

# Matthew G Jackson

## List of Publications by Year in descending order

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68  
papers

4,061  
citations

125106

35  
h-index

129628

63  
g-index

69  
all docs

69  
docs citations

69  
times ranked

3258  
citing authors

#	ARTICLE	IF	CITATIONS
1	On the relative temperatures of Earth's volcanic hotspots and mid-ocean ridges. <i>Science</i> , 2022, 375, 57-61.	6.0	21
2	Ancient and recycled sulfur sampled by the Iceland mantle plume. <i>Earth and Planetary Science Letters</i> , 2022, 584, 117452.	1.8	8
3	Distinguishing Volcanic Contributions to the Overlapping Samoan and Cook-Austral Hotspot Tracks. <i>Journal of Petrology</i> , 2022, 63, .	1.1	3
4	Oxidized mantle sources of HIMU- and EM-type Ocean Island Basalts. <i>Chemical Geology</i> , 2022, 602, 120901.	1.4	9
5	Spatial distribution and geochemical characterization of Icelandic mantle end-members: Implications for plume geometry and melting processes. <i>Chemical Geology</i> , 2022, 604, 120930.	1.4	6
6	Heavy $^{57}\text{Fe}$ in ocean island basalts: A non-unique signature of processes and source lithologies in the mantle. <i>Geochimica Et Cosmochimica Acta</i> , 2021, 292, 309-332.	1.6	36
7	Extreme isotopic heterogeneity in Samoan clinopyroxenes constrains sediment recycling. <i>Nature Communications</i> , 2021, 12, 1234.	5.8	10
8	Trachytic Melt Inclusions Hosted in Clinopyroxene Offer a Glimpse Into Samoan EM2 Endmember Melts. <i>Geochemistry, Geophysics, Geosystems</i> , 2021, 22, e2020GC009212.	1.0	3
9	Spatial Characteristics of Recycled and Primordial Reservoirs in the Deep Mantle. <i>Geochemistry, Geophysics, Geosystems</i> , 2021, 22, e2020GC009525.	1.0	20
10	Testing the Recycled Gabbro Hypothesis for the Origin of $^{87}\text{Sr}/^{86}\text{Sr}$ of Individual Olivine-Hosted Melt Inclusions From Hawai'i. <i>Geochemistry, Geophysics, Geosystems</i> , 2021, 22, e2020GC009260.	1.0	4
11	Mantle plumes and their role in Earth processes. <i>Nature Reviews Earth &amp; Environment</i> , 2021, 2, 382-401.	12.2	78
12	Sulfur Isotope Evidence for a Geochemical Zonation of the Samoan Mantle Plume. <i>Geochemistry, Geophysics, Geosystems</i> , 2021, 22, e2021GC009816.	1.0	2
13	Carbonatite Versus Silicate Melt Metasomatism Impacts Grain Scale $^{87}\text{Sr}/^{86}\text{Sr}$ and $^{143}\text{Nd}/^{144}\text{Nd}$ Heterogeneity in Polynesian Mantle Peridotite Xenoliths. <i>Geochemistry, Geophysics, Geosystems</i> , 2021, 22, e2021GC009749.	1.0	1
14	The Mercury Isotopic Composition of Earth's Mantle and the Use of Mass Independently Fractionated Hg to Test for Recycled Crust. <i>Geophysical Research Letters</i> , 2021, 48, e2021GL094301.	1.5	33
15	Remnants of early Earth differentiation in the deepest mantle-derived lavas. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2021, 118, .	3.3	33
16	Chondritic mercury isotopic composition of Earth and evidence for evaporative equilibrium degassing during the formation of eucrites. <i>Earth and Planetary Science Letters</i> , 2020, 551, 116544.	1.8	26
17	Ancient helium and tungsten isotopic signatures preserved in mantle domains least modified by crustal recycling. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2020, 117, 30993-31001.	3.3	41
18	Isotopic Evidence for Multiple Recycled Sulfur Reservoirs in the Mangaia Mantle Plume. <i>Geochemistry, Geophysics, Geosystems</i> , 2020, 21, e2020GC009081.	1.0	10

