

Luca Caricchi

List of Publications by Year in descending order

Source: <https://exaly.com/author-pdf/1941062/publications.pdf>

Version: 2024-02-01

66
papers

3,243
citations

159585

30
h-index

155660

55
g-index

74
all docs

74
docs citations

74
times ranked

2272
citing authors

#	ARTICLE	IF	CITATIONS
1	Determining the State of Activity of Transcrustal Magmatic Systems and Their Volcanoes. Annual Review of Earth and Planetary Sciences, 2022, 50, 231-259.	11.0	22
2	A Machine Learning-Based Approach to Clinopyroxene Thermobarometry: Model Optimization and Distribution for Use in Earth Sciences. Journal of Geophysical Research: Solid Earth, 2022, 127, .	3.4	26
3	Machine learning thermobarometry and chemometry using amphibole and clinopyroxene: a window into the roots of an arc volcano (Mount Liamuiga, Saint Kitts). Contributions To Mineralogy and Petrology, 2022, 177, 1.	3.1	27
4	Supergiant porphyry copper deposits are failed large eruptions. Communications Earth & Environment, 2022, 3, .	6.8	12
5	CO ₂ favours the accumulation of excess fluids in felsic magmas. Terra Nova, 2021, 33, 120-128.	2.1	8
6	Magmatic Evolution of Zoned and Unzoned Ignimbrites: Evidence for a Complex Crustal Architecture Feeding four Rapid-sequence, Caldera-forming Eruptions in the San Juan Mountains, Colorado. Journal of Petrology, 2021, 62, .	2.8	10
7	Seismic Attenuation During Magma Vesiculation: A Combination of Laboratory Constraints and Modeling. Geophysical Research Letters, 2021, 48, e2020GL092315.	4.0	2
8	The build-up and triggers of volcanic eruptions. Nature Reviews Earth & Environment, 2021, 2, 458-476.	29.7	44
9	Quantitative chemical mapping of plagioclase as a tool for the interpretation of volcanic stratigraphy: an example from Saint Kitts, Lesser Antilles. Bulletin of Volcanology, 2021, 83, 51.	3.0	13
10	Zircon geochronology suggests a long-living and active magmatic system beneath the Ciomadul volcanic dome field (eastern-central Europe). Earth and Planetary Science Letters, 2021, 565, 116965.	4.4	14
11	Growth and thermal maturation of the Toba magma reservoir. Proceedings of the National Academy of Sciences of the United States of America, 2021, 118, .	7.1	12
12	Timescales and thermal evolution of large silicic magma reservoirs during an ignimbrite flare-up: perspectives from zircon. Contributions To Mineralogy and Petrology, 2021, 176, 1.	3.1	12
13	Magmatic Forcing of Cenozoic Climate?. Journal of Geophysical Research: Solid Earth, 2020, 125, e2018JB016460.	3.4	15
14	The Long-Term Life-Cycle of Nevado de Toluca Volcano (Mexico): Insights Into the Origin of Petrologic Modes. Frontiers in Earth Science, 2020, 8, .	1.8	3
15	Machine Learning ThermoBarometry: Application to Clinopyroxene-Bearing Magmas. Journal of Geophysical Research: Solid Earth, 2020, 125, e2020JB020130.	3.4	44
16	Magma diversity reflects recharge regime and thermal structure of the crust. Scientific Reports, 2020, 10, 11867.	3.3	18
17	Determining the current size and state of subvolcanic magma reservoirs. Nature Communications, 2020, 11, 5477.	12.8	22
18	Tectonic Controls on Global Variations of Large-Magnitude Explosive Eruptions in Volcanic Arcs. Frontiers in Earth Science, 2020, 8, .	1.8	11

