

Michel cha Pichavant

List of Publications by Year in descending order

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papers

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34105

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#	ARTICLE	IF	CITATIONS
1	Timescales and mechanisms of paroxysm initiation at Stromboli volcano, Aeolian Islands, Italy. <i>Bulletin of Volcanology</i> , 2022, 84, 1.	3.0	7
2	Rare elements enrichment in crustal peraluminous magmas: insights from partial melting experiments. <i>Contributions To Mineralogy and Petrology</i> , 2021, 176, 1.	3.1	22
3	Syn-Eruptive Conditions of the AD 1530 Sub-Plinian Eruption of La Soufrière of Guadeloupe (Lesser Tj ETQq1 1 0.784314 rgBT /Over 1.8 1	1.8	1
4	From magmatic to hydrothermal Sn-Li-(Nb-Ta-W) mineralization: The Argemela area (central Portugal). <i>Ore Geology Reviews</i> , 2020, 116, 103215.	2.7	22
5	Dynamic Crystallization of a Haplogranitic Melt: Application to Pegmatites. <i>Journal of Petrology</i> , 2020, 61, .	2.8	11
6	Magmatic fractionation and the magmatic-hydrothermal transition in rare metal granites: Evidence from Argemela (Central Portugal). <i>Geochimica Et Cosmochimica Acta</i> , 2020, 289, 130-157.	3.9	33
7	Two-mica rhyolitic tephra in the East Pisco Basin (Peru): new age and dispersion constraints for the eruptions of the Eastern Cordillera of Central Andes. <i>Bulletin of Volcanology</i> , 2020, 82, 1.	3.0	2
8	Petrological and experimental constraints on magma storage for large pumiceous eruptions in Dominica island (Lesser Antilles). <i>Bulletin of Volcanology</i> , 2019, 81, 1.	3.0	13
9	Effect of anorthite on granite phase relations: Experimental data and models. <i>Comptes Rendus - Geoscience</i> , 2019, 351, 540-550.	1.2	10
10	Melt inclusions track melt evolution and degassing of Etnean magmas in the last 15 ka. <i>Lithos</i> , 2019, 324-325, 716-732.	1.4	14
11	Storage conditions of the mafic and silicic magmas at Cotopaxi, Ecuador. <i>Journal of Volcanology and Geothermal Research</i> , 2018, 354, 74-86.	2.1	14
12	A Raman calibration for the quantification of SO ₄ ²⁻ groups dissolved in silicate glasses: Application to natural melt inclusions. <i>American Mineralogist</i> , 2017, 102, 2065-2076.	1.9	13
13	Structure of the Plumbing System at Tungurahua Volcano, Ecuador: Insights from Phase Equilibrium Experiments on July–August 2006 Eruption Products. <i>Journal of Petrology</i> , 2017, 58, 1249-1278.	2.8	32
14	Petrological and experimental evidence for differentiation of water-rich magmas beneath St. Kitts, Lesser Antilles. <i>Contributions To Mineralogy and Petrology</i> , 2017, 172, 98.	3.1	42
15	The Influence of Redox State On Mica Crystallization In Leucogranitic and Pegmatitic Liquids. <i>Canadian Mineralogist</i> , 2016, 54, 559-581.	1.0	22
16	Generation Conditions of Dacite and Rhyodacite via the Crystallization of an Andesitic Magma. Implications for the Plumbing System at Santorini (Greece) and the Origin of Tholeiitic or Calc-alkaline Differentiation Trends in Arc Magmas. <i>Journal of Petrology</i> , 2016, 57, 1887-1920.	2.8	31
17	Origin of primitive ultra-calcic arc melts at crustal conditions – Experimental evidence on the La Sommata basalt, Vulcano, Aeolian Islands. <i>Journal of Volcanology and Geothermal Research</i> , 2016, 321, 85-101.	2.1	8
18	Experimental simulation of bubble nucleation and magma ascent in basaltic systems: Implications for Stromboli volcano. <i>American Mineralogist</i> , 2016, 101, 1967-1985.	1.9	26

