

Franck Poitrasson

List of Publications by Year in descending order

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93
papers

7,204
citations

57758

44
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97
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97
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5934
citing authors

#	ARTICLE	IF	CITATIONS
1	Concomitant separation of strontium and samarium-neodymium for isotopic analysis in silicate samples, based on specific extraction chromatography. <i>Analytica Chimica Acta</i> , 1994, 298, 209-217.	5.4	533
2	Mineralogy of a Mudstone at Yellowknife Bay, Gale Crater, Mars. <i>Science</i> , 2014, 343, 1243480.	12.6	508
3	The ChemCam Instrument Suite on the Mars Science Laboratory (MSL) Rover: Body Unit and Combined System Tests. <i>Space Science Reviews</i> , 2012, 170, 167-227.	8.1	429
4	The ChemCam Instrument Suite on the Mars Science Laboratory (MSL) Rover: Science Objectives and Mast Unit Description. <i>Space Science Reviews</i> , 2012, 170, 95-166.	8.1	372
5	Martian Fluvial Conglomerates at Gale Crater. <i>Science</i> , 2013, 340, 1068-1072.	12.6	326
6	Heavy iron isotope composition of granites determined by high resolution MC-ICP-MS. <i>Chemical Geology</i> , 2005, 222, 132-147.	3.3	281
7	Iron isotope differences between Earth, Moon, Mars and Vesta as possible records of contrasted accretion mechanisms. <i>Earth and Planetary Science Letters</i> , 2004, 223, 253-266.	4.4	271
8	Elemental Geochemistry of Sedimentary Rocks at Yellowknife Bay, Gale Crater, Mars. <i>Science</i> , 2014, 343, 1244734.	12.6	246
9	Soil Diversity and Hydration as Observed by ChemCam at Gale Crater, Mars. <i>Science</i> , 2013, 341, 1238670.	12.6	215
10	Electron microprobe and LA-ICP-MS study of monazite hydrothermal alteration. <i>Geochimica Et Cosmochimica Acta</i> , 2000, 64, 3283-3297.	3.9	208
11	Contrasted monazite hydrothermal alteration mechanisms and their geochemical implications. <i>Earth and Planetary Science Letters</i> , 1996, 145, 79-96.	4.4	191
12	Iron isotope fractionation between pyrite (FeS ₂), hematite (Fe ₂ O ₃) and siderite (FeCO ₃): A first-principles density functional theory study. <i>Geochimica Et Cosmochimica Acta</i> , 2009, 73, 6565-6578.	3.9	173
13	An experimental study of the dissolution stoichiometry and rates of a natural monazite as a function of temperature from 50 to 230 Å°C and pH from 1.5 to 10. <i>Chemical Geology</i> , 2002, 191, 73-87.	3.3	157
14	Comparison of Ultraviolet Femtosecond and Nanosecond Laser Ablation Inductively Coupled Plasma Mass Spectrometry Analysis in Glass, Monazite, and Zircon. <i>Analytical Chemistry</i> , 2003, 75, 6184-6190.	6.5	144
15	The Petrochemistry of Jake_M: A Martian Mugearite. <i>Science</i> , 2013, 341, 1239463.	12.6	134
16	Experimental determination of synthetic NdPO ₄ monazite end-member solubility in water from 21Å°C to 300Å°C: implications for rare earth element mobility in crustal fluids. <i>Geochimica Et Cosmochimica Acta</i> , 2004, 68, 2207-2221.	3.9	130
17	Fe isotope and trace element geochemistry of the Neoproterozoic syn-glacial Rapitan iron formation. <i>Earth and Planetary Science Letters</i> , 2011, 309, 100-112.	4.4	124
18	Planetary and meteoritic Mg/Si and $\hat{\delta}^{54}\text{Fe}$ variations inherited from solar nebula chemistry. <i>Earth and Planetary Science Letters</i> , 2015, 427, 236-248.		

