Bruno Scaillet

List of Publications by Year
in descending order

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	Evidence for mantle metasomatism by hydrous silicic melts derived from subducted oceanic crust. Nature, 2001, 410, 197-200.	27.8	446
2	The 15 June 1991 Eruption of Mount Pinatubo. I. Phase Equilibria and Pre-eruption P-T-fO2-fH2O Conditions of the Dacite Magma. Journal of Petrology, 1999, 40, 381-411.	2.8	395
3	Experimental Crystallization of Leucogranite Magmas. Journal of Petrology, 1995, 36, 663-705.	2.8	305
4	Carbonatite Melts and Electrical Conductivity in the Asthenosphere. Science, 2008, 322, 1363-1365.	12.6	271
5	Atmospheric oxygenation caused by a change in volcanic degassing pressure. Nature, 2011, 478, 229-232.	27.8	261
6	Redox evolution of a degassing magma rising to the surface. Nature, 2007, 445, 194-197.	27.8	221
7	Physical conditions, structure, and dynamics of a zoned magma chamber: Mount PelÃ©e (Martinique,) Tj ETQq1 1 0.784314 rgBT /Ov	3.3	187
8	Effects offO2and H2O on andesite phase relations between 2 and 4 kbar. Journal of Geophysical Research, 1999, 104, 29453-29470.	3.3	185
9	Redox control of sulfur degassing in silicic magmas. Journal of Geophysical Research, 1998, 103, 23937-23949.	3.3	183
10	Phase equilibrium constraints on the viscosity of silicic magmas: 1. Volcanic-plutonic comparison. Journal of Geophysical Research, 1998, 103, 27257-27266.	3.3	170
11	Badrinath-Gangotri plutons (Garhwal, India): petrological and geochemical evidence for fractionation processes in a high Himalayan leucogranite. Journal of Volcanology and Geothermal Research, 1990, 44, 163-188.	2.1	168
12	Experimental Crystallization of a High-K Arc Basalt: the Golden Pumice, Stromboli Volcano (Italy). Journal of Petrology, 2006, 47, 1317-1343.	2.8	163
13	A theoretical framework for volcanic degassing chemistry in a comparative planetology perspective and implications for planetary atmospheres. Earth and Planetary Science Letters, 2014, 403, 307-316.	4.4	148
14	The sulfur content of volcanic gases on Mars. Earth and Planetary Science Letters, 2009, 279, 34-43.	4.4	141
15	The impact of degassing on the oxidation state of basaltic magmas: A case study of KÄ«lauea volcano. Earth and Planetary Science Letters, 2016, 450, 317-325.	4.4	118
16	Tracking the changing oxidation state of Erebus magmas, from mantle to surface, driven by magma ascent and degassing. Earth and Planetary Science Letters, 2014, 393, 200-209.	4.4	111
17	Lithium isotopes in island arc geothermal systems: Guadeloupe, Martinique (French West Indies) and experimental approach. Geochimica Et Cosmochimica Acta, 2010, 74, 1852-1871.	3.9	107
18	Experimental Constraints on the Formation of Silicic Magmas. Elements, 2016, 12, 109-114.	0.5	107

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19	Phase Equilibria of the Lyngdal Granodiorite (Norway): Implications for the Origin of Metaluminous Ferroan Granitoids. Journal of Petrology, 2006, 47, 2405-2431.	2.8	106
20	Geochemical Reservoirs and Timing of Sulfur Cycling on Mars. Space Science Reviews, 2013, 174, 251-300.	8.1	103
21	The Gangotri granite (Garhwal Himalaya): Laccolithic emplacement in an extending collisional belt. Journal of Geophysical Research, 1995, 100, 585-607.	3.3	101
22	The effect of water and fO2 on the ferricâ€“ferrous ratio of silicic melts. Chemical Geology, 2001, 174, 255-273.	3.3	101
23	Viscosity of Himalayan leucogranites: Implications for mechanisms of granitic magma ascent. Journal of Geophysical Research, 1996, 101, 27691-27699.	3.3	98
24	The redox geodynamics linking basalts and their mantle sources through space and time. Chemical Geology, 2015, 418, 217-233.	3.3	95