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19	Homogeneous bubble nucleation in H ₂ O- and H ₂ O-CO ₂ -bearing basaltic melts: Results of high temperature decompression experiments. <i>Journal of Volcanology and Geothermal Research</i> , 2016, 327, 604-621.	2.1	25
20	Constraints from Phase Equilibrium Experiments on Pre-eruptive Storage Conditions in Mixed Magma Systems: a Case Study on Crystal-rich Basaltic Andesites from Mount Merapi, Indonesia. <i>Journal of Petrology</i> , 2016, 57, 535-560.	2.8	39
21	Experimental Constraints on the Formation of Silicic Magmas. <i>Elements</i> , 2016, 12, 109-114.	0.5	107
22	Fe pre-enrichment: A new method to counteract iron loss in experiments on basaltic melts. <i>American Mineralogist</i> , 2015, 100, 2106-2111.	1.9	7
23	The redox geodynamics linking basalts and their mantle sources through space and time. <i>Chemical Geology</i> , 2015, 418, 217-233.	3.3	95
24	The solubility of sulfur in hydrous basaltic melts. <i>Chemical Geology</i> , 2015, 418, 104-116.	3.3	23
25	Differentiation Conditions of a Basaltic Magma from Santorini, and its Bearing on the Production of Andesite in Arc Settings. <i>Journal of Petrology</i> , 2015, 56, 765-794.	2.8	51
26	On the conditions of magma mixing and its bearing on andesite production in the crust. <i>Nature Communications</i> , 2014, 5, 5607.	12.8	77
27	Nature and Evolution of Primitive Vesuvius Magmas: an Experimental Study. <i>Journal of Petrology</i> , 2014, 55, 2281-2310.	2.8	37
28	Amphibole as an archivist of magmatic crystallization conditions: problems, potential, and implications for inferring magma storage prior to the paroxysmal 2010 eruption of Mount Merapi, Indonesia. <i>Contributions To Mineralogy and Petrology</i> , 2014, 167, 1.	3.1	167
29	Generation of CO ₂ -rich melts during basalt magma ascent and degassing. <i>Contributions To Mineralogy and Petrology</i> , 2013, 166, 545-561.	3.1	72
30	Effects of experimental reheating of natural basaltic ash at different temperatures and redox conditions. <i>Contributions To Mineralogy and Petrology</i> , 2013, 165, 863-883.	3.1	22
31	Trachyte Phase Relations and Implication for Magma Storage Conditions in the Chaîne des Puys (French Massif Central). <i>Journal of Petrology</i> , 2013, 54, 1071-1107.	2.8	47
32	A fresh look at crystals in the Bishop Tuff. <i>American Mineralogist</i> , 2013, 98, 529-529.	1.9	0
33	The rheological transition in plagioclase-bearing magmas. <i>Journal of Geophysical Research: Solid Earth</i> , 2013, 118, 1363-1377.	3.4	39
34	Gold solubility in arc magmas: Experimental determination of the effect of sulfur at 1000 Å°C and 0.4 GPa. <i>Geochimica Et Cosmochimica Acta</i> , 2012, 84, 560-592.	3.9	49
35	The carbon dioxide solubility in alkali basalts: an experimental study. <i>Contributions To Mineralogy and Petrology</i> , 2011, 162, 153-168.	3.1	66
36	The H ₂ O solubility of alkali basaltic melts: an experimental study. <i>Contributions To Mineralogy and Petrology</i> , 2011, 162, 133-151.	3.1	87

