StÃ©phane Gin

List of Publications by Year
in descending order

179 papers	8,102 citations	31976 53 h-index	58581 82 g-index
184 all docs	184 docs citations	184 times ranked	2504 citing authors

#	Article	IF	Citations
1	An international initiative on long-term behavior of high-level nuclear waste glass. Materials Today, 2013, 16, 243-248.	14.2	417
2	Insight into silicate-glass corrosion mechanisms. Nature Materials, 2008, 7, 978-983.	27.5	402
3	SON68 nuclear glass dissolution kinetics: Current state of knowledge and basis of the new GRAAL model. Journal of Nuclear Materials, 2008, 380, 8-21.	2.7	314
4	Origin and consequences of silicate glass passivation by surface layers. Nature Communications, 2015, 6, 6360.	12.8	219
5	Current Understanding and Remaining Challenges in Modeling Longâ€Term Degradation of Borosilicate Nuclear Waste Glasses. International Journal of Applied Glass Science, 2013, 4, 283-294.	2.0	208
6	Effect of composition on the short-term and long-term dissolution rates of ten borosilicate glasses of increasing complexity from 3 to 30 oxides. Journal of Non-Crystalline Solids, 2012, 358, 2559-2570.	3.1	174
7	The fate of silicon during glass corrosion under alkaline conditions: A mechanistic and kinetic study with the International Simple Glass. Geochimica Et Cosmochimica Acta, 2015, 151, 68-85.	3.9	165
8	A comparative review of the aqueous corrosion of glasses, crystalline ceramics, and metals. Npj Materials Degradation, 2018, 2, .	5.8	150
9	Radionuclides containment in nuclear glasses: an overview. Radiochimica Acta, 2017, 105, 927-959.	1.2	126
10	Resumption of nuclear glass alteration: State of the art. Journal of Nuclear Materials, 2014, 448, 348-363.	2.7	124
11	Nuclear Glass Durability: New Insight into Alteration Layer Properties. Journal of Physical Chemistry C, 2011, 115, 18696-18706.	3.1	116
12	Alteration kinetics of a simplified nuclear glass in an aqueous medium: effects of solution chemistry and of protective gel properties on diminishing the alteration rate. Journal of Nuclear Materials, 2000, 280, 216-229.	2.7	114
13	Role of neoformed phases on the mechanisms controlling the resumption of SON68 glass alteration in alkaline media. Journal of Nuclear Materials, 2004, 324, 152-164.	2.7	114
14	Present understanding of R7T7 glass alteration kinetics and their impact on long-term behavior modeling. Journal of Nuclear Materials, 2001, 298, 27-36.	2.7	112
15	The effect of composition on the leaching of three nuclear waste glasses: R7T7, AVM and VRZ. Journal of Nuclear Materials, 2005, 346, 194-207.	2.7	106
16	SON 68 nuclear glass alteration kinetics between pH 7 and pH 11.5. Journal of Nuclear Materials, 2001, 295, 83-96.	2.7	105
17	Contribution of atom-probe tomography to a better understanding of glass alteration mechanisms: Application to a nuclear glass specimen altered 25years in a granitic environment. Chemical Geology, 2013, 349-350, 99-109.	3.3	105
18	Long-term Behavior Science: The cornerstone approach for reliably assessing the long-term performance of nuclear waste. Journal of Nuclear Materials, 2012, 420, 182-192.	2.7	94

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19	Dynamics of self-reorganization explains passivation of silicate glasses. Nature Communications, 2018, 9, 2169.	12.8	94
20	Glassâ€“water interphase reactivity with calcium rich solutions. Geochimica Et Cosmochimica Acta, 2011, 75, 4125-4139.	3.9	93
21	Role and properties of the gel formed during nuclear glass alteration: importance of gel formation conditions. Journal of Nuclear Materials, 2001, 298, 1-10.	2.7	92
