Charles Le Losq

List of Publications by Year
in descending order

45 papers	1,180 citations	361413 20 h-index	395702 33 g-index
49 all docs	49 docs citations	49 times ranked	1162 citing authors

#	Article	IF	Citations
1	The role of Al3+ on rheology and structural changes in sodium silicate and aluminosilicate glasses and melts. Geochimica Et Cosmochimica Acta, 2014, 126, 495-517.	3.9	205
2	Effect of the Na/K mixing on the structure and the rheology of tectosilicate silica-rich melts. Chemical Geology, 2013, 346, 57-71.	3.3	105
3	Determination of water content in silicate glasses using Raman spectrometry: Implications for the study of explosive volcanism. American Mineralogist, 2012, 97, 779-790.	1.9	94
4	Percolation channels: a universal idea to describe the atomic structure and dynamics of glasses and melts. Scientific Reports, 2017, 7, 16490.	3.3	76
5	Molecular structure, configurational entropy and viscosity of silicate melts: Link through the Adam and Gibbs theory of viscous flow. Journal of Non-Crystalline Solids, 2017, 463, 175-188.	3.1	54
6	Solubility and solution mechanisms of chlorine and fluorine in aluminosilicate melts at high pressure and high temperature. American Mineralogist, 2015, 100, 2272-2283.	1.9	40
7	Elastic moduli of XAlSiO4 aluminosilicate glasses: effects of charge-balancing cations. Journal of Non-Crystalline Solids, 2016, 447, 267-272.	3.1	40
8	Experimentally determined sulfur isotope fractionation between metal and silicate and implications for planetary differentiation. Geochimica Et Cosmochimica Acta, 2016, 175, 181-194.	3.9	39
9	Water and magmas: insights about the water solution mechanisms in alkali silicate melts from infrared, Raman, and 29Si solid-state NMR spectroscopies. Progress in Earth and Planetary Science, 2015, 2, .	3.0	35
10	Rheology of phonolitic magmas â€“ the case of the Erebus lava lake. Earth and Planetary Science Letters, 2015, 411, 53-61.	4.4	35
11	Determination of the oxidation state of iron in Mid-Ocean Ridge basalt glasses by Raman spectroscopy. American Mineralogist, 2019, 104, 1032-1042.	1.9	35
12	Raman spectroscopy study of C-O-H-N speciation in reduced basaltic glasses: Implications for reduced planetary mantles. Geochimica Et Cosmochimica Acta, 2019, 265, 32-47.	3.9	33
13	Speciation and amphoteric behaviour of water in aluminosilicate melts and glasses: high-temperature Raman spectroscopy and reaction equilibria. European Journal of Mineralogy, 2014, 25, 777-790.	1.3	24
14	Alkali influence on the water speciation and the environment of protons in silicate glasses revealed by 1H MAS NMR spectroscopy. American Mineralogist, 2015, 100, 466-473.	1.9	24
15	The dependence of Raman defect bands in silica glasses on densification revisited. Journal of Materials Science, 2016, 51, 1659-1666.	3.7	24
16	Silicate Glasses. Springer Handbooks, 2019, , 441-503.	0.6	24
17	Complex IR spectra of OH- groups in silicate glasses: Implications for the use of the 4500 cm-1 IR peak as a marker of OH- groups concentration. American Mineralogist, 2015, 100, 945-950.	1.9	23
18	In situ study of the fractionation of hydrogen isotopes between aluminosilicate melts and coexisting aqueous fluids at high pressure and high temperature â€“ Implications for the ÎD in magmatic processes. Earth and Planetary Science Letters, 2015, 426, 158-166.	4.4	23