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37	Petrography, mineralogy and geochemistry of a primitive pumice from Stromboli: implications for the deep feeding system. <i>European Journal of Mineralogy</i> , 2011, 23, 499-517.	1.3	24
38	In situ bubble vesiculation in silicic magmas. <i>American Mineralogist</i> , 2011, 96, 111-124.	1.9	33
39	Rheology and microstructure of experimentally deformed plagioclase suspensions. <i>Geology</i> , 2011, 39, 747-750.	4.4	1
40	Phase Equilibrium Constraints on Pre-eruptive Conditions of Recent Felsic Explosive Volcanism at Pantelleria Island, Italy. <i>Journal of Petrology</i> , 2010, 51, 2245-2276.	2.8	73
41	Methodological re-evaluation of the electrical conductivity of silicate melts. <i>American Mineralogist</i> , 2010, 95, 284-291.	1.9	52
42	Time-dependent changes of the electrical conductivity of basaltic melts with redox state. <i>Geochimica Et Cosmochimica Acta</i> , 2010, 74, 1653-1671.	3.9	37
43	Controls on gold solubility in arc magmas: An experimental study at 1000°C and 4kbar. <i>Geochimica Et Cosmochimica Acta</i> , 2010, 74, 2165-2189.	3.9	45
44	Amorphous Materials: Properties, Structure, and Durability: Arsenic enrichment in hydrous peraluminous melts: Insights from femtosecond laser ablation-inductively coupled plasma-quadrupole mass spectrometry, and in situ X-ray absorption fine structure spectroscopy. <i>American Mineralogist</i> , 2010, 95, 1095-1104.	1.9	43
45	Role of non-mantle CO ₂ in the dynamics of volcano degassing: The Mount Vesuvius example. <i>Geology</i> , 2009, 37, 319-322.	4.4	85
46	Experimental Constraints on the Deep Magma Feeding System at Stromboli Volcano, Italy. <i>Journal of Petrology</i> , 2009, 50, 601-624.	2.8	71
47	Determination of the Liquidus Temperatures of Ashes from the Biomass Gazification for Fuel Production by Thermodynamical and Experimental Approaches. <i>Energy & Fuels</i> , 2009, 23, 6231-6241.	5.1	17
48	Influence of glass polymerisation and oxidation on micro-Raman water analysis in alumino-silicate glasses. <i>Geochimica Et Cosmochimica Acta</i> , 2009, 73, 197-217.	3.9	86
49	THE PERALKALINE TIN-MINERALIZED MADEIRA CRYOLITE ALBITE-RICH GRANITE OF PITINGA, AMAZONIAN CRATON, BRAZIL: PETROGRAPHY, MINERALOGY AND CRYSTALLIZATION PROCESSES. <i>Canadian Mineralogist</i> , 2009, 47, 1301-1327.	1.0	58
50	Limestone assimilation by basaltic magmas: an experimental re-assessment and application to Italian volcanoes. <i>Contributions To Mineralogy and Petrology</i> , 2008, 155, 719-738.	3.1	129
51	Upward migration of Vesuvius magma chamber over the past 20,000 years. <i>Nature</i> , 2008, 455, 216-219.	27.8	131
52	Carbonatite Melts and Electrical Conductivity in the Asthenosphere. <i>Science</i> , 2008, 322, 1363-1365.	12.6	271
53	Conditions for the growth of a long-lived shallow crustal magma chamber below Mount Pelee volcano (Martinique, Lesser Antilles Arc). <i>Journal of Geophysical Research</i> , 2008, 113, .	3.3	73
54	Equilibration Scales in Silicic to Intermediate Magmas Implications for Experimental Studies. <i>Journal of Petrology</i> , 2007, 48, 1955-1972.	2.8	89

