

# Alexander Nichols

## List of Publications by Year in descending order

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Version: 2024-02-01

48  
papers

2,105  
citations

218677

26  
h-index

233421

45  
g-index

50  
all docs

50  
docs citations

50  
times ranked

2186  
citing authors

#	ARTICLE	IF	CITATIONS
1	Glass transition temperatures of natural hydrous melts: a relationship with shear viscosity and implications for the welding process. <i>Journal of Volcanology and Geothermal Research</i> , 2005, 142, 105-118.	2.1	150
2	Is the Iceland hot spot also wet? Evidence from the water contents of undegassed submarine and subglacial pillow basalts. <i>Earth and Planetary Science Letters</i> , 2002, 202, 77-87.	4.4	144
3	The Petrology and Geochemistry of St. Helena Alkali Basalts: Evaluation of the Oceanic Crust-recycling Model for HIMU OIB. <i>Journal of Petrology</i> , 2011, 52, 791-838.	2.8	125
4	Lead isotope analysis of melt inclusions by LA-MC-ICP-MS. <i>Journal of Analytical Atomic Spectrometry</i> , 2014, 29, 1393-1405.	3.0	96
5	Viscosity of peridotite liquid. <i>Earth and Planetary Science Letters</i> , 2004, 226, 127-138.	4.4	86
6	Limited latitudinal mantle plume motion for the Louisville hotspot. <i>Nature Geoscience</i> , 2012, 5, 911-917.	12.9	85
7	Controls on magmatic degassing along the Reykjanes Ridge with implications for the helium paradox. <i>Earth and Planetary Science Letters</i> , 2000, 183, 43-50.	4.4	84
8	Distribution of dissolved water in magmatic glass records growth and resorption of bubbles. <i>Earth and Planetary Science Letters</i> , 2014, 401, 1-11.	4.4	79
9	Timescales of spherulite crystallization in obsidian inferred from water concentration profiles. <i>American Mineralogist</i> , 2008, 93, 1816-1822.	1.9	76
10	Mission Immiscible: Distinct Subduction Components Generate Two Primary Magmas at Pagan Volcano, Mariana Arc. <i>Journal of Petrology</i> , 2014, 55, 63-101.	2.8	69
11	Geochemical Differences of the Hawaiian Shield Lavas: Implications for Melting Process in the Heterogeneous Hawaiian Plume. <i>Journal of Petrology</i> , 2009, 50, 1553-1573.	2.8	68
12	Primary magmas and mantle sources of Emeishan basalts constrained from major element, trace element and Pb isotope compositions of olivine-hosted melt inclusions. <i>Geochimica Et Cosmochimica Acta</i> , 2017, 208, 63-85.	3.9	68
13	Surface tension driven processes densify and retain permeability in magma and lava. <i>Earth and Planetary Science Letters</i> , 2016, 433, 116-124.	4.4	63
14	Hyperquenched volcanic glass from Loihi Seamount, Hawaii. <i>Earth and Planetary Science Letters</i> , 2008, 270, 54-62.	4.4	62
15	Cooling rate correction of paleointensity determination for volcanic glasses by relaxation geospeedometry. <i>Earth and Planetary Science Letters</i> , 2006, 243, 282-292.	4.4	59
16	Petrogenesis of Late Cenozoic basalts from North Hainan Island: Constraints from melt inclusions and their host olivines. <i>Geochimica Et Cosmochimica Acta</i> , 2015, 152, 89-121.	3.9	59
17	Advances in Fourier transform infrared spectroscopy of natural glasses: From sample preparation to data analysis. <i>Lithos</i> , 2014, 206-207, 52-64.	1.4	58
18	Using micro-FTIR spectroscopy to measure volatile contents in small and unexposed inclusions hosted in olivine crystals. <i>Chemical Geology</i> , 2007, 242, 371-384.	3.3	56

