

# Roberto Moretti

## List of Publications by Year in descending order

Source: <https://exaly.com/author-pdf/8153684/publications.pdf>

Version: 2024-02-01

88  
papers

4,461  
citations

94269

37  
h-index

106150

65  
g-index

95  
all docs

95  
docs citations

95  
times ranked

2860  
citing authors

#	ARTICLE	IF	CITATIONS
1	The thermal properties of hydrothermally altered andesites from La Soufrière de Guadeloupe (Eastern Tj ETQq1 1 0.784314 rgBT /Over	0.8	14
2	Bottom-up vs top-down drivers of eruption style: Petro-geochemical constraints from the holocene explosive activity at La Soufrière de Guadeloupe. Journal of Volcanology and Geothermal Research, 2022, 424, 107488.	0.8	8
3	Gas Leakage From Shallow Ponding Magma and Trapdoor Faulting at Sierra Negra Volcano (Isabela) Tj ETQq1 1 0.784314 rgBT /Over	1.0	4
4	Gas Monitoring of Volcanic-Hydrothermal Plumes in a Tropical Environment: The Case of La Soufrière de Guadeloupe Unrest Volcano (Lesser Antilles). Frontiers in Earth Science, 2022, 10, .	0.8	12
5	Decoding water-rock interaction and volatile input at La Soufriere volcano (Guadeloupe) using time-series major and trace element analyses in gas condensates. Journal of Volcanology and Geothermal Research, 2022, 425, 107517.	0.8	5
6	Metallome deregulation and health-related impacts due to long-term exposure to recent volcanic ash deposits: New chemical and isotopic insights. Science of the Total Environment, 2022, 829, 154383.	3.9	1
7	Thermodynamics of Multi-component Gas-Melt Equilibrium in Magmas: Theory, Models, and Applications. Reviews in Mineralogy and Geochemistry, 2022, 87, 431-556.	2.2	9
8	The tensile strength of hydrothermally altered volcanic rocks. Journal of Volcanology and Geothermal Research, 2022, 428, 107576.	0.8	13
9	Monitoring Hydrothermal Activity Using Major and Trace Elements in Low-Temperature Fumarolic Condensates: The Case of La Soufriere de Guadeloupe Volcano. Geosciences (Switzerland), 2022, 12, 267.	1.0	6
10	Redox behavior of degassing magmas: critical review and comparison of glass-based oxybarometers with application to Etna volcano. Comptes Rendus - Geoscience, 2022, 354, 249-279.	0.4	4
11	Whole-rock oxygen isotope ratios as a proxy for the strength and stiffness of hydrothermally altered volcanic rocks. Bulletin of Volcanology, 2022, 84, .	1.1	5
12	A machine-learning approach for automatic classification of volcanic seismicity at La Soufrière Volcano, Guadeloupe. Journal of Volcanology and Geothermal Research, 2021, 411, 107151.	0.8	13
13	A multi-decadal view of the heat and mass budget of a volcano in unrest: La Soufrière de Guadeloupe (French West Indies). Bulletin of Volcanology, 2021, 83, 1.	1.1	20
14	Magmatic Processes at La Soufrière de Guadeloupe: Insights From Crystal Studies and Diffusion Timescales for Eruption Onset. Frontiers in Earth Science, 2021, 9, .	0.8	9
15	Alteration-Induced Volcano Instability at La Soufrière de Guadeloupe (Eastern Caribbean). Journal of Geophysical Research: Solid Earth, 2021, 126, e2021JB022514.	1.4	34
16	Testing gas dispersion modelling: A case study at La Soufrière volcano (Guadeloupe, Lesser Antilles). Journal of Volcanology and Geothermal Research, 2021, 417, 107312.	0.8	6
17	Building a Natural-Hazard-Resilient High-Quality Seismic Network: How WI Network Sustained Hurricanes Maria and Irma. Seismological Research Letters, 2021, 92, 77-84.	0.8	3
18	The Basse-Terre Island of Guadeloupe (Eastern Caribbean, France) and Its Volcanic-Hydrothermal Geodiversity: A Case Study of Challenges, Perspectives, and New Paradigms for Resilience and Sustainability on Volcanic Islands. Geosciences (Switzerland), 2021, 11, 454.	1.0	5