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55	Limestone assimilation and the origin of CO ₂ emissions at the Alban Hills (Central Italy): Constraints from experimental petrology. <i>Journal of Volcanology and Geothermal Research</i> , 2007, 166, 91-105.	2.1	88
56	Crystallization of primitive basaltic magmas at crustal pressures and genesis of the calc-alkaline igneous suite: experimental evidence from St Vincent, Lesser Antilles arc. <i>Contributions To Mineralogy and Petrology</i> , 2007, 154, 535-558.	3.1	167
57	STRUCTURAL ENVIRONMENTS AROUND MOLYBDENUM IN SILICATE GLASSES AND MELTS. II. EFFECT OF TEMPERATURE, PRESSURE, H ₂ O, HALOGENS AND SULFUR. <i>Canadian Mineralogist</i> , 2006, 44, 755-773.	1.0	32
58	Basalt-inherited microlites in silicic magmas: Evidence from Mount Pelée (Martinique, French West Indies). <i>Journal of Petrology</i> , 2006, 47, 1317-1343.	4.4	62
59	In situ study of magmatic processes: a new experimental approach. <i>High Pressure Research</i> , 2006, 26, 243-250.	1.2	9
60	Trace element geochemistry of the 1991 Mt. Pinatubo silicic melts, Philippines: Implications for ore-forming potential of adakitic magmatism. <i>Geochimica Et Cosmochimica Acta</i> , 2006, 70, 3702-3716.	3.9	48
61	Experimental Crystallization of a High-K Arc Basalt: the Golden Pumice, Stromboli Volcano (Italy). <i>Journal of Petrology</i> , 2006, 47, 1317-1343.	2.8	163
62	Constraints on dacite magma degassing and regime of the June 15, 1991, climactic eruption of Mount Pinatubo (Philippines): New data on melt and crystal inclusions in quartz. <i>Journal of Volcanology and Geothermal Research</i> , 2005, 145, 35-67.	2.1	29
63	Prostaglandin ₂ affects the differentiation and functions of human dendritic cells: impact on the T _H 1 cell response. <i>European Journal of Immunology</i> , 2005, 35, 1491-1500.	2.9	53
64	Melting kinetics of granitic powder aggregates at 1175°C, 1 atm. <i>European Journal of Mineralogy</i> , 2005, 17, 387-398.	1.3	13
65	Occurrence and Origin of Andalusite in Peraluminous Felsic Igneous Rocks. <i>Journal of Petrology</i> , 2005, 46, 441-472.	2.8	89
66	Petrological and Experimental Constraints on the Pre-eruption Conditions of Holocene Dacite from Volcan San Pedro (36°S, Chilean Andes) and the Importance of Sulphur in Silicic Subduction-related Magmas. <i>Journal of Petrology</i> , 2004, 45, 855-881.	2.8	158
67	The Solubility of Sulphur in Hydrous Rhyolitic Melts. <i>Journal of Petrology</i> , 2004, 45, 2171-2196.	2.8	135
68	Evidence for present-day leucogranite pluton growth in Tibet. <i>Geology</i> , 2004, 32, 801.	4.4	56
69	Role of fO ₂ on fluid saturation in oceanic basalt. <i>Nature</i> , 2004, 430, 1-1.	27.8	11
70	Experimental determination of activities of FeO and Fe ₂ O ₃ components in hydrous silicic melts under oxidizing conditions. <i>Geochimica Et Cosmochimica Acta</i> , 2003, 67, 4389-4409.	3.9	58
71	Experimental constraints on volatile abundances in arc magmas and their implications for degassing processes. <i>Geological Society Special Publication</i> , 2003, 213, 23-52.	1.3	72
72	Chemical transfer during redox exchanges between H ₂ and Fe-bearing silicate melts. <i>American Mineralogist</i> , 2003, 88, 308-315.	1.9	21

