Tobias Fischer

List of Publications by Year in descending order

77 papers	4,599 citations	76326 40 h-index	106344 65 g-index
79 all docs	79 docs citations	79 times ranked	3081 citing authors

#	Article	IF	Citations
1	Noble Gases and Volatile Recycling at Subduction Zones. Reviews in Mineralogy and Geochemistry, 2002, 47, 319-370.	4.8	389
2	Subduction and Recycling of Nitrogen Along the Central American Margin. Science, 2002, 297, 1154-1157.	12.6	178
3	Massive and prolonged deep carbon emissions associated with continental rifting. Nature Geoscience, 2016, 9, 145-149.	12.9	178
4	Fluxes of volatiles (H2O, CO2, N2, Cl, F) from arc volcanoes. Geochemical Journal, 2008, 42, 21-38.	1.0	172
5	Volcanic flux of nitrogen from the Earth. Chemical Geology, 2001, 171, 263-271.	3.3	168
6	Contrasting Heâ€“C relationships in Nicaragua and Costa Rica: insights into C cycling through subduction zones. Earth and Planetary Science Letters, 2003, 214, 499-513.	4.4	161
7	An essential role for continental rifts and lithosphere in the deep carbon cycle. Nature Geoscience, 2017, 10, 897-902.	12.9	150
8	Along-arc, inter-arc and arc-to-arc variations in volcanic gas CO 2 /S T ratios reveal dual source of carbon in arc volcanism. Earth-Science Reviews, 2017, 168, 24-47.	9.1	131
9	Upper-mantle volatile chemistry at Oldoinyo Lengai volcano and the origin of carbonatites. Nature, 2009, 459, 77-80.	27.8	129
10	Fluxes and sources of volatiles discharged from Kudryavy, a subduction zone volcano, Kurile Islands. Earth and Planetary Science Letters, 1998, 160, 81-96.	4.4	127
11	The emissions of CO2 and other volatiles from the worldâ€™s subaerial volcanoes. Scientific Reports, 2019, 9, 18716.	3.3	109
12	Geochemistry of the volcano-hydrothermal system of El ChichÃ³n Volcano, Chiapas, Mexico. Bulletin of Volcanology, 1998, 59, 436-449.	3.0	107
13	Sulfur degassing at Erta Ale (Ethiopia) and Masaya (Nicaragua) volcanoes: Implications for degassing processes and oxygen fugacities of basaltic systems. Geochemistry, Geophysics, Geosystems, 2013, 14, 4076-4108.	2.5	100
14	Correlations between SO2 flux and long-period seismicity at Galeras volcano. Nature, 1994, 368, 135-137.	27.8	98
15	Forearc carbon sink reduces long-term volatile recycling into the mantle. Nature, 2019, 568, 487-492.	27.8	97
16	Geochemical surveillance of magmatic volatiles at Popocatèpetl volcano, Mexico. Bulletin of the Geological Society of America, 1998, 110, 0695.	3.3	89
17	Trace elements in the gas emissions from the Erta Ale volcano, Afar, Ethiopia. Chemical Geology, 2013, 357, 95-116.	3.3	89
18	9. Noble Gases and Volatile Recycling at Subduction Zones. , 2002, , 319-370.		85

