156	Nuclear forensic signatures of studtite and Î±-UO3 from a matrix of solution processing parameters. Journal of Nuclear Materials, 2021, 544, 152713.	1.3	5
157	Thermal treatment of nuclear fuel-containing Magnox sludge radioactive waste. Journal of Nuclear Materials, 2021, 552, 152965.	1.3	5
158	The Effect of Temperature on the Stability and Cerium Oxidation State of CeTi2O6 in Inert and Oxidizing Atmospheres. Inorganic Chemistry, 2020, 59, 17364-17373.	1.9	5
159	Spectroscopic evaluation of U^{VI}â€“cement mineral interactions: ettringite and hydrotalcite. Journal of Synchrotron Radiation, 2022, 29, 89-102.	1.0	5
160	Site-Selective d¹⁰/d⁰ Substitution in an S = ¹/₂ Spin Ladder Ba₂CuTe_{1â€“x}W_xO₆ (0 â‰¤ Tj ETQq0 0 0 rgBT /Overloc		
161	Interactions of Simulated High Level Waste (HLW) Calcine with Alkali Borosilicate Glass. Materials Research Society Symposia Proceedings, 2003, 807, 122.	0.1	4
162	Single Phase Ceramic Wasteforms for Plutonium Disposition. Advances in Science and Technology, 2006, 45, 2004.	0.2	4

#	Article	IF	Citations
163	Ceramic formulation and processing design for plutonium disposition. Materials Research Society Symposia Proceedings, 2009, 1193, .	0.1	4
164	Rapid microwave synthesis of Pb5(VO4)3X (X = F, Cl, Br and I) vanadinite apatites for the immobilisation of halide radioisotopes.. Materials Research Society Symposia Proceedings, 2012, 1475, 221.	0.1	4
165	Thermal Conversion of Cs-exchanged IONSIV IE-911 into a Novel Caesium Ceramic Wasteform by Hot Isostatic Pressing. Materials Research Society Symposia Proceedings, 2013, 1518, 67-72.	0.1	4
166	Interactions between Simulant Vitrified Nuclear Wastes and high pH solutions: A Natural Analogue Approach. MRS Advances, 2017, 2, 669-675.	0.5	4
167	Corrigendum to â€œThe dissolution rates of simulated UK Magnox â€“ ThORP blend nuclear waste glass as a function of pH, temperature and waste loadingâ€•[Miner. Mag. 79, (2015) 1529â€“1542]. Mineralogical Magazine, 2018, 82, 939-942.	0.6	4
168	Molten salt synthesis of Ce doped zirconolite for the immobilisation of pyroprocessing wastes and separated plutonium. Ceramics International, 2020, 46, 29080-29089.	2.3	4
169	Thermal treatment for radioactive waste minimisation. EPJ Nuclear Sciences & Technologies, 2020, 6, 25.	0.3	4
170	Synthesis and characterization of iodovanadinite using PdI_{2,} an iodine source for the immobilisation of radioiodine. RSC Advances, 2020, 10, 25116-25124.	1.7	4
171	On the existence of the compound â€œCe3NbO7+â€•prepared under air atmosphere. Journal of Rare Earths, 2021, 39, 596-599.	2.5	4
172	Chemical state mapping of simulant Chernobyl lava-like fuel containing material using micro-focused synchrotron X-ray spectroscopy. Journal of Synchrotron Radiation, 2021, 28, 1672-1683.	1.0	4
173	Synthesis, characterisation and crystal chemistry of Pb3Sr3Cu3O8Br: a new layered copper oxideâ€“bromide. Physica C: Superconductivity and Its Applications, 2002, 366, 283-290.	0.6	3
174	Synthesis and characterisation of transition metal substituted barium hollandite ceramics. Materials Research Society Symposia Proceedings, 2006, 932, 1.	0.1	3
175	The Effect of Î³-radiation on Mechanical Properties of Model UK Nuclear Waste Glasses. Materials Research Society Symposia Proceedings, 2013, 1518, 41-46.	0.1	3
