

# Paul J Wallace

## List of Publications by Year in descending order

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60  
papers

4,783  
citations

109321

35  
h-index

155660

55  
g-index

60  
all docs

60  
docs citations

60  
times ranked

2893  
citing authors

#	ARTICLE	IF	CITATIONS
1	Volatiles in subduction zone magmas: concentrations and fluxes based on melt inclusion and volcanic gas data. <i>Journal of Volcanology and Geothermal Research</i> , 2005, 140, 217-240.	2.1	858
2	Why do mafic arc magmas contain $\sim 1/4$ wt% water on average?. <i>Earth and Planetary Science Letters</i> , 2013, 364, 168-179.	4.4	409
3	Gradients in H <sub>2</sub> O, CO <sub>2</sub> , and exsolved gas in a large-volume silicic magma system: Interpreting the record preserved in melt inclusions from the Bishop Tuff. <i>Journal of Geophysical Research</i> , 1999, 104, 20097-20122.	3.3	216
4	Bubbles matter: An assessment of the contribution of vapor bubbles to melt inclusion volatile budgets. <i>American Mineralogist</i> , 2015, 100, 806-823.	1.9	175
5	Quantification of pre-eruptive exsolved gas contents in silicic magmas. <i>Nature</i> , 1995, 377, 612-616.	27.8	168
6	Role of H <sub>2</sub> O in subduction-zone magmatism: New insights from melt inclusions in high-Mg basalts from central Mexico. <i>Geology</i> , 2003, 31, 235.	4.4	164
7	Quaternary volcanism near the Valley of Mexico: implications for subduction zone magmatism and the effects of crustal thickness variations on primitive magma compositions. <i>Contributions To Mineralogy and Petrology</i> , 1999, 135, 291-314.	3.1	160
8	Magmatic volatile contents and degassing-induced crystallization at VolcÃ¡n Jorullo, Mexico: Implications for melt evolution and the plumbing systems of monogenetic volcanoes. <i>Earth and Planetary Science Letters</i> , 2008, 269, 478-487.	4.4	139
9	Effects of eruption and lava drainback on the H <sub>2</sub> O contents of basaltic magmas at Kilauea Volcano. <i>Bulletin of Volcanology</i> , 1998, 59, 327-344.	3.0	136
10	Subduction-related Volatile Recycling and Magma Generation beneath Central Mexico: Insights from Melt Inclusions, Oxygen Isotopes and Geodynamic Models. <i>Journal of Petrology</i> , 2009, 50, 1729-1764.	2.8	128
11	Melt inclusion CO <sub>2</sub> contents, pressures of olivine crystallization, and the problem of shrinkage bubbles. <i>American Mineralogist</i> , 2015, 100, 787-794.	1.9	128
12	Global variations in H <sub>2</sub> O/Ce: 1. Slab surface temperatures beneath volcanic arcs. <i>Geochemistry, Geophysics, Geosystems</i> , 2012, 13, .	2.5	122
13	Volatiles in High-K Magmas from the Western Trans-Mexican Volcanic Belt: Evidence for Fluid Fluxing and Extreme Enrichment of the Mantle Wedge by Subduction Processes. <i>Journal of Petrology</i> , 2008, 49, 1589-1618.	2.8	119
14	Zoned quartz phenocrysts from the rhyolitic Bishop Tuff. <i>American Mineralogist</i> , 2001, 86, 1034-1052.	1.9	105
15	Volatiles and Exsolved Vapor in Volcanic Systems. <i>Elements</i> , 2017, 13, 29-34.	0.5	97
16	Global variations in H <sub>2</sub> O/Ce: 2. Relationships to arc magma geochemistry and volatile fluxes. <i>Geochemistry, Geophysics, Geosystems</i> , 2012, 13, .	2.5	95
17	Mafic magma recharge supplies high CO <sub>2</sub> and SO <sub>2</sub> gas fluxes from Popocatepetl volcano, Mexico. <i>Geology</i> , 2009, 37, 107-110.	4.4	90
18	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.	3.3	80