25	The H2O solubility of alkali basaltic melts: an experimental study. Contributions To Mineralogy and Petrology, 2011, 162, 133-151.	3.1	87
26	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
27	Role of non-mantle CO2 in the dynamics of volcano degassing: The Mount Vesuvius example. Geology, 2009, 37, 319-322.	4.4	85
28	Simulating the behavior of volatiles belonging to the Câ€“Oâ€“Hâ€“S system in silicate melts under magmatic conditions with the software D-Compress. Computers and Geosciences, 2015, 79, 1-14.	4.2	85
29	Mantle plumes are oxidised. Earth and Planetary Science Letters, 2019, 527, 115798.	4.4	85
30	On the conditions of magma mixing and its bearing on andesite production in the crust. Nature Communications, 2014, 5, 5607.	12.8	77
31	Phase Equilibrium Constraints on Pre-eruptive Conditions of Recent Felsic Explosive Volcanism at Pantelleria Island, Italy. Journal of Petrology, 2010, 51, 2245-2276.	2.8	73
32	Generation of CO2-rich melts during basalt magma ascent and degassing. Contributions To Mineralogy and Petrology, 2013, 166, 545-561.	3.1	72
33	A relatively reduced Hadean continental crust and implications for the early atmosphere and crustal rheology. Earth and Planetary Science Letters, 2014, 393, 210-219.	4.4	71
34	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
35	Câ€“Oâ€“H fluid solubility in haplobasalt under reducing conditions: An experimental study. Chemical Geology, 2010, 279, 1-16.	3.3	66
36	The carbon dioxide solubility in alkali basalts: an experimental study. Contributions To Mineralogy and Petrology, 2011, 162, 153-168.	3.1	66

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37	Ion microprobe determination of water in silicate glasses: methods and applications. Chemical Geology, 1995, 125, 19-28.	3.3	63
38	Magma Storage Conditions of Large Plinian Eruptions of Santorini Volcano (Greece). Journal of Petrology, 2014, 55, 1129-1171.	2.8	63
39	Experimental determination of activities of FeO and Fe 2 O 3 components in hydrous silicic melts under oxidizing conditions. Geochimica Et Cosmochimica Acta, 2003, 67, 4389-4409.	3.9	58
40	Magnetic properties of the High Himalayan leucogranites: Structural implications. Earth and Planetary Science Letters, 1994, 126, 217-234.	4.4	56
41	Evidence for present-day leucogranite pluton growth in Tibet. Geology, 2004, 32, 801.	4.4	56
42	Effect of alkalis on the Fe oxidation state and local environment in peralkaline rhyolitic glasses. American Mineralogist, 2012, 97, 468-475.	1.9	55
43	Relationships between pre-eruptive conditions and eruptive styles of phonoliteâ€“trachyte magmas. Lithos, 2012, 152, 122-131.	1.4	53
44	Stratospheric Ozone destruction by the Bronze-Age Minoan eruption (Santorini Volcano, Greece). Scientific Reports, 2015, 5, 12243.	3.3	53
45	Noble gas solubilities in silicate melts: New experimental results and a comprehensive model of the effects of liquid composition, temperature and pressure. Chemical Geology, 2010, 279, 145-157.	3.3	52
46	Differentiation Conditions of a Basaltic Magma from Santorini, and its Bearing on the Production of Andesite in Arc Settings. Journal of Petrology, 2015, 56, 765-794.	2.8	51
47	Experimental assessment of the relationships between electrical resistivity, crustal melting and strain localization beneath the Himalayanâ€“Tibetan Belt. Earth and Planetary Science Letters, 2013, 373, 20-30.	4.4	50
48	Extremely reducing conditions reached during basaltic intrusion in organic matter-bearing sediments. Earth and Planetary Science Letters, 2012, 357-358, 319-326.	4.4	44
49	Redox controls during magma ocean degassing. Earth and Planetary Science Letters, 2022, 577, 117255.	4.4	43