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73	Kinetics of iron oxidation-reduction in hydrous silicic melts. <i>American Mineralogist</i> , 2002, 87, 829-837.	1.9	36
74	Physical conditions, structure, and dynamics of a zoned magma chamber: Mount Pelée (Martinique). <i>Journal of Volcanology and Geothermal Research</i> , 2000, 96, 191-206.	3.3	187
75	A thermodynamic model for hydrous silicate melts in the system NaAlSi ₃ O ₈ -KAlSi ₃ O ₈ -Si ₄ O ₈ -H ₂ O. <i>Chemical Geology</i> , 2001, 174, 103-114.	3.3	12
76	The effect of water and fO ₂ on the ferric-ferrous ratio of silicic melts. <i>Chemical Geology</i> , 2001, 174, 255-273.	3.3	101
77	Structural characterization of water-bearing silicate and aluminosilicate glasses by high-resolution solid-state NMR. <i>Chemical Geology</i> , 2001, 174, 291-305.	3.3	60
78	Experimental fragmentation of crystal- and vesicle-bearing silicic melts. <i>Bulletin of Volcanology</i> , 2001, 63, 398-405.	3.0	36
79	Evidence for mantle metasomatism by hydrous silicic melts derived from subducted oceanic crust. <i>Nature</i> , 2001, 410, 197-200.	27.8	446
80	Water solubility in silica and quartzofeldspathic melts. <i>American Mineralogist</i> , 2000, 85, 682-686.	1.9	35
81	Textures, water content and degassing of silicic andesites from recent plinian and dome-forming eruptions at Mount Pelée volcano (Martinique, Lesser Antilles arc). <i>Journal of Volcanology and Geothermal Research</i> , 2000, 96, 191-206.	2.1	53
82	Phase equilibrium constraints on the viscosity of silicic magmas II: implications for mafic-silicic mixing processes. <i>Earth and Environmental Science Transactions of the Royal Society of Edinburgh</i> , 2000, 91, 61-72.	0.3	16
83	Fragmentation of foamed silicic melts: an experimental study. <i>Earth and Planetary Science Letters</i> , 2000, 178, 47-58.	4.4	62
84	Melting of fluorophlogopite-plagioclase pairs at 1 atmosphere. <i>European Journal of Mineralogy</i> , 2000, 12, 315-328.	1.3	16
85	Water solubility in haplogranitic melts coexisting with H ₂ O-H ₂ fluids. <i>Contributions To Mineralogy and Petrology</i> , 1999, 136, 213-224.	3.1	20
86	Effects of O ₂ and H ₂ O on andesite phase relations between 2 and 4 kbar. <i>Journal of Geophysical Research</i> , 1999, 104, 29453-29470.	3.3	185
87	Kinetics of melting of fluorophlogopite-quartz pairs at 1 atmosphere. <i>European Journal of Mineralogy</i> , 1999, 11, 637-654.	1.3	15
88	The effect of temperature and bulk composition on the solution mechanism of phosphorus in peraluminous haplogranitic magma. <i>American Mineralogist</i> , 1999, 84, 1336-1345.	1.9	23
89	Gold solubility and speciation in hydrothermal solutions: experimental study of the stability of hydrosulphide complex of gold (AuHS ₂ ^o) at 350 to 450°C and 500 bars. <i>Geochimica Et Cosmochimica Acta</i> , 1998, 62, 2931-2947.	3.9	115
90	Magma storage conditions and control of eruption regime in silicic volcanoes: experimental evidence from Mt. Pelée. <i>Earth and Planetary Science Letters</i> , 1998, 156, 89-99.	4.4	141