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19	Volatiles in Magmas. , 2015, , 163-183.		80
20	Water and partial melting in mantle plumes: Inferences from the dissolved H <sub>2</sub> O concentrations of Hawaiian basaltic magmas. <i>Geophysical Research Letters</i> , 1998, 25, 3639-3642.	4.0	79
21	Prolonged ascent and episodic venting of discrete magma batches at the onset of the Huckleberry Ridge supereruption, Yellowstone. <i>Earth and Planetary Science Letters</i> , 2016, 451, 285-297.	4.4	71
22	Petrology of Volc��n Tequila, Jalisco, Mexico: disequilibrium phenocryst assemblages and evolution of the subvolcanic magma system. <i>Contributions To Mineralogy and Petrology</i> , 1994, 117, 345-361.	3.1	68
23	Degassing of volatiles (H <sub>2</sub> O, CO <sub>2</sub> , S, Cl) during ascent, crystallization, and eruption at mafic monogenetic volcanoes in central Mexico. <i>Journal of Volcanology and Geothermal Research</i> , 2010, 197, 225-238.	2.1	68
24	Zonation of H <sub>2</sub> O and F Concentrations around Melt Inclusions in Olivines. <i>Journal of Petrology</i> , 2014, 55, 685-707.	2.8	68
25	Storage and interaction of compositionally heterogeneous magmas from the 1986 eruption of Augustine Volcano, Alaska. <i>Bulletin of Volcanology</i> , 2006, 68, 240-254.	3.0	60
26	Reconstructing CO <sub>2</sub> concentrations in basaltic melt inclusions using Raman analysis of vapor bubbles. <i>Journal of Volcanology and Geothermal Research</i> , 2016, 323, 148-162.	2.1	57
27	Cooling rates of Plinian-fall and pyroclastic-flow deposits in the Bishop Tuff: inferences from water speciation in quartz-hosted glass inclusions. <i>Bulletin of Volcanology</i> , 2003, 65, 105-123.	3.0	56
28	Degassing of the H <sub>2</sub> O-rich rhyolites of the Okataina Volcanic Center, Taupo Volcanic Zone, New Zealand. <i>Geology</i> , 2011, 39, 311-314.	4.4	53
29	The melt inclusion record from the rhyolitic Kos Plateau Tuff (Aegean Arc). <i>Contributions To Mineralogy and Petrology</i> , 2010, 159, 187-202.	3.1	44
30	The nature and evolution of mantle upwelling at Ross Island, Antarctica, with implications for the source of HIMU lavas. <i>Earth and Planetary Science Letters</i> , 2018, 498, 38-53.	4.4	42
31	Inferring magma ascent timescales and reconstructing conduit processes in explosive rhyolitic eruptions using diffusive losses of hydrogen from melt inclusions. <i>Journal of Volcanology and Geothermal Research</i> , 2019, 369, 95-112.	2.1	42
32	Anomalous uplift and subsidence of the Ontong Java Plateau inferred from CO <sub>2</sub> contents of submarine basaltic glasses. <i>Geology</i> , 2005, 33, 501.	4.4	40
33	A comparative study of continental vs. intraoceanic arc mantle melting: Experimentally determined phase relations of hydrous primitive melts. <i>Earth and Planetary Science Letters</i> , 2011, 308, 97-106.	4.4	40
34	Magma transport and olivine crystallization depths in K��lauea��'s east rift zone inferred from experimentally rehomogenized melt inclusions. <i>Geochimica Et Cosmochimica Acta</i> , 2016, 185, 232-250.	3.9	39
35	Controls on long-term low explosivity at andesitic arc volcanoes: Insights from Mount Hood, Oregon. <i>Journal of Volcanology and Geothermal Research</i> , 2012, 219-220, 1-14.	2.1	37
36	Ascent rates of rhyolitic magma at the onset of three caldera-forming eruptions. <i>American Mineralogist</i> , 2018, 103, 952-965.	1.9	35

