John Maclennan

List of Publications by Year
in descending order

100 papers	5,270 citations	66234 42 h-index	95083 68 g-index
104 all docs	104 docs citations	104 times ranked	3615 citing authors

#	Article	IF	Citations
1	Explosive Activity on KÄ«lauea's Lower East Rift Zone Fueled by a Volatileâ€Rich, Dacitic Melt. Geochemistry, Geophysics, Geosystems, 2022, 23, .	1.0	10
2	The global melt inclusion C/Ba array: Mantle variability, melting process, or degassing?. Geochimica Et Cosmochimica Acta, 2021, 293, 525-543.	1.6	10
3	Reconstructing Magma Storage Depths for the 2018 KÄ±Ì„lauean Eruption From Melt Inclusion CO₂ Contents: The Importance of Vapor Bubbles. Geochemistry, Geophysics, Geosystems, 2021, 22, e2020GC009364.	1.0	31
4	Oceanic crustal flow in Iceland observed using seismic anisotropy. Nature Geoscience, 2021, 14, 168-173.	5.4	4
5	DFENS: Diffusion Chronometry Using Finite Elements and Nested Sampling. Geochemistry, Geophysics, Geosystems, 2021, 22, e2020GC009303.	1.0	8
6	Do Olivine Crystallization Temperatures Faithfully Record Mantle Temperature Variability?. Geochemistry, Geophysics, Geosystems, 2021, 22, e2020GC009157.	1.0	23
7	Global influence of mantle temperature and plate thickness on intraplate volcanism. Nature Communications, 2021, 12, 2045.	5.8	24
8	Microstructural constraints on magmatic mushes under KÄ«lauea Volcano, HawaiÊ»i. Nature Communications, 2020, 11, 14.	5.8	35
9	A multi-proxy investigation of mantle oxygen fugacity along the Reykjanes Ridge. Earth and Planetary Science Letters, 2020, 531, 115973.	1.8	13
10	A tale of two domes: Neogene to recent volcanism and dynamic uplift of northeast Brazil and southwest Africa. Earth and Planetary Science Letters, 2020, 547, 116464.	1.8	17
11	Cryptic evolved melts beneath monotonous basaltic shield volcanoes in the GalÃ¡pagos Archipelago. Nature Communications, 2020, 11, 3767.	5.8	20
12	Finding harzburgite in the mantle. A comment on Brown et al. (2020): â€œMarkov chain Monte Carlo inversion of mantle temperature and source composition, with application to Reykjanes Peninsula, Icelandâ€•[Earth Planet. Sci. Lett. 532 (2020) 116007]. Earth and Planetary Science Letters, 2020, 548, 116503.	1.8	5
13	Chalcophile elements track the fate of sulfur at KÄ«lauea Volcano, Hawaiâ€™i. Geochimica Et Cosmochimica Acta, 2020, 282, 245-275.	1.6	32
14	Clinopyroxene Dissolution Records Rapid Magma Ascent. Frontiers in Earth Science, 2020, 8, .	0.8	10
15	Millennial storage of near-Moho magma. Science, 2019, 365, 260-264.	6.0	39
16	Estimating the carbon content of the deep mantle with Icelandic melt inclusions. Earth and Planetary Science Letters, 2019, 523, 115699.	1.8	40
17	Compositional boundary layers trigger liquid unmixing in a basaltic crystal mush. Nature Communications, 2019, 10, 4821.	5.8	20
18	Hot primary melts and mantle source for the ParanÃ¡-Etendeka flood basalt province: New constraints from Al-in-olivine thermometry. Chemical Geology, 2019, 529, 119287.	1.4	32