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19	Accounting for the species-dependence of the 3500 $\text{cm}^{-1}$ $\text{H}_2\text{O}$ infrared molar absorptivity coefficient: Implications for hydrated volcanic glasses. <i>American Mineralogist</i> , 2017, 102, 1677-1689.	1.9	54
20	Low degree melting under the Southwest Indian Ridge: the roles of mantle temperature, conductive cooling and wet melting. <i>Earth and Planetary Science Letters</i> , 2001, 188, 383-398.	4.4	47
21	The influence of H <sub>2</sub> O and CO <sub>2</sub> on the glass transition temperature: insights into the effects of volatiles on magma viscosity. <i>European Journal of Mineralogy</i> , 2007, 19, 657-669.	1.3	45
22	Cooling rates of basaltic hyaloclastites and pillow lava glasses from the HSDP2 drill core. <i>Geochimica Et Cosmochimica Acta</i> , 2009, 73, 1052-1066.	3.9	41
23	Lava balloons—peculiar products of basaltic submarine eruptions. <i>Bulletin of Volcanology</i> , 2012, 74, 1379-1393.	3.0	34
24	Timescales of texture development in a cooling lava dome. <i>Geochimica Et Cosmochimica Acta</i> , 2013, 114, 72-80.	3.9	34
25	Experiments and models on H <sub>2</sub> O retrograde solubility in volcanic systems. <i>American Mineralogist</i> , 2015, 100, 774-786.	1.9	33
26	Advent of Continents: A New Hypothesis. <i>Scientific Reports</i> , 2016, 6, 33517.	3.3	33
27	Time- and temperature-dependent conduit wall porosity: A key control on degassing and explosivity at Tarawera volcano, New Zealand. <i>Earth and Planetary Science Letters</i> , 2010, 299, 126-137.	4.4	29
28	The Tectonomagmatic Source of Ore Metals and Volatile Elements in the Southern Kermadec Arc. <i>Economic Geology</i> , 2012, 107, 1539-1556.	3.8	25
29	The missing half of the subduction factory: shipboard results from the Izu rear arc, IODP Expedition 350. <i>International Geology Review</i> , 2017, 59, 1677-1708.	2.1	23
30	New insights on the origin of flow bands in obsidian. , 2005, , .		22
31	Eruptive shearing of tube pumice: pure and simple. <i>Solid Earth</i> , 2016, 7, 1383-1393.	2.8	22
32	Pliocene granodioritic knoll with continental crust affinities discovered in the intra-oceanic Izu “Bonin” Mariana Arc: Syntectonic granitic crust formation during back-arc rifting. <i>Earth and Planetary Science Letters</i> , 2015, 424, 84-94.	4.4	21
33	Nishinoshima volcano in the Ogasawara Arc: New continent from the ocean?. <i>Island Arc</i> , 2019, 28, e12285.	1.1	20
34	Cooling rates of lunar orange glass beads. <i>Earth and Planetary Science Letters</i> , 2018, 503, 88-94.	4.4	19
35	Geochemistry of volcanic glasses from the Louisville Seamount Trail (IODP Expedition 330): Implications for eruption environments and mantle melting. <i>Geochemistry, Geophysics, Geosystems</i> , 2014, 15, 1718-1738.	2.5	18
36	Melt inclusions reveal geochemical cross-arc variations and diversity within magma chambers feeding the Higashi-Izu Monogenetic Volcano Field, Izu Peninsula, Japan. <i>Geochemistry, Geophysics, Geosystems</i> , 2012, 13, .	2.5	14

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37	( <sup>210</sup> Pb/ <sup>226</sup> Ra) variations during the 1994–2001 intracaldera volcanism at Rabaul Caldera. <i>Journal of Volcanology and Geothermal Research</i> , 2009, 184, 416-426.	2.1	13
38	Tracing of Cl input into the sub-arc mantle through the combined analysis of B, O and Cl isotopes in melt inclusions. <i>Earth and Planetary Science Letters</i> , 2019, 507, 30-39.	4.4	13
39	Heat capacity of hydrous trachybasalt from Mt Etna: comparison with CaAl <sub>2</sub> Si <sub>2</sub> O <sub>8</sub> (An)–CaMgSi <sub>2</sub> O <sub>6</sub> (Di) as basaltic proxy compositions. <i>Contributions To Mineralogy and Petrology</i> , 2015, 170, 1.	3.1	12
40	Volcanoes of the Diamante cross-chain: evidence for a mid-crustal felsic magma body beneath the Southern Izu–Bonin–Mariana arc. <i>Geological Society Special Publication</i> , 2014, 385, 235-255.	1.3	7
41	The Origin of Late Cenozoic Magmatism in the South China Sea and Southeast Asia. <i>Geochemistry, Geophysics, Geosystems</i> , 2021, 22, e2021GC009686.	2.5	7
42	Incipient melt segregation as preserved in subaqueous pyroclasts. <i>Geology</i> , 2012, 40, 355-358.	4.4	6
43	The Mantle Transition Zone Hosts the Missing HIMU Reservoir Beneath Eastern China. <i>Geophysical Research Letters</i> , 2020, 47, e2020GL087260.	4.0	6
44	The Kulanaokuaiki-3 tephra, 900 CE: Products of a remarkably energetic pyroclastic eruption at K�lauea Volcano, Hawai�i, USA. <i>Bulletin of the Geological Society of America</i> , 2019, 131, 1537-1554.	3.3	3
45	Provenance of the Pakawau Group and Farewell Formation (Late Cretaceous – Paleocene), Taranaki Basin, northwest Nelson, New Zealand. <i>New Zealand Journal of Geology, and Geophysics</i> , 2020, 63, 1-34.	1.8	3
46	Highly heterogeneous mantle caused by recycling of oceanic lithosphere from the mantle transition zone. <i>Earth and Planetary Science Letters</i> , 2022, 593, 117679.	4.4	2
47	The role of axial discontinuities in oceanic crustal evolution: Evidence from elemental and Mo Sr Nd Pb Hf isotopic compositions of rock suites from the Southwest Indian Ridge (42�–53�E). <i>Marine Geology</i> , 2021, 442, 106626.	2.1	1
48	Melt inclusion formation during olivine recrystallization: Evidence from stable isotopes. <i>Earth and Planetary Science Letters</i> , 2022, 592, 117638.	4.4	1