176	Decontamination of Molten Salt Wastes for Pyrochemical Reprocessing of Nuclear Fuels. Materials Research Society Symposia Proceedings, 2013, 1518, 97-102.	0.1	3
177	On the existence of AgM₉(VO₄)₆I (M = Ba, Pb). RSC Advances, 2017, 7, 49004-49009.	1.7	3
178	Synthesis and characterisation of high ceramic fraction brannerite (UTi2O6) glass-ceramic composites. IOP Conference Series: Materials Science and Engineering, 2020, 818, 012018.	0.3	3
179	Influence of Transition Metal Charge Compensation Species on Phase Assemblage in Zirconolite Ceramics for Pu Immobilisation. MRS Advances, 2020, 5, 93-101.	0.5	3
180	Multimodal X-ray microanalysis of a UFeO₄: evidence for the environmental stability of ternary U(<scp>v</scp>) oxides from depleted uranium munitions testing. Environmental Sciences: Processes and Impacts, 2020, 22, 1577-1585.	1.7	3

#	Article	IF	Citations
181	Synthesis and characterisation of HIP Ca0.80Ce0.20ZrTi1.60Cr0.40O7 zirconolite and observations of the ceramicâ€“canister interface. MRS Advances, 2021, 6, 112-118.	0.5	3
182	Low-Temperature Nitridation of Fe₃O₄ by Reaction with NaNH₂. Inorganic Chemistry, 2021, 60, 2553-2562.	1.9	3
183	Chemical structure and dissolution behaviour of CaO and ZnO containing alkali-borosilicate glass. Materials Advances, 2022, 3, 1747-1758.	2.6	3
184	Chemical characterisation of degraded nuclear fuel analogues simulating the Fukushima Daiichi nuclear accident. Npj Materials Degradation, 2022, 6, .	2.6	3
185	Vapour Phase Hydration of Blended Oxide - Magnox Waste Glasses. Materials Research Society Symposia Proceedings, 2003, 807, 224.	0.1	2
186	Analytical STEM of Borosilicate Glasses Containing Molybdates.. Materials Research Society Symposia Proceedings, 2004, 824, 372.	0.1	2
187	Characterisation of Plasma Vitrified Simulant Plutonium Contaminated Material Waste. Materials Research Society Symposia Proceedings, 2006, 985, 1.	0.1	2
188	The Relative Merits of Oxides of Hafnium, Cerium and Thorium as Surrogates for Plutonium Oxide in Calcium Phosphate Ceramics. Materials Research Society Symposia Proceedings, 2009, 1193, .	0.1	2
189	Ceramic Immobilisation Options for Technetium. Materials Research Society Symposia Proceedings, 2012, 1518, 111-116.	0.1	2
190	Surface Sensitive Spectroscopy Study of Ion Beam Irradiation Induced Structural Modifications in Borosilicate Glasses. Materials Research Society Symposia Proceedings, 2013, 1514, 75-80.	0.1	2
191	MoO3 incorporation in alkaline earth aluminosilicate glasses. Materials Research Society Symposia Proceedings, 2015, 1744, 67-72.	0.1	2
192	Investigation of Processing Parameters for the Consolidation of Actinide Glass-Ceramic Wasteforms by Hot Isostatic Pressing. MRS Advances, 2016, 1, 4269-4274.	0.5	2
193	Ceramic Immobilization Options for Technetium. MRS Advances, 2017, 2, 753-758.	0.5	2
194	Leaching of Nirex Reference Vault Backfill cement by clay, granite and saline groundwaters. MRS Advances, 2018, 3, 1175-1180.	0.5	2
195	Investigation of ion irradiation induced damages in iron phosphate glasses: Role of electronic and nuclear losses in glass network modification. Journal of Non-Crystalline Solids: X, 2020, 8, 100055.	0.5	2
196	Synthesis, characterisation and preliminary corrosion behaviour assessment of simulant Fukushima nuclear accident fuel debris. MRS Advances, 2020, 5, 65-72.	0.5	2
197	Ba1.2-xCsxM1.2-x/2Ti6.8+x/2O16 (M = Ni, Zn) hollandites for the immobilisation of radiocaesium. MRS Advances, 2020, 5, 55-64.	0.5	2
