Fabian B Wadsworth

List of Publications by Year
in descending order

82	1,968	201674 27	289244 40
papers	citations	h-index	g-index

82	82	82	1247
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	The evolution of pore connectivity in volcanic rocks. Earth and Planetary Science Letters, 2017, 462, 99-109.	4.4	96
2	Volcanic sintering: Timescales of viscous densification and strength recovery. Geophysical Research Letters, 2013, 40, 5658-5664.	4.0	91
3	Universal scaling of fluid permeability during volcanic welding and sediment diagenesis. Geology, 2016, 44, 219-222.	4.4	74
4	Nonisothermal viscous sintering of volcanic ash. Journal of Geophysical Research: Solid Earth, 2014, 119, 8792-8804.	3.4	71
5	Blowing Off Steam: Tuffisite Formation As a Regulator for Lava Dome Eruptions. Frontiers in Earth Science, 2016, 4, .	1.8	70
6	Surface tension driven processes densify and retain permeability in magma and lava. Earth and Planetary Science Letters, 2016, 433, 116-124.	4.4	63
7	Fusion characteristics of volcanic ash relevant to aviation hazards. Geophysical Research Letters, 2014, 41, 2326-2333.	4.0	57
8	Microstructural and petrophysical properties of the Permo-Triassic sandstones (Buntsandstein) from the Soultz-sous-ForÃªts geothermal site (France). Geothermal Energy, 2017, 5, .	1.9	56
9	The thermal stability of EyjafjallajÃ¶kull ash versus turbine ingestion test sands. Journal of Applied Volcanology, 2014, 3, .	2.0	55
10	From rock to magma and back again: The evolution of temperature and deformation mechanism in conduit margin zones. Earth and Planetary Science Letters, 2017, 463, 92-100.	4.4	54
11	Thermal vesiculation during volcanic eruptions. Nature, 2015, 528, 544-547.	27.8	52
12	Sintering of viscous droplets under surface tension. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2016, 472, 20150780.	2.1	47
13	Permeability of compacting porous lavas. Journal of Geophysical Research: Solid Earth, 2015, 120, 1605-1622.	3.4	46
14	Wetting and Spreading of Molten Volcanic Ash in Jet Engines. Journal of Physical Chemistry Letters, 2017, 8, 1878-1884.	4.6	45
15	High Temperature Reactions Between Gases and Ash Particles in Volcanic Eruption Plumes. Reviews in Mineralogy and Geochemistry, 2018, 84, 285-308.	4.8	44
16	Topological inversions in coalescing granular media control fluid-flow regimes. Physical Review E, 2017, 96, 033113.	2.1	39
17	Does an inter-flaw length control the accuracy of rupture forecasting in geological materials?. Earth and Planetary Science Letters, 2017, 475, 181-189.	4.4	39
18	Combined effusive-explosive silicic volcanism straddles the multiphase viscous-to-brittle transition. Nature Communications, 2018, 9, 4696.	12.8	39

