Daniele Giordano

List of Publications by Year
in descending order

66 papers	4,144 citations	136950 32 h-index	110387 64 g-index
72 all docs	72 docs citations	72 times ranked	2367 citing authors

#	Article	IF	Citations
1	Viscosity of magmatic liquids: A model. Earth and Planetary Science Letters, 2008, 271, 123-134.	4.4	1,257
2	Non-Arrhenian multicomponent melt viscosity: a model. Earth and Planetary Science Letters, 2003, 208, 337-349.	4.4	188
3	Viscosity of hydrous Etna basalt: implications for Plinian-style basaltic eruptions. Bulletin of Volcanology, 2003, 65, 8-14.	3.0	176
4	The rheology of crystal-bearing basaltic magmas from Stromboli and Etna. Geochimica Et Cosmochimica Acta, 2011, 75, 3214-3236.	3.9	166
5	Glass transition temperatures of natural hydrous melts: a relationship with shear viscosity and implications for the welding process. Journal of Volcanology and Geothermal Research, 2005, 142, 105-118.	2.1	150
6	The combined effects of water and fluorine on the viscosity of silicic magmas. Geochimica Et Cosmochimica Acta, 2004, 68, 5159-5168.	3.9	135
7	An expanded non-Arrhenian model for silicate melt viscosity: A treatment for metaluminous, peraluminous and peralkaline liquids. Chemical Geology, 2006, 229, 42-56.	3.3	126
8	Viscosity of peridotite liquid. Earth and Planetary Science Letters, 2004, 226, 127-138.	4.4	86
9	Influence of glass polymerisation and oxidation on micro-Raman water analysis in alumino-silicate glasses. Geochimica Et Cosmochimica Acta, 2009, 73, 197-217.	3.9	86
10	High-temperature limits on viscosity of non-Arrhenian silicate melts. American Mineralogist, 2004, 88, 1390-1394.	1.9	84
11	The viscosity of trachytes, and comparison with basalts, phonolites, and rhyolites. Chemical Geology, 2004, 213, 49-61.	3.3	83
12	The dry and hydrous viscosities of alkaline melts from Vesuvius and Phlegrean Fields. Chemical Geology, 2003, 202, 23-38.	3.3	80
13	Predicting shear viscosity during volcanic processes at the glass transition: a calorimetric calibration. Earth and Planetary Science Letters, 2002, 198, 417-427.	4.4	73
14	Spectroscopic analysis (FTIR, Raman) of water in mafic and intermediate glasses and glass inclusions. Geochimica Et Cosmochimica Acta, 2010, 74, 5641-5656.	3.9	66
15	Micro-Raman determination of iron redox state in dry natural glasses: Application to peralkaline rhyolites and basalts. Chemical Geology, 2009, 259, 78-88.	3.3	64
16	Viscosity and glass transition temperature of hydrous melts in the system CaAl2Si2O8â€“CaMgSi2O6. Chemical Geology, 2008, 256, 203-215.	3.3	61
17	The rheology of peralkaline rhyolites from Pantelleria Island. Journal of Volcanology and Geothermal Research, 2013, 249, 201-216.	2.1	59
18	The effect of oxygen fugacity on the rheological evolution of crystallizing basaltic melts. Earth and Planetary Science Letters, 2018, 487, 21-32.	4.4	57