198	Nuclear forensic signatures and structural analysis of uranyl oxalate, its products of thermal decomposition and Fe impurity dopant. Journal of Radioanalytical and Nuclear Chemistry, 2021, 327, 957-973.	0.7	2

#	Article	IF	Citations
199	A preliminary investigation of the molten salt mediated synthesis of Gd2TiO5 â€˜stuffedâ€™ pyrochlore. MRS Advances, 2021, 6, 149-153.	0.5	2
200	Actinide Immobilization in Dedicated Wasteforms: An Alternative Pathway for the Long-Term Management of Existing Actinide Stockpiles. , 2021, , 650-662.		2
201	Vapour Phase Hydration of Magnox Waste Glass. Materials Research Society Symposia Proceedings, 2002, 757, II5.10.1.	0.1	1
202	Disorderly conduct in Bi2Ln2Ti3O12 Aurivillius phases (Ln = La, Pr, Nd, Sm).. Materials Research Society Symposia Proceedings, 2002, 755, 1.	0.1	1
203	Synthesis, structure and superconducting properties of the (Hg0.65V0.35)Sr2(Nd1â^'ySry)Cu2O6+Î´ system. Physica C: Superconductivity and Its Applications, 2003, 391, 160-168.	0.6	1
204	The crystal structure of Hg0.75Mo0.25Sr2CuO4.5+Î´, determined by neutron powder diffraction. Physica C: Superconductivity and Its Applications, 2003, 391, 230-236.	0.6	1
205	In Situ Characterisation of Model UK Nuclear Waste Glasses by X-ray Absorption Spectroscopy Under Process Conditions. Materials Research Society Symposia Proceedings, 2008, 1107, 1.	0.1	1
206	Glass Development for Vitrification of Wet Intermediate Level Waste (WILW) from Decommissionning of the Hinkley Point â€˜Aâ€™ Site. Materials Research Society Symposia Proceedings, 2008, 1124, 1.	0.1	1
207	The Use of High Durability Alumino-Borosilicate Glass for the Encapsulation of High Temperature Reactor (HTR) Fuel. Materials Research Society Symposia Proceedings, 2013, 1518, 3-8.	0.1	1
208	Reducing the uncertainty of nuclear fuel dissolution: an investigation of UO2 analogue CeO2. Materials Research Society Symposia Proceedings, 2013, 1518, 151-156.	0.1	1
209	Ion Beam Irradiation Induced Structural Modifications in Iron Phosphate Glasses: A Model System for Understanding Radiation Damage in Nuclear Waste Glasses. Materials Research Society Symposia Proceedings, 2015, 1757, 65.	0.1	1
210	Thermal treatment of plutonium contaminated material (PCM) waste. MRS Advances, 2017, 2, 735-740.	0.5	1
211	A synchrotron X-ray spectroscopy study of titanium co-ordination in explosive melt glass derived from the trinity nuclear test. RSC Advances, 2019, 9, 12921-12927.	1.7	1
212	Preliminary investigation of chlorine speciation in zirconolite glass-ceramics for plutonium residues by analysis of Cl K-edge XANES. MRS Advances, 2020, 5, 37-43.	0.5	1
213	Laboratory Based X-ray Absorption Spectroscopy of Iron Phosphate Glasses for Radioactive Waste Immobilisation: A Preliminary Investigation.. IOP Conference Series: Materials Science and Engineering, 2020, 818, 012020.	0.3	1
214	Hot Isostatic Pressing (HIP): A novel method to prepare Cr-doped UO2 nuclear fuel. MRS Advances, 2020, 5, 45-53.	0.5	1
215	Ce and U speciation in wasteforms for thermal treatment of plutonium bearing wastes, probed by L3 edge XANES. IOP Conference Series: Materials Science and Engineering, 2020, 818, 012019.	0.3	1
216	Synthesis of zirconolite-2M ceramics for immobilisation of neptunium. Ceramics International, 2021, 47, 1047-1052.	2.3	1

#	Article	IF	Citations
217	ILW conditioning and performance. , 2021, , 548-563.		1