50	The redox state of Pinatubo dacite and the ilmenite-hematite solvus. American Mineralogist, 1997, 82, 625-629.	1.9	41
51	In defense of magnetite-ilmenite thermometry in the Bishop Tuff and its implication for gradients in silicic magma reservoirs. American Mineralogist, 2016, 101, 469-482.	1.9	39
52	Petrological and volcanological constraints on volcanic sulfur emissions to the atmosphere. Geophysical Monograph Series, 2003, , 11-40.	0.1	37
53	Nature and Evolution of Primitive Vesuvius Magmas: an Experimental Study. Journal of Petrology, 2014, 55, 2281-2310.	2.8	37
54	Kinetics of iron oxidation-reduction in hydrous silicic melts. American Mineralogist, 2002, 87, 829-837.	1.9	36

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55	Megacrystals track magma convection between reservoir and surface. Earth and Planetary Science Letters, 2015, 413, 1-12.	4.4	35
56	Experimental Constraints on Parameters Controlling the Difference in the Eruptive Dynamics of Phonolitic Magmas: the Case of Tenerife (Canary Islands). Journal of Petrology, 2012, 53, 1777-1806.	2.8	34
57	Experimental Phase-equilibrium Constraints on the Phonolite Magmatic System of Erebus Volcano, Antarctica. Journal of Petrology, 2013, 54, 1285-1307.	2.8	34
58	Structure of the Plumbing System at Tungurahua Volcano, Ecuador: Insights from Phase Equilibrium Experiments on Julyâ€“August 2006 Eruption Products. Journal of Petrology, 2017, 58, 1249-1278.	2.8	32
59	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. Journal of Petrology, 2016, 57, 1887-1920.	2.8	31
60	Melting conditions in the modern Tibetan crust since the Miocene. Nature Communications, 2018, 9, 3515.	12.8	31
61	Gas emissions due to magmaâ€“sediment interactions during flood magmatism at the Siberian Traps: Gas dispersion and environmental consequences. Earth and Planetary Science Letters, 2012, 357-358, 308-318.	4.4	30
62	Influence of eruptive style on volcanic gas emission chemistry and temperature. Nature Geoscience, 2018, 11, 678-681.	12.9	30
63	Rheological Properties of Granitic Magmas in Their Crystallization Range. Petrology and Structural Geology, 1997, , 11-29.	0.5	29
64	Chemical patterns of erupting silicic magmas and their influence on the amount of degassing during ascent. Journal of Geophysical Research, 2008, 113, .	3.3	29
65	Backward tracking of gas chemistry measurements at Erebus volcano. Geochemistry, Geophysics, Geosystems, 2012, 13, .	2.5	29
66	Experimental simulation of magma mixing at high pressure. Lithos, 2014, 196-197, 281-300.	1.4	29
67	The role of melt composition on aqueous fluid vs. silicate melt partitioning of bromine in magmas. Earth and Planetary Science Letters, 2018, 498, 450-463.	4.4	29
68	Experimental temperatureâ€“X(H₂O)â€“viscosity relationship for leucogranites and comparison with synthetic silicic liquids. Earth and Environmental Science Transactions of the Royal Society of Edinburgh, 2004, 95, 59-71.	0.3	28
69	Raman quantification factor calibration for COâ€“CO2 gas mixture in synthetic fluid inclusions: Application to oxygen fugacity calculation in magmatic systems. Chemical Geology, 2009, 264, 58-70.	3.3	28
70	Redox state of early magmas. Nature, 2011, 480, 48-49.	27.8	28
71	Phase Equilibria of Pantelleria Trachytes (Italy): Constraints on Pre-eruptive Conditions and on the Metaluminous to Peralkaline Transition in Silicic Magmas. Journal of Petrology, 2018, 59, 559-588.	2.8	28
72	Synthesis and crystal-chemistry of alkali amphiboles in the system Na2O-MgO-FeO-Fe2O3-SiO2-H2O as a function of fO2. American Mineralogist, 2005, 90, 1375-1383.	1.9	27

