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	Redox-induced crystallisation in Ti-bearing glass-forming melts: A Ti K-edge XANES study. Materials Letters, 2022, 319, 132296.	2.6	2
2	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
3	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
4	Fractional crystallisation of eclogite during the birth of a Hawaiian Volcano. Nature Communications, 2022, 13, .	12.8	4
5	Quantifying dynamic pressure and temperature conditions on fault asperities during earthquake slip. Earth and Planetary Science Letters, 2021, 555, 116701.	4.4	1
6	Iron cation vacancies in Pt(iv)-doped hematite. Materials Advances, 2021, 2, 5195-5202.	5.4	3
7	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
8	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
9	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
10	Structure and properties of alkali aluminosilicate glasses and melts: Insights from deep learning. Geochimica Et Cosmochimica Acta, 2021, 314, 27-54.	3.9	23
11	Effect of Ti4+ on the structure of nepheline (NaAlSiO4) glass. Geochimica Et Cosmochimica Acta, 2020, 290, 333-351.	3.9	10
12	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
13	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
14	Magmas are the Largest Repositories and Carriers of Earthâ€™s Redox Processes. Elements, 2020, 16, 173-178.	0.5	18
15	Primordial and recycled helium isotope signatures in the mantle transition zone. Science, 2019, 365, 692-694.	12.6	21
16	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
17	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
18	Point defect populations of forsterite revealed by two-stage metastable hydroxylation experiments. Contributions To Mineralogy and Petrology, 2019, 174, 1.	3.1	11

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19	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
20	Perrhenate sodalite growth from alkali silicate melts by noble metal catalysis. SN Applied Sciences, 2019, 1, 1.	2.9	4
21	Rheological Controls on Asperity Weakening During Earthquake Slip. Journal of Geophysical Research: Solid Earth, 2019, 124, 12736-12762.	3.4	6
22	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
23	Silicate Glasses. Springer Handbooks, 2019, , 441-503.	0.6	24
24	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
25	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
26	Percolation channels: a universal idea to describe the atomic structure and dynamics of glasses and melts. Scientific Reports, 2017, 7, 16490.	3.3	76
27	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
28	Elastic moduli of XAlSiO4 aluminosilicate glasses: effects of charge-balancing cations. Journal of Non-Crystalline Solids, 2016, 447, 267-272.	3.1	40
29	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
30	The dependence of Raman defect bands in silica glasses on densification revisited. Journal of Materials Science, 2016, 51, 1659-1666.	3.7	24
31	Intramolecular fractionation of hydrogen isotopes in silicate quenched melts. Geochemical Perspectives Letters, 2016, , 87-94.	5.0	12
32	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
33	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
34	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
35	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
36	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

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37	Rheology of phonolitic magmas â€“ the case of the Erebus lava lake. Earth and Planetary Science Letters, 2015, 411, 53-61.	4.4	35
38	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
39	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
40	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
41	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
42	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
43	Structure et propriÃ©tÃ© des verres et des liquides : le rÃ1e de lâ€™aluminium. Materiaux Et Techniques, 2010, 98, 395-402.	0.9	4
44	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
45	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