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19	The Relationship between Petrology and Nd Isotopes as Evidence for Contrasting Anorogenic Granite Genesis: Example of the Corsican Province (SE France). <i>Journal of Petrology</i> , 1995, 36, 1251-1274.	2.8	102
20	Extreme iron isotope fractionation between colloids and particles of boreal and temperate organic-rich waters. <i>Geochimica Et Cosmochimica Acta</i> , 2013, 101, 96-111.	3.9	99
21	Significance of iron isotope mineral fractionation in pallasites and iron meteorites for the core-mantle differentiation of terrestrial planets. <i>Earth and Planetary Science Letters</i> , 2005, 234, 151-164.	4.4	97
22	On the iron isotope homogeneity level of the continental crust. <i>Chemical Geology</i> , 2006, 235, 195-200.	3.3	90
23	The current state and future of accessory mineral research. <i>Chemical Geology</i> , 2002, 191, 3-24.	3.3	82
24	Silicon isotope variations in the inner solar system: Implications for planetary formation, differentiation and composition. <i>Geochimica Et Cosmochimica Acta</i> , 2013, 121, 67-83.	3.9	80
25	No iron isotope fractionation between molten alloys and silicate melt to 2000°C and 7.7 GPa: Experimental evidence and implications for planetary differentiation and accretion. <i>Earth and Planetary Science Letters</i> , 2009, 278, 376-385.	4.4	79
26	Springwater chloride ion anomaly prior to a ML = 5.2 Pyrenean earthquake. <i>Earth and Planetary Science Letters</i> , 1997, 149, 113-119.	4.4	78
27	Precise Determination of Silicon Isotopes in Silicate Rock Reference Materials by MC-ICP-MS. <i>Geostandards and Geoanalytical Research</i> , 2011, 35, 89-99.	3.1	77
28	On the iron isotope heterogeneity of lithospheric mantle xenoliths: implications for mantle metasomatism, the origin of basalts and the iron isotope composition of the Earth. <i>Contributions To Mineralogy and Petrology</i> , 2013, 165, 1243-1258.	3.1	75
29	In situ investigations of allanite hydrothermal alteration: examples from calc-alkaline and anorogenic granites of Corsica (southeast France). <i>Contributions To Mineralogy and Petrology</i> , 2002, 142, 485-500.	3.1	72
30	Measurement of the isotopic composition of dissolved iron in the open ocean. <i>Geophysical Research Letters</i> , 2008, 35, .	4.0	70
31	Iron sources and dissolved-particulate interactions in the seawater of the Western Equatorial Pacific, iron isotope perspectives. <i>Global Biogeochemical Cycles</i> , 2014, 28, 1044-1065.	4.9	66
32	Limited iron isotope variations in recent lateritic soils from Nsimi, Cameroon: Implications for the global Fe geochemical cycle. <i>Chemical Geology</i> , 2008, 253, 54-63.	3.3	61
33	Iron isotopes reveal distinct dissolved iron sources and pathways in the intermediate versus deep Southern Ocean. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2017, 114, 858-863.	7.1	57
34	Femtosecond laser ablation inductively coupled plasma source mass spectrometry for elemental and isotopic analysis: are ultrafast lasers worthwhile?. <i>Journal of Analytical Atomic Spectrometry</i> , 2017, 32, 1075-1091.	3.0	56
35	Trace element partitioning between carbonatitic melts and mantle transition zone minerals: Implications for the source of carbonatites. <i>Geochimica Et Cosmochimica Acta</i> , 2009, 73, 239-255.	3.9	54
36	Silicon Isotope Geochemistry. <i>Reviews in Mineralogy and Geochemistry</i> , 2017, 82, 289-344.	4.8	54

