

# Bruno Scaillet

## List of Publications by Year in descending order

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119  
papers

7,215  
citations

50276

46  
h-index

58581

82  
g-index

121  
all docs

121  
docs citations

121  
times ranked

4884  
citing authors

#	ARTICLE	IF	CITATIONS
1	Spectral Emissivity of Phonolite Lava at High Temperature. IEEE Transactions on Geoscience and Remote Sensing, 2022, 60, 1-15.	6.3	5
2	Redox controls during magma ocean degassing. Earth and Planetary Science Letters, 2022, 577, 117255.	4.4	43
3	Modest volcanic SO <sub>2</sub> emissions from the Indonesian archipelago. Nature Communications, 2022, 13, .	12.8	4
4	Understanding volcanic systems and their dynamics combining field and physical volcanology with petrology studies. , 2021, , 285-328.		1
5	The Role of Sulphur on the Melting of Ca-Poor Sediment and on Trace Element Transfer in Subduction Zones: An Experimental Investigation. Journal of Petrology, 2021, 62, .	2.8	4
6	Magmatic epidote in Archean granitoids of the Carajás province, Amazonian craton, and its stability during magma rise and emplacement. Journal of South American Earth Sciences, 2021, , 103570.	1.4	3
7	Experimental determination of H <sub>2</sub> O and CO <sub>2</sub> solubilities of mafic alkaline magmas from Canary Islands. Comptes Rendus - Geoscience, 2021, 353, 289-314.	1.2	5
8	Perspectives on alkaline magmas. Comptes Rendus - Geoscience, 2021, 353, 1-5.	1.2	2
9	Experimental constraints on pre-eruption conditions of the 1631 Vesuvius eruption. Journal of Volcanology and Geothermal Research, 2020, 406, 107076.	2.1	2
10	Experimental and thermodynamic constraints on mineral equilibrium in pantelleritic magmas. Lithos, 2020, 376-377, 105793.	1.4	9
11	Controls of magma chamber zonation on eruption dynamics and deposits stratigraphy: The case of El Palomar fallout succession (Tenerife, Canary Islands). Journal of Volcanology and Geothermal Research, 2020, 399, 106908.	2.1	9
12	Crystallization Kinetics of Alkali Feldspar in Peralkaline Rhyolitic Melts: Implications for Pantelleria Volcano. Frontiers in Earth Science, 2020, 8, .	1.8	16
13	Role of inherited structure on granite emplacement: An example from the Late Jurassic Shibeï pluton in the Wuyishan area (South China) and its tectonic implications. Tectonophysics, 2020, 779, 228394.	2.2	6
14	Experimental Constraints on Intensive Crystallization Parameters and Fractionation in A-type Granites: A Case Study on the Qitianling Pluton, South China. Journal of Geophysical Research: Solid Earth, 2019, 124, 10132-10152.	3.4	20
15	Titanite: A potential solidus barometer for granitic magma systems. Comptes Rendus - Geoscience, 2019, 351, 551-561.	1.2	21
16	Mantle plumes are oxidised. Earth and Planetary Science Letters, 2019, 527, 115798.	4.4	85
17	On the relationship between oxidation state and temperature of volcanic gas emissions. Earth and Planetary Science Letters, 2019, 520, 260-267.	4.4	26
18	New aspects of magma storage and transfer. Comptes Rendus - Geoscience, 2019, 351, 523-524.	1.2	0

