

Frédéric Angeli

List of Publications by Year in descending order

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46
papers

2,716
citations

159585

30
h-index

223800

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. <i>Nature Materials</i> , 2008, 7, 978-983.	27.5	402
2	Origin and consequences of silicate glass passivation by surface layers. <i>Nature Communications</i> , 2015, 6, 6360.	12.8	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. <i>Journal of Non-Crystalline Solids</i> , 2012, 358, 2559-2570.	3.1	174
4	Insight into sodium silicate glass structural organization by multinuclear NMR combined with first-principles calculations. <i>Geochimica Et Cosmochimica Acta</i> , 2011, 75, 2453-2469.	3.9	120
5	Effect of temperature and thermal history on borosilicate glass structure. <i>Physical Review B</i> , 2012, 85, .	3.2	117
6	Boron Speciation in Soda-Lime Borosilicate Glasses Containing Zirconium. <i>Journal of the American Ceramic Society</i> , 2010, 93, 2693-2704.	3.8	111
7	Influence of glass chemical composition on the Na-O bond distance: a ^{23}Na 3Q-MAS NMR and molecular dynamics study. <i>Journal of Non-Crystalline Solids</i> , 2000, 276, 132-144.	3.1	91
8	Contribution of ^{43}Ca MAS NMR for probing the structural configuration of calcium in glass. <i>Chemical Physics Letters</i> , 2007, 440, 324-328.	2.6	86
9	Influence of glass composition and alteration solution on leached silicate glass structure: A solid-state NMR investigation. <i>Geochimica Et Cosmochimica Acta</i> , 2006, 70, 2577-2590.	3.9	85
10	Why Do Certain Glasses with a High Dissolution Rate Undergo a Low Degree of Corrosion?. <i>Journal of Physical Chemistry C</i> , 2011, 115, 5846-5855.	3.1	79
11	Investigation of gel porosity clogging during glass leaching. <i>Journal of Non-Crystalline Solids</i> , 2008, 354, 4952-4958.	3.1	75
12	Probing silicon and aluminium chemical environments in silicate and aluminosilicate glasses by solid state NMR spectroscopy and accurate first-principles calculations. <i>Geochimica Et Cosmochimica Acta</i> , 2014, 125, 170-185.	3.9	72
13	Antagonist effects of calcium on borosilicate glass alteration. <i>Journal of Nuclear Materials</i> , 2013, 441, 402-410.	2.7	67
14	Influence of zirconium on the structure of pristine and leached soda-lime borosilicate glasses: Towards a quantitative approach by ^{17}O MQMAS NMR. <i>Journal of Non-Crystalline Solids</i> , 2008, 354, 3713-3722.	3.1	66
15	Influence of lanthanum on borosilicate glass structure: A multinuclear MAS and MQMAS NMR investigation. <i>Journal of Non-Crystalline Solids</i> , 2013, 376, 189-198.	3.1	57
16	Aqueous alteration of silicate glass: state of knowledge and perspectives. <i>Npj Materials Degradation</i> , 2021, 5, .	5.8	56
17	^{17}O 3Q-MAS NMR characterization of a sodium aluminoborosilicate glass and its alteration gel. <i>Chemical Physics Letters</i> , 2001, 341, 23-28.	2.6	52
18	Structural Characterization of Glass from the Inversion of ^{23}Na and ^{27}Al 3Q-MAS NMR Spectra. <i>Journal of Physical Chemistry B</i> , 1999, 103, 10356-10364.	2.6	51