22	Hydrogenâ€“sodium interdiffusion in borosilicate glasses investigated from first principles. Journal of Non-Crystalline Solids, 2006, 352, 3147-3152.	3.1	91
23	Structure of International Simple Glass and properties of passivating layer formed in circumneutral pH conditions. Npj Materials Degradation, 2018, 2, .	5.8	91
24	Atom-Probe Tomography, TEM and ToF-SIMS study of borosilicate glass alteration rim: A multiscale approach to investigating rate-limiting mechanisms. Geochimica Et Cosmochimica Acta, 2017, 202, 57-76.	3.9	88
25	Application of the GRAAL model to leaching experiments with SON68 nuclear glass in initially pure water. Journal of Nuclear Materials, 2009, 392, 552-567.	2.7	86
26	Morphological evolution of alteration layers formed during nuclear glass alteration: new evidence of a gel as a diffusive barrier. Journal of Nuclear Materials, 2004, 326, 9-18.	2.7	84
27	Solid state diffusion during nuclear glass residual alteration in solution. Journal of Nuclear Materials, 2007, 362, 466-473.	2.7	80
28	The controversial role of inter-diffusion in glass alteration. Chemical Geology, 2016, 440, 115-123.	3.3	80
29	Why Do Certain Glasses with a High Dissolution Rate Undergo a Low Degree of Corrosion?. Journal of Physical Chemistry C, 2011, 115, 5846-5855.	3.1	79
30	New Insight into the Residual Rate of Borosilicate Glasses: Effect of <scp>S</scp>/<scp>V</scp> and Glass Composition. International Journal of Applied Glass Science, 2013, 4, 371-382.	2.0	76
31	Investigation of gel porosity clogging during glass leaching. Journal of Non-Crystalline Solids, 2008, 354, 4952-4958.	3.1	75
32	A fractured roman glass block altered for 1800 years in seawater: Analogy with nuclear waste glass in a deep geological repository. Geochimica Et Cosmochimica Acta, 2008, 72, 5372-5385.	3.9	75
33	Open Scientific Questions about Nuclear Glass Corrosion. , 2014, 7, 163-171.		73
34	Effect of clayey groundwater on the dissolution rate of the simulated nuclear waste glass SON68. Journal of Nuclear Materials, 2012, 420, 508-518.	2.7	70
35	Long-term modeling of alteration-transport coupling: Application to a fractured Roman glass. Geochimica Et Cosmochimica Acta, 2010, 74, 2291-2315.	3.9	69
36	Glass dissolution rate measurement and calculation revisited. Journal of Nuclear Materials, 2016, 476, 140-154.	2.7	69

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37	Forward dissolution rate of silicate glasses of nuclear interest in clay-equilibrated groundwater. Chemical Geology, 2012, 330-331, 207-217.	3.3	67
38	Antagonist effects of calcium on borosilicate glass alteration. Journal of Nuclear Materials, 2013, 441, 402-410.	2.7	67
39	Long-term alteration of basaltic glass: Mechanisms and rates. Geochimica Et Cosmochimica Acta, 2015, 154, 28-48.	3.9	67
40	Glassâ€"ironâ€"clay interactions in a radioactive waste geological disposal: An integrated laboratory-scale experiment. Applied Geochemistry, 2011, 26, 65-79.	3.0	66
41	Protective properties and dissolution ability of the gel formed during nuclear glass alteration. Journal of Nuclear Materials, 2005, 342, 26-34.	2.7	65
42	Hydrogen bonding interactions of H2O and SiOH on a boroaluminosilicate glass corroded in aqueous solution. Npj Materials Degradation, 2020, 4, .	5.8	64
43	Self-accelerated corrosion of nuclear waste forms at material interfaces. Nature Materials, 2020, 19, 310-316.	27.5	61
44	Impact of Pore Size and Pore Surface Composition on the Dynamics of Confined Water in Highly Ordered Porous Silica. Journal of Physical Chemistry C, 2012, 116, 7021-7028.	3.1	59