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73	The influence of H2O-H2 fluids and redox conditions on melting temperatures in the haplogranite system. Contributions To Mineralogy and Petrology, 1997, 126, 386-400.	3.1	26
74	Experimental determination of coexisting ironâ€“titanium oxides in the systems FeTiAlO, FeTiAlMgO, FeTiAlMnO, and FeTiAlMgMnO at 800 and 900Â°C, 1â€“4Âkbar, and relatively high oxygen fugacity. Contributions To Mineralogy and Petrology, 2006, 152, 149-167.	3.1	26
75	Storage conditions and eruptive dynamics of central versus flank eruptions in volcanic islands: The case of Tenerife (Canary Islands, Spain). Journal of Volcanology and Geothermal Research, 2013, 260, 62-79.	2.1	26
76	Carbon dioxide in silica-undersaturated melt. Part I: The effect of mixed alkalis (K and Na) on CO2 solubility and speciation. Geochimica Et Cosmochimica Acta, 2014, 141, 45-61.	3.9	26
77	On the relationship between oxidation state and temperature of volcanic gas emissions. Earth and Planetary Science Letters, 2019, 520, 260-267.	4.4	26
78	Storage and Evolution of Mafic and Intermediate Alkaline Magmas beneath Ross Island, Antarctica. Journal of Petrology, 2016, 57, 93-118.	2.8	25
79	The solubility of sulfur in hydrous basaltic melts. Chemical Geology, 2015, 418, 104-116.	3.3	23
80	Accurate control of fH2 in cold-seal pressure vessels with the Shaw membrane technique. European Journal of Mineralogy, 1995, 7, 893-904.	1.3	23
81	The Influence of Redox State On Mica Crystallization In Leucogranitic and Pegmatitic Liquids. Canadian Mineralogist, 2016, 54, 559-581.	1.0	22
82	Massive atmospheric sulfur loading of the AD 1600 Huaynaputina eruption and implications for petrologic sulfur estimates. Geophysical Research Letters, 2003, 30, .	4.0	21
83	Chemical transfer during redox exchanges between H₂and Fe-bearing silicate melts. American Mineralogist, 2003, 88, 308-315.	1.9	21
84	Titanite: A potential solidus barometer for granitic magma systems. Comptes Rendus - Geoscience, 2019, 351, 551-561.	1.2	21
85	Experimental Constraints on Intensive Crystallization Parameters and Fractionation in Aâ€Type Granites: A Case Study on the Qitianling Pluton, South China. Journal of Geophysical Research: Solid Earth, 2019, 124, 10132-10152.	3.4	20
86	Control of redox state and Sr isotopic composition of granitic magmas: a critical evaluation of the role of source rocks. Earth and Environmental Science Transactions of the Royal Society of Edinburgh, 1996, 87, 321-329.	0.3	18
87	Effect of sulphur on the structure of silicate melts under oxidizing conditions. Chemical Geology, 2013, 358, 131-147.	3.3	18
88	Incremental Emplacement of the Late Jurassic Midcrustal, Lopolithâ€Like Qitianling Pluton, South China, Revealed by AMS and Bouguer Gravity Data. Journal of Geophysical Research: Solid Earth, 2018, 123, 9249-9268.	3.4	17
89	Phase equilibrium constraints on the viscosity of silicic magmas II: implications for maficâ€“silicic mixing processes. Earth and Environmental Science Transactions of the Royal Society of Edinburgh, 2000, 91, 61-72.	0.3	16
90	Crystallization Kinetics of Alkali Feldspar in Peralkaline Rhyolitic Melts: Implications for Pantelleria Volcano. Frontiers in Earth Science, 2020, 8, .	1.8	16

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91	Experimental mixing of hydrous magmas. Chemical Geology, 2015, 418, 158-170.	3.3	15
92	Oceanic Slab Melting and Mantle Metasomatism. Science Progress, 2001, 84, 335-354.	1.9	14
93	Storage conditions of the mafic and silicic magmas at Cotopaxi, Ecuador. Journal of Volcanology and Geothermal Research, 2018, 354, 74-86.	2.1	14