#	ARTICLE	IF	CITATIONS
19	A Data Driven Approach to Investigate the Chemical Variability of Clinopyroxenes From the 2014–2015 Holuhraun–Bárdarbunga Eruption (Iceland). <i>Frontiers in Earth Science</i> , 2020, 8, .	1.8	14
20	Temporal Magnetotellurics Reveals Mechanics of the 2012 Mount Tongariro, NZ, Eruption. <i>Geophysical Research Letters</i> , 2020, 47, e2019GL086429.	4.0	14
21	A Recurrent Magmatic Pattern on Observable Timescales Prior to Plinian Eruptions From Nevado de Toluca (Mexico). <i>Journal of Geophysical Research: Solid Earth</i> , 2019, 124, 10999-11021.	3.4	17
22	Melt segregation and the architecture of magmatic reservoirs: insights from the Muroto sill (Japan). <i>Contributions To Mineralogy and Petrology</i> , 2019, 174, 1.	3.1	16
23	Zircon Petrochronology and ⁴⁰ Ar/ ³⁹ Ar Thermochronology of the Adamello Intrusive Suite, N. Italy: Monitoring the Growth and Decay of an Incrementally Assembled Magmatic System. <i>Journal of Petrology</i> , 2019, 60, 701-722.	2.8	38
24	Magma Degassing as a Source of Long-Term Seismicity at Volcanoes: The Ischia Island (Italy) Case. <i>Geophysical Research Letters</i> , 2019, 46, 14421-14429.	4.0	36
25	The role of H ₂ O on the extraction of melt from crystallising magmas. <i>Earth and Planetary Science Letters</i> , 2019, 508, 85-96.	4.4	43
26	A cross correlation method for chemical profiles in minerals, with an application to zircons of the Kilgore Tuff (USA). <i>Contributions To Mineralogy and Petrology</i> , 2018, 173, 1.	3.1	9
27	Modulation of magmatic processes by CO ₂ flushing. <i>Earth and Planetary Science Letters</i> , 2018, 491, 160-171.	4.4	116
28	Does the Shape of a Volcano Reflect Its Personality?. <i>Frontiers for Young Minds</i> , 2018, 6, .	0.8	0
29	Tempo of magma degassing and the genesis of porphyry copper deposits. <i>Scientific Reports</i> , 2017, 7, 40566.	3.3	115
30	Stochastic modelling of deep magmatic controls on porphyry copper deposit endowment. <i>Scientific Reports</i> , 2017, 7, 44523.	3.3	106
31	Regional variability in the frequency and magnitude of large explosive volcanic eruptions. <i>Geology</i> , 2017, 45, 111-114.	4.4	21
32	Magmatic pulse driven by sea-level changes associated with the Messinian salinity crisis. <i>Nature Geoscience</i> , 2017, 10, 783-787.	12.9	46
33	Evidence for Residual Melt Extraction in the Takidani Pluton, Central Japan. <i>Journal of Petrology</i> , 2017, 58, 763-788.	2.8	59
34	Caldera resurgence driven by magma viscosity contrasts. <i>Nature Communications</i> , 2017, 8, 1750.	12.8	54
35	From magma ascent to ash generation: investigating volcanic conduit processes by integrating experiments, numerical modeling, and observations. <i>Annals of Geophysics</i> , 2017, 60, .	1.0	5
36	Deglaciation and glacial erosion: A joint control on magma productivity by continental unloading. <i>Geophysical Research Letters</i> , 2016, 43, 1632-1641.	4.0	26