45	Predicting the dissolution kinetics of silicate glasses by topology-informed machine learning. Npj Materials Degradation, 2019, 3, .	5.8	59
46	Theoretical consideration on the application of the Aagaardâ€"Helgeson rate law to the dissolution of silicate minerals and glasses. Chemical Geology, 2008, 255, 14-24.	3.3	58
47	Vapor hydration of SON68 glass from 90Â°C to 200Â°C: A kinetic study and corrosion products investigation. Journal of Non-Crystalline Solids, 2012, 358, 2894-2905.	3.1	57
48	The dual effect of Mg on the long-term alteration rate of AVM nuclear waste glasses. Journal of Nuclear Materials, 2012, 427, 297-310.	2.7	57
49	Influence of lanthanum on borosilicate glass structure: A multinuclear MAS and MQMAS NMR investigation. Journal of Non-Crystalline Solids, 2013, 376, 189-198.	3.1	57
50	Various effects of magnetite on international simple glass (ISG) dissolution: implications for the long-term durability of nuclear glasses. Npj Materials Degradation, 2017, 1, .	5.8	57
51	The use of natural and archeological analogues for understanding the long-term behavior of nuclear glasses. Comptes Rendus - Geoscience, 2011, 343, 237-245.	1.2	56
52	Silicate Glass Alteration Enhanced by Iron: Origin and Long-Term Implications. Environmental Science & Technology, 2013, 47, 750-756.	10.0	56
53	Aqueous alteration of silicate glass: state of knowledge and perspectives. Npj Materials Degradation, 2021, 5, .	5.8	56
54	French SON 68 nuclear glass alteration mechanisms on contact with clay media. Applied Geochemistry, 2001, 16, 861-881.	3.0	54

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55	Water penetration mechanisms in nuclear glasses by X-ray and neutron reflectometry. Journal of Non-Crystalline Solids, 2007, 353, 2221-2230.	3.1	54
56	Composition effects on synthetic glass alteration mechanisms: Part 1. Experiments. Chemical Geology, 2010, 279, 106-119.	3.3	54
57	17O 3Q-MAS NMR characterization of a sodium aluminoborosilicate glass and its alteration gel. Chemical Physics Letters, 2001, 341, 23-28.	2.6	52
58	Recent Advances in Corrosion Science Applicable To Disposal of High-Level Nuclear Waste. Chemical Reviews, 2021, 121, 12327-12383.	47.7	52
59	A 25-year laboratory experiment on French SON68 nuclear glass leached in a granitic environment â€“ First investigations. Journal of Nuclear Materials, 2011, 408, 73-89.	2.7	47
60	Contribution of zeolite-seeded experiments to the understanding of resumption of glass alteration. Npj Materials Degradation, 2017, 1, .	5.8	47
61	Molecular Dynamics Simulations of Water Structure and Diffusion in a 1 nm Diameter Silica Nanopore as a Function of Surface Charge and Alkali Metal Counterion Identity. Journal of Physical Chemistry C, 2018, 122, 17764-17776.	3.1	47
62	First investigations of the influence of IVB elements (Ti, Zr, and Hf) on the chemical durability of soda-lime borosilicate glasses. Journal of Non-Crystalline Solids, 2010, 356, 2315-2322.	3.1	46
63	Impact of iron on nuclear glass alteration in geological repository conditions: A multiscale approach. Applied Geochemistry, 2013, 31, 159-170.	3.0	45
64	Borosilicate glass alteration driven by magnesium carbonates. Journal of Nuclear Materials, 2012, 420, 347-361.	2.7	44
65	Spectroscopic ellipsometry study of thickness and porosity of the alteration layer formed on international simple glass surface in aqueous corrosion conditions. Npj Materials Degradation, 2018, 2, .	5.8	44
66	A General Mechanism for Gel Layer Formation on Borosilicate Glass under Aqueous Corrosion. Journal of Physical Chemistry C, 2020, 124, 5132-5144.	3.1	43