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19	Phase Equilibria of Pantelleria Trachytes (Italy): Constraints on Pre-eruptive Conditions and on the Metaluminous to Peralkaline Transition in Silicic Magmas. <i>Journal of Petrology</i> , 2018, 59, 559-588.	2.8	28
20	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
21	Incremental Emplacement of the Late Jurassic Midcrustal, Lopolith-like Qitianling Pluton, South China, Revealed by AMS and Bouguer Gravity Data. <i>Journal of Geophysical Research: Solid Earth</i> , 2018, 123, 9249-9268.	3.4	17
22	Melting conditions in the modern Tibetan crust since the Miocene. <i>Nature Communications</i> , 2018, 9, 3515.	12.8	31
23	Influence of eruptive style on volcanic gas emission chemistry and temperature. <i>Nature Geoscience</i> , 2018, 11, 678-681.	12.9	30
24	The role of melt composition on aqueous fluid vs. silicate melt partitioning of bromine in magmas. <i>Earth and Planetary Science Letters</i> , 2018, 498, 450-463.	4.4	29
25	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
26	The Influence of Redox State On Mica Crystallization In Leucogranitic and Pegmatitic Liquids. <i>Canadian Mineralogist</i> , 2016, 54, 559-581.	1.0	22
27	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
28	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
29	The impact of degassing on the oxidation state of basaltic magmas: A case study of K�lauea volcano. <i>Earth and Planetary Science Letters</i> , 2016, 450, 317-325.	4.4	118
30	Storage and Evolution of Mafic and Intermediate Alkaline Magmas beneath Ross Island, Antarctica. <i>Journal of Petrology</i> , 2016, 57, 93-118.	2.8	25
31	Experimental Constraints on the Formation of Silicic Magmas. <i>Elements</i> , 2016, 12, 109-114.	0.5	107
32	In defense of magnetite-ilmenite thermometry in the Bishop Tuff and its implication for gradients in silicic magma reservoirs. <i>American Mineralogist</i> , 2016, 101, 469-482.	1.9	39
33	Stratospheric Ozone destruction by the Bronze-Age Minoan eruption (Santorini Volcano, Greece). <i>Scientific Reports</i> , 2015, 5, 12243.	3.3	53
34	Simulating the behavior of volatiles belonging to the C–O–H–S system in silicate melts under magmatic conditions with the software D-Compress. <i>Computers and Geosciences</i> , 2015, 79, 1-14.	4.2	85
35	The redox geodynamics linking basalts and their mantle sources through space and time. <i>Chemical Geology</i> , 2015, 418, 217-233.	3.3	95
36	Megacrystals track magma convection between reservoir and surface. <i>Earth and Planetary Science Letters</i> , 2015, 413, 1-12.	4.4	35

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37	The solubility of sulfur in hydrous basaltic melts. <i>Chemical Geology</i> , 2015, 418, 104-116.	3.3	23
38	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
39	Experimental mixing of hydrous magmas. <i>Chemical Geology</i> , 2015, 418, 158-170.	3.3	15
40	Carbon in the Moon. <i>Nature Geoscience</i> , 2015, 8, 747-748.	12.9	0
41	Carbon dioxide in silica-undersaturated melt Part II: Effect of CO <sub>2</sub> on quenched glass structure. <i>Geochimica Et Cosmochimica Acta</i> , 2014, 144, 202-216.	3.9	12
42	Chloride partitioning and solubility in hydrous phonolites from Erebus volcano: A contribution towards a multi-component degassing model. <i>GeoResJ</i> , 2014, 3-4, 27-45.	1.4	10
43	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
44	A relatively reduced Hadean continental crust and implications for the early atmosphere and crustal rheology. <i>Earth and Planetary Science Letters</i> , 2014, 393, 210-219.	4.4	71
45	Characteristic Textures of Recrystallized, Peritectic, and Primary Magmatic Olivine in Experimental Samples and Natural Volcanic Rocks. <i>Journal of Petrology</i> , 2014, 55, 2377-2402.	2.8	12
46	Nature and Evolution of Primitive Vesuvius Magmas: an Experimental Study. <i>Journal of Petrology</i> , 2014, 55, 2281-2310.	2.8	37
47	Magma Storage Conditions of Large Plinian Eruptions of Santorini Volcano (Greece). <i>Journal of Petrology</i> , 2014, 55, 1129-1171.	2.8	63
48	Carbon dioxide in silica-undersaturated melt. Part I: The effect of mixed alkalis (K and Na) on CO <sub>2</sub> solubility and speciation. <i>Geochimica Et Cosmochimica Acta</i> , 2014, 141, 45-61.	3.9	26
49	A theoretical framework for volcanic degassing chemistry in a comparative planetology perspective and implications for planetary atmospheres. <i>Earth and Planetary Science Letters</i> , 2014, 403, 307-316.	4.4	148
50	Experimental simulation of magma mixing at high pressure. <i>Lithos</i> , 2014, 196-197, 281-300.	1.4	29
51	Tracking the changing oxidation state of Erebus magmas, from mantle to surface, driven by magma ascent and degassing. <i>Earth and Planetary Science Letters</i> , 2014, 393, 200-209.	4.4	111
52	Generation of CO <sub>2</sub> -rich melts during basalt magma ascent and degassing. <i>Contributions To Mineralogy and Petrology</i> , 2013, 166, 545-561.	3.1	72
53	Storage conditions and eruptive dynamics of central versus flank eruptions in volcanic islands: The case of Tenerife (Canary Islands, Spain). <i>Journal of Volcanology and Geothermal Research</i> , 2013, 260, 62-79.	2.1	26
54	Effect of sulphur on the structure of silicate melts under oxidizing conditions. <i>Chemical Geology</i> , 2013, 358, 131-147.	3.3	18