218	A high throughput computational investigation of the solid solution mechanisms of actinides and lanthanides in zirconolite. RSC Advances, 2021, 11, 25179-25186.	1.7	1
219	Ceramic-based stabilization/solidification of radioactive waste. , 2022, , 449-468.		1
220	Fission Product Immobilisation in Secondary Phases Formed During Magnox Waste Glass Dissolution at 60 Â°C: Experimental Results and Modelling.. Materials Research Society Symposia Proceedings, 2002, 757, II5.11.1.	0.1	0
221	A Study of Magnox Waste Glass Under Conditions of High Temperature, Very Deep, Geological Disposal. Materials Research Society Symposia Proceedings, 2003, 807, 218.	0.1	0
222	Synthesis, structure and superconducting properties of the (Hg1ÂxRex)Sr2(Nd1ÂyCay)Cu2O6+Âsystem. Superconductor Science and Technology, 2004, 17, 401-408.	1.8	0
223	An Evaluation of Single Phase Ceramic Formulations for Plutonium Disposition. Materials Research Society Symposia Proceedings, 2006, 985, 1.	0.1	0
224	Synthesis of Crystalline Ceramics for Actinide Immobilisation. , 2007, , 255.		0
225	Diamond: A New Research Programme to Support UK Decommissioning, Immobilisation and Management of Nuclear Wastes for Disposal. Materials Research Society Symposia Proceedings, 2008, 1124, 1.	0.1	0
226	Heavy ion implantation combined with grazing incidence X-ray absorption spectroscopy (GIXAS): A new methodology for the characterisation of radiation damage in nuclear ceramics. Materials Research Society Symposia Proceedings, 2009, 1193, .	0.1	0
227	The DIAMOND University Research Consortium: Nuclear Waste Characterisation, Immobilisation and Storage. , 2009, , .		0
228	Stability of Cs-Ionsiv in Portland cement blends for radioactive waste disposal. Materials Research Society Symposia Proceedings, 2010, 1265, 1.	0.1	0
229	Krypton and Helium Irradiation Damage in Yttria-stabilised Zirconia. Materials Research Society Symposia Proceedings, 2011, 1298, 197.	0.1	0
230	Comment on â€œPreliminary assessment of modified borosilicate glasses for chromium and ruthenium immobilizationâ€, by Farid and Rahman. Materials Chemistry and Physics, 2017, 192, 29-32.	2.0	0
231	Evaluation of novel leaching assessment of nuclear waste glasses. MRS Advances, 2017, 2, 635-640.	0.5	0
232	Advanced Gas-cooled Reactor SIMFuel Fabricated by Hot Isostatic Pressing: a Feasibility Investigation. IOP Conference Series: Materials Science and Engineering, 2020, 818, 012011.	0.3	0
233	Taking X-ray spectroscopy global from the kitchen table. Synchrotron Radiation News, 2020, 33, 46-46.	0.2	0
234	Use of WetSEMÂ® capsules for convenient multimodal scanning electron microscopy, energy dispersive X-ray analysis, and micro Raman spectroscopy characterisation of technetium oxides. Journal of Radioanalytical and Nuclear Chemistry, 2021, 328, 1313-1318.	0.7	0

#	Article	IF	Citations
235	MÃ¶ssbauer studies of materials used to immobilise industrial wastes. , 2012, , 83-90.		0
236	Investigation of Radiation Damage in Iron Phosphate Glasses by Soft X-Ray Absorption Spectroscopy: A Powerful Tool for Surface Characterization. Springer Proceedings in Physics, 2019, , 133-139.	0.1	0
237	HERMES â€“ a GUI-based software tool for pre-processing of X-ray absorption spectroscopy data from laboratory Rowland circle spectrometers. Journal of Synchrotron Radiation, 2022, 29, 276-279.	1.0	0