67	Effect of iron metal and siderite on the durability of simulated archeological glassy material. Corrosion Science, 2013, 76, 403-414.	6.6	42
68	Impact of alkali on the passivation of silicate glass. Npj Materials Degradation, 2018, 2, .	5.8	42
69	Quantitative Structureâ€“Property Relationship (QSPR) Analysis of ZrO₂-Containing Soda-Lime Borosilicate Glasses. Journal of Physical Chemistry B, 2019, 123, 1412-1422.	2.6	41
70	Effect of natural and synthetic iron corrosion products on silicate glass alteration processes. Geochimica Et Cosmochimica Acta, 2016, 172, 287-305.	3.9	40
71	Archaeological analogs and the future of nuclear waste glass. Journal of Nuclear Materials, 2010, 406, 365-370.	2.7	38
72	Effect of thermally induced structural disorder on the chemical durability of International Simple Glass. Npj Materials Degradation, 2018, 2, .	5.8	37

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73	Experimental investigation of aqueous corrosion of R7T7 nuclear glass at 90Â°C in the presence of organic species. Applied Geochemistry, 1994, 9, 255-269.	3.0	36
74	SON68 glass dissolution driven by magnesium silicate precipitation. Journal of Nuclear Materials, 2013, 442, 17-28.	2.7	35
75	Resumption of Alteration at High Temperature and pH: Rates Measurements and Comparison with Initial Rates. , 2014, 7, 202-208.		34
76	Alteration kinetics of the glass-ceramic zirconolite and role of the alteration film â€" Comparison with the SON68 glass. Journal of Nuclear Materials, 2007, 366, 277-287.	2.7	32
77	Dolomite effect on borosilicate glass alteration. Applied Geochemistry, 2013, 33, 237-251.	3.0	32
78	Protective Effect of the Alteration Gel: A Key Mechanism in the Long-Term Behavior of Nuclear Waste Glass. Materials Research Society Symposia Proceedings, 2000, 663, 1.	0.1	31
79	An enhanced resolution of the structural environment of zirconium in borosilicate glasses. Journal of Non-Crystalline Solids, 2013, 381, 40-47.	3.1	31
80	Borosilicate Nuclear Waste Glass Alteration Kinetics: Chemical Inhibition and Affinity Control. Materials Research Society Symposia Proceedings, 1997, 506, 63.	0.1	30
81	Spectral changes in Siâ€"Oâ€"Si stretching band of porous glass network upon ingress of water. Journal of Non-Crystalline Solids, 2020, 527, 119722.	3.1	30
82	Structural identification of a trioctahedral smectite formed by the aqueous alteration of a nuclear glass. Applied Clay Science, 2010, 49, 135-141.	5.2	29
83	HLW glass dissolution in the presence of magnesium carbonate: Diffusion cell experiment and coupled modeling of diffusion and geochemical interactions. Journal of Nuclear Materials, 2013, 443, 507-521.	2.7	29
84	Analytic implementation of the GRAAL model: Application to a R7T7-type glass package in a geological disposal environment. Journal of Nuclear Materials, 2010, 404, 178-202.	2.7	28
85	Study of gel development during SON68 glass alteration using atomic force microscopy. Comparison with two simplified glasses. Journal of Nuclear Materials, 2003, 317, 83-92.	2.7	27
86	Compositional Effects on the Long-Term Durability of Nuclear Waste Glasses: A Statistical Approach. Materials Research Society Symposia Proceedings, 2004, 824, 240.	0.1	27
87	Impact of soda-lime borosilicate glass composition on water penetration and water structure at the first time of alteration. Journal of Non-Crystalline Solids, 2012, 358, 2951-2960.	3.1	27
88	Comparing the reactivity of glasses with their crystalline equivalents: The case study of plagioclase feldspar. Geochimica Et Cosmochimica Acta, 2019, 254, 122-141.	3.9	27
