

# Fabian B Wadsworth

## List of Publications by Year in descending order

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Version: 2024-02-01

82  
papers

1,968  
citations

201575

27  
h-index

289141

40  
g-index

82  
all docs

82  
docs citations

82  
times ranked

1247  
citing authors

#	ARTICLE	IF	CITATIONS
1	Vesiculation of Rhyolitic Melts Under Oscillatory Pressure. <i>Frontiers in Earth Science</i> , 2022, 10, .	0.8	2
2	Vesiculation and densification of pyroclasts: A clast-size dependent competition between bubble growth and diffusive outgassing. <i>Journal of Volcanology and Geothermal Research</i> , 2022, , 107550.	0.8	2
3	Universal scaling for the permeability of random packs of overlapping and nonoverlapping particles. <i>Physical Review E</i> , 2022, 105, L043301.	0.8	2
4	Crowd-sourcing observations of volcanic eruptions during the 2021 Fagradalsfjall and Cumbre Vieja events. <i>Nature Communications</i> , 2022, 13, 2611.	5.8	5
5	Hot Sintering of Melts, Glasses and Magmas. <i>Reviews in Mineralogy and Geochemistry</i> , 2022, 87, 801-840.	2.2	4
6	The tensile strength of hydrothermally altered volcanic rocks. <i>Journal of Volcanology and Geothermal Research</i> , 2022, 428, 107576.	0.8	13
7	Interparticle and Brownian forces controlling particle aggregation and rheology of silicate melts containing platinum-group element particles. <i>Scientific Reports</i> , 2022, 12, .	1.6	6
8	The Permeability of Porous Volcanic Rock Through the Brittle–Ductile Transition. <i>Journal of Geophysical Research: Solid Earth</i> , 2022, 127, .	1.4	4
9	A model for permeability evolution during volcanic welding. <i>Journal of Volcanology and Geothermal Research</i> , 2021, 409, 107118.	0.8	18
10	Silicic conduits as supersized tuffisites: Clastogenic influences on shifting eruption styles at Cordón Caulle volcano (Chile). <i>Bulletin of Volcanology</i> , 2021, 83, 1.	1.1	15
11	Mechanical Compaction of Crustal Analogs Made of Sintered Glass Beads: The Influence of Porosity and Grain Size. <i>Journal of Geophysical Research: Solid Earth</i> , 2021, 126, e2020JB021321.	1.4	22
12	Rapid alteration of fractured volcanic conduits beneath Mt Unzen. <i>Bulletin of Volcanology</i> , 2021, 83, 1.	1.1	6
13	Pressure-Driven Opening and Filling of a Volcanic Hydrofracture Recorded by Tuffisite at HÅsafell, Iceland: A Potential Seismic Source. <i>Frontiers in Earth Science</i> , 2021, 9, .	0.8	7
14	Permeability of packs of polydisperse hard spheres. <i>Physical Review E</i> , 2021, 103, 062613.	0.8	13
15	Volcanic Unrest at TaupÅ Volcano in 2019: Causes, Mechanisms and Implications. <i>Geochemistry, Geophysics, Geosystems</i> , 2021, 22, e2021GC009803.	1.0	21
16	The force required to operate the plunger on a French press. <i>American Journal of Physics</i> , 2021, 89, 769-775.	0.3	6
17	A model for the kinetics of high-temperature reactions between polydisperse volcanic ash and SO <sub>2</sub> gas. <i>American Mineralogist</i> , 2021, 106, 1319-1332.	0.9	4
18	The tensile strength of volcanic rocks: Experiments and models. <i>Journal of Volcanology and Geothermal Research</i> , 2021, 418, 107348.	0.8	16

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19	Publishing a Special Issue of Reports from the volcano observatories in Latin America. <i>Volcanica</i> , 2021, 4, i-vi.	0.6	3
20	Determination of permeability using a classic Darcy water column. <i>American Journal of Physics</i> , 2020, 88, 20-24.	0.3	12
21	Explosive-effusive volcanic eruption transitions caused by sintering. <i>Science Advances</i> , 2020, 6, .	4.7	39
22	Quantifying Microstructural Evolution in Moving Magma. <i>Frontiers in Earth Science</i> , 2020, 8, .	0.8	11
23	Timescales of porosity and permeability loss by solid-state sintering. <i>Earth and Planetary Science Letters</i> , 2020, 549, 116533.	1.8	11
24	Petrophysical properties, mechanical behaviour, and failure modes of impact melt-bearing breccia (suevite) from the Ries impact crater (Germany). <i>Icarus</i> , 2020, 349, 113873.	1.1	6
25	Permeability of polydisperse magma foam. <i>Geology</i> , 2020, 48, 536-540.	2.0	17
26	In situ observation of the percolation threshold in multiphase magma analogues. <i>Bulletin of Volcanology</i> , 2020, 82, 32.	1.1	21
27	The thermal properties of porous andesite. <i>Journal of Volcanology and Geothermal Research</i> , 2020, 398, 106901.	0.8	29
28	Syn-eruptive agglutination of kimberlite volcanic ash. <i>Volcanica</i> , 2020, 3, 169-182.	0.6	2
29	Syn-eruptive agglutination of kimberlite volcanic ash. <i>Volcanica</i> , 2020, 3, 169-182.	0.6	0
30	The Permeability Evolution of Tuffisites and Implications for Outