

Jacob B Lowenstern

List of Publications by Year in descending order

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67
papers

6,560
citations

87888

38
h-index

102487

66
g-index

85
all docs

85
docs citations

85
times ranked

4488
citing authors

#	ARTICLE	IF	CITATIONS
1	The role of magmas in the formation of hydrothermal ore deposits. <i>Nature</i> , 1994, 370, 519-527.	27.8	1,465
2	VolatileCalc: a silicate melt-H ₂ O-CO ₂ solution model written in Visual Basic for excel. <i>Computers and Geosciences</i> , 2002, 28, 597-604.	4.2	812
3	Magma Generation at a Large, Hyperactive Silicic Volcano (Taupo, New Zealand) Revealed by U-Th and U-Pb Systematics in Zircons. <i>Journal of Petrology</i> , 2005, 46, 3-32.	2.8	349
4	Carbon dioxide in magmas and implications for hydrothermal systems. <i>Mineralium Deposita</i> , 2001, 36, 490-502.	4.1	324
5	Late Pleistocene granodiorite source for recycled zircon and phenocrysts in rhyodacite lava at Crater Lake, Oregon. <i>Earth and Planetary Science Letters</i> , 2005, 233, 277-293.	4.4	180
6	Evidence for Extreme Partitioning of Copper into a Magmatic Vapor Phase. <i>Science</i> , 1991, 252, 1405-1409.	12.6	131
7	The ubiquitous nature of accessory calcite in granitoid rocks: Implications for weathering, solute evolution, and petrogenesis. <i>Geochimica Et Cosmochimica Acta</i> , 2005, 69, 1455-1471.	3.9	131
8	Monitoring a Supervolcano in Repose: Heat and Volatile Flux at the Yellowstone Caldera. <i>Elements</i> , 2008, 4, 35-40.	0.5	131
9	Dynamics of the Yellowstone hydrothermal system. <i>Reviews of Geophysics</i> , 2014, 52, 375-411.	23.0	122
10	Volatile transport in a convecting magma column: Implications for porphyry Mo mineralization. <i>Geology</i> , 1995, 23, 1091.	4.4	116
11	Zircon crystallization and recycling in the magma chamber of the rhyolitic Kos Plateau Tuff (Aegean) Tj ETQq1 1 0.784314 rgBT / Overlo	4.4	116
12	Mantle to surface degassing of alkalic magmas at Erebus volcano, Antarctica. <i>Earth and Planetary Science Letters</i> , 2011, 306, 261-271.	4.4	116
13	Dissolved volatile concentrations in an ore-forming magma. <i>Geology</i> , 1994, 22, 893.	4.4	113
14	New data on magmatic H ₂ O contents of pantellerites, with implications for petrogenesis and eruptive dynamics at Pantelleria. <i>Bulletin of Volcanology</i> , 1991, 54, 78-83.	3.0	112
15	Evidence for a copper-bearing fluid in magma erupted at the Valley of ten thousand smokes, Alaska. <i>Contributions To Mineralogy and Petrology</i> , 1993, 114, 409-421.	3.1	101
16	Monitoring super-volcanoes: geophysical and geochemical signals at Yellowstone and other large caldera systems. <i>Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences</i> , 2006, 364, 2055-2072.	3.4	98
17	Crystallisation ages in coeval silicic magma bodies: ²³⁸ U- ²³⁰ Th disequilibrium evidence from the Rotoiti and Earthquake Flat eruption deposits, Taupo Volcanic Zone, New Zealand. <i>Earth and Planetary Science Letters</i> , 2003, 206, 441-457.	4.4	94
18	Origin of a rhyolite that intruded a geothermal well while drilling at the Krafla volcano, Iceland. <i>Geology</i> , 2011, 39, 231-234.	4.4	86

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19	Analytical techniques for volatiles: A case study using intermediate (andesitic) glasses. <i>American Mineralogist</i> , 2002, 87, 1077-1089.	1.9	83
20	Comagmatic A-type Granophyre and Rhyolite from the Alid Volcanic Center, Eritrea, Northeast Africa. <i>Journal of Petrology</i> , 1997, 38, 1707-1721.	2.8	74
21	U–Th dating of single zircons from young granitoid xenoliths: new tools for understanding volcanic processes. <i>Earth and Planetary Science Letters</i> , 2000, 183, 291-302.	4.4	73
22	What makes hydromagmatic eruptions violent? Some insights from the Keanakāko'i Ash, Kīlauea Volcano, Hawai'i. <i>Journal of Volcanology and Geothermal Research</i> , 2004, 137, 15-31.	2.1	69
23	Prodigious degassing of a billion years of accumulated radiogenic helium at Yellowstone. <i>Nature</i> , 2014, 506, 355-358.	27.8	69
24	Volatile emissions and gas geochemistry of Hot Spring Basin, Yellowstone National Park, USA. <i>Journal of Volcanology and Geothermal Research</i> , 2008, 178, 751-762.	2.1	68
25	Molybdenite Saturation in Silicic Magmas: Occurrence and Petrological Implications. <i>Journal of Petrology</i> , 2011, 52, 891-904.	2.8	68
26	The role of dyking and fault control in the rapid onset of eruption at Chaitān volcano, Chile. <i>Nature</i> , 2011, 478, 374-377.	27.8	65
27	Use of ASTER and MODIS thermal infrared data to quantify heat flow and hydrothermal change at Yellowstone National Park. <i>Journal of Volcanology and Geothermal Research</i> , 2012, 233-234, 72-89.	2.1	65
28	Exsolved magmatic fluid and its role in the formation of comb-layered quartz at the Cretaceous Logtung W-Mo deposit, Yukon Territory, Canada. <i>Earth and Environmental Science Transactions of the Royal Society of Edinburgh</i> , 1996, 87, 291-303.	0.3	63
29	The 2017–19 activity at Mount Agung in Bali (Indonesia): Intense unrest, monitoring, crisis response, evacuation, and eruption. <i>Scientific Reports</i> , 2019, 9, 8848.	3.3	57
30	Composition and origin of rhyolite melt intersected by drilling in the Krafla geothermal field, Iceland. <i>Contributions To Mineralogy and Petrology</i> , 2013, 165, 327-347.	3.1	54
31	A review of the contrasting behavior of two magmatic volatiles: chlorine and carbon dioxide. <i>Journal of Geochemical Exploration</i> , 2000, 69-70, 287-290.	3.2	51
32	Origins of geothermal gases at Yellowstone. <i>Journal of Volcanology and Geothermal Research</i> , 2015, 302, 87-101.	2.1	51
33	Melt inclusions come of age: Volatiles, volcanoes, and sorby's legacy. <i>Developments in Volcanology</i> , 2003, 5, 1-21.	0.5	50
34	Spatial and temporal geochemical trends in the hydrothermal system of Yellowstone National Park: Inferences from river solute fluxes. <i>Journal of Volcanology and Geothermal Research</i> , 2007, 162, 149-171.	2.1	49
35	Analysis of H ₂ O in silicate glass using attenuated total reflectance (ATR) micro-FTIR spectroscopy. <i>American Mineralogist</i> , 2013, 98, 1660-1668.	1.9	46
36	Modeling ash fall distribution from a Yellowstone supereruption. <i>Geochemistry, Geophysics, Geosystems</i> , 2014, 15, 3459-3475.	2.5	46

