

Elizabeth Cottrell

List of Publications by Citations

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

46
papers

2,283
citations

24
h-index

47
g-index

51
ext. papers

2,695
ext. citations

6.7
avg, IF

5.51
L-index

#	Paper	IF	Citations
46	Water and the oxidation state of subduction zone magmas. <i>Science</i> , 2009 , 325, 605-7	33.3	520
45	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	5.3	301
44	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	5.3	165
43	High-precision determination of iron oxidation state in silicate glasses using XANES. <i>Chemical Geology</i> , 2009 , 268, 167-179	4.2	151
42	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	3.5	99
41	Temporal evolution of mantle wedge oxygen fugacity during subduction initiation. <i>Geology</i> , 2015 , 43, 775-778	5	83
40	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	5.3	77
39	Electrical and thermal transport properties of iron and iron-silicon alloy at high pressure. <i>Geophysical Research Letters</i> , 2013 , 40, 5377-5381	4.9	74
38	Determination of Fe ³⁺ /Fe 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	4.2	67
37	Redox heterogeneity in mid-ocean ridge basalts as a function of mantle source. <i>Science</i> , 2013 , 340, 1314-1317	37.3	61
36	Density profile of pyrolite under the lower mantle conditions. <i>Geophysical Research Letters</i> , 2009 , 36,	4.9	61
35	The effect of primary versus secondary processes on the volatile content of MORB glasses: An example from the equatorial Mid-Atlantic Ridge (5°N-5°S). <i>Journal of Geophysical Research: Solid Earth</i> , 2015 , 120, 125-144	3.6	48
34	The FeO system at 5GPa and implications for Earth's core. <i>Geochimica Et Cosmochimica Acta</i> , 2008 , 72, 4146-4158	5.5	43
33	Forearc Peridotites from Tonga Record Heterogeneous Oxidation of the Mantle following Subduction Initiation. <i>Journal of Petrology</i> , 2017 , 58, 1755-1780	3.9	39
32	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	5.3	38
31	A Mössbauer-based XANES calibration for hydrous basalt glasses reveals radiation-induced oxidation of Fe. <i>American Mineralogist</i> , 2018 , 103, 489-501	2.9	37
30	Carbon Fluxes and Primary Magma CO ₂ Contents Along the Global Mid-Ocean Ridge System. <i>Geochemistry, Geophysics, Geosystems</i> , 2019 , 20, 1387-1424	3.6	36

29	Revisiting the electron microprobe method of spinel-olivine-orthopyroxene oxybarometry applied to spinel peridotites. <i>American Mineralogist</i> , 2017 , 102, 421-435	2.9	35
28	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	5.3	35
27	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	3.7	31
26	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	11.5	25
25	Early episodes of high-pressure core formation preserved in plume mantle. <i>Nature</i> , 2018 , 553, 491-495	50.4	25
24	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	2.9	25
23	Assessing uncertainty in geochemical models for core formation in Earth. <i>Earth and Planetary Science Letters</i> , 2013 , 365, 165-176	5.3	25
22	Spherulite crystallization induces Fe-redox redistribution in silicic melt. <i>Chemical Geology</i> , 2009 , 268, 272-280	4.2	23
21	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	2.9	21
20	The Fina Nagu volcanic complex: Unusual submarine arc volcanism in the rapidly deforming southern Mariana margin. <i>Geochemistry, Geophysics, Geosystems</i> , 2016 , 17, 4078-4091	3.6	14
19	The redox budget of the Mariana subduction zone. <i>Earth and Planetary Science Letters</i> , 2019 , 528, 115859.3	5.3	13
18	Crystal-rich lava dome extrusion during vesiculation: An experimental study. <i>Journal of Volcanology and Geothermal Research</i> , 2017 , 347, 1-14	2.8	12
17	Crystal structure and compressibility of lead dioxide up to 140 GPa. <i>American Mineralogist</i> , 2014 , 99, 170-177	2.9	12
16	Hydrothermal alteration of seafloor peridotites does not influence oxygen fugacity recorded by spinel oxybarometry. <i>Geology</i> , 2016 , 44, 535-538	5	9
15	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	4.4	8
14	Warm and oxidizing slabs limit ingassing efficiency of nitrogen to the mantle. <i>Earth and Planetary Science Letters</i> , 2021 , 553, 116615	5.3	8
13	Oxygen Fugacity Across Tectonic Settings. <i>Geophysical Monograph Series</i> , 2021 , 33-61	1.1	8
12	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	2.9	7

11	Covariation of Slab Tracers, Volatiles, and Oxidation During Subduction Initiation. <i>Geochemistry, Geophysics, Geosystems</i> , 2021 , 22, e2021GC009823	3.6	6
10	OXYGEN FUGACITY ACROSS TECTONIC SETTINGS		6
9	Melt addition to mid-ocean ridge peridotites increases spinel Cr# with no significant effect on recorded oxygen fugacity. <i>Earth and Planetary Science Letters</i> , 2021 , 566, 116951	5.3	5
8	Carbon in the Convecting Mantle 2019 , 237-275		4
7	Deep Earth carbon reactions through time and space. <i>American Mineralogist</i> , 2020 , 105, 22-27	2.9	3
6	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. <i>Contributions To Mineralogy and Petrology</i> , 2021 , 176, 1	3.5	3
5	OXYGEN FUGACITY ACROSS TECTONIC SETTINGS		2
4	Catastrophic Caldera-Forming (CCF) Monotonous Silicic Magma Reservoirs: Constraints from Volatiles in Melt Inclusions from the 349 Ma Tara Supereruption, Guacha II Caldera, SW Bolivia. <i>Journal of Petrology</i> , 2017 , 58, 2115-2142	3.9	1
3	Direct nanoscale observations of degassing-induced crystallisation in felsic magmas. <i>Contributions To Mineralogy and Petrology</i> , 2022 , 177, 1	3.5	1
2	Experimental quantification of vanadium partitioning between eclogitic minerals (garnet, clinopyroxene, rutile) and silicate melt as a function of temperature and oxygen fugacity. <i>Contributions To Mineralogy and Petrology</i> , 2022 , 177, 1	3.5	0
1	Experimental determination of ferric iron partitioning between pyroxene and melt at 100 kPa. <i>Chemical Geology</i> , 2021 , 584, 120532	4.2	0