

Elizabeth Cottrell

List of Publications by Year in descending order

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Version: 2024-02-01

43
papers

3,144
citations

218677

26
h-index

233421

45
g-index

51
all docs

51
docs citations

51
times ranked

2504
citing authors

#	ARTICLE	IF	CITATIONS
1	Water and the Oxidation State of Subduction Zone Magmas. <i>Science</i> , 2009, 325, 605-607.	12.6	668
2	The oxidation state of Fe in MORB glasses and the oxygen fugacity of the upper mantle. <i>Earth and Planetary Science Letters</i> , 2011, 305, 270-282.	4.4	374
3	The influence of magmatic differentiation on the oxidation state of Fe in a basaltic arc magma. <i>Earth and Planetary Science Letters</i> , 2012, 329-330, 109-121.	4.4	216
4	High-precision determination of iron oxidation state in silicate glasses using XANES. <i>Chemical Geology</i> , 2009, 268, 167-179.	3.3	183
5	Petrologic and experimental evidence for the movement and heating of the pre-eruptive Minoan rhyodacite (Santorini, Greece). <i>Contributions To Mineralogy and Petrology</i> , 1999, 135, 315-331.	3.1	123
6	Temporal evolution of mantle wedge oxygen fugacity during subduction initiation. <i>Geology</i> , 2015, 43, 775-778.	4.4	106
7	Determination of Fe ³⁺ /ΣFe of XANES basaltic glass standards by Mössbauer spectroscopy and its application to the oxidation state of iron in MORB. <i>Chemical Geology</i> , 2018, 479, 166-175.	3.3	101
8	Electrical and thermal transport properties of iron and iron-silicon alloy at high pressure. <i>Geophysical Research Letters</i> , 2013, 40, 5377-5381.	4.0	89
9	Metal-silicate partitioning of tungsten at high pressure and temperature: Implications for equilibrium core formation in Earth. <i>Earth and Planetary Science Letters</i> , 2009, 281, 275-287.	4.4	84
10	Redox Heterogeneity in Mid-Ocean Ridge Basalts as a Function of Mantle Source. <i>Science</i> , 2013, 340, 1314-1317.	12.6	80
11	Carbon Fluxes and Primary Magma CO ₂ Contents Along the Global Mid-Ocean Ridge System. <i>Geochemistry, Geophysics, Geosystems</i> , 2019, 20, 1387-1424.	2.5	74
12	Density profile of pyrolite under the lower mantle conditions. <i>Geophysical Research Letters</i> , 2009, 36, .	4.0	70
13	The effect of primary versus secondary processes on the volatile content of MORB glasses: An example from the equatorial Mid-Atlantic Ridge (5°N-3°S). <i>Journal of Geophysical Research: Solid Earth</i> , 2015, 120, 125-144.	3.4	63
14	The carbon content of Earth and its core. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2020, 117, 8743-8749.	7.1	62
15	Forearc Peridotites from Tonga Record Heterogeneous Oxidation of the Mantle following Subduction Initiation. <i>Journal of Petrology</i> , 2017, 58, 1755-1780.	2.8	57
16	A Mössbauer-based XANES calibration for hydrous basalt glasses reveals radiation-induced oxidation of Fe. <i>American Mineralogist</i> , 2018, 103, 489-501.	1.9	57
17	The role of crustal and eruptive processes versus source variations in controlling the oxidation state of iron in Central Andean magmas. <i>Earth and Planetary Science Letters</i> , 2016, 440, 92-104.	4.4	52
18	Revisiting the electron microprobe method of spinel-olivine-orthopyroxene oxybarometry applied to spinel peridotites. <i>American Mineralogist</i> , 2017, 102, 421-435.	1.9	51