#	Article	IF	Citations
19	Structure and properties of alkali aluminosilicate glasses and melts: Insights from deep learning. Geochimica Et Cosmochimica Acta, 2021, 314, 27-54.	3.9	23
20	Primordial and recycled helium isotope signatures in the mantle transition zone. Science, 2019, 365, 692-694.	12.6	21
21	Magmas are the Largest Repositories and Carriers of Earthâ€™s Redox Processes. Elements, 2020, 16, 173-178.	0.5	18
22	The amphoteric behavior of water in silicate melts from the point of view of their ionic-polymeric constitution. Chemical Geology, 2014, 367, 23-33.	3.3	17
23	Revisiting water speciation in hydrous alumino-silicate glasses: A discrepancy between solid-state 1H NMR and NIR spectroscopy in the determination of X-OH and H2O. Geochimica Et Cosmochimica Acta, 2020, 285, 150-174.	3.9	16
24	Link between Medium and Long-range Order and Macroscopic Properties of Silicate Glasses and Melts. Reviews in Mineralogy and Geochemistry, 2022, 87, 105-162.	4.8	15
25	In situ study at high pressure and temperature of the environment of water in hydrous Na and Ca aluminosilicate melts and coexisting aqueous fluids. Journal of Geophysical Research: Solid Earth, 2017, 122, 4888-4899.	3.4	12
26	Intramolecular fractionation of hydrogen isotopes in silicate quenched melts. Geochemical Perspectives Letters, 2016, , 87-94.	5.0	12
27	Point defect populations of forsterite revealed by two-stage metastable hydroxylation experiments. Contributions To Mineralogy and Petrology, 2019, 174, 1.	3.1	11
28	Effect of Ti4+ on the structure of nepheline (NaAlSiO4) glass. Geochimica Et Cosmochimica Acta, 2020, 290, 333-351.	3.9	10
29	In situ XANES study of the influence of varying temperature and oxygen fugacity on iron oxidation state and coordination in a phonolitic melt. Contributions To Mineralogy and Petrology, 2020, 175, 1.	3.1	9
30	Low-Ca boninite formation by second-stage melting of spinel harzburgite residues at mature subduction zones: new evidence from veined mantle xenoliths from the West Bismarck Arc. Contributions To Mineralogy and Petrology, 2018, 173, 1.	3.1	8
31	Synthesis and characterization of polycrystalline KAlSi3O8 hollandite [liebermannite]: Sound velocities vs. pressure to 13â€...GPa at room temperature. Comptes Rendus - Geoscience, 2019, 351, 113-120.	1.2	8
32	A combined Fourier transform infrared and Cr K-edge X-ray absorption near-edge structure spectroscopy study of the substitution and diffusion of H in Cr-doped forsterite. European Journal of Mineralogy, 2021, 33, 113-138.	1.3	8
33	Rheological Controls on Asperity Weakening During Earthquake Slip. Journal of Geophysical Research: Solid Earth, 2019, 124, 12736-12762.	3.4	6
34	Compositions and Classification of Fractionated Boninite Series Melts from the Izuâ€“Boninâ€“Mariana Arc: A Machine Learning Approach. Journal of Petrology, 2021, 62, .	2.8	6
35	Perrhenate sodalite growth from alkali silicate melts by noble metal catalysis. SN Applied Sciences, 2019, 1, 1.	2.9	4
36	Raman spectroscopy to determine CO2 solubility in mafic silicate melts at high pressure: Haplobasaltic, haploandesitic and approach of basaltic compositions. Chemical Geology, 2021, 582, 120413.	3.3	4

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37	Structure et propriÃ©tÃ© des verres et des liquides : le rÃ1e de lâ€™aluminium. Materiaux Et Techniques, 2010, 98, 395-402.	0.9	4
38	Water solution mechanism in calcium aluminosilicate glasses and melts: insights from in and ex situ Raman and <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:msup><mml:mrow /><mml:mn>29</mml:mn> </mml:msup><mml:mtext>Si</mml:mtext></mml:mrow></mml:math> NMR spectroscopy. Comptes Rendus - Geoscience, 2022, 354, 199-225.	1.2	4
39	Fractional crystallisation of eclogite during the birth of a Hawaiian Volcano. Nature Communications, 2022, 13, .	12.8	4
40	Observation of the Chemical Structure of Water up to the Critical Point by Raman Spectroscopic Analysis of Fluid Inclusions. Journal of Physical Chemistry B, 2019, 123, 5841-5847.	2.6	3
41	Iron cation vacancies in Pt(iv)-doped hematite. Materials Advances, 2021, 2, 5195-5202.	5.4	3
42	Spinel Harzburgite-Derived Silicate Melts Forming Sulfide-Bearing Orthopyroxenite in the Lithosphere. Part 1: Partition Coefficients and Volatile Evolution Accompanying Fluid- and Redox-Induced Sulfide Formation. Frontiers in Earth Science, 0, 10, .	1.8	3
43	Redox-induced crystallisation in Ti-bearing glass-forming melts: A Ti K-edge XANES study. Materials Letters, 2022, 319, 132296.	2.6	2
44	Quantifying dynamic pressure and temperature conditions on fault asperities during earthquake slip. Earth and Planetary Science Letters, 2021, 555, 116701.	4.4	1
45	La spectromÃ©trie Raman, un outil de choix pour Ã©tudier les volatils dissous dans un verre ou un silicate fondu : le cas de lâ€™eau. Materiaux Et Techniques, 2010, 98, 443-452.	0.9	1