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37	Iron and sulphur isotopes from the Carajás mining province (Pará, Brazil): Implications for the oxidation of the ocean and the atmosphere across the Archaean-Proterozoic transition. <i>Chemical Geology</i> , 2011, 289, 124-139.	3.3	53
38	Hydrothermal remobilization of rare earth elements and its effect on Nd isotopes in rhyolite and granite. <i>Earth and Planetary Science Letters</i> , 1995, 130, 1-11.	4.4	52
39	Carbon-oxygen isotope and trace element constraints on how fluids percolate faulted limestones from the San Andreas Fault system: partitioning of fluid sources and pathways. <i>Chemical Geology</i> , 2002, 190, 231-250.	3.3	51
40	Aluminous subsolvus anorogenic granite genesis in the light of Nd isotopic heterogeneity. <i>Chemical Geology</i> , 1994, 112, 199-219.	3.3	50
41	First experimental determination of iron isotope fractionation between hematite and aqueous solution at hydrothermal conditions. <i>Geochimica Et Cosmochimica Acta</i> , 2011, 75, 6629-6654.	3.9	47
42	Evaluation of infrared femtosecond laser ablation for the analysis of geomaterials by ICP-MS. <i>Journal of Analytical Atomic Spectrometry</i> , 2008, 23, 702.	3.0	46
43	Importance of late-magmatic and hydrothermal fluids on the Sm-Nd isotope mineral systematics of hypersolvus granites. <i>Chemical Geology</i> , 1998, 146, 187-203.	3.3	45
44	Iron isotope composition of the bulk waters and sediments from the Amazon River Basin. <i>Chemical Geology</i> , 2014, 377, 1-11.	3.3	45
45	On the iron isotope composition of Mars and volatile depletion in the terrestrial planets. <i>Earth and Planetary Science Letters</i> , 2016, 449, 360-371.	4.4	39
46	Secondary fabrics revealed by remanence anisotropy: methodological study and examples from plutonic rocks. <i>Geophysical Journal International</i> , 2001, 147, 310-318.	2.4	38
47	Iron isotope fractionation during Fe(II) and Fe(III) adsorption on cyanobacteria. <i>Chemical Geology</i> , 2015, 400, 24-33.	3.3	38
48	Iron isotope fingerprints of redox and biogeochemical cycling in the soil-water-rice plant system of a paddy field. <i>Science of the Total Environment</i> , 2017, 574, 1622-1632.	8.0	38
49	Laboratory experiments on the weathering of iron meteorites and carbonaceous chondrites by iron-oxidizing bacteria. <i>Meteoritics and Planetary Science</i> , 2009, 44, 233-247.	1.6	35
50	Does planetary differentiation really fractionate iron isotopes?. <i>Earth and Planetary Science Letters</i> , 2007, 256, 484-492.	4.4	34
51	Nyctemeral variations of magnesium intake in the calcitic layer of a Chilean mollusk shell (<i>Concholepas concholepas</i> , Gastropoda). <i>Geochimica Et Cosmochimica Acta</i> , 2007, 71, 5369-5383.	3.9	32
52	In situ characterization of infra red femtosecond laser ablation in geological samples. Part B: the laser induced particles. <i>Journal of Analytical Atomic Spectrometry</i> , 2012, 27, 108-119.	3.0	31
53	An Earth-Moon silicon isotope model to track silicic magma origins. <i>Geochimica Et Cosmochimica Acta</i> , 2015, 167, 301-312.	3.9	31
54	High-Precision Determination of the Isotopic Composition of Dissolved Iron in Iron Depleted Seawater by Double Spike Multicollector-ICPMS. <i>Analytical Chemistry</i> , 2010, 82, 7103-7111.	6.5	30