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91	Redox control of sulfur degassing in silicic magmas. <i>Journal of Geophysical Research</i> , 1998, 103, 23937-23949.	3.3	183
92	Phase equilibrium constraints on the viscosity of silicic magmas: 1. Volcanic-plutonic comparison. <i>Journal of Geophysical Research</i> , 1998, 103, 27257-27266.	3.3	170
93	Solution mechanisms of phosphorus in quenched hydrous and anhydrous granitic glass as a function of peraluminosity. <i>Geochimica Et Cosmochimica Acta</i> , 1997, 61, 3913-3926.	3.9	32
94	The influence of H ₂ O-H ₂ fluids and redox conditions on melting temperatures in the haplogranite system. <i>Contributions To Mineralogy and Petrology</i> , 1997, 126, 386-400.	3.1	26
95	Control of redox state and Sr isotopic composition of granitic magmas: a critical evaluation of the role of source rocks. <i>Earth and Environmental Science Transactions of the Royal Society of Edinburgh</i> , 1996, 87, 321-329.	0.3	18
96	Isotopic equilibration during partial melting: an experimental test of the behaviour of Sr. <i>Earth and Planetary Science Letters</i> , 1996, 144, 109-121.	4.4	42
97	High-temperature Raman spectroscopy of silicate and aluminosilicate hydrous glasses: Implications for water speciation. <i>Chemical Geology</i> , 1996, 128, 25-39.	3.3	35
98	Viscosity of Himalayan leucogranites: Implications for mechanisms of granitic magma ascent. <i>Journal of Geophysical Research</i> , 1996, 101, 27691-27699.	3.3	98
99	The combined effects of fO ₂ and melt composition on SnO ₂ solubility and tin diffusivity in haplogranitic melts. <i>Geochimica Et Cosmochimica Acta</i> , 1996, 60, 4965-4976.	3.9	163
100	Chapter 8. EXPERIMENTAL STUDIES OF BORON IN GRANITIC MELTS. , 1996, , 331-386.		18
101	Control of redox state and Sr isotopic composition of granitic magmas: a critical evaluation of the role of source rocks. , 1996, , .		0
102	Biotite resorption in dacite lavas from northeastern Algeria. <i>European Journal of Mineralogy</i> , 1996, 8, 625-638.	1.3	11
103	Ion microprobe determination of water in silicate glasses: methods and applications. <i>Chemical Geology</i> , 1995, 125, 19-28.	3.3	63
104	The effect of on the solubility, diffusion, and speciation of tin in haplogranitic melt at 850Å°C and 2 kbar. <i>Geochimica Et Cosmochimica Acta</i> , 1995, 59, 1579-1588.	3.9	121
105	Experimental Crystallization of Leucogranite Magmas. <i>Journal of Petrology</i> , 1995, 36, 663-705.	2.8	305
106	Synthesis of fluorphlogopite single crystals. Applications to experimental studies. <i>European Journal of Mineralogy</i> , 1995, 7, 1381-1388.	1.3	13
107	Volcano-stratigraphy and ⁴⁰ Ar/ ³⁹ Ar geochronology of the Macusani ignimbrite field: monitor of the Miocene geodynamic evolution of the Andes of southeast Peru. <i>Tectonophysics</i> , 1992, 205, 307-327.	2.2	26
108	Apatite solubility in peraluminous liquids: Experimental data and an extension of the Harrison-Watson model. <i>Geochimica Et Cosmochimica Acta</i> , 1992, 56, 3855-3861.	3.9	202

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109	Peraluminous granites: the effect of alumina on melt composition and coexisting minerals. Earth and Environmental Science Transactions of the Royal Society of Edinburgh, 1992, 83, 409-416.	0.3	18
110	Phase relations and compositional dependence of H ₂ O solubility in quartz-feldspar melts. Chemical Geology, 1992, 96, 303-319.	3.3	59
111	Thermobarometry and granite genesis: the Hercynian low-P, high-T Velay anatectic dome (French) Tj ETQq1 1 0.784314 rgBT /Overloc	3.4	89
112	Morphology of Zirconia Synthesized Hydrothermally from Zirconium Oxychloride. Journal of the American Ceramic Society, 1992, 75, 2515-2519.	3.8	30
113	Effect of excess aluminium on phase relations in the system Qz-Ab-Or: experimental investigation at 2 kbar and reduced H ₂ O-activity. European Journal of Mineralogy, 1992, 4, 137-152.	1.3	33
114	The Miocene-Pliocene Macusani Volcanics, SE Peru. Contributions To Mineralogy and Petrology, 1988, 100, 300-324.	3.1	110
115	The Miocene-Pliocene Macusani Volcanics, SE Peru. Contributions To Mineralogy and Petrology, 1988, 100, 325-338.	3.1	140
116	Petrogenesis of a two-mica ignimbrite suite: the Macusani Volcanics, SE Peru. Earth and Environmental Science Transactions of the Royal Society of Edinburgh, 1988, 79, 197-207.	0.3	13
117	Petrogenesis of tourmaline granites and topaz granites; the contribution of experimental data. Physics of the Earth and Planetary Interiors, 1984, 35, 31-50.	1.9	140
118	Fluid immiscibility in natural processes: Use and misuse of fluid inclusion data. Chemical Geology, 1982, 37, 1-27.	3.3	134
119	Fluid immiscibility in natural processes: Use and misuse of fluid inclusion data. Chemical Geology, 1982, 37, 29-48.	3.3	358
120	An experimental study of the effect of boron on a water saturated haplogranite at 1 Kbar vapour pressure. Contributions To Mineralogy and Petrology, 1981, 76, 430-439.	3.1	179
121	Sulphur behaviour and redox conditions in etnean magmas during magma differentiation and degassing. Journal of Petrology, 0, , .	2.8	10