#	ARTICLE	IF	CITATIONS
19	Hydrothermal versus magmatic. , 2020, , 371-406.		7
20	Seismogenic potential of withdrawal-reinjection cycles: Numerical modelling and implication on induced seismicity. <i>Geothermics</i> , 2020, 85, 101770.	1.5	2
21	In situ XANES study of the influence of varying temperature and oxygen fugacity on iron oxidation state and coordination in a phonolitic melt. <i>Contributions To Mineralogy and Petrology</i> , 2020, 175, 1.	1.2	9
22	Earth's Electrodes. <i>Elements</i> , 2020, 16, 157-160.	0.5	11
23	Magmas are the Largest Repositories and Carriers of Earth's Redox Processes. <i>Elements</i> , 2020, 16, 173-178.	0.5	18
24	Volcanic and Geothermal Redox Engines. <i>Elements</i> , 2020, 16, 179-184.	0.5	16
25	The 2018 unrest phase at La Soufrière of Guadeloupe (French West Indies) andesitic volcano: Scrutiny of a failed but prodromal phreatic eruption. <i>Journal of Volcanology and Geothermal Research</i> , 2020, 393, 106769.	0.8	45
26	Intercomparison of geochemical techniques at La Soufrière de Guadeloupe (FWI) volcano: their advantages and their limits over a long-standing unrest. <i>Italian Journal of Geosciences</i> , 2020, 139, 398-412.	0.4	10
27	Spatio-Temporal Relationships between Fumarolic Activity, Hydrothermal Fluid Circulation and Geophysical Signals at an Arc Volcano in Degassing Unrest: La Soufrière of Guadeloupe (French West) <a href="#">Tj ETQq1 1 0.7843142gBT /O</a>	0.7	14
28	The Campi Flegrei caldera unrest: Discriminating magma intrusions from hydrothermal effects and implications for possible evolution. <i>Earth-Science Reviews</i> , 2019, 188, 108-122.	4.0	60
29	Volatile segregation and generation of highly vesiculated explosive magmas by volatile-melt fining processes: The case of the Campanian Ignimbrite eruption. <i>Chemical Geology</i> , 2019, 503, 1-14.	1.4	18
30	Tracking Formation of a Lava Lake From Ground and Space: Masaya Volcano (Nicaragua), 2014–2017. <i>Geochemistry, Geophysics, Geosystems</i> , 2018, 19, 496-515.	1.0	52
31	Feasibility study of a geothermal energy system for indoor swimming pool in Campi Flegrei area. <i>Thermal Science and Engineering Progress</i> , 2018, 6, 421-425.	1.3	18
32	Degassing vs. eruptive styles at Mt. Etna volcano (Sicily, Italy). Part I: Volatile stocking, gas fluxing, and the shift from low-energy to highly explosive basaltic eruptions. <i>Chemical Geology</i> , 2018, 482, 1-17.	1.4	43
33	Caldera unrest driven by CO2-induced drying of the deep hydrothermal system. <i>Scientific Reports</i> , 2018, 8, 8309.	1.6	28
34	A geochemical and geophysical reappraisal to the significance of the recent unrest at Campi Flegrei caldera (Southern Italy). <i>Geochemistry, Geophysics, Geosystems</i> , 2017, 18, 1244-1269.	1.0	38
35	Real-time quadrupole mass spectrometry of hydrothermal gases from the unstable Pisciarelli fumaroles (Campi Flegrei): Trends, challenges and processes. <i>International Journal of Mass Spectrometry</i> , 2017, 415, 44-54.	0.7	8
36	Understanding volcanic hazard at the most populated caldera in the world: Campi Flegrei, Southern Italy. <i>Geochemistry, Geophysics, Geosystems</i> , 2017, 18, 2004-2008.	1.0	13