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19	Quantifying Asthenospheric and Lithospheric Controls on Mafic Magmatism Across North Africa. Geochemistry, Geophysics, Geosystems, 2019, 20, 3520-3555.	1.0	26
20	Rapid transcrustal magma movement under Iceland. Nature Geoscience, 2019, 12, 569-574.	5.4	53
21	Carbon Dioxide in Geochemically Heterogeneous Melt Inclusions From Mount Etna, Italy. Geochemistry, Geophysics, Geosystems, 2019, 20, 3150-3169.	1.0	2
22	Rate of Melt Ascent Beneath Iceland From the Magmatic Response to Deglaciation. Geochemistry, Geophysics, Geosystems, 2019, 20, 2585-2605.	1.0	14
23	Melt movement through the Icelandic crust. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2019, 377, 20180010.	1.6	17
24	Mafic tiers and transient mushes: evidence from Iceland. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2019, 377, 20180021.	1.6	39
25	Crystal scavenging from mush piles recorded by melt inclusions. Nature Communications, 2019, 10, 5797.	5.8	32
26	Melt inclusion constraints on petrogenesis of the 2014â€"2015 Holuhraun eruption, Iceland. Contributions To Mineralogy and Petrology, 2018, 173, 10.	1.2	51
27	Role of basaltic magmatism within the ParnaÃba cratonic basin, NE Brazil. Geological Society Special Publication, 2018, 472, 309-319.	0.8	8
28	CO2 content beneath northern Iceland and the variability of mantle carbon. Geology, 2018, 46, 55-58.	2.0	46
29	Integrated Petrological and Geophysical Constraints on Magma System Architecture in the Western GalÃ¡pagos Archipelago: Insights From Wolf Volcano. Geochemistry, Geophysics, Geosystems, 2018, 19, 4722-4743.	1.0	31
30	Quantitative Relationships Between Basalt Geochemistry, Shear Wave Velocity, and Asthenospheric Temperature Beneath Western North America. Geochemistry, Geophysics, Geosystems, 2018, 19, 3376-3404.	1.0	31
31	Magmatic Densities Control Erupted Volumes in Icelandic Volcanic Systems. Frontiers in Earth Science, 2018, 6, .	0.8	20
32	Crustal Formation on a Spreading Ridge Above a Mantle Plume: Receiver Function Imaging of the Icelandic Crust. Journal of Geophysical Research: Solid Earth, 2018, 123, 5190-5208.	1.4	23
33	Bubble formation and decrepitation control the <scp>CO</scp>₂ content of olivineâ€hosted melt inclusions. Geochemistry, Geophysics, Geosystems, 2017, 18, 597-616.	1.0	64
34	Volatile and light lithophile elements in high-anorthite plagioclase-hosted melt inclusions from Iceland. Geochimica Et Cosmochimica Acta, 2017, 205, 100-118.	1.6	38
35	Continuous mush disaggregation during the long-lasting Laki fissure eruption, Iceland. American Mineralogist, 2017, 102, 2007-2021.	0.9	32
36	Olivine-hosted melt inclusions as an archive of redox heterogeneity in magmatic systems. Earth and Planetary Science Letters, 2017, 479, 192-205.	1.8	47

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37	Constraining mantle carbon: CO 2 -trace element systematics in basalts and the roles of magma mixing and degassing. Earth and Planetary Science Letters, 2017, 480, 1-14.	1.8	29
38	Causes and Consequences of Diachronous Vâ€Shaped Ridges in the North Atlantic Ocean. Journal of Geophysical Research: Solid Earth, 2017, 122, 8675-8708.	1.4	15
39	Deep mixing of mantle melts beneath continental flood basalt provinces: Constraints from olivine-hosted melt inclusions in primitive magmas. Geochimica Et Cosmochimica Acta, 2017, 196, 36-57.	1.6	37
40	Time scales of magma transport and mixing at KÄ«lauea Volcano, Hawaiâ€™i. Geology, 2016, 44, 463-466.	2.0	41
41	The temperature of the <scp>I</scp>celandic mantle from olivineâ€spinel aluminum exchange thermometry. Geochemistry, Geophysics, Geosystems, 2016, 17, 4725-4752.	1.0	68
42	A Statistical Description of Concurrent Mixing and Crystallization during MORB Differentiation: Implications for Trace Element Enrichment. Journal of Petrology, 2016, 57, 2127-2162.	1.1	21
43	Tracking timescales of short-term precursors to large basaltic fissure eruptions through Feâ€“Mg diffusion in olivine. Earth and Planetary Science Letters, 2016, 439, 58-70.	1.8	59
44	Magmas Erupted during the Main Pulse of Siberian Traps Volcanism were Volatile-poor. Journal of Petrology, 2015, 56, 2089-2116.	1.1	23
45	Diffusive over-hydration of olivine-hosted melt inclusions. Earth and Planetary Science Letters, 2015, 425, 168-178.	1.8	49
46	Fe-XANES analyses of Reykjanes Ridge basalts: Implications for oceanic crust's role in the solid Earth oxygen cycle. Earth and Planetary Science Letters, 2015, 427, 272-285.	1.8	75
47	The evolution and storage of primitive melts in the Eastern Volcanic Zone of Iceland: the 10Âka GrÃmsvÃ¶tn tephra series (i.e. the Saksunarvatn ash). Contributions To Mineralogy and Petrology, 2015, 170, 1.	1.2	36
48	Melt mixing causes negative correlation of trace element enrichment and CO2 content prior to an Icelandic eruption. Earth and Planetary Science Letters, 2014, 400, 272-283.	1.8	31
49	Eruption style at KÄ«lauea Volcano in Hawaiâ€˜i linked to primary melt composition. Nature Geoscience, 2014, 7, 464-469.	5.4	71
50	Short Length Scale Oxygen Isotope Heterogeneity in the Icelandic Mantle: Evidence from Plagioclase Compositional Zones. Journal of Petrology, 2014, 55, 2537-2566.	1.1	23
51	Crystal Storage and Transfer in Basaltic Systems: the SkuggafjÃ¶ll Eruption, Iceland. Journal of Petrology, 2014, 55, 2311-2346.	1.1	69
52	Quantifying lithological variability in the mantle. Earth and Planetary Science Letters, 2014, 395, 24-40.	1.8	105
53	A continuous 55-million-year record of transient mantle plume activity beneath Iceland. Nature Geoscience, 2014, 7, 914-919.	5.4	90
54	A joint geochemicalâ€“geophysical record of time-dependent mantle convection south of Iceland. Earth and Planetary Science Letters, 2014, 386, 86-97.	1.8	31