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19	CO2 flux emissions from the Earthâ€™s most actively degassing volcanoes, 2005â€“2015. Scientific Reports, 2019, 9, 5442.	3.3	84
20	The chemical and isotopic composition of fumarolic gases and spring discharges from Galeras Volcano, Colombia. Journal of Volcanology and Geothermal Research, 1997, 77, 229-253.	2.1	81
21	Nitrogen systematics and gas fluxes of subduction zones: Insights from Costa Rica arc volatiles. Geochemistry, Geophysics, Geosystems, 2004, 5, n/a-n/a.	2.5	81
22	The effects of volatile recycling, degassing and crustal contamination on the helium and carbon geochemistry of hydrothermal fluids from the Southern Volcanic Zone of Chile. Chemical Geology, 2009, 266, 38-49.	3.3	81
23	The relationship between fumarole gas composition and eruptive activity at Galeras Volcano, Colombia. Geology, 1996, 24, 531.	4.4	70
24	Causes of unrest at silicic calderas in the East African Rift: New constraints from InSAR and soilâ€gas chemistry at Aluto volcano, Ethiopia. Geochemistry, Geophysics, Geosystems, 2016, 17, 3008-3030.	2.5	68
25	Helium isotopes at Rungwe Volcanic Province, Tanzania, and the origin of East African Plateaux. Geophysical Research Letters, 2011, 38, n/a-n/a.	4.0	67
26	Volatile abundances in the sub-arc mantle: insights from volcanic and hydrothermal gas discharges. Journal of Volcanology and Geothermal Research, 2005, 140, 205-216.	2.1	65
27	Sulphur geodynamic cycle. Scientific Reports, 2015, 5, 8330.	3.3	64
28	The Analysis and Interpretation of Noble Gases in Modern Hydrothermal Systems. Advances in Isotope Geochemistry, 2013, , 249-317.	1.4	60
29	Chlorine isotope variations along the Central American volcanic front and back arc. Geochemistry, Geophysics, Geosystems, 2009, 10, .	2.5	57
30	A New Sulfur and Carbon Degassing Inventory for the Southern Central American Volcanic Arc: The Importance of Accurate Timeâ€Series Data Sets and Possible Tectonic Processes Responsible for Temporal Variations in Arcâ€Scale Volatile Emissions. Geochemistry, Geophysics, Geosystems, 2017, 18, 4437-4468.	2.5	56
31	Nitrogen sources and recycling at subduction zones: Insights from the Izuâ€Boninâ€Mariana arc. Geochemistry, Geophysics, Geosystems, 2010, 11, .	2.5	54
32	Insights on Hydrothermalâ€Magmatic Interactions and Eruptive Processes at PoÃ¡s Volcano (Costa Rica) From Highâ€Frequency Gas Monitoring and Drone Measurements. Geophysical Research Letters, 2019, 46, 1293-1302.	4.0	54
33	Volatile-rich silicate melts from Oldoinyo Lengai volcano (Tanzania): Implications for carbonatite genesis and eruptive behavior. Earth and Planetary Science Letters, 2013, 361, 379-390.	4.4	53
34	Volcanic, Magmatic and Hydrothermal Gases. , 2015, , 779-797.		53
35	Carbon Dioxide Emissions from Subaerial Volcanic Regions. , 2019, , 188-236.		53
36	Displaced cratonic mantle concentrates deep carbon during continental rifting. Nature, 2020, 582, 67-72.	27.8	50

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37	Hydrothermal 15N15N abundances constrain the origins of mantle nitrogen. Nature, 2020, 580, 367-371.	27.8	50
38	Continental-scale links between the mantle and groundwater systems of the western United States: Evidence from travertine springs and regional He isotope data. GSA Today, 2005, 15, 4.	2.0	49
39	Aqueous and isotope geochemistry of mineral springs along the southern margin of the Tibetan plateau: Implications for fluid sources and regional degassing of CO₂. Geochemistry, Geophysics, Geosystems, 2008, 9, .	2.5	48
40	Faultâ€magma interactions during early continental rifting: Seismicity of the <scp>M</scp>agadiâ€<scp>N</scp>atronâ€<scp>M</scp>anyara basins, <scp>A</scp>frica. Geochemistry, Geophysics, Geosystems, 2017, 18, 3662-3686.	2.5	47
41	Nitrogen isotopes of the mantle: Insights from mineral separates. Geophysical Research Letters, 2005, 32, .	4.0	46
42	Monitoring of temporal and spatial variations in fumarole helium and carbon dioxide characteristics at Po^|^aacute;s and Turrialba volcanoes, Costa Rica (2001-2009). Geochemical Journal, 2010, 44, 431-440.	1.0	43
43	Gas and water geochemistry of geothermal systems in Dominica, Lesser Antilles island arc. Journal of Volcanology and Geothermal Research, 2011, 206, 1-14.	2.1	43
44	Incipient rifting accompanied by the release of subcontinental lithospheric mantle volatiles in the Magadi and Natron basin, East Africa. Journal of Volcanology and Geothermal Research, 2017, 346, 118-133.	2.1	39
45	Geochemical and isotopic evidence for seawater contamination of the hydrothermal system of Taal Volcano, Luzon, the Philippines. Bulletin of Volcanology, 1998, 59, 562-576.	3.0	38
46	AGU Centennial Grand Challenge: Volcanoes and Deep Carbon Global CO₂ Emissions From Subaerial Volcanismâ€"Recent Progress and Future Challenges. Geochemistry, Geophysics, Geosystems, 2020, 21, e2019GC008690.	2.5	36
47	Tracing magma sources in an arc-arc collision zone: Helium and carbon isotope and relative abundance systematics of the Sangihe Arc, Indonesia. Geochemistry, Geophysics, Geosystems, 2004, 5, n/a-n/a.	2.5	33
48	First airborne samples of a volcanic plume for Î´¹³C of CO₂ determinations. Geophysical Research Letters, 2016, 43, 3272-3279.	4.0	33
49	Extreme enrichment in atmospheric ¹⁵ N ¹⁵ N. Science Advances, 2017, 3, eaao6741.	10.3	31
50	Volatile and N isotope chemistry of the Molucca Sea collision zone: Tracing source components along the Sangihe Arc, Indonesia. Geochemistry, Geophysics, Geosystems, 2005, 6, n/a-n/a.	2.5	30
51	Resolving volatile sources along the western Sunda arc, Indonesia. Chemical Geology, 2013, 339, 263-282.	3.3	30
52	Gas Emissions From Volcanoes of the Kuril Island Arc (NW Pacific): Geochemistry and Fluxes. Geochemistry, Geophysics, Geosystems, 2018, 19, 1859-1880.	2.5	30
53	Aerial strategies advance volcanic gas measurements at inaccessible, strongly degassing volcanoes. Science Advances, 2020, 6, .	10.3	24
54	Diffuse degassing at Longonot volcano, Kenya: Implications for CO 2 flux in continental rifts. Journal of Volcanology and Geothermal Research, 2016, 327, 208-222.	2.1	23