#	Article	IF	Citations
19	Explosive-effusive volcanic eruption transitions caused by sintering. Science Advances, 2020, 6, .	10.3	39
20	Cristobalite in the 2011â€“2012 CordÃ³n Caulle eruption (Chile). Bulletin of Volcanology, 2015, 77, 1.	3.0	38
21	Disclosing the temperature of columnar jointing in lavas. Nature Communications, 2018, 9, 1432.	12.8	38
22	Time-dependent permeability evolution in compacting volcanic fracture systems and implications for gasÂoverpressure. Journal of Volcanology and Geothermal Research, 2017, 339, 81-97.	2.1	35
23	Vesiculation and Quenching During Surtseyan Eruptions at Hunga Tongaâ€Hunga Ha'apai Volcano, Tonga. Journal of Geophysical Research: Solid Earth, 2018, 123, 3762-3779.	3.4	34
24	Closing an open system: Pore pressure changes in permeable edifice rock at high strain rates. Journal of Volcanology and Geothermal Research, 2016, 315, 40-50.	2.1	31
25	The strength of heterogeneous volcanic rocks: A 2D approximation. Journal of Volcanology and Geothermal Research, 2016, 319, 1-11.	2.1	31
26	Size limits for rounding of volcanic ash particles heated by lightning. Journal of Geophysical Research: Solid Earth, 2017, 122, 1977-1989.	3.4	30
27	A general model for welding of ash particles in volcanic systems validated using in situ X-ray tomography. Earth and Planetary Science Letters, 2019, 525, 115726.	4.4	30
28	The Permeability Evolution of Tuffisites and Implications for Outgassing Through Dense Rhyolitic Magma. Journal of Geophysical Research: Solid Earth, 2019, 124, 8281-8299.	3.4	29
29	The thermal properties of porous andesite. Journal of Volcanology and Geothermal Research, 2020, 398, 106901.	2.1	29
30	Experimental sintering of ash at conduit conditions and implications for the longevity of tuffisites. Bulletin of Volcanology, 2018, 80, 1.	3.0	28
31	Sphere models for pore geometry and fluid permeability in heterogeneous magmas. Bulletin of Volcanology, 2017, 79, 1.	3.0	27
32	Sintering of polydisperse viscous droplets. Physical Review E, 2017, 95, 033114.	2.1	22
33	Upscaling permeability in anisotropic volcanic systems. Journal of Volcanology and Geothermal Research, 2018, 364, 35-47.	2.1	22
34	Mechanical Compaction of Crustal Analogs Made of Sintered Glass Beads: The Influence of Porosity and Grain Size. Journal of Geophysical Research: Solid Earth, 2021, 126, e2020JB021321.	3.4	22
35	Permeability Evolution in Variably Glassy Basaltic Andesites Measured Under Magmatic Conditions. Geophysical Research Letters, 2017, 44, 10,262.	4.0	21
36	Outgassing from Open and Closed Magma Foams. Frontiers in Earth Science, 2017, 5, .	1.8	21

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37	In situ observation of the percolation threshold in multiphase magma analogues. Bulletin of Volcanology, 2020, 82, 32.	3.0	21
38	Volcanic Unrest at TaupÅ•Volcano in 2019: Causes, Mechanisms and Implications. Geochemistry, Geophysics, Geosystems, 2021, 22, e2021GC009803.	2.5	21
39	Exhumed conduit records magma ascent and drain-back during a Strombolian eruption at Tongariro volcano, New Zealand. Bulletin of Volcanology, 2015, 77, 1.	3.0	18
40	Conduit margin heating and deformation during the AD 1886 basaltic Plinian eruption at Tarawera volcano, New Zealand. Bulletin of Volcanology, 2016, 78, 12.	3.0	18
41	Experimental constraints on the textures and origin of obsidian pyroclasts. Bulletin of Volcanology, 2019, 81, 1.	3.0	18
42	A model for permeability evolution during volcanic welding. Journal of Volcanology and Geothermal Research, 2021, 409, 107118.	2.1	18
43	Permeability of polydisperse magma foam. Geology, 2020, 48, 536-540.	4.4	17
44	SO2 scrubbing during percolation through rhyolitic volcanic domes. Geochimica Et Cosmochimica Acta, 2019, 257, 150-162.	3.9	16
45	The Permeability of Columnar Jointed Lava. Journal of Geophysical Research: Solid Earth, 2019, 124, 11305-11315.	3.4	16
46	The tensile strength of volcanic rocks: Experiments and models. Journal of Volcanology and Geothermal Research, 2021, 418, 107348.	2.1	16
47	Silicic conduits as supersized tuffisites: Clastogenic influences on shifting eruption styles at CordÃ³n Caulle volcano (Chile). Bulletin of Volcanology, 2021, 83, 1.	3.0	15
48	Fire resistance of the Mt. Epomeo Green Tuff, a widely-used building stone on Ischia Island (Italy). Volcanica, 2018, 1, 33-48.	1.8	15
49	Permeability of packs of polydisperse hard spheres. Physical Review E, 2021, 103, 062613.	2.1	13
50	The tensile strength of hydrothermally altered volcanic rocks. Journal of Volcanology and Geothermal Research, 2022, 428, 107576.	2.1	13
51	In situgranulation by thermal stress during subaqueous volcanic eruptions. Geology, 2019, 47, 179-182.	4.4	12
52	Determination of permeability using a classic Darcy water column. American Journal of Physics, 2020, 88, 20-24.	0.7	12
53	Quantifying Microstructural Evolution in Moving Magma. Frontiers in Earth Science, 2020, 8, .	1.8	11
54	Timescales of porosity and permeability loss by solid-state sintering. Earth and Planetary Science Letters, 2020, 549, 116533.	4.4	11