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19	Contrasting Old and Young Volcanism from Aitutaki, Cook Islands: Implications for the Origins of the Cook "Austral Volcanic Chain. <i>Journal of Petrology</i> , 2020, 61, .	1.1	14
20	Metasomatism and Hydration of the Oceanic Lithosphere: a Case Study of Peridotite Xenoliths from Samoa. <i>Journal of Petrology</i> , 2020, 61, .	1.1	11
21	Sulfur isotope characterization of primordial and recycled sources feeding the Samoan mantle plume. <i>Earth and Planetary Science Letters</i> , 2020, 534, 116073.	1.8	20
22	Pacific Lithosphere Evolution Inferred from Aitutaki Mantle Xenoliths. <i>Journal of Petrology</i> , 2019, 60, 1753-1772.	1.1	15
23	Hot and Heterogenous High <sup>3</sup> He/ <sup>4</sup> He Components: New Constraints From Proto-Iceland Plume Lavas From Baffin Island. <i>Geochemistry, Geophysics, Geosystems</i> , 2019, 20, 5939-5967.	1.0	15
24	Shipboard Characterization of Tuvalu, Samoa, and Lau Dredge Samples Using Laser-Induced Breakdown Spectroscopy (LIBS). <i>Applied Spectroscopy</i> , 2019, 73, 623-637.	1.2	2
25	Rejuvenated Volcanism Superimposed on Plume-Derived Samoan Shield Volcanoes: Evidence From a 645m Drill Core From Tutuila Island, American Samoa. <i>Geochemistry, Geophysics, Geosystems</i> , 2019, 20, 1485-1507.	1.0	19
26	Deep-sea video technology tracks a monoplacophoran to the end of its trail (Mollusca, Tryblidia). <i>Marine Biodiversity</i> , 2019, 49, 825-832.	0.3	10
27	On the relative motions of long-lived Pacific mantle plumes. <i>Nature Communications</i> , 2018, 9, 854.	5.8	55
28	Tracking Hadean processes in modern basalts with 142-Neodymium. <i>Earth and Planetary Science Letters</i> , 2018, 484, 184-191.	1.8	39
29	Evidence for a deep mantle source for EM and HIMU domains from integrated geochemical and geophysical constraints. <i>Earth and Planetary Science Letters</i> , 2018, 484, 154-167.	1.8	40
30	The mantle source of thermal plumes: Trace and minor elements in olivine and major oxides of primitive liquids (and why the olivine compositions don't matter). <i>American Mineralogist</i> , 2018, 103, 1253-1270.	0.9	35
31	Geochemistry and Distribution of Recycled Domains in the Mantle Inferred From Nd and Pb Isotopes in Oceanic Hot Spots: Implications for Storage in the Large Low Shear Wave Velocity Provinces. <i>Geochemistry, Geophysics, Geosystems</i> , 2018, 19, 3496-3519.	1.0	29
32	Seawater cycled throughout Earth's mantle in partially serpentinized lithosphere. <i>Nature Geoscience</i> , 2017, 10, 222-228.	5.4	139
33	Primordial helium entrained by the hottest mantle plumes. <i>Nature</i> , 2017, 542, 340-343.	13.7	88
34	Geodynamic implications for zonal and meridional isotopic patterns across the northern Lau and North Fiji Basins. <i>Geochemistry, Geophysics, Geosystems</i> , 2017, 18, 1013-1042.	1.0	14
35	Tungsten-182 heterogeneity in modern ocean island basalts. <i>Science</i> , 2017, 356, 66-69.	6.0	171
36	Unusual <sup>56</sup> Fe values in Samoan rejuvenated lavas generated in the mantle. <i>Earth and Planetary Science Letters</i> , 2016, 450, 221-232.	1.8	64