94	Carbon dioxide in silica-undersaturated melt Part II: Effect of CO 2 on quenched glass structure. Geochimica Et Cosmochimica Acta, 2014, 144, 202-216.	3.9	12
95	Characteristic Textures of Recrystallized, Peritectic, and Primary Magmatic Olivine in Experimental Samples and Natural Volcanic Rocks. Journal of Petrology, 2014, 55, 2377-2402.	2.8	12
96	Role of fO2 on fluid saturation in oceanic basalt. Nature, 2004, 430, 1-1.	27.8	11
97	Estimation of pre-eruptive magmatic water fugacity in the Phlegrean Fields, Naples, Italy. European Journal of Mineralogy, 2009, 21, 107-116.	1.3	11
98	Chloride partitioning and solubility in hydrous phonolites from Erebus volcano: A contribution towards a multi-component degassing model. GeoResJ, 2014, 3-4, 27-45.	1.4	10
99	Experimental and thermodynamic constraints on mineral equilibrium inpantelleritic magmas. Lithos, 2020, 376-377, 105793.	1.4	9
100	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
101	Origin of primitive ultra-calcic arc melts at crustal conditions â€" Experimental evidence on the La Sommata basalt, Vulcano, Aeolian Islands. Journal of Volcanology and Geothermal Research, 2016, 321, 85-101.	2.1	8
102	Experimental temperature-X(H₂O)-viscosity relationship for leucogranites and comparison with synthetic silicic liquids. , 2004, , .		7
103	13. Sulfur Degassing From Volcanoes: Source Conditions, Surveillance, Plume Chemistry and Earth System Impacts. , 2011, , 363-422.		6
104	Role of inherited structure on granite emplacement: An example from the Late Jurassic Shibei pluton in the Wuyishan area (South China) and its tectonic implications. Tectonophysics, 2020, 779, 228394.	2.2	6
105	Spectral Emissivity of Phonolite Lava at High Temperature. IEEE Transactions on Geoscience and Remote Sensing, 2022, 60, 1-15.	6.3	5
106	Experimental determination of H<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:msub><mml:mrow /> <mml:mn>2</mml:mn></mml:msub></mml:math>O and CO<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:msub><mml:mrow /> <mml:mn>2</mml:mn></mml:msub></mml:math> solubilities of mafic alkaline magmas from Canary Islands. Comptes Rendus - Geoscience, 2021, 353, 289-314.	1.2	5
107	Volatile destruction. Nature Geoscience, 2010, 3, 456-457.	12.9	4
108	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

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109	Modest volcanic SO2 emissions from the Indonesian archipelago. Nature Communications, 2022, 13, .	12.8	4
110	Phase equilibrium constraints on the viscosity of silicic magmas II: implications for mafic-silicic mixing processes. , 2000, , .		3
111	Magmatic epidote in Archean granitoids of the CarajÃ¡s province, Amazonian craton, and its stability during magma rise and emplacement. Journal of South American Earth Sciences, 2021, , 103570.	1.4	3
112	Gaillard et al. reply. Nature, 2012, 487, E2-E2.	27.8	2
113	Experimental constraints on pre-eruption conditions of the 1631 Vesuvius eruption. Journal of Volcanology and Geothermal Research, 2020, 406, 107076.	2.1	2
114	Geochemical Reservoirs and Timing of Sulfur Cycling on Mars. Space Sciences Series of ISSI, 2012, , 251-300.	0.0	2
115	Perspectives on alkaline magmas. Comptes Rendus - Geoscience, 2021, 353, 1-5.	1.2	2
116	Understanding volcanic systems and their dynamics combining field and physical volcanology with petrology studies. , 2021, , 285-328.		1
117	Control of redox state and Sr isotopic composition of granitic magmas: a critical evaluation of the role of source rocks. , 1996, , .		0
118	Carbon in the Moon. Nature Geoscience, 2015, 8, 747-748.	12.9	0
119	New aspects of magma storage and transfer. Comptes Rendus - Geoscience, 2019, 351, 523-524.	1.2	0