Larry G Mastin

List of Publications by Year
in descending order

41 papers	2,538 citations	236925 25 h-index	265206 42 g-index
54 all docs	54 docs citations	54 times ranked	2095 citing authors

#	Article	IF	Citations
1	A multidisciplinary effort to assign realistic source parameters to models of volcanic ash-cloud transport and dispersion during eruptions. Journal of Volcanology and Geothermal Research, 2009, 186, 10-21.	2.1	561
2	A user-friendly one-dimensional model for wet volcanic plumes. Geochemistry, Geophysics, Geosystems, 2007, 8, n/a-n/a.	2.5	125
3	Volcanic lightning and plume behavior reveal evolving hazards during the April 2015 eruption of Calbuco volcano, Chile. Geophysical Research Letters, 2016, 43, 3563-3571.	4.0	112
4	Insights into volcanic conduit flow from an open-source numerical model. Geochemistry, Geophysics, Geosystems, 2002, 3, 1-18.	2.5	101
5	Thermodynamics of gas and steam-blast eruptions. Bulletin of Volcanology, 1995, 57, 85-98.	3.0	96
6	Gas evolution in eruptive conduits: combining insights from high temperature and pressure decompression experiments with steady-state flow modeling. Journal of Volcanology and Geothermal Research, 2004, 129, 23-36.	2.1	89
7	Ash3d: A finiteâ€volume, conservative numerical model for ash transport and tephra deposition. Journal of Geophysical Research, 2012, 117, .	3.3	72
8	What makes hydromagmatic eruptions violent? Some insights from the KeanakÄko'i Ash, KÄ±Ì„lauea Volcano, Hawai'i. Journal of Volcanology and Geothermal Research, 2004, 137, 15-31.	2.1	69
9	Testing the accuracy of a 1â€D volcanic plume model in estimating mass eruption rate. Journal of Geophysical Research D: Atmospheres, 2014, 119, 2474-2495.	3.3	67
10	Evidence for water influx from a caldera lake during the explosive hydromagmatic eruption of 1790, Kilauea volcano, Hawaii. Journal of Geophysical Research, 1997, 102, 20093-20109.	3.3	65
11	Improved prediction and tracking of volcanic ash clouds. Journal of Volcanology and Geothermal Research, 2009, 186, 1-9.	2.1	65
12	Explosive tephra emissions at Mount St. Helens, 1989-1991: The violent escape of magmatic gas following storms?. Bulletin of the Geological Society of America, 1994, 106, 175-185.	3.3	63
13	Hail formation triggers rapid ash aggregation in volcanic plumes. Nature Communications, 2015, 6, 7860.	12.8	59
14	New Zealand supereruption provides time marker for the Last Glacial Maximum in Antarctica. Scientific Reports, 2017, 7, 12238.	3.3	59
15	Cycles of explosive and effusive eruptions at KÄ«lauea Volcano, Hawaiâ€˜i. Geology, 2014, 42, 631-634.	4.4	49
16	Adiabatic temperature changes of magmaâ€"gas mixtures during ascent and eruption. Contributions To Mineralogy and Petrology, 2001, 141, 307-321.	3.1	48
17	The controlling effect of viscous dissipation on magma flow in silicic conduits. Journal of Volcanology and Geothermal Research, 2005, 143, 17-28.	2.1	48
18	Generation of fine hydromagmatic ash by growth and disintegration of glassy rinds. Journal of Geophysical Research, 2007, 112, .	3.3	48