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55	Experimental Phase-equilibrium Constraints on the Phonolite Magmatic System of Erebus Volcano, Antarctica. <i>Journal of Petrology</i> , 2013, 54, 1285-1307.	2.8	34
56	Geochemical Reservoirs and Timing of Sulfur Cycling on Mars. <i>Space Science Reviews</i> , 2013, 174, 251-300.	8.1	103
57	Experimental assessment of the relationships between electrical resistivity, crustal melting and strain localization beneath the Himalayan-Tibetan Belt. <i>Earth and Planetary Science Letters</i> , 2013, 373, 20-30.	4.4	50
58	Gaillard et al. reply. <i>Nature</i> , 2012, 487, E2-E2.	27.8	2
59	Experimental Constraints on Parameters Controlling the Difference in the Eruptive Dynamics of Phonolitic Magmas: the Case of Tenerife (Canary Islands). <i>Journal of Petrology</i> , 2012, 53, 1777-1806.	2.8	34
60	Backward tracking of gas chemistry measurements at Erebus volcano. <i>Geochemistry, Geophysics, Geosystems</i> , 2012, 13, .	2.5	29
61	Gas emissions due to magma-sediment interactions during flood magmatism at the Siberian Traps: Gas dispersion and environmental consequences. <i>Earth and Planetary Science Letters</i> , 2012, 357-358, 308-318.	4.4	30
62	Extremely reducing conditions reached during basaltic intrusion in organic matter-bearing sediments. <i>Earth and Planetary Science Letters</i> , 2012, 357-358, 319-326.	4.4	44
63	Relationships between pre-eruptive conditions and eruptive styles of phonolite-trachyte magmas. <i>Lithos</i> , 2012, 152, 122-131.	1.4	53
64	Effect of alkalis on the Fe oxidation state and local environment in peralkaline rhyolitic glasses. <i>American Mineralogist</i> , 2012, 97, 468-475.	1.9	55
65	Geochemical Reservoirs and Timing of Sulfur Cycling on Mars. <i>Space Sciences Series of ISSI</i> , 2012, , 251-300.	0.0	2
66	Redox state of early magmas. <i>Nature</i> , 2011, 480, 48-49.	27.8	28
67	13. Sulfur Degassing From Volcanoes: Source Conditions, Surveillance, Plume Chemistry and Earth System Impacts. , 2011, , 363-422.		6
68	The carbon dioxide solubility in alkali basalts: an experimental study. <i>Contributions To Mineralogy and Petrology</i> , 2011, 162, 153-168.	3.1	66
69	The H <sub>2</sub> O solubility of alkali basaltic melts: an experimental study. <i>Contributions To Mineralogy and Petrology</i> , 2011, 162, 133-151.	3.1	87
70	Atmospheric oxygenation caused by a change in volcanic degassing pressure. <i>Nature</i> , 2011, 478, 229-232.	27.8	261
71	Volatile destruction. <i>Nature Geoscience</i> , 2010, 3, 456-457.	12.9	4
72	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