#	ARTICLE	IF	CITATIONS
37	A $\text{CO}_2$ gas precursor to the March 2015 Villarrica volcano eruption. <i>Geochemistry, Geophysics, Geosystems</i> , 2017, 18, 2120-2132.	1.0	66
38	Improved quantification of $\text{CO}_2$ emission at Campi Flegrei by combined Lagrangian Stochastic and Eulerian dispersion modelling. <i>Atmospheric Environment</i> , 2017, 170, 1-11.	1.9	9
39	The thermal regime of the Campi Flegrei magmatic system reconstructed through 3D numerical simulations. <i>Journal of Volcanology and Geothermal Research</i> , 2016, 328, 210-221.	0.8	23
40	Experimental investigations on the explosivity of steam-driven eruptions: A case study of Solfatara volcano (Campi Flegrei). <i>Journal of Geophysical Research: Solid Earth</i> , 2016, 121, 7996-8014.	1.4	38
41	Turmoil at Turrialba Volcano (Costa Rica): Degassing and eruptive processes inferred from high-frequency gas monitoring. <i>Journal of Geophysical Research: Solid Earth</i> , 2016, 121, 5761-5775.	1.4	105
42	Open-system magma evolution and fluid transfer at Campi Flegrei caldera (Southern Italy) during the past 5 ka as revealed by geochemical and isotopic data: The example of the Nisida eruption. <i>Chemical Geology</i> , 2016, 427, 109-124.	1.4	37
43	Terminal Strombolian activity at Etna's central craters during summer 2012: The most $\text{CO}_2$ -rich volcanic gas ever recorded at Mount Etna. <i>Geochemical Journal</i> , 2016, 50, 123-138.	0.5	11
44	Reactivation of Stromboli's summit craters at the end of the 2007 effusive eruption detected by thermal surveys and seismicity. <i>Journal of Geophysical Research: Solid Earth</i> , 2015, 120, 7376-7395.	1.4	9
45	Rheology of phonolitic magmas – the case of the Erebus lava lake. <i>Earth and Planetary Science Letters</i> , 2015, 411, 53-61.	1.8	35
46	Speciation and amphoteric behaviour of water in aluminosilicate melts and glasses: high-temperature Raman spectroscopy and reaction equilibria. <i>European Journal of Mineralogy</i> , 2014, 25, 777-790.	0.4	24
47	The amphoteric behavior of water in silicate melts from the point of view of their ionic-polymeric constitution. <i>Chemical Geology</i> , 2014, 367, 23-33.	1.4	17
48	Geochemical and isotopic insights into the assembly, evolution and disruption of a magmatic plumbing system before and after a cataclysmic caldera-collapse eruption at Ischia volcano (Italy). <i>Contributions To Mineralogy and Petrology</i> , 2014, 168, 1.	1.2	48
49	Mantle and crustal processes in the magmatism of the Campania region: inferences from mineralogy, geochemistry, and $\text{Sr}$ - $\text{Nd}$ - $\text{O}$ isotopes of young hybrid volcanics of the Ischia island (South Italy). <i>Contributions To Mineralogy and Petrology</i> , 2013, 165, 1173-1194.	1.2	42
50	Multiple magma degassing sources at an explosive volcano. <i>Earth and Planetary Science Letters</i> , 2013, 367, 95-104.	1.8	60
51	The Deep Plumbing System of Ischia: a Physico-chemical Window on the Fluid-saturated and $\text{CO}_2$ -sustained Neapolitan Volcanism (Southern Italy). <i>Journal of Petrology</i> , 2013, 54, 951-984.	1.1	56
52	The active portion of the Campi Flegrei caldera structure imaged by $\text{B}$ inversion of gravity data. <i>Geochemistry, Geophysics, Geosystems</i> , 2013, 14, 4681-4697.	1.0	59
53	Determination of water content in silicate glasses using Raman spectrometry: Implications for the study of explosive volcanism. <i>American Mineralogist</i> , 2012, 97, 779-790.	0.9	94
54	Seismic precursors of a basaltic paroxysmal explosion track deep gas accumulation and slug upraise. <i>Journal of Geophysical Research</i> , 2011, 116, .	3.3	27

#	ARTICLE	IF	CITATIONS
55	Hydrogen in the gas plume of an open-vent volcano, Mount Etna, Italy. <i>Journal of Geophysical Research</i> , 2011, 116, .	3.3	70
56	Modeling the Solubility of Sulfur in Magmas: A 50-Year Old Geochemical Challenge. <i>Reviews in Mineralogy and Geochemistry</i> , 2011, 73, 167-213.	2.2	132
57	A CO <sub>2</sub> -rich magma source beneath the Phlegraean Volcanic District (Southern Italy): Evidence from a melt inclusion study. <i>Chemical Geology</i> , 2011, 287, 66-80.	1.4	59
58	Mantle to surface degassing of alkalic magmas at Erebus volcano, Antarctica. <i>Earth and Planetary Science Letters</i> , 2011, 306, 261-271.	1.8	116
59	14. Sulfur Isotopes in Magmatic-Hydrothermal Systems, Melts, and Magmas. , 2011, , 423-492.		5
60	7. Modeling the Solubility of Sulfur in Magmas: A 50-Year Old Geochemical Challenge. , 2011, , 167-214.		29
61	Sulfur Isotopes in Magmatic-Hydrothermal Systems, Melts, and Magmas. <i>Reviews in Mineralogy and Geochemistry</i> , 2011, 73, 423-492.	2.2	153
62	First <sup>13</sup> C/ <sup>12</sup> C isotopic characterisation of volcanic plume CO <sub>2</sub> . <i>Bulletin of Volcanology</i> , 2011, 73, 531-542.	1.1	52
63	Excess volatiles supplied by mingling of mafic magma at an andesite arc volcano. <i>Geochemistry, Geophysics, Geosystems</i> , 2010, 11, .	1.0	86
64	A model of degassing for Stromboli volcano. <i>Earth and Planetary Science Letters</i> , 2010, 295, 195-204.	1.8	148
65	The feeding system of Agnanoâ€™Monte Spina eruption (Campi Flegrei, Italy): Dragging the past into present activity and future scenarios. <i>Chemical Geology</i> , 2010, 270, 135-147.	1.4	102
66	The 2007 eruption of Stromboli volcano: Insights from real-time measurement of the volcanic gas plume CO <sub>2</sub> /SO <sub>2</sub> ratio. <i>Journal of Volcanology and Geothermal Research</i> , 2009, 182, 221-230.	0.8	155
67	Chlorine partitioning between a basaltic melt and H <sub>2</sub> Oâ€™CO <sub>2</sub> fluids at Mount Etna. <i>Chemical Geology</i> , 2009, 263, 37-50.	1.4	75
68	Heterogeneous large total CO <sub>2</sub> abundance in the shallow magmatic system of Kilauea volcano, Hawaii. <i>Journal of Geophysical Research</i> , 2009, 114, .	3.3	23
69	Polymerisation, basicity, oxidation state and their role in ionic modelling of silicate melts. <i>Annals of Geophysics</i> , 2009, 48, .	0.5	21
70	REE in skarn systems: A LA-ICP-MS study of garnets from the Crown Jewel gold deposit. <i>Geochimica Et Cosmochimica Acta</i> , 2008, 72, 185-205.	1.6	220
71	Modeling the interplay of fO <sub>2</sub> and fS <sub>2</sub> along the FeS-silicate melt equilibrium. <i>Chemical Geology</i> , 2008, 256, 286-298.	1.4	66
72	8th Silicate Melt Workshop. <i>Chemical Geology</i> , 2008, 256, 77-79.	1.4	0