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55	Trace elements and isotope geochemistry (C, O, Fe, Cr) of the Cauã iron formation, Quadrilãtero Ferrãfero, Brazil: Evidence for widespread microbial dissimilatory iron reduction at the Archean/Paleoproterozoic transition. <i>Precambrian Research</i> , 2017, 298, 39-55.	2.7	30
56	Insights into iron sources and pathways in the Amazon River provided by isotopic and spectroscopic studies. <i>Geochimica Et Cosmochimica Acta</i> , 2015, 150, 142-159.	3.9	28
57	Near Infra Red femtosecond Laser Ablation: the influence of energy and pulse width on the LA-ICP-MS analysis of monazite. <i>Journal of Analytical Atomic Spectrometry</i> , 2010, 25, 681.	3.0	27
58	The isotopic fingerprint of Fe cycling in an equatorial soilã“plantã“water system: The Nsimi watershed, South Cameroon. <i>Chemical Geology</i> , 2014, 385, 104-116.	3.3	27
59	Contrasting iron isotopic compositions in river suspended particulate matter: the Negro and the Amazon annual river cycles. <i>Earth and Planetary Science Letters</i> , 2014, 394, 168-178.	4.4	27
60	Iron isotopes as a potential tool for ancient iron metals tracing. <i>Journal of Archaeological Science</i> , 2016, 76, 9-20.	2.4	27
61	Effect of hot desert weathering on the bulkã“rock iron isotope composition of ã“L6 and H5 ordinary chondrites. <i>Meteoritics and Planetary Science</i> , 2010, 45, 195-209.	1.6	25
62	Earthquake-related elemental and isotopic lead anomaly in a springwater. <i>Earth and Planetary Science Letters</i> , 1999, 169, 269-276.	4.4	24
63	Dominance of mechanical over thermally induced damage during femtosecond laser ablation of monazite. <i>European Journal of Mineralogy</i> , 2010, 22, 235-244.	1.3	22
64	Hydrothermally-induced changes in mineralogy and magnetic properties of oxidized A-type granites. <i>Lithos</i> , 2015, 212-215, 145-157.	1.4	22
65	Processes controlling silicon isotopic fractionation in a forested tropical watershed: Mule Hole Critical Zone Observatory (Southern India). <i>Geochimica Et Cosmochimica Acta</i> , 2018, 228, 301-319.	3.9	22
66	In situ characterization of infrared femtosecond laser ablation in geological samples. Part A: the laser induced damage. <i>Journal of Analytical Atomic Spectrometry</i> , 2012, 27, 99-107.	3.0	21
67	Comment on ã“New data on equilibrium iron isotope fractionation among sulfides: Constraints on mechanisms of sulfide formation in hydrothermal and igneous systemsã“by V.B. Polyakov and D.M. Soutanov. <i>Geochimica Et Cosmochimica Acta</i> , 2012, 87, 356-359.	3.9	21
68	Iron isotope composition of the suspended matter along depth and lateral profiles in the Amazon River and its tributaries. <i>Journal of South American Earth Sciences</i> , 2013, 44, 35-44.	1.4	21
69	Direct isotope ratio measurement of ultra-trace lead in waters by double focusing inductively coupled plasma mass spectrometry with an ultrasonic nebuliser and a desolvation unit. <i>Journal of Analytical Atomic Spectrometry</i> , 1999, 14, 1573-1577.	3.0	20
70	The giant monazite crystals from Manangotry (Madagascar). <i>Chemical Geology</i> , 2018, 484, 36-50.	3.3	17
71	A reassessment of the iron isotope composition of the Moon and its implications for the accretion and differentiation of terrestrial planets. <i>Geochimica Et Cosmochimica Acta</i> , 2019, 267, 257-274.	3.9	17
72	First-principles calculation of iron and silicon isotope fractionation between Fe-bearing minerals at magmatic temperatures: The importance of second atomic neighbors. <i>Geochimica Et Cosmochimica Acta</i> , 2021, 304, 101-118.	3.9	17