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73	Lithium isotopes in island arc geothermal systems: Guadeloupe, Martinique (French West Indies) and experimental approach. <i>Geochimica Et Cosmochimica Acta</i> , 2010, 74, 1852-1871.	3.9	107
74	Câ€“Oâ€“H fluid solubility in haplobasalt under reducing conditions: An experimental study. <i>Chemical Geology</i> , 2010, 279, 1-16.	3.3	66
75	Noble gas solubilities in silicate melts: New experimental results and a comprehensive model of the effects of liquid composition, temperature and pressure. <i>Chemical Geology</i> , 2010, 279, 145-157.	3.3	52
76	Role of non-mantle CO <sub>2</sub> in the dynamics of volcano degassing: The Mount Vesuvius example. <i>Geology</i> , 2009, 37, 319-322.	4.4	85
77	The sulfur content of volcanic gases on Mars. <i>Earth and Planetary Science Letters</i> , 2009, 279, 34-43.	4.4	141
78	Raman quantification factor calibration for COâ€“CO <sub>2</sub> gas mixture in synthetic fluid inclusions: Application to oxygen fugacity calculation in magmatic systems. <i>Chemical Geology</i> , 2009, 264, 58-70.	3.3	28
79	Influence of glass polymerisation and oxidation on micro-Raman water analysis in aluminosilicate glasses. <i>Geochimica Et Cosmochimica Acta</i> , 2009, 73, 197-217.	3.9	86
80	Estimation of pre-eruptive magmatic water fugacity in the Phlegrean Fields, Naples, Italy. <i>European Journal of Mineralogy</i> , 2009, 21, 107-116.	1.3	11
81	Carbonatite Melts and Electrical Conductivity in the Asthenosphere. <i>Science</i> , 2008, 322, 1363-1365.	12.6	271
82	Chemical patterns of erupting silicic magmas and their influence on the amount of degassing during ascent. <i>Journal of Geophysical Research</i> , 2008, 113, .	3.3	29
83	Redox evolution of a degassing magma rising to the surface. <i>Nature</i> , 2007, 445, 194-197.	27.8	221
84	Phase Equilibria of the Lyngdal Granodiorite (Norway): Implications for the Origin of Metaluminous Ferroan Granitoids. <i>Journal of Petrology</i> , 2006, 47, 2405-2431.	2.8	106
85	Experimental determination of coexisting ironâ€“titanium oxides in the systems FeTiAlO, FeTiAlMgO, FeTiAlMnO, and FeTiAlMgMnO at 800 and 900Â°C, 1â€“4 kbar, and relatively high oxygen fugacity. <i>Contributions To Mineralogy and Petrology</i> , 2006, 152, 149-167.	3.1	26
86	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
87	Synthesis and crystal-chemistry of alkali amphiboles in the system Na <sub>2</sub> O-MgO-FeO-Fe <sub>2</sub> O <sub>3</sub> -SiO <sub>2</sub> -H <sub>2</sub> O as a function of fO <sub>2</sub> . <i>American Mineralogist</i> , 2005, 90, 1375-1383.	1.9	27
88	Experimental temperatureâ€“X(H <sub>2</sub> O)â€“viscosity relationship for leucogranites and comparison with synthetic silicic liquids. <i>Earth and Environmental Science Transactions of the Royal Society of Edinburgh</i> , 2004, 95, 59-71.	0.3	28
89	Evidence for present-day leucogranite pluton growth in Tibet. <i>Geology</i> , 2004, 32, 801.	4.4	56
90	Role of fO <sub>2</sub> on fluid saturation in oceanic basalt. <i>Nature</i> , 2004, 430, 1-1.	27.8	11