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55	Reconstructing the deep CO2 degassing behaviour of large basaltic fissure eruptions. Earth and Planetary Science Letters, 2014, 393, 120-131.	1.8	143
56	Magma mixing and high fountaining during the 1959 KÄ«lauea Iki eruption, Hawaiâ€˜i. Earth and Planetary Science Letters, 2014, 400, 102-112.	1.8	42
57	Crystalâ€"Melt Relationships and the Record of Deep Mixing and Crystallization in the ad 1783 Laki Eruption, Iceland. Journal of Petrology, 2013, 54, 1661-1690.	1.1	97
58	Geochemical provincialism in the Iceland plume. Geochimica Et Cosmochimica Acta, 2013, 122, 363-397.	1.6	42
59	Renewed melting at the abandoned HÃºnafloÃ-Rift, northern Iceland, caused by plume pulsing. Earth and Planetary Science Letters, 2013, 377-378, 227-238.	1.8	10
60	Short length scale mantle heterogeneity beneath Iceland probed by glacial modulation of melting. Earth and Planetary Science Letters, 2013, 379, 146-157.	1.8	36
61	The geochemical consequences of mixing melts from a heterogeneous mantle. Geochimica Et Cosmochimica Acta, 2013, 114, 112-143.	1.6	88
62	All rise for the case of the missing magma. Nature, 2013, 494, 182-183.	13.7	1
63	Melting during late-stage rifting in Afar is hot and deep. Nature, 2013, 499, 70-73.	13.7	85
64	Crustal manifestations of a hot transient pulse at 60Â°N beneath the Mid-Atlantic Ridge. Earth and Planetary Science Letters, 2013, 363, 109-120.	1.8	17
65	The Distribution of Olivine Compositions in Icelandic Basalts and Picrites. Journal of Petrology, 2013, 54, 745-768.	1.1	85
66	Mush Disaggregation in Basaltic Magma Chambers: Evidence from AD 1783 Laki Eruption. Journal of Petrology, 2013, 54, 2411-2411.	1.1	1
67	Effects of presentâ€day deglaciation in Iceland on mantle melt production rates. Journal of Geophysical Research: Solid Earth, 2013, 118, 3366-3379.	1.4	39
68	Estimating Divergence Dates and Substitution Rates in the Drosophila Phylogeny. Molecular Biology and Evolution, 2012, 29, 3459-3473.	3.5	230
69	Mush Disaggregation in Basaltic Magma Chambers: Evidence from the ad 1783 Laki Eruption. Journal of Petrology, 2012, 53, 2593-2623.	1.1	64
70	Two phases of sulphide saturation in RÃ©union magmas: Evidence from cumulates. Earth and Planetary Science Letters, 2012, 337-338, 104-113.	1.8	17
71	Compositional trends of Icelandic basalts: Implications for short-length scale lithological heterogeneity in mantle plumes. Geochemistry, Geophysics, Geosystems, 2011, 12, n/a-n/a.	1.0	117
72	Ocean circulation and mantle melting controlled by radial flow of hot pulses in the Iceland plume. Nature Geoscience, 2011, 4, 558-561.	5.4	55