89	Insights into the mechanisms controlling the residual corrosion rate of borosilicate glasses. Npj Materials Degradation, 2020, 4, .	5.8	26
90	Can a simple topological-constraints-based model predict the initial dissolution rate of borosilicate and aluminosilicate glasses?. Npj Materials Degradation, 2020, 4, .	5.8	26

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91	Impact of magnesium on the structure of aluminoborosilicate glasses: A solidâ€state NMR and Raman spectroscopy study. Journal of the American Ceramic Society, 2021, 104, 4518-4536.	3.8	26
92	Chemical durability of peraluminous glasses for nuclear waste conditioning. Npj Materials Degradation, 2018, 2, .	5.8	25
93	Effect of pH on the stability of passivating gel layers formed on International Simple Glass. Journal of Nuclear Materials, 2019, 524, 21-38.	2.7	25
94	Son68 Glass Dissolution Kinetics at High Reaction Progress: Mechanisms Accounting for The Residual Alteration Rate. Materials Research Society Symposia Proceedings, 2006, 932, 1.	0.1	24
95	Structure and Chemical Durability of Lead Crystal Glass. Environmental Science & Technology, 2016, 50, 11549-11558.	10.0	24
96	Effect of Zeolite Formation on Borosilicate Glass Dissolution Kinetics. Procedia Earth and Planetary Science, 2013, 7, 264-267.	0.6	23
97	Chemical Durability of Lanthanumâ€Enriched Borosilicate Glass. International Journal of Applied Glass Science, 2013, 4, 383-394.	2.0	23
98	Modeling glass corrosion with GRAAL. Npj Materials Degradation, 2018, 2, .	5.8	23
99	Use of orthophosphate complexing agents to investigate mechanisms limiting the alteration kinetics of French SON 68 nuclear glass. Applied Geochemistry, 2000, 15, 1505-1525.	3.0	22
100	X-ray reflectometry characterization of SON 68 glass alteration films. Journal of Non-Crystalline Solids, 2003, 325, 113-123.	3.1	22
101	Heavy ion radiation ageing impact on long-term glass alteration behavior. Journal of Nuclear Materials, 2018, 510, 168-177.	2.7	22
102	ToF-SIMS depth profiling of altered glass. Npj Materials Degradation, 2019, 3, .	5.8	22
103	Control of R7T7 Nuclear Glass Alteration Kinetics Under Saturation Conditions. Materials Research Society Symposia Proceedings, 1995, 412, 189.	0.1	21
104	Long-term behavior of R7T7-type nuclear glass: Current state of knowledge and outlook. Materials Research Society Symposia Proceedings, 2004, 824, 258.	0.1	21
105	Leaching and Reactivity at the Sodium Aluminosilicate Glassâ€"Water Interface: Insights from a ReaxFF Molecular Dynamics Study. Journal of Physical Chemistry C, 2021, 125, 27170-27184.	3.1	21
106	Waste Glass. , 2012, , 451-483.		20
107	Reactive transport processes occurring during nuclear glass alteration in presence of magnetite. Applied Geochemistry, 2015, 58, 26-37.	3.0	20
108	SON68 glass alteration under Si-rich solutions at low temperature (35â€"90 Â°C): kinetics, secondary phases and isotopic exchange studies. RSC Advances, 2016, 6, 72616-72633.	3.6	20

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109	Influence of zeolite precipitation on borosilicate glass alteration under hyperalkaline conditions. Journal of Nuclear Materials, 2017, 491, 67-82.	2.7	20
110	Influence of composition of nuclear waste glasses on vapor phase hydration. Journal of Nuclear Materials, 2019, 525, 53-71.	2.7	20
111	Review of corrosion interactions between different materials relevant to disposal of high-level nuclear waste. Npj Materials Degradation, 2020, 4, .	5.8	20
112	Atomic Insights into the Events Governing the Borosilicate Glassâ€"Water Interface. Journal of Physical Chemistry C, 2021, 125, 7919-7931.	3.1	20