#	ARTICLE	IF	CITATIONS
73	The deep magmatic system of the Campi Flegrei caldera (Italy). <i>Geophysical Research Letters</i> , 2008, 35, .	1.5	85
74	Forecasting Etna eruptions by real-time observation of volcanic gas composition. <i>Geology</i> , 2007, 35, 1115.	2.0	270
75	The origin of the fumaroles of La Solfatara (Campi Flegrei, South Italy). <i>Geochimica Et Cosmochimica Acta</i> , 2007, 71, 3040-3055.	1.6	161
76	Modeling of the thermal state of Mount Vesuvius from 1631 A.D. to present and the role of CO <sub>2</sub> degassing on the volcanic conduit closure after the 1944 A.D. eruption. <i>Journal of Geophysical Research</i> , 2007, 112, .	3.3	8
77	Physics, chemistry and rheology of silicate melts and glasses. <i>Chemical Geology</i> , 2006, 229, 1.	1.4	6
78	The compositional dependence of the saturation surface of H <sub>2</sub> O+CO <sub>2</sub> fluids in silicate melts. <i>Chemical Geology</i> , 2006, 229, 78-95.	1.4	485
79	Geochemistry of the Submarine Gaseous Emissions of Panarea (Aeolian Islands, Southern Italy): Magmatic vs. Hydrothermal Origin and Implications for Volcanic Surveillance. <i>Pure and Applied Geophysics</i> , 2006, 163, 759-780.	0.8	48
80	Solubility and speciation of sulfur in silicate melts: The Conjugated Toop-Samis-Flood-Grjotheim (CTSFG) model. <i>Geochimica Et Cosmochimica Acta</i> , 2005, 69, 801-823.	1.6	85
81	Lux-Flood basicity of binary silicate melts. <i>Journal of Physics and Chemistry of Solids</i> , 2004, 65, 1609-1614.	1.9	22
82	On the oxidation state and volatile behavior in multicomponent gas-melt equilibria. <i>Chemical Geology</i> , 2004, 213, 265-280.	1.4	97
83	A polymeric approach to the sulfide capacity of silicate slags and melts. <i>Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science</i> , 2003, 34, 399-410.	1.0	31
84	Polymerization and disproportionation of iron and sulfur in silicate melts: insights from an optical basicity-based approach. <i>Journal of Non-Crystalline Solids</i> , 2003, 323, 111-119.	1.5	46
85	A model for the saturation of C-O-H-S fluids in silicate melts. <i>Geological Society Special Publication</i> , 2003, 213, 81-101.	0.8	63
86	Oxidation state of iron in silicate glasses and melts: a thermochemical model. <i>Chemical Geology</i> , 2001, 174, 157-179.	1.4	116
87	On the significance of static interactions in silicate garnets. <i>Journal of Physics and Chemistry of Solids</i> , 1998, 59, 893-901.	1.9	2
88	An Appraisal of Endmember Energy and Mixing Properties of Rare Earth Garnets. <i>Geochimica Et Cosmochimica Acta</i> , 1998, 62, 1147-1173.	1.6	34