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91	Experimental temperature- $X(\text{H}_2\text{O})$ -viscosity relationship for leucogranites and comparison with synthetic silicic liquids. , 2004, , .		7
92	Massive atmospheric sulfur loading of the AD 1600 Huaynaputina eruption and implications for petrologic sulfur estimates. Geophysical Research Letters, 2003, 30, .	4.0	21
93	Experimental determination of activities of FeO and Fe <sub>2</sub> O <sub>3</sub> components in hydrous silicic melts under oxidizing conditions. Geochimica Et Cosmochimica Acta, 2003, 67, 4389-4409.	3.9	58
94	Petrology and geochemistry of the Lyngdal granodiorite (Southern Norway) and the role of fractional crystallisation in the genesis of Proterozoic ferro-potassic A-type granites. Precambrian Research, 2003, 124, 149-184.	2.7	66
95	Petrological and volcanological constraints on volcanic sulfur emissions to the atmosphere. Geophysical Monograph Series, 2003, , 11-40.	0.1	37
96	Chemical transfer during redox exchanges between $\text{H}_2$ and Fe-bearing silicate melts. American Mineralogist, 2003, 88, 308-315.	1.9	21
97	Kinetics of iron oxidation-reduction in hydrous silicic melts. American Mineralogist, 2002, 87, 829-837.	1.9	36
98	Physical conditions, structure, and dynamics of a zoned magma chamber: Mount Pelée (Martinique.) Tj ETQq0 0 0 rgBT /Overlock 10 T	3.3	187
99	The effect of water and fO <sub>2</sub> on the ferric/ferrous ratio of silicic melts. Chemical Geology, 2001, 174, 255-273.	3.3	101
100	Evidence for mantle metasomatism by hydrous silicic melts derived from subducted oceanic crust. Nature, 2001, 410, 197-200.	27.8	446
101	Oceanic Slab Melting and Mantle Metasomatism. Science Progress, 2001, 84, 335-354.	1.9	14
102	Phase equilibrium constraints on the viscosity of silicic magmas II: implications for mafic-silicic mixing processes. , 2000, , .		3
103	Phase equilibrium constraints on the viscosity of silicic magmas II: implications for mafic-silicic mixing processes. Earth and Environmental Science Transactions of the Royal Society of Edinburgh, 2000, 91, 61-72.	0.3	16
104	The 15 June 1991 Eruption of Mount Pinatubo. I. Phase Equilibria and Pre-eruption P-T-fO <sub>2</sub> -fH <sub>2</sub> O Conditions of the Dacite Magma. Journal of Petrology, 1999, 40, 381-411.	2.8	395
105	Effects of O <sub>2</sub> and H <sub>2</sub> O on andesite phase relations between 2 and 4 kbar. Journal of Geophysical Research, 1999, 104, 29453-29470.	3.3	185
106	Redox control of sulfur degassing in silicic magmas. Journal of Geophysical Research, 1998, 103, 23937-23949.	3.3	183
107	Phase equilibrium constraints on the viscosity of silicic magmas: 1. Volcanic-plutonic comparison. Journal of Geophysical Research, 1998, 103, 27257-27266.	3.3	170
108	Rheological Properties of Granitic Magmas in Their Crystallization Range. Petrology and Structural Geology, 1997, , 11-29.	0.5	29

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109	The influence of H <sub>2</sub> O-H <sub>2</sub> 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
110	The redox state of Pinatubo dacite and the ilmenite-hematite solvus. <i>American Mineralogist</i> , 1997, 82, 625-629.	1.9	41
111	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
112	Viscosity of Himalayan leucogranites: Implications for mechanisms of granitic magma ascent. <i>Journal of Geophysical Research</i> , 1996, 101, 27691-27699.	3.3	98
113	Control of redox state and Sr isotopic composition of granitic magmas: a critical evaluation of the role of source rocks. , 1996, , .		0
114	Ion microprobe determination of water in silicate glasses: methods and applications. <i>Chemical Geology</i> , 1995, 125, 19-28.	3.3	63
115	The Gangotri granite (Garhwal Himalaya): Laccolithic emplacement in an extending collisional belt. <i>Journal of Geophysical Research</i> , 1995, 100, 585-607.	3.3	101
116	Experimental Crystallization of Leucogranite Magmas. <i>Journal of Petrology</i> , 1995, 36, 663-705.	2.8	305
117	Accurate control of fH <sub>2</sub> in cold-seal pressure vessels with the Shaw membrane technique. <i>European Journal of Mineralogy</i> , 1995, 7, 893-904.	1.3	23
118	Magnetic properties of the High Himalayan leucogranites: Structural implications. <i>Earth and Planetary Science Letters</i> , 1994, 126, 217-234.	4.4	56
119	Badrinath-Gangotri plutons (Garhwal, India): petrological and geochemical evidence for fractionation processes in a high Himalayan leucogranite. <i>Journal of Volcanology and Geothermal Research</i> , 1990, 44, 163-188.	2.1	168