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19	Viscosity of a Teide phonolite in the welding interval. Journal of Volcanology and Geothermal Research, 2000, 103, 239-245.	2.1	56
20	A model for the viscosity of rhyolite as a function of H2O-content and pressure: A calibration based on centrifuge piston cylinder experiments. Geochimica Et Cosmochimica Acta, 2008, 72, 6103-6123.	3.9	52
21	Thermo-rheological magma control on the impact of highly fluid lava flows at Mt. Nyiragongo. Geophysical Research Letters, 2007, 34, .	4.0	51
22	Physical properties of CaAl2Si2O8â€“CaMgSi2O6â€“FeOâ€“Fe2O3 melts: Analogues for extra-terrestrial basalt. Chemical Geology, 2013, 346, 93-105.	3.3	51
23	In situ thermal characterization of cooling/crystallizing lavas during rheology measurements and implications for lava flow emplacement. Geochimica Et Cosmochimica Acta, 2016, 195, 244-258.	3.9	51
24	Rheological properties of magma from the 1538 eruption of Monte Nuovo (Phlegrean Fields, Italy): An experimental study. Chemical Geology, 2008, 256, 158-171.	3.3	48
25	The rheological evolution of the 2014/2015 eruption at Holuhraun, central Iceland. Bulletin of Volcanology, 2017, 79, 1.	3.0	45
26	The rheological evolution of alkaline Vesuvius magmas and comparison with alkaline series from the Phlegrean Fields, Etna, Stromboli and Teide. Geochimica Et Cosmochimica Acta, 2009, 73, 6613-6630.	3.9	44
27	Shear Rateâ€Ðependent Disequilibrium Rheology and Dynamics of Basalt Solidification. Geophysical Research Letters, 2018, 45, 6466-6475.	4.0	39
28	A model for silicate melt viscosity in the system CaMgSi2O6-CaAl2Si2O8-NaAlSi3O8. Geochimica Et Cosmochimica Acta, 2005, 69, 5333-5349.	3.9	38
29	Heat capacity, configurational heat capacity and fragility of hydrous magmas. Geochimica Et Cosmochimica Acta, 2014, 142, 314-333.	3.9	37
30	The kinetic fragility of natural silicate melts. Journal of Physics Condensed Matter, 2003, 15, S945-S954.	1.8	35
31	The multiphase rheology of magmas from Monte Nuovo (Campi Flegrei, Italy). Chemical Geology, 2013, 346, 213-227.	3.3	33
32	Influence of composition and thermal history of volcanic glasses on water content as determined by micro-Raman spectrometry. Applied Geochemistry, 2006, 21, 802-812.	3.0	32
33	Texture and composition of pumices and scoriae from the Campi Flegrei caldera (Italy): Implications on the dynamics of explosive eruptions. Geochemistry, Geophysics, Geosystems, 2008, 9, .	2.5	32
34	Dynamics of magma ascent and fragmentation in trachytic versus rhyolitic eruptions. Journal of Volcanology and Geothermal Research, 2004, 131, 93-108.	2.1	29
35	Modelling the non-Arrhenian rheology of silicate melts: Numerical considerations. European Journal of Mineralogy, 2002, 14, 417-428.	1.3	26
36	Effusive silicic volcanism in the ParanÃ¡ Magmatic Province, South Brazil: Physico-chemical conditions of storage and eruption and considerations on the rheological behavior during emplacement. Journal of Volcanology and Geothermal Research, 2018, 355, 115-135.	2.1	23