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19	Peridotites and basalts reveal broad congruence between two independent records of mantle fO ₂ despite local redox heterogeneity. <i>Earth and Planetary Science Letters</i> , 2018, 494, 172-189.	4.4	50
20	The Fe- ⁵⁷ Fe system at 5GPa and implications for Earth's core. <i>Geochimica Et Cosmochimica Acta</i> , 2008, 72, 4146-4158.	3.9	48
21	Petrogenesis of antecryst-bearing arc basalts from the Trans-Mexican Volcanic Belt: Insights into along-arc variations in magma-mush ponding depths, H ₂ O contents, and surface heat flux. <i>American Mineralogist</i> , 2016, 101, 2405-2422.	1.9	38
22	Early episodes of high-pressure core formation preserved in plume mantle. <i>Nature</i> , 2018, 553, 491-495.	27.8	38
23	Instability of a chemically dense layer heated from below and overlain by a deep less viscous fluid. <i>Journal of Fluid Mechanics</i> , 2007, 572, 433-469.	3.4	35
24	Crystal-rich lava dome extrusion during vesiculation: An experimental study. <i>Journal of Volcanology and Geothermal Research</i> , 2017, 347, 1-14.	2.1	34
25	Experimental investigation of basalt and peridotite oxybarometers: Implications for spinel thermodynamic models and Fe ³⁺ compatibility during generation of upper mantle melts. <i>American Mineralogist</i> , 2018, 103, 1056-1067.	1.9	30
26	Assessing uncertainty in geochemical models for core formation in Earth. <i>Earth and Planetary Science Letters</i> , 2013, 365, 165-176.	4.4	27
27	The F ₂ in a N ₂ volcanic complex: Unusual submarine arc volcanism in the rapidly deforming southern Mariana margin. <i>Geochemistry, Geophysics, Geosystems</i> , 2016, 17, 4078-4091.	2.5	27
28	Slab-derived devolatilization fluids oxidized by subducted metasedimentary rocks. <i>Nature Geoscience</i> , 2022, 15, 320-326.	12.9	25
29	Warm and oxidizing slabs limit ingassing efficiency of nitrogen to the mantle. <i>Earth and Planetary Science Letters</i> , 2021, 553, 116615.	4.4	24
30	Spherulite crystallization induces Fe-redox redistribution in silicic melt. <i>Chemical Geology</i> , 2009, 268, 272-280.	3.3	23
31	The redox budget of the Mariana subduction zone. <i>Earth and Planetary Science Letters</i> , 2019, 528, 115859.	4.4	23
32	Crystal structure and compressibility of lead dioxide up to 140 GPa. <i>American Mineralogist</i> , 2014, 99, 170-177.	1.9	16
33	Hydrothermal alteration of seafloor peridotites does not influence oxygen fugacity recorded by spinel oxybarometry. <i>Geology</i> , 2016, 44, 535-538.	4.4	15
34	Covariation of Slab Tracers, Volatiles, and Oxidation During Subduction Initiation. <i>Geochemistry, Geophysics, Geosystems</i> , 2021, 22, e2021GC009823.	2.5	15
35	Ten years of satellite observations reveal highly variable sulphur dioxide emissions at Anatahan Volcano, Mariana Islands. <i>Journal of Geophysical Research D: Atmospheres</i> , 2015, 120, 7258-7282.	3.3	14
36	Partitioning of V and 19 other trace elements between rutile and silicate melt as a function of oxygen fugacity and melt composition: Implications for subduction zones. <i>American Mineralogist</i> , 2020, 105, 244-254.	1.9	14

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37	Partitioning of Fe ₂ O ₃ in peridotite partial melting experiments over a range of oxygen fugacities elucidates ferric iron systematics in mid-ocean ridge basalts and ferric iron content of the upper mantle. Contributions To Mineralogy and Petrology, 2021, 176, 1.	3.1	14
38	Melt addition to mid-ocean ridge peridotites increases spinel Cr# with no significant effect on recorded oxygen fugacity. Earth and Planetary Science Letters, 2021, 566, 116951.	4.4	12
39	Catastrophic Caldera-Forming (CCF) Monotonous Silicic Magma Reservoirs: Constraints from Volatiles in Melt Inclusions from the 3.49 Ma Tara Supereruption, Guacha Il Caldera, SW Bolivia. Journal of Petrology, 2017, 58, 2115-2142.	2.8	7
40	Carbon in the Convecting Mantle. , 2019, , 237-275.		7
41	Experimental quantification of vanadium partitioning between eclogitic minerals (garnet,) Tj ETQq1 1 0.784314 rgBT /Overlock 10 Tf 50 Contributions To Mineralogy and Petrology, 2022, 177, 1.	3.1	7
42	Direct nanoscale observations of degassing-induced crystallisation in felsic magmas. Contributions To Mineralogy and Petrology, 2022, 177, 1.	3.1	7
43	Deep Earth carbon reactions through time and space. American Mineralogist, 2020, 105, 22-27.	1.9	5