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37	Vapor-bubble growth in olivine-hosted melt inclusions. <i>American Mineralogist</i> , 2020, 105, 1898-1919.	1.9	33
38	Replenishment of volatile-rich mafic magma into a degassed chamber drives mixing and eruption of Tungurahua volcano. <i>Bulletin of Volcanology</i> , 2014, 76, 1.	3.0	32
39	Insight into volatile behavior at Nyamuragira volcano (D.R. Congo, Africa) through olivine-hosted melt inclusions. <i>Geochemistry, Geophysics, Geosystems</i> , 2011, 12, n/a-n/a.	2.5	31
40	Deciphering post-caldera volcanism: insight into the Vulcanello (Island of Vulcano, Southern Italy) eruptive activity based on geological and petrological constraints. <i>Bulletin of Volcanology</i> , 2015, 77, 1.	3.0	31
41	From mantle to atmosphere: magma degassing, explosive eruptions, and volcanic volatile budgets. <i>Developments in Volcanology</i> , 2003, 5, 105-127.	0.5	30
42	Evacuation of multiple magma bodies and the onset of caldera collapse in a supereruption, captured in glass and mineral compositions. <i>Contributions To Mineralogy and Petrology</i> , 2018, 173, 1.	3.1	29
43	Olivine-Hosted Melt Inclusions: A Microscopic Perspective on a Complex Magmatic World. <i>Annual Review of Earth and Planetary Sciences</i> , 2021, 49, 465-494.	11.0	27
44	The petrologic and degassing behavior of sulfur and other magmatic volatiles from the 2018 eruption of K��lauea, Hawai��i: melt concentrations, magma storage depths, and magma recycling. <i>Bulletin of Volcanology</i> , 2021, 83, 1.	3.0	25
45	The sources of volatile and fluid��mobile elements in the Sunda arc: A melt inclusion study from Kawah Ijen and Tambora volcanoes, Indonesia. <i>Geochemistry, Geophysics, Geosystems</i> , 2012, 13, .	2.5	23
46	Volatiles in submarine basaltic glasses from the Ontong Java Plateau (ODP Leg 192): implications for magmatic processes and source region compositions. <i>Geological Society Special Publication</i> , 2004, 229, 239-257.	1.3	17
47	Experimental insights into the formation of high-Mg basaltic andesites in the trans-Mexican volcanic belt. <i>Contributions To Mineralogy and Petrology</i> , 2012, 163, 825-840.	3.1	16
48	Integrating petrologic and remote sensing perspectives on magmatic volatiles and volcanic degassing. <i>Eos</i> , 2003, 84, 441.	0.1	15
49	Direct measurements of copper speciation in basaltic glasses: understanding the relative roles of sulfur and oxygen in copper complexation in melts. <i>Geochimica Et Cosmochimica Acta</i> , 2019, 267, 164-178.	3.9	15
50	Chapter 7.2��f Mount Erebus. <i>Geological Society Memoir</i> , 2021, 55, 695-739.	1.7	15
51	8. The Sulfur Budget in Magmas: Evidence from Melt Inclusions, Submarine Glasses, and Volcanic Gas Emissions. , 2011, , 215-246.		14
52	Experimental constraints on the origins of primitive potassic lavas from the Trans-Mexican Volcanic Belt. <i>Contributions To Mineralogy and Petrology</i> , 2013, 166, 825-843.	3.1	14
53	Improving the reliability of Fe- and S-XANES measurements in silicate glasses: Correcting beam damage and identifying Fe-oxide nanolites in hydrous and anhydrous melt inclusions. <i>Chemical Geology</i> , 2021, 586, 120610.	3.3	14
54	Initiation of large-volume silicic centers in the Yellowstone hotspot track: insights from H2O- and F-rich quartz-hosted rhyolitic melt inclusions in the Arbon Valley Tuff of the Snake River Plain. <i>Contributions To Mineralogy and Petrology</i> , 2016, 171, 1.	3.1	10

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55	Magma-ice-sediment interactions and the origin of lava/hyaloclastite sequences in the Skaftá formation, South Iceland. <i>Bulletin of Volcanology</i> , 2014, 76, 1.	3.0	8
56	Catastrophic Caldera-Forming (CCF) Monotonous Silicic Magma Reservoirs: Constraints from Volatiles in Melt Inclusions from the 3.49 Ma Tara Supereruption, Guacha II Caldera, SW Bolivia. <i>Journal of Petrology</i> , 2017, 58, 2115-2142.	2.8	7
57	Magma storage below Cascades shield volcanoes as inferred from melt inclusion data: A comparison of long-lived and short-lived magma plumbing systems. <i>Journal of Volcanology and Geothermal Research</i> , 2018, 368, 1-12.	2.1	4
58	Understanding Degassing and Transport of CO <sub>2</sub> -rich Alkalic Magmas at Ross Island, Antarctica using Olivine-Hosted Melt Inclusions. <i>Journal of Petrology</i> , 0, , .	2.8	3
59	Magmatic Volatiles. , 2021, , 301-312.		2
60	An issue honoring Ian S. E. Carmichael. <i>Contributions To Mineralogy and Petrology</i> , 2013, 166, 655-663.	3.1	0