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37	Generation and evolution of hydrothermal fluids at Yellowstone: Insights from the Heart Lake Geyser Basin. <i>Geochemistry, Geophysics, Geosystems</i> , 2012, 13, .	2.5	43
38	Quantifying gas emissions from the "Millennium Eruption" of Paektu volcano, Democratic People's Republic of Korea/China. <i>Science Advances</i> , 2016, 2, e1600913.	10.3	43
39	The Chait�n rhyolite lava dome: Eruption sequence, lava dome volumes, rapid effusion rates and source of the rhyolite magma. <i>Andean Geology</i> , 2013, 40, .	0.5	42
40	Insights from fumarole gas geochemistry on the origin of hydrothermal fluids on the Yellowstone Plateau. <i>Geochimica Et Cosmochimica Acta</i> , 2012, 89, 265-278.	3.9	40
41	Extreme U-Th Disequilibrium in Rift-Related Basalts, Rhyolites and Granophyric Granite and the Timescale of Rhyolite Generation, Intrusion and Crystallization at Alid Volcanic Center, Eritrea. <i>Journal of Petrology</i> , 2006, 47, 2105-2122.	2.8	39
42	Melt Inclusions. , 2014, , 143-173.		34
43	Vapor-bubble growth in olivine-hosted melt inclusions. <i>American Mineralogist</i> , 2020, 105, 1898-1919.	1.9	33
44	Age of the Rockland tephra, western USA. <i>Quaternary Research</i> , 2004, 62, 94-104.	1.7	31
45	The occurrence and distribution of Mo and molybdenite in unaltered peralkaline rhyolites from Pantelleria, Italy. <i>Contributions To Mineralogy and Petrology</i> , 1993, 114, 119-129.	3.1	30
46	Carbon dioxide and hydrogen sulfide degassing and cryptic thermal input to Brimstone Basin, Yellowstone National Park, Wyoming. <i>Chemical Geology</i> , 2012, 330-331, 233-243.	3.3	30
47	River solute fluxes reflecting active hydrothermal chemical weathering of the Yellowstone Plateau Volcanic Field, USA. <i>Chemical Geology</i> , 2010, 276, 331-343.	3.3	28
48	Degassing of Cl, F, Li, and Be during extrusion and crystallization of the rhyolite dome at Volc�n Chait�n, Chile during 2008 and 2009. <i>Bulletin of Volcanology</i> , 2012, 74, 2303-2319.	3.0	27
49	Guidelines for volcano-observatory operations during crises: recommendations from the 2019 volcano observatory best practices meeting. <i>Journal of Applied Volcanology</i> , 2022, 11, .	2.0	26
50	Causes of distal volcano-tectonic seismicity inferred from hydrothermal modeling. <i>Journal of Volcanology and Geothermal Research</i> , 2017, 345, 98-108.	2.1	23
51	Interdisciplinary Studies of Eruption at Chait�n Volcano, Chile. <i>Eos</i> , 2010, 91, 381-382.	0.1	22
52	Monitoring gas and heat emissions at Norris Geysers Basin, Yellowstone National Park, USA based on a combined eddy covariance and Multi-GAS approach. <i>Journal of Volcanology and Geothermal Research</i> , 2017, 347, 312-326.	2.1	22
53	A geochemical reconnaissance of the Alid volcanic center and geothermal system, Danakil depression, Eritrea. <i>Geothermics</i> , 1999, 28, 161-187.	3.4	18
54	Multireaction equilibrium geothermometry: A sensitivity analysis using data from the Lower Geysers Basin, Yellowstone National Park, USA. <i>Journal of Volcanology and Geothermal Research</i> , 2016, 328, 105-114.	2.1	17

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55	Solute and geothermal flux monitoring using electrical conductivity in the Madison, Firehole, and Gibbon Rivers, Yellowstone National Park. <i>Applied Geochemistry</i> , 2012, 27, 2370-2381.	3.0	15
56	Radiocarbon dating of silica sinter deposits in shallow drill cores from the Upper Geyser Basin, Yellowstone National Park. <i>Journal of Volcanology and Geothermal Research</i> , 2016, 310, 132-136.	2.1	15
57	Magma Intrusion and Volatile Ascent Beneath Norris Geyser Basin, Yellowstone National Park. <i>Journal of Geophysical Research: Solid Earth</i> , 2020, 125, e2019JB018208.	3.4	15
58	Identifying bubble collapse in a hydrothermal system using hidden Markov models. <i>Geophysical Research Letters</i> , 2012, 39, .	4.0	14
59	Strengthening local volcano observatories through global collaborations. <i>Bulletin of Volcanology</i> , 2022, 84, .	3.0	13
60	Chapter 7 Magmatic-hydrothermal fluid interaction and mineralization in alkali-syenite nodules from the Breccia Museo pyroclastic deposit, Naples, Italy. <i>Developments in Volcanology</i> , 2006, , 125-161.	0.5	11
61	The West Mageik Lake Sill Complex as an analogue for magma transport during the 1912 Eruption at the Valley of Ten Thousand Smokes, Alaska. <i>Geophysical Research Letters</i> , 1991, 18, 1569-1572.	4.0	10
62	Geothermal solute flux monitoring and the source and fate of solutes in the Snake River, Yellowstone National Park, WY. <i>Applied Geochemistry</i> , 2016, 73, 142-156.	3.0	10
63	Petrogenesis of high-silica rhyolite on the Alaska Peninsula. <i>Geophysical Research Letters</i> , 1991, 18, 1565-1568.	4.0	8
64	Bursting the bubble of melt inclusions. <i>American Mineralogist</i> , 2015, 100, 672-673.	1.9	8
65	Contamination of basaltic lava by seawater: Evidence found in a lava pillar from Axial Seamount, Juan de Fuca Ridge. <i>Geochemistry, Geophysics, Geosystems</i> , 2010, 11, .	2.5	7
66	An Experimental Investigation of Interaction between Andesite and Hyperacidic Volcanic Lake Water. <i>Minerals (Basel, Switzerland)</i> , 2020, 10, 96.	2.0	6
67	Conversion of Wet Glass to Melt at Lower Seismogenic Zone Conditions: Implications for Pseudotachylyte Creep. <i>Geophysical Research Letters</i> , 2017, 44, 10,248.	4.0	5