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55	New insights into the magmatic-hydrothermal system and volatile budget of Lastarria volcano, Chile: Integrated results from the 2014 IAVCEI CCVG 12th Volcanic Gas Workshop. , 2018, 14, 983-1007.		23
56	Determination of trace and platinum-group elements in high ionic-strength volcanic fluids by sector-field inductively coupled plasma mass spectrometry (ICP-MS). Fresenius' Journal of Analytical Chemistry, 1998, 362, 457-464.	1.5	21
57	Volcanic activity and hazard in the East African Rift Zone. Nature Communications, 2021, 12, 6881.	12.8	21
58	Spatial and Depthâ€Dependent Variations in Magma Volume Addition and Addition Rates to Continental Arcs: Application to Global CO 2 Fluxes since 750 Ma. Geochemistry, Geophysics, Geosystems, 2019, 20, 2997-3018.	2.5	19
59	Element flux to the environment of the passively degassing crater lake-hosting Kawah Ijen volcano, Indonesia, and implications for estimates of the global volcanic flux. Geological Society Special Publication, 2017, 437, 9-34.	1.3	18
60	Sulfur sequestration and redox equilibria in volcanic gases. Journal of Volcanology and Geothermal Research, 2021, 414, 107181.	2.1	16
61	Volcanic activity and gas emissions along the South Sandwich Arc. Bulletin of Volcanology, 2021, 83, 1.	3.0	14
62	A multi-purpose, multi-rotor drone system for long-range and high-altitude volcanic gas plume measurements. Atmospheric Measurement Techniques, 2021, 14, 4255-4277.	3.1	14
63	Variable SO₂ emission rates for Anatahan volcano, the Commonwealth of the Northern Mariana Islands: Implications for deriving arcâ€wide volatile fluxes from erupting volcanoes. Geophysical Research Letters, 2007, 34, .	4.0	13
64	High ³ He/ ⁴ He in central Panama reveals a distal connection to the GalÃ¡pagos plume. Proceedings of the National Academy of Sciences of the United States of America, 2021, 118, .	7.1	12
65	Kinetic nitrogen isotope fractionation between air and dissolved N₂ in water: Implications for hydrothermal systems. Geochemical Journal, 2015, 49, 571-573.	1.0	7
66	Constraints on the sulfur subduction cycle in Central America from sulfur isotope compositions of volcanic gases. Chemical Geology, 2022, 588, 120627.	3.3	7
67	Nitrogen recycling at the Costa Rican subduction zone: The role of incoming plate structure. Scientific Reports, 2017, 7, 13933.	3.3	6
68	Atmospheric helium isotope composition as a tracer of volcanic emissions: A case study of Erta Ale volcano, Ethiopia. Chemical Geology, 2018, 480, 3-11.	3.3	4
69	The crater lake of Ilamatepec (Santa Ana) volcano, El Salvador: insights into lake gas composition and implications for monitoring. Bulletin of Volcanology, 2019, 81, 1.	3.0	4
70	VGAM: Compact and Lowâ€Power Mass Spectrometerâ€Based Instrumentation for Volcanic Gas Monitoring. Geochemistry, Geophysics, Geosystems, 2019, 20, 3782-3798.	2.5	4
71	Geochemistry of volcanic fluids. Bulletin of Volcanology, 2011, 73, 369-371.	3.0	3
72	Helium-carbon systematics of groundwaters in the Lassen Peak Region. Chemical Geology, 2021, 584, 120535.	3.3	3

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73	Gas Emissions From the Western Aleutians Volcanic Arc. Frontiers in Earth Science, 2021, 9, .	1.8	3
74	The Last Eighteen Years (1998â€“2014) of Fumarolic Degassing at the PoÃ¡s Volcano (Costa Rica) and Renewal Activity. Active Volcanoes of the World, 2019, , 235-260.	1.4	2
75	Aerial Survey Robotics in Extreme Environments: Mapping Volcanic CO2 Emissions With Flocking UAVs. Frontiers in Control Engineering, 2022, 3, .	0.6	2
76	Quantifying Eruptive and Background Seismicity, Deformation, Degassing, and Thermal Emissions at Volcanoes in the United States During 1978â€“2020. Journal of Geophysical Research: Solid Earth, 2021, 126, e2021JB021684.	3.4	1
77	Gas geochemistry of volcanic and hydrothermal fluids. , 2007, , .		0