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55	Eruption and emplacement timescales of ignimbrite super-eruptions from thermo-kinetics of glass shards. Frontiers in Earth Science, 2015, 3, .	1.8	10
56	Dynamic elastic moduli during isotropic densification of initially granular media. Geophysical Journal International, 2016, 204, 1721-1728.	2.4	9
57	Friendly fire: Engineering a fort wall in the Iron Age. Journal of Archaeological Science, 2016, 67, 7-13.	2.4	9
58	Local geology controlled the feasibility of vitrifying Iron Age buildings. Scientific Reports, 2017, 7, 40028.	3.3	7
59	Pressure-Driven Opening and Filling of a Volcanic Hydrofracture Recorded by Tuffisite at HÃºsafell, Iceland: A Potential Seismic Source. Frontiers in Earth Science, 2021, 9, .	1.8	7
60	A novel apparatus for the simulation of eruptive gas-rock interactions. Bulletin of Volcanology, 2015, 77, 1.	3.0	6
61	Petrophysical properties, mechanical behaviour, and failure modes of impact melt-bearing breccia (suevite) from the Ries impact crater (Germany). Icarus, 2020, 349, 113873.	2.5	6
62	Rapid alteration of fractured volcanic conduits beneath Mt Unzen. Bulletin of Volcanology, 2021, 83, 1.	3.0	6
63	The force required to operate the plunger on a French press. American Journal of Physics, 2021, 89, 769-775.	0.7	6
64	Interparticle and Brownian forces controlling particle aggregation and rheology of silicate melts containing platinum-group element particles. Scientific Reports, 2022, 12, .	3.3	6
65	Crowd-sourcing observations of volcanic eruptions during the 2021 Fagradalsfjall and Cumbre Vieja events. Nature Communications, 2022, 13, 2611.	12.8	5
66	In Vulcanâ€™s forge. Nature Geoscience, 2019, 12, 2-3.	12.9	4
67	A model for the kinetics of high-temperature reactions between polydisperse volcanic ash and SO2 gas. American Mineralogist, 2021, 106, 1319-1332.	1.9	4
68	Introducing Volcanica: The first diamond open-access journal for volcanology. Volcanica, 2018, 1, i-ix.	1.8	4
69	Frictional Behaviour, Wear and Comminution of Synthetic Porous Geomaterials. Frontiers in Earth Science, 0, 8, .	1.8	4
70	Hot Sintering of Melts, Glasses and Magmas. Reviews in Mineralogy and Geochemistry, 2022, 87, 801-840.	4.8	4
71	The Permeability of Porous Volcanic Rock Through the Brittleâ€Ductile Transition. Journal of Geophysical Research: Solid Earth, 2022, 127, .	3.4	4
72	A viscousâ€toâ€brittle transition in eruptions through clay suspensions. Geophysical Research Letters, 2017, 44, 4806-4813.	4.0	3

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73	Forecasting Multiphase Magma Failure at the Laboratory Scale Using Acoustic Emission Data. Frontiers in Earth Science, 2018, 6, .	1.8	3
74	Publishing a Special Issue of Reports from the volcano observatories in Latin America. Volcanica, 2021, 4, i-vi.	1.8	3
75	The feasibility of vitrifying a sandstone enclosure in the British Iron Age. Journal of Archaeological Science: Reports, 2015, 4, 605-612.	0.5	2
76	Trashcano: Developing a quantitative teaching tool to understand ballistics accelerated by explosive volcanic eruptions. Volcanica, 2018, 1, 107-126.	1.8	2
77	Syn-eruptive agglutination of kimberlite volcanic ash. Volcanica, 2020, 3, 169-182.	1.8	2
78	Vesiculation of Rhyolitic Melts Under Oscillatory Pressure. Frontiers in Earth Science, 2022, 10, .	1.8	2
79	Vesiculation and densification of pyroclasts: A clast-size dependent competition between bubble growth and diffusive outgassing. Journal of Volcanology and Geothermal Research, 2022, , 107550.	2.1	2
80	Universal scaling for the permeability of random packs of overlapping and nonoverlapping particles. Physical Review E, 2022, 105, L043301.	2.1	2
81	Estimating pi using geoscience. Nature Geoscience, 0, , .	12.9	0
82	Syn-eruptive agglutination of kimberlite volcanic ash. Volcanica, 2020, 3, 169-182.	1.8	0