#	ARTICLE	IF	CITATIONS
19	Modeling ash fall distribution from a Yellowstone supereruption. Geochemistry, Geophysics, Geosystems, 2014, 15, 3459-3475.	2.5	46
20	Did ice-charging generate volcanic lightning during the 2016–2017 eruption of Bogoslof volcano, Alaska?. Bulletin of Volcanology, 2020, 82, 1.	3.0	45
21	The roles of magma and groundwater in the phreatic eurptions at Inyo Craters, Long Valley Caldera, California. Bulletin of Volcanology, 1991, 53, 579-596.	3.0	37
22	Improved constraints on the estimated size and volatile content of the Mount St. Helens magma system from the 2004–2008 history of dome growth and deformation. Geophysical Research Letters, 2009, 36, .	4.0	35
23	Confort 15 model of conduit dynamics: applications to Pantelleria Green Tuff and Etna 122 BC eruptions. Contributions To Mineralogy and Petrology, 2016, 171, 1.	3.1	29
24	Globally detected volcanic lightning and umbrella dynamics during the 2014 eruption of Kelud, Indonesia. Journal of Volcanology and Geothermal Research, 2019, 382, 81-91.	2.1	28
25	The Independent Volcanic Eruption Source Parameter Archive (IVESPA, version 1.0): A new observational database to support explosive eruptive column model validation and development. Journal of Volcanology and Geothermal Research, 2021, 417, 107295.	2.1	28
26	Impact of reduced near-field entrainment of overpressured volcanic jets on plume development. Journal of Geophysical Research, 2012, 117, .	3.3	22
27	Injection, transport, and deposition of tephra during event 5 at Redoubt Volcano, 23 March, 2009. Journal of Volcanology and Geothermal Research, 2013, 259, 201-213.	2.1	21
28	Evaluating the state-of-the-art in remote volcanic eruption characterization Part I: Raikoke volcano, Kuril Islands. Journal of Volcanology and Geothermal Research, 2021, 419, 107354.	2.1	21
29	Experimental study of near-field air entrainment by subsonic volcanic jets. Journal of Geophysical Research, 2009, 114, .	3.3	20
30	Adjusting particle-size distributions to account for aggregation in tephra-deposit model forecasts. Atmospheric Chemistry and Physics, 2016, 16, 9399-9420.	4.9	18
31	Laboratory Experiments of Volcanic Ash Resuspension by Wind. Journal of Geophysical Research D: Atmospheres, 2019, 124, 9534-9560.	3.3	18
32	Modeling Ash Dispersal From Future Eruptions of Taupo Supervolcano. Geochemistry, Geophysics, Geosystems, 2019, 20, 3375-3401.	2.5	18
33	Operational Modelling of Umbrella Cloud Growth in a Lagrangian Volcanic Ash Transport and Dispersion Model. Atmosphere, 2020, 11, 200.	2.3	18
34	Experimental Study of Near-Field Entrainment of Moderately Overpressured Jets. Journal of Fluids Engineering, Transactions of the ASME, 2011, 133, .	1.5	16
35	Turbulence, entrainment and low-order description of a transitional variable-density jet. Journal of Fluid Mechanics, 2018, 836, 1009-1049.	3.4	16
36	Evaluating the state-of-the-art in remote volcanic eruption characterization Part II: Ulawun volcano, Papua New Guinea. Journal of Volcanology and Geothermal Research, 2021, 420, 107381.	2.1	10

#	Article	IF	Citations
37	Comparing Simulations of Umbrella-Cloud Growth and Ash Transport with Observations from Pinatubo, Kelud, and Calbuco Volcanoes. Atmosphere, 2020, 11, 1038.	2.3	7
38	Progress in protecting air travel from volcanic ash clouds. Bulletin of Volcanology, 2022, 84, 1.	3.0	6
39	Investigating the Accuracy of One‐Dimensional Volcanic Plume Models using Laboratory Experiments and Field Data. Journal of Geophysical Research: Solid Earth, 2019, 124, 11290-11304.	3.4	4
40	Experimental study of analogue vent erosion towards nozzle shapes. Journal of Volcanology and Geothermal Research, 2018, 367, 79-87.	2.1	3
41	Mechanisms for ballistic block ejection during the 2016–2017 shallow submarine eruption of Bogoslof volcano, Alaska. Bulletin of Volcanology, 2020, 82, 1.	3.0	3