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19	Contribution of first-principles calculations to multinuclear NMR analysis of borosilicate glasses. <i>Magnetic Resonance in Chemistry</i> , 2010, 48, S159-S170.	1.9	49
20	Investigation of Al-O-Si bond angle in glass by 3Q-MAS NMR and molecular dynamics. <i>Chemical Physics Letters</i> , 2000, 320, 681-687.	2.6	48
21	Aqueous alteration of five-oxide silicate glasses: Experimental approach and Monte Carlo modeling. <i>Journal of Non-Crystalline Solids</i> , 2008, 354, 155-161.	3.1	48
22	Phase separation and crystallization effects on the structure and durability of molybdenum borosilicate glass. <i>Journal of Non-Crystalline Solids</i> , 2015, 427, 120-133.	3.1	47
23	First investigations of the influence of IVB elements (Ti, Zr, and Hf) on the chemical durability of soda-lime borosilicate glasses. <i>Journal of Non-Crystalline Solids</i> , 2010, 356, 2315-2322.	3.1	46
24	Modification of Molybdenum Structural Environment in Borosilicate Glasses with Increasing Content of Boron and Calcium Oxide by ^{95}Mo MAS NMR. <i>Journal of the American Ceramic Society</i> , 2011, 94, 4274-4282.	3.8	45
25	Chemical durability of hollandite ceramic for conditioning cesium. <i>Journal of Nuclear Materials</i> , 2008, 380, 59-69.	2.7	37
26	Calcium environment in silicate and aluminosilicate glasses probed by ^{43}Ca MQMAS NMR experiments and MD-GIPAW calculations. <i>Solid State Nuclear Magnetic Resonance</i> , 2015, 68-69, 31-36.	2.3	37
27	Effect of thermally induced structural disorder on the chemical durability of International Simple Glass. <i>Npj Materials Degradation</i> , 2018, 2, .	5.8	37
28	Glass-water interaction: Effect of high-valence cations on glass structure and chemical durability. <i>Geochimica Et Cosmochimica Acta</i> , 2016, 181, 54-71.	3.9	36
29	Rare-earth silicate crystallization in borosilicate glasses: Effect on structural and chemical durability properties. <i>Journal of Non-Crystalline Solids</i> , 2016, 438, 37-48.	3.1	32
30	An enhanced resolution of the structural environment of zirconium in borosilicate glasses. <i>Journal of Non-Crystalline Solids</i> , 2013, 381, 40-47.	3.1	31
31	Structural identification of a trioctahedral smectite formed by the aqueous alteration of a nuclear glass. <i>Applied Clay Science</i> , 2010, 49, 135-141.	5.2	29
32	Insights into the mechanisms controlling the residual corrosion rate of borosilicate glasses. <i>Npj Materials Degradation</i> , 2020, 4, .	5.8	26
33	Can a simple topological-constraints-based model predict the initial dissolution rate of borosilicate and aluminosilicate glasses?. <i>Npj Materials Degradation</i> , 2020, 4, .	5.8	26
34	Impact of magnesium on the structure of aluminoborosilicate glasses: A solid-state NMR and Raman spectroscopy study. <i>Journal of the American Ceramic Society</i> , 2021, 104, 4518-4536.	3.8	26
35	Structure and Chemical Durability of Lead Crystal Glass. <i>Environmental Science & Technology</i> , 2016, 50, 11549-11558.	10.0	24
36	Chemical Durability of Lanthanum-Enriched Borosilicate Glass. <i>International Journal of Applied Glass Science</i> , 2013, 4, 383-394.	2.0	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.	2.7	20
38	Influence of composition of nuclear waste glasses on vapor phase hydration. Journal of Nuclear Materials, 2019, 525, 53-71.	2.7	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.	3.1	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.	3.1	11
41	Chemical and mineralogical modifications of simplified radioactive waste calcine during heat treatment. Journal of Nuclear Materials, 2014, 448, 8-19.	2.7	8
42	Influence of temperature and relative humidity on vapor hydration of an AVM nuclear waste glass. Journal of Nuclear Materials, 2021, 543, 152571.	2.7	8
43	Short communication on the Influence of the temperature between 30 and 70°C on the hydration of SON68 nuclear waste glass in a vapour phase. Journal of Nuclear Materials, 2021, 545, 152738.	2.7	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