#	ARTICLE	IF	CITATIONS
37	Rheological flow laws for multiphase magmas: An empirical approach. <i>Journal of Volcanology and Geothermal Research</i> , 2016, 321, 158-170.	2.1	37
38	Unravelling textural heterogeneity in obsidian: Shear-induced outgassing in the Rocche Rosse flow. <i>Journal of Volcanology and Geothermal Research</i> , 2016, 310, 137-158.	2.1	27
39	In situ X-ray tomographic microscopy observations of vesiculation of bubble-free and bubble-bearing magmas. <i>Bulletin of Volcanology</i> , 2015, 77, 1.	3.0	16
40	The Viscous to Brittle Transition in Crystal- and Bubble-Bearing Magmas. <i>Frontiers in Earth Science</i> , 2015, 3, .	1.8	25
41	Experimental petrology of monotonous intermediate magmas. <i>Geological Society Special Publication</i> , 2015, 422, 105-130.	1.3	54
42	The temporal evolution of chemical and physical properties of magmatic systems. <i>Geological Society Special Publication</i> , 2015, 422, 1-15.	1.3	34
43	Strain-induced outgassing of three-phase magmas during simple shear. <i>Journal of Geophysical Research: Solid Earth</i> , 2014, 119, 6936-6957.	3.4	50
44	Frequency and magnitude of volcanic eruptions controlled by magma injection and buoyancy. <i>Nature Geoscience</i> , 2014, 7, 126-130.	12.9	156
45	The influence of cooling, crystallisation and re-melting on the interpretation of geodetic signals in volcanic systems. <i>Earth and Planetary Science Letters</i> , 2014, 388, 166-174.	4.4	60
46	Linking rapid magma reservoir assembly and eruption trigger mechanisms at evolved Yellowstone-type supervolcanoes. <i>Geology</i> , 2014, 42, 807-810.	4.4	97
47	Zircons reveal magma fluxes in the Earth's crust. <i>Nature</i> , 2014, 511, 457-461.	27.8	81
48	Rheology of volatile-bearing crystal mushes: Mobilization vs. viscous death. <i>Chemical Geology</i> , 2013, 345, 16-39.	3.3	85
49	Deformation experiments of bubble- and crystal-bearing magmas: Rheological and microstructural analysis. <i>Journal of Geophysical Research</i> , 2012, 117, .	3.3	115
50	Insights into the mechanisms and timescales of pluton assembly from deformation patterns of mafic enclaves. <i>Journal of Geophysical Research</i> , 2012, 117, .	3.3	24
51	The viscous-brittle transition of crystal-bearing silicic melt: Direct observation of magma rupture and healing. <i>Geology</i> , 2012, 40, 611-614.	4.4	113
52	Melt migration in basalt columns driven by crystallization-induced pressure gradients. <i>Nature Communications</i> , 2011, 2, 299.	12.8	31
53	Potential causes for the non-Newtonian rheology of crystal-bearing magmas. <i>Geochemistry, Geophysics, Geosystems</i> , 2011, 12, .	2.5	37
54	Experimental determination of electrical conductivity during deformation of melt-bearing olivine aggregates: Implications for electrical anisotropy in the oceanic low velocity zone. <i>Earth and Planetary Science Letters</i> , 2011, 302, 81-94.	4.4	53

#	ARTICLE	IF	CITATIONS
55	Degassing processes during lava dome growth: Insights from Santiaguito lava dome, Guatemala. <i>Journal of Volcanology and Geothermal Research</i> , 2011, 202, 153-166.	2.1	106
56	Application of fractal fragmentation theory to natural pyroclastic deposits: Insights into volcanic explosivity of the Valentano scoria cone (Italy). <i>Journal of Volcanology and Geothermal Research</i> , 2011, 202, 200-210.	2.1	23
57	Strain-induced magma degassing: insights from simple-shear experiments on bubble bearing melts. <i>Bulletin of Volcanology</i> , 2011, 73, 1245-1257.	3.0	71
58	Rheological control on the dynamics of explosive activity in the 2000 summit eruption of Mt. Etna. <i>Solid Earth</i> , 2010, 1, 61-69.	2.8	22
59	Experimental constraints on the crystallization of natrocarbonatitic lava flows. <i>Bulletin of Volcanology</i> , 2009, 71, 1179-1193.	3.0	9
60	A model for the rheology of particle-bearing suspensions and partially molten rocks. <i>Geochemistry, Geophysics, Geosystems</i> , 2009, 10, .	2.5	304
61	Propagation of P and S-waves in magmas with different crystal contents: Insights into the crystallinity of magmatic reservoirs. <i>Journal of Volcanology and Geothermal Research</i> , 2008, 178, 740-750.	2.1	50
62	Rheological properties of magma from the 1538 eruption of Monte Nuovo (Phlegrean Fields, Italy): An experimental study. <i>Chemical Geology</i> , 2008, 256, 158-171.	3.3	48
63	Non-Newtonian rheology of crystal-bearing magmas and implications for magma ascent dynamics. <i>Earth and Planetary Science Letters</i> , 2007, 264, 402-419.	4.4	390
64	Application of High Spatial Resolution Laser Ablation ICP-MS to Crystal-Melt Trace Element Partition Coefficient Determination. <i>Geostandards and Geoanalytical Research</i> , 2007, 31, 13-25.	1.9	18
65	A high-pressure experimental study on the evolution of the silicic magmatism of the Main Ethiopian Rift. <i>Lithos</i> , 2006, 91, 46-58.	1.4	30
66	Estimates of Volume and Magma Input in Crustal Magmatic Systems from Zircon Geochronology: The Effect of Modeling Assumptions and System Variables. <i>Frontiers in Earth Science</i> , 0, 4, .	1.8	21