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73	ASSESSMENT OF A SIMPLE METHOD FOR THE DETERMINATION OF NB AND TA AT THE SUB- $\frac{1}{4}$ G/G LEVEL IN SILICATE ROCKS BY ICP-MS. <i>Geostandards and Geoanalytical Research</i> , 1993, 17, 209-215.	3.1	15
74	Iron Isotope Fractionation during Bio- and Photodegradation of Organoferric Colloids in Boreal Humic Waters. <i>Environmental Science & Technology</i> , 2019, 53, 11183-11194.	10.0	15
75	Nickel isotope fractionation during metal-silicate differentiation of planetesimals: Experimental petrology and ab initio calculations. <i>Geochimica Et Cosmochimica Acta</i> , 2020, 269, 238-256.	3.9	15
76	Study of near infra red femtosecond laser induced particles using transmission electron microscopy and low pressure impaction: Implications for laser ablation inductively coupled plasma-mass spectrometry analysis of natural monazite. <i>Spectrochimica Acta, Part B: Atomic Spectroscopy</i> , 2011, 66, 671-680.	2.9	13
77	Extreme Nd isotope homogeneity in a large rhyolitic province: the Estrel massif, southeast France. <i>Bulletin of Volcanology</i> , 1998, 60, 213-223.	3.0	12
78	The size-isotopic evolution connection among layered mafic intrusions: Clues from a Sr-Nd isotopic study of a small complex. <i>Journal of Geophysical Research</i> , 1994, 99, 9441-9451.	3.3	10
79	Stable Zn isotopes reveal the uptake and toxicity of zinc oxide engineered nanomaterials in <i>Phragmites australis</i> . <i>Environmental Science: Nano</i> , 2020, 7, 1927-1941.	4.3	8
80	Probes of the Ancient and the Inaccessible. <i>Science</i> , 2009, 323, 882-883.	12.6	7
81	Mechanisms and rates of pyrite formation from hydrothermal fluid revealed by iron isotopes. <i>Geochimica Et Cosmochimica Acta</i> , 2021, 304, 281-304.	3.9	7
82	Potential use of Fe isotopes for ancient non-ferrous metals tracing through the example of a lead-silver production site (Imiter mine, Anti-Atlas, Morocco). <i>Journal of Archaeological Science</i> , 2018, 98, 22-33.	2.4	6
83	Investigation of Fe isotope systematics for the complete sequence of natural and metallurgical processes of Ni lateritic ores: Implications for environmental source tracing. <i>Applied Geochemistry</i> , 2021, 127, 104930.	3.0	6
84	Effects of different water storage procedures on the dissolved Fe concentration and isotopic composition of chemically contrasted waters from the Amazon River Basin. <i>Rapid Communications in Mass Spectrometry</i> , 2015, 29, 2102-2108.	1.5	5
85	Control of seasonal and inter-annual rainfall distribution on the Strontium-Neodymium isotopic compositions of suspended particulate matter and implications for tracing ENSO events in the Pacific coast (Tumbes basin, Peru). <i>Global and Planetary Change</i> , 2020, 185, 103080.	3.5	5
86	Impact of deforestation on soil iron chemistry and isotope signatures in Amazonia. <i>Chemical Geology</i> , 2021, 577, 120048.	3.3	5
87	A silicon memory of subduction. <i>Nature Geoscience</i> , 2019, 12, 682-683.	12.9	4
88	Silicon Isotope Analyses of Soil and Plant Reference Materials: An Intercomparison of Seven Laboratories. <i>Geostandards and Geoanalytical Research</i> , 2021, 45, 525-538.	3.1	3
89	Investigating the provenance of iron bars from Les Saintes-Maries-de-la-Mer Roman shipwrecks (southeast France) with iron isotopes. <i>Archaeometry</i> , 2022, 64, 385-407.	1.3	3
90	Springwater Geochemical Response to a Seismic Event. <i>Mineralogical Magazine</i> , 1998, 62A, 1192-1193.	1.4	1

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91	Iron Isotopes. , 2015, , 1264-1268.		1
92	8 Silicon Isotope Geochemistry. , 2017, , 289-344.		0
93	Iron Isotopes. , 2014, , 1-6.		0