FrÃ©dÃ©ric Angeli

List of Publications by Year
in descending order

46 papers	2,716 citations	159525 30 h-index	223716 46 g-index
46 all docs	46 docs citations	46 times ranked	1657 citing authors

#	Article	IF	Citations
1	Insight into silicate-glass corrosion mechanisms. Nature Materials, 2008, 7, 978-983.	13.3	402
2	Origin and consequences of silicate glass passivation by surface layers. Nature Communications, 2015, 6, 6360.	5.8	219
3	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.	1.5	174
4	Insight into sodium silicate glass structural organization by multinuclear NMR combined with first-principles calculations. Geochimica Et Cosmochimica Acta, 2011, 75, 2453-2469.	1.6	120
5	Effect of temperature and thermal history on borosilicate glass structure. Physical Review B, 2012, 85, .	1.1	117
6	Boron Speciation in Sodaâ€Lime Borosilicate Glasses Containing Zirconium. Journal of the American Ceramic Society, 2010, 93, 2693-2704.	1.9	111
7	Influence of glass chemical composition on the Naâ€“O bond distance: a 23Na 3Q-MAS NMR and molecular dynamics study. Journal of Non-Crystalline Solids, 2000, 276, 132-144.	1.5	91
8	Contribution of 43Ca MAS NMR for probing the structural configuration of calcium in glass. Chemical Physics Letters, 2007, 440, 324-328.	1.2	86
9	Influence of glass composition and alteration solution on leached silicate glass structure: A solid-state NMR investigation. Geochimica Et Cosmochimica Acta, 2006, 70, 2577-2590.	1.6	85
10	Why Do Certain Glasses with a High Dissolution Rate Undergo a Low Degree of Corrosion?. Journal of Physical Chemistry C, 2011, 115, 5846-5855.	1.5	79
11	Investigation of gel porosity clogging during glass leaching. Journal of Non-Crystalline Solids, 2008, 354, 4952-4958.	1.5	75
12	Probing silicon and aluminium chemical environments in silicate and aluminosilicate glasses by solid state NMR spectroscopy and accurate first-principles calculations. Geochimica Et Cosmochimica Acta, 2014, 125, 170-185.	1.6	72
13	Antagonist effects of calcium on borosilicate glass alteration. Journal of Nuclear Materials, 2013, 441, 402-410.	1.3	67
14	Influence of zirconium on the structure of pristine and leached soda-lime borosilicate glasses: Towards a quantitative approach by 17O MQMAS NMR. Journal of Non-Crystalline Solids, 2008, 354, 3713-3722.	1.5	66
15	Influence of lanthanum on borosilicate glass structure: A multinuclear MAS and MQMAS NMR investigation. Journal of Non-Crystalline Solids, 2013, 376, 189-198.	1.5	57
16	Aqueous alteration of silicate glass: state of knowledge and perspectives. Npj Materials Degradation, 2021, 5, .	2.6	56
17	17O 3Q-MAS NMR characterization of a sodium aluminoborosilicate glass and its alteration gel. Chemical Physics Letters, 2001, 341, 23-28.	1.2	52
18	Structural Characterization of Glass from the Inversion of 23Na and 27Al 3Q-MAS NMR Spectra. Journal of Physical Chemistry B, 1999, 103, 10356-10364.	1.2	51