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37	Preservation of Earth-forming events in the tungsten isotopic composition of modern flood basalts. <i>Science</i> , 2016, 352, 809-812.	6.0	130
38	Geochemical evidence in the northeast Lau Basin for subduction of the Cook–Austral volcanic chain in the Tonga Trench. <i>Geochemistry, Geophysics, Geosystems</i> , 2016, 17, 1694-1724.	1.0	23
39	Missing Archean sulfur returned from the mantle. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2016, 113, 12893-12895.	3.3	13
40	Deeply dredged submarine HIMU glasses from the Tokelau Islands, Polynesia: Implications for volatile budgets of recycled oceanic crust. <i>Geochemistry, Geophysics, Geosystems</i> , 2015, 16, 3210-3234.	1.0	23
41	Connections between the bulk composition, geodynamics and habitability of Earth. <i>Nature Geoscience</i> , 2015, 8, 587-593.	5.4	54
42	Anionic Chemistry of Noble Gases: Formation of Mg–NG (NG = Xe, Kr, Ar) Compounds under Pressure. <i>Journal of the American Chemical Society</i> , 2015, 137, 14122-14128.	6.6	91
43	Oceanic lavas sampling the high- <sup>3</sup> He/ <sup>4</sup> He mantle reservoir: Primitive, depleted, or re-enriched?. <i>American Mineralogist</i> , 2015, 100, 2066-2081.	0.9	14
44	The halogen (F, Cl, Br, I) and H <sub>2</sub> O systematics of Samoan lavas: Assimilated-seawater, EM2 and high- <sup>3</sup> He/ <sup>4</sup> He components. <i>Earth and Planetary Science Letters</i> , 2015, 410, 197-209.	1.8	62
45	Ta'u and Ofu/Olosega volcanoes: The ‘Twin Sisters’ of Samoa, their P, T, X melting regime, and global implications. <i>Geochemistry, Geophysics, Geosystems</i> , 2014, 15, 2301-2318.	1.0	25
46	Volatile cycling of H <sub>2</sub> O, CO <sub>2</sub> , F, and Cl in the HIMU mantle: A new window provided by melt inclusions from oceanic hot spot lavas at Mangaia, Cook Islands. <i>Geochemistry, Geophysics, Geosystems</i> , 2014, 15, 4445-4467.	1.0	67
47	Helium and lead isotopes reveal the geochemical geometry of the Samoan plume. <i>Nature</i> , 2014, 514, 355-358.	13.7	90
48	Contrasting behaviours of CO <sub>2</sub> , S, H <sub>2</sub> O and halogens (F, Cl, Br, and I) in enriched-mantle melts from Pitcairn and Society seamounts. <i>Chemical Geology</i> , 2014, 370, 69-81.	1.4	80
49	Evidence for a broadly distributed Samoan-plume signature in the northern Lau and North Fiji Basins. <i>Geochemistry, Geophysics, Geosystems</i> , 2014, 15, 986-1008.	1.0	34
50	Major and trace element composition of the high- <sup>3</sup> He/ <sup>4</sup> He mantle: Implications for the composition of a nonchondritic Earth. <i>Geochemistry, Geophysics, Geosystems</i> , 2013, 14, 2954-2976.	1.0	63
51	Anomalous sulphur isotopes in plume lavas reveal deep mantle storage of Archaean crust. <i>Nature</i> , 2013, 496, 490-493.	13.7	205
52	Nickel and helium evidence for melt above the core–mantle boundary. <i>Nature</i> , 2013, 493, 393-397.	13.7	77
53	Parallel volcano trends and geochemical asymmetry of the Society Islands hotspot track. <i>Geology</i> , 2013, 41, 19-22.	2.0	35
54	Large volumes of rejuvenated volcanism in Samoa: Evidence supporting a tectonic influence on late-stage volcanism. <i>Geochemistry, Geophysics, Geosystems</i> , 2012, 13, .	1.0	52

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55	Homogeneous superchondritic $^{142}\text{Nd}/^{144}\text{Nd}$ in the mid-ocean ridge basalt and ocean island basalt mantle. <i>Geochemistry, Geophysics, Geosystems</i> , 2012, 13, .	1.0	46
56	Age systematics of two young en echelon Samoan volcanic trails. <i>Geochemistry, Geophysics, Geosystems</i> , 2011, 12, n/a-n/a.	1.0	56
57	An ancient recipe for flood-basalt genesis. <i>Nature</i> , 2011, 476, 316-319.	13.7	88
58	Geochemical zoning of volcanic chains associated with Pacific hotspots. <i>Nature Geoscience</i> , 2011, 4, 874-878.	5.4	88
59	Re-Os isotope systematics in Samoan shield lavas and the use of Os-isotopes in olivine phenocrysts to determine primary magmatic compositions. <i>Earth and Planetary Science Letters</i> , 2011, 312, 91-101.	1.8	38
60	Evidence for the survival of the oldest terrestrial mantle reservoir. <i>Nature</i> , 2010, 466, 853-856.	13.7	151
61	Samoan hot spot track on a "hot spot highway" Implications for mantle plumes and a deep Samoan mantle source. <i>Geochemistry, Geophysics, Geosystems</i> , 2010, 11, .	1.0	77
62	Globally elevated titanium, tantalum, and niobium (TITAN) in ocean island basalts with high $^3\text{He}/^4\text{He}$ . <i>Geochemistry, Geophysics, Geosystems</i> , 2008, 9, .	1.0	73
63	Compositions of HIMU, EM1, and EM2 from global trends between radiogenic isotopes and major elements in ocean island basalts. <i>Earth and Planetary Science Letters</i> , 2008, 276, 175-186.	1.8	256
64	Oxygen isotopes in Samoan lavas: Confirmation of continent recycling. <i>Geology</i> , 2008, 36, 551.	2.0	58
65	Samoa reinstated as a primary hotspot trail. <i>Geology</i> , 2008, 36, 435.	2.0	85
66	Ambient and excess mantle temperatures, olivine thermometry, and active vs. passive upwelling. <i>Chemical Geology</i> , 2007, 241, 177-206.	1.4	374
67	The return of subducted continental crust in Samoan lavas. <i>Nature</i> , 2007, 448, 684-687.	13.7	280
68	Strontium isotopes in melt inclusions from Samoan basalts: Implications for heterogeneity in the Samoan plume. <i>Earth and Planetary Science Letters</i> , 2006, 245, 260-277.	1.8	128