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73	A Partial Record of Mixing of Mantle Melts Preserved in Icelandic Phenocrysts. Journal of Petrology, 2011, 52, 1791-1812.	1.1	64
74	Widening the goal-posts. Nature Geoscience, 2010, 3, 229-230.	5.4	9
75	Control of the symmetry of plumeâ€ridge interaction by spreading ridge geometry. Geochemistry, Geophysics, Geosystems, 2010, 11, .	1.0	48
76	Melt inclusions track pre-eruption storage and dehydration of magmas at Etna. Geology, 2009, 37, 571-574.	2.0	110
77	Kick-starting ancient warming. Nature Geoscience, 2009, 2, 156-159.	5.4	26
78	Magmatic filtering of mantle compositions at mid-ocean-ridge volcanoes. Nature Geoscience, 2009, 2, 321-328.	5.4	91
79	Evaluation of the multispecimen parallel differential pTRM method: a test on historical lavas from Iceland and Mexico. Geophysical Journal International, 2008, 173, 409-420.	1.0	33
80	Petrography of the dikeâ€gabbro transition at IODP Site 1256 (equatorial Pacific): The evolution of the granoblastic dikes. Geochemistry, Geophysics, Geosystems, 2008, 9, .	1.0	67
81	Lead isotope variability in olivine-hosted melt inclusions from Iceland. Geochimica Et Cosmochimica Acta, 2008, 72, 4159-4176.	1.6	114
82	Concurrent Mixing and Cooling of Melts under Iceland. Journal of Petrology, 2008, 49, 1931-1953.	1.1	129
83	Textures in Partially Solidified Crystalline Nodules: a Window into the Pore Structure of Slowly Cooled Mafic Intrusions. Journal of Petrology, 2007, 48, 1243-1264.	1.1	69
84	Joint inversion of seismic and gravity data for lunar composition and thermal state. Geophysical Journal International, 2007, 168, 243-258.	1.0	119
85	Are the Earth and the Moon compositionally alike? Inferences on lunar composition and implications for lunar origin and evolution from geophysical modeling. Journal of Geophysical Research, 2006, 111, .	3.3	67
86	Regional uplift, gas hydrate dissociation and the origins of the Paleoceneâ€"Eocene Thermal Maximum. Earth and Planetary Science Letters, 2006, 245, 65-80.	1.8	67
87	Drilling to Gabbro in Intact Ocean Crust. Science, 2006, 312, 1016-1020.	6.0	230
88	Cooling of the lower oceanic crust. Geology, 2005, 33, 357.	2.0	80
89	Crustal flow beneath Iceland. Journal of Geophysical Research, 2005, 110, .	3.3	24
90	Thermal models of oceanic crustal accretion: Linking geophysical, geological and petrological observations. Geochemistry, Geophysics, Geosystems, 2004, 5, n/a-n/a.	1.0	80

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91	Melt mixing and crystallization under Theistareykir, northeast Iceland. Geochemistry, Geophysics, Geosystems, 2003, 4, n/a-n/a.	1.0	94
92	Geochemical variability in a single flow from northern Iceland. Journal of Geophysical Research, 2003, 108, ECV 4-1-ECV 4-21.	3.3	94
93	Control of regional sea level by surface uplift and subsidence caused by magmatic underplating of Earth's crust. Geology, 2002, 30, 675.	2.0	61
94	V-shaped ridges around Iceland: Implications for spatial and temporal patterns of mantle convection. Geochemistry, Geophysics, Geosystems, 2002, 3, 1-23.	1.0	100
95	The link between volcanism and deglaciation in Iceland. Geochemistry, Geophysics, Geosystems, 2002, 3, 1-25.	1.0	225
96	Crustal accretion under northern Iceland. Earth and Planetary Science Letters, 2001, 191, 295-310.	1.8	115
97	Plume-driven upwelling under central Iceland. Earth and Planetary Science Letters, 2001, 194, 67-82.	1.8	116
98	The Supply of Heat to Mid-Ocean Ridges by Crystallization and Cooling of Mantle Melts. Geophysical Monograph Series, 0, , 45-73.	0.1	3
99	Some Hard Rock Constraints on the Supply of Heat to Mid-Ocean Ridges. Geophysical Monograph Series, 0, , 111-149.	0.1	31
100	The Composition of Melts from a Heterogeneous Mantle and the Origin of Ferropicrite: Application of a Thermodynamic Model. Journal of Petrology, 0, , egw065.	1.1	7