113	Low-temperature lithium diffusion in simulated high-level boroaluminosilicate nuclear waste glasses. Journal of Non-Crystalline Solids, 2014, 405, 83-90.	3.1	18
114	Archeological slag from Glinet: An example of silicate glass altered in an anoxic iron-rich environment. Chemical Geology, 2015, 413, 28-43.	3.3	18
115	The effect of magnesium on the local structure and initial dissolution rate of simplified UK Magnox waste glasses. Journal of Non-Crystalline Solids, 2018, 497, 82-92.	3.1	18
116	Predicting the dissolution rate of borosilicate glasses using QSPR analysis based on molecular dynamics simulations. Journal of the American Ceramic Society, 2021, 104, 4445-4458.	3.8	18
117	Molecular Dynamics Simulation of Water Confinement in Disordered Aluminosilicate Subnanopores. Scientific Reports, 2018, 8, 3761.	3.3	17
118	Alteration of synthetic basaltic glass in silica saturated conditions: Analogy with nuclear glass. Applied Geochemistry, 2018, 97, 19-31.	3.0	17
119	Deciphering the non-linear impact of Al on chemical durability of silicate glass. Acta Materialia, 2022, 225, 117478.	7.9	17
120	SON68 Glass Alteration Enhanced by Magnetite. Procedia Earth and Planetary Science, 2013, 7, 300-303.	0.6	16
121	Mineralogy and thermodynamic properties of magnesium phyllosilicates formed during the alteration of a simplified nuclear glass. Journal of Nuclear Materials, 2016, 475, 255-265.	2.7	16
122	Effect of clayey groundwater on the dissolution rate of SON68 simulated nuclear waste glass at 70â€‰Â°C. Journal of Nuclear Materials, 2018, 503, 279-289.	2.7	16
123	Molecular dynamics simulation of ballistic effects in simplified nuclear waste glasses. Journal of Non-Crystalline Solids, 2019, 505, 188-201.	3.1	16
124	Near-field corrosion interactions between glass and corrosion resistant alloys. Npj Materials Degradation, 2020, 4, .	5.8	15
125	Silicon isotope ratio measurements by inductively coupled plasma tandem mass spectrometry for alteration studies of nuclear waste glasses. Analytica Chimica Acta, 2017, 954, 68-76.	5.4	14
126	Behaviors of sodium and calcium ions at the borosilicate glassâ€"water interface: Gaining new insights through an <i>ab initio</i> molecular dynamics study. Journal of Chemical Physics, 2022, 156, 134501.	3.0	14

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127	Application of GRAAL model to the resumption of International Simple Glass alteration. Npj Materials Degradation, 2018, 2, .	5.8	13
128	Monte Carlo simulation of the corrosion of irradiated simplified nuclear waste glasses. Journal of Non-Crystalline Solids, 2019, 519, 119449.	3.1	13
129	Effect of decades of corrosion on the microstructure of altered glasses and their radiation stability. Npj Materials Degradation, 2020, 4, .	5.8	13
130	Apparent Solubility Limit of Nuclear Glass. Materials Research Society Symposia Proceedings, 2000, 663, 1.	0.1	12
131	Network structure in alteration layer of boroaluminosilicate glass formed by aqueous corrosion. Journal of Non-Crystalline Solids, 2021, 553, 120494.	3.1	12
132	Development of an Experimental Design to Investigate the Effects of R7T7 Glass Composition on the Residual Rate of Alteration. , 2014, 7, 193-201.		11
133	Investigation of local environment around rare earths (La and Eu) by fluorescence line narrowing during borosilicate glass alteration. Journal of Luminescence, 2014, 145, 213-218.	3.1	11
134	Zirconium local environment in simplified nuclear glasses altered in basic, neutral or acidic conditions: Evidence of a double-layered gel. Journal of Non-Crystalline Solids, 2019, 503-504, 268-278.	3.1	11