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19	Contribution of first-principles calculations to multinuclear NMR analysis of borosilicate glasses. Magnetic Resonance in Chemistry, 2010, 48, S159-S170.	1.1	49
20	Investigation of Alâ€“Oâ€“Si bond angle in glass by 3Q-MAS NMR and molecular dynamics. Chemical Physics Letters, 2000, 320, 681-687.	1.2	48
21	Aqueous alteration of five-oxide silicate glasses: Experimental approach and Monte Carlo modeling. Journal of Non-Crystalline Solids, 2008, 354, 155-161.	1.5	48
22	Phase separation and crystallization effects on the structure and durability of molybdenum borosilicate glass. Journal of Non-Crystalline Solids, 2015, 427, 120-133.	1.5	47
23	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.	1.5	46
24	Modification of Molybdenum Structural Environment in Borosilicate Glasses with Increasing Content of Boron and Calcium Oxide by <scp><scp>⁹⁵Mo</scp> MAS NMR</scp>. Journal of the American Ceramic Society, 2011, 94, 4274-4282.	1.9	45
25	Chemical durability of hollandite ceramic for conditioning cesium. Journal of Nuclear Materials, 2008, 380, 59-69.	1.3	37
26	Calcium environment in silicate and aluminosilicate glasses probed by 43Ca MQMAS NMR experiments and MD-GIPAW calculations. Solid State Nuclear Magnetic Resonance, 2015, 68-69, 31-36.	1.5	37
27	Effect of thermally induced structural disorder on the chemical durability of International Simple Glass. Npj Materials Degradation, 2018, 2, .	2.6	37
28	Glassâ€“water interaction: Effect of high-valence cations on glass structure and chemical durability. Geochimica Et Cosmochimica Acta, 2016, 181, 54-71.	1.6	36
29	Rare-earth silicate crystallization in borosilicate glasses: Effect on structural and chemical durability properties. Journal of Non-Crystalline Solids, 2016, 438, 37-48.	1.5	32
30	An enhanced resolution of the structural environment of zirconium in borosilicate glasses. Journal of Non-Crystalline Solids, 2013, 381, 40-47.	1.5	31
31	Structural identification of a trioctahedral smectite formed by the aqueous alteration of a nuclear glass. Applied Clay Science, 2010, 49, 135-141.	2.6	29
32	Insights into the mechanisms controlling the residual corrosion rate of borosilicate glasses. Npj Materials Degradation, 2020, 4, .	2.6	26
33	Can a simple topological-constraints-based model predict the initial dissolution rate of borosilicate and aluminosilicate glasses?. Npj Materials Degradation, 2020, 4, .	2.6	26
34	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.	1.9	26
35	Structure and Chemical Durability of Lead Crystal Glass. Environmental Science & Technology, 2016, 50, 11549-11558.	4.6	24
36	Chemical Durability of Lanthanumâ€Enriched Borosilicate Glass. International Journal of Applied Glass Science, 2013, 4, 383-394.	1.0	23

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37	Influence of zeolite precipitation on borosilicate glass alteration under hyperalkaline conditions. Journal of Nuclear Materials, 2017, 491, 67-82.	1.3	20
38	Influence of composition of nuclear waste glasses on vapor phase hydration. Journal of Nuclear Materials, 2019, 525, 53-71.	1.3	20
39	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.	1.5	11
40	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.	1.5	11
41	Chemical and mineralogical modifications of simplified radioactive waste calcine during heat treatment. Journal of Nuclear Materials, 2014, 448, 8-19.	1.3	8
42	Influence of temperature and relative humidity on vapor hydration of an AVM nuclear waste glass. Journal of Nuclear Materials, 2021, 543, 152571.	1.3	8
43	Short communication on the Influence of the temperature between 30 and 70Â°C on the hydration of SON68 nuclear waste glass in a vapour phase. Journal of Nuclear Materials, 2021, 545, 152738.	1.3	6
44	Comparative Structural Study and Dissolution of Simplified Glasses: A Radioactive Waste Glass (R7T7) and a Basaltic Glass. Materials Research Society Symposia Proceedings, 1997, 506, 71.	0.1	2
45	Experimental Study and Monte Carlo Modeling of Calcium Borosilicate Glasses Leaching. Materials Research Society Symposia Proceedings, 2006, 985, 1.	0.1	2
46	Key Phenomena Governing HLW Glass Behavior in the French Deep Geological Disposal. Materials Research Society Symposia Proceedings, 2015, 1744, 127-138.	0.1	1