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37	Effusive silicic volcanism in the ParanÃ¡ Magmatic Province, South Brazil: Evidence for locally-fed lava flows and domes from detailed field work. Journal of Volcanology and Geothermal Research, 2018, 355, 204-218.	2.1	23
38	Towards a structural model for the viscosity of geological melts. Earth and Planetary Science Letters, 2018, 501, 202-212.	4.4	23
39	The 2.0â€“1.88â€¯Ga Paleoproterozoic evolution of the southern Amazonian Craton (Brazil): An interpretation inferred by lithofaciological, geochemical and geochronological data. Gondwana Research, 2019, 70, 1-24.	6.0	23
40	Rheological control on the dynamics of explosive activity in the 2000 summit eruption of Mt. Etna. Solid Earth, 2010, 1, 61-69.	2.8	22
41	A rheological model for glassforming silicate melts in the systems CAS, MAS, MCAS. Journal of Physics Condensed Matter, 2007, 19, 205148.	1.8	20
42	High-temperature deformation of volcanic materials in the presence of water. American Mineralogist, 2008, 93, 74-80.	1.9	20
43	A novel protocol for resolving feldspar crystals in synchrotron X-ray microtomographic images of crystallized natural magmas and synthetic analogs. American Mineralogist, 2016, 101, 2301-2311.	1.9	20
44	Rheology of porous volcanic materials: High-temperature experimentation under controlled water pressure. Chemical Geology, 2008, 256, 216-230.	3.3	19
45	Densification mechanisms of haplogranite glasses as a function of water content and pressure based on density and Raman data. Geochimica Et Cosmochimica Acta, 2014, 138, 158-180.	3.9	19
46	Rapid Updating and Improvement of Airborne LIDAR DEMs Through Ground-Based SfM 3-D Modeling of Volcanic Features. IEEE Transactions on Geoscience and Remote Sensing, 2016, 54, 6687-6699.	6.3	19
47	A Raman spectroscopic tool to estimate chemical composition of natural volcanic glasses. Chemical Geology, 2020, 556, 119819.	3.3	17
48	Dendritic crystallization in hydrous basaltic magmas controls magma mobility within the Earthâ€™s crust. Nature Communications, 2022, 13, .	12.8	17
49	Permeability measurements of Campi Flegrei pyroclastic products: An example from the Campanian Ignimbrite and Monte Nuovo eruptions. Journal of Volcanology and Geothermal Research, 2014, 272, 16-22.	2.1	16
50	A calibrated database of Raman spectra for natural silicate glasses: implications for modelling melt physical properties. Journal of Raman Spectroscopy, 2020, 51, 1822-1838.	2.5	16
51	Modelling configurational entropy of silicate melts. Chemical Geology, 2017, 461, 140-151.	3.3	14
52	Raman Spectroscopy from Laboratory and Proximal to Remote Sensing: A Tool for the Volcanological Sciences. Remote Sensing, 2020, 12, 805.	4.0	13
53	Heat capacity of hydrous trachybasalt from Mt Etna: comparison with CaAl2Si2O8 (An)â€“CaMgSi2O6 (Di) as basaltic proxy compositions. Contributions To Mineralogy and Petrology, 2015, 170, 1.	3.1	12
54	Volcanology of the Southwestern sector of Vesuvius volcano, Italy. Journal of Maps, 2016, 12, 425-440.	2.0	12

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55	Paleoproterozoic felsic volcanism of the TapajÃ³s Mineral Province, Southern Amazon Craton, Brazil. Journal of Volcanology and Geothermal Research, 2016, 310, 98-106.	2.1	11
56	Equilibrium Viscosity and Disequilibrium Rheology of a high Magnesium Basalt from Piton De La Fournaise volcano, La Reunion, Indian Ocean, France. Annals of Geophysics, 2018, 61, .	1.0	11
57	The heat capacity of hydrous multicomponent natural melts and glasses. Chemical Geology, 2017, 461, 96-103.	3.3	8
58	Archaeomagnetic dating of Copper Age furnaces at Croce di Papa village and relations on Vesuvius and Phlegraean Fields volcanic activity. Journal of Volcanology and Geothermal Research, 2018, 349, 217-229.	2.1	8
59	Viscosity of Palmas-type magmas of the ParanÃ¡ Magmatic Province (Rio Grande do Sul State, Brazil): Implications for high-temperature silicic volcanism. Chemical Geology, 2021, 560, 119981.	3.3	8
60	Retrieving dissolved H2O content from micro-Raman spectroscopy on nanolitized silicic glasses: Application to volcanic products of the ParanÃ¡ Magmatic Province, Brazil. Chemical Geology, 2021, 567, 120058.	3.3	7
61	Advances in the rheology of natural multiphase silicate melts: Import for magma transport and lava flow emplacement. Annals of Geophysics, 2019, 61, .	1.0	6
62	Pre-Eruptive Conditions and Dynamics Recorded in Banded Pumices from the El Abrigo Caldera-Forming Eruption (Tenerife, Canary Islands). Journal of Petrology, 2022, 63, .	2.8	6
63	From magma ascent to ash generation: investigating volcanic conduit processes by integrating experiments, numerical modeling, and observations. Annals of Geophysics, 2017, 60, .	1.0	5
64	Giant gas bubbles in a rheomorphic vent fill at the Las CaÃ±adas caldera, Tenerife (Canary Islands). Bulletin of Volcanology, 2009, 71, 919-932.	3.0	4
65	Inflated pyroclasts in proximal fallout deposits reveal abrupt transitions in eruption behaviour. Nature Communications, 2022, 13, .	12.8	4
66	Temperature-pressure-composition model for melt viscosity in the Di-An-Ab system. Chemical Geology, 2021, 560, 119895.	3.3	2