135	Effect of leaching-driven flow on the alteration kinetics of an ideal crack in SON68 glass. Journal of Nuclear Materials, 2012, 426, 160-172.	2.7	10
136	Modeling Resumption of Glass Alteration Due to Zeolites Precipitation. Procedia Earth and Planetary Science, 2017, 17, 340-343.	0.6	10
137	Effects of Al:Si and (Al+Na):Si ratios on the static corrosion of sodiumâ€boroaluminosilicate glasses. International Journal of Applied Glass Science, 2022, 13, 94-111.	2.0	10
138	SON68 Glass Dissolution Kinetics at High Reaction Progress: Experimental Evidence of the Residual Rate. Materials Research Society Symposia Proceedings, 2002, 757, II5.9.1.	0.1	9
139	Influence of Magnesium on the Structure of Complex Multicomponent Silicates: Insights from Molecular Simulations and Neutron Scattering Experiments. Journal of Physical Chemistry B, 2021, 125, 11761-11776.	2.6	9
140	Chemical durability of high-level waste glass in repository environment: main conclusions and remaining uncertainties from the GLASTAB and GLAMOR projects. Materials Research Society Symposia Proceedings, 2006, 932, 1.	0.1	8
141	Semi-stochastic generator (FraGMA) of 2D fractured media by mechanistic analogy â€“ Application to reactive transport in a fractured package of vitrified nuclear waste. Computational Materials Science, 2011, 50, 1387-1398.	3.0	8
142	Material degradation foreseen in the very long term: the case of glasses and ferrous metals. Npj Materials Degradation, 2017, 1, .	5.8	8
143	Glass-Iron-Clay interactions in a radioactive waste geological disposal: a multiscale approach. Materials Research Society Symposia Proceedings, 2013, 1518, 185-190.	0.1	7
144	Glass Corrosion in the Presence of Iron-Bearing Materials and Potential Corrosion Suppressors. Materials Research Society Symposia Proceedings, 2015, 1744, 139-144.	0.1	7

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145	Influence of iron on the alteration of the SON68 nuclear glass in the Callovo-Oxfordian groundwater. Applied Geochemistry, 2019, 100, 268-278.	3.0	7
146	Reply to: How much does corrosion of nuclear waste matrices matter. Nature Materials, 2020, 19, 962-963.	27.5	7
147	Investigation on boron and iodine behavior during nuclear glass vapor hydration. Npj Materials Degradation, 2021, 5, .	5.8	7
148	A comparative study of the dissolution mechanisms of amorphous and crystalline feldspars at acidic pH conditions. Npj Materials Degradation, 2022, 6, .	5.8	7
149	Simplifying a solution to a complex puzzle. Npj Materials Degradation, 2018, 2, .	5.8	6
150	Nuclear Glass Alteration in Clay: Assessment of the Effect of Direct Contact between the Materials through Experimental and Modeling Approach. Materials Research Society Symposia Proceedings, 2003, 807, 636.	0.1	5
151	Topography of borosilicate glass reacting interface under aqueous corrosion. Chemical Physics Letters, 2013, 588, 180-183.	2.6	5
152	Dynamics of Water Confined in Gel Formed During Glass Alteration at a Picosecond Scale. Procedia Earth and Planetary Science, 2013, 7, 733-737.	0.6	5
153	Mechanisms involved in the increase of borosilicate glass alteration by interaction with the Callovian-Oxfordian clayey fraction. Applied Geochemistry, 2018, 98, 206-220.	3.0	5
154	The fate of Si and Fe while nuclear glass alters with steel and clay. Npj Materials Degradation, 2021, 5, .	5.8	5
155	Mass Transfer Phenomena in Nuclear Waste Packages. Advances in Transport Phenomena, 2009, , 31-133.	0.5	4
156	Development of potentials for molecular dynamics simulations of dry and hydrated calcium aluminosilicate glasses by force matching and refinement. Journal of Non-Crystalline Solids, 2022, 592, 121746.	3.1	4
157	Effects of irradiation on the mechanisms controlling the residual rate of an alumino-borosilicate glass. Npj Materials Degradation, 2022, 6, .	5.8	4
158	Modelling The Alteration of Son-68 Glass with Nearfield Materials. Materials Research Society Symposia Proceedings, 2006, 932, 1.	0.1	3
159	Long-Term Behavior of Embiez Archaeological Glass: Results after 1800 Years of Alteration in a Marine Environment. Materials Research Society Symposia Proceedings, 2006, 932, 1.	0.1	3
160	Use of Archaeological Glass to Predict the Long-Term Behavior of HLW. Materials Research Society Symposia Proceedings, 2009, 1193, 417.	0.1	3
161	Reactive Surface of Glass Particles Under Aqueous Corrosion. Procedia Earth and Planetary Science, 2017, 17, 257-260.	0.6	3
162	Nanoscale imaging of hydrogen and sodium in alteration layers of corroded glass using ToFâ€SIMS: Is an auxiliary sputtering ion beam necessary?. Surface and Interface Analysis, 2019, 51, 219-225.	1.8	3

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163	Incipient formation of zircon and hafnon during glass alteration at 90Â°C. Journal of the American Ceramic Society, 2019, 102, 3123-3128.	3.8	3
164	A classical molecular dynamics simulation method for the formation of â€œdryâ€• gels from boro-aluminosilicate glass structures. Journal of Non-Crystalline Solids, 2021, 553, 120513.	3.1	3
165	AVM nuclear glass/steel/claystone system altered by Callovoâ€"Oxfordian poral water with and without cementâ€"bentonite grout at 70Â°C. Materials and Corrosion - Werkstoffe Und Korrosion, 2021, 72, 474-482.	1.5	3
166	Structure--property relationship and chemical durability of magnesium-containing borosilicate glasses with insight from topological constraints. Npj Materials Degradation, 2022, 6, .	5.8	3
167	Estimating Internal Stress of an Alteration Layer Formed on Corroded Boroaluminosilicate Glass through Spectroscopic Ellipsometry Analysis. ACS Applied Materials & Interfaces, 2021, 13, 50470-50480.	8.0	2
168	Impact of initial states on the vapor hydration of iodine-bearing borosilicate glass. Journal of Non-Crystalline Solids, 2022, 587, 121584.	3.1	2
169	Impact of aqueous solution pH on network structure of corrosionâ€induced surface layers of boroaluminosilicate glass. Journal of the American Ceramic Society, 2022, 105, 6581-6592.	3.8	2
170	Experimental alteration of R7T7 glass in salt brines at 90Â°C and 150Â°C. Applied Clay Science, 1992, 7, 87-96.	5.2	1
171	Affinity Rate Law Failure to Describe Sodium Borosilicate Glass Alteration Kinetics. Materials Research Society Symposia Proceedings, 2003, 807, 19.	0.1	1
172	Single Idealized Cracks: A Tool for Understanding Fractured Glass Block Leaching. Materials Research Society Symposia Proceedings, 2008, 1107, 1.	0.1	1
173	Waste Glasses. , 2016, , 414-444.		1
174	Deciphering the Non-Linear Impact of Al on Chemical Durability of Silicate Glass. SSRN Electronic Journal, 0, , .	0.4	1
175	HLW Conditioning and Long-Term Performance. , 2021, , 564-576.		1
176	Leaching of Nuclear Waste Glass in Cement Pore Water: Effect of Calcium in Solution. , 2013, , 161-168.		1
177	Ubiquitous presence of laminae in altered layers of glass artefacts. , 2012, , .		0
178	Use of natural and archaeological analogs to validate long-term behaviour of HLW glass in geological disposal conditions. , 2007, , .		0
179	Long-term interactive corrosion between International Simple Glass and stainless steel. Npj Materials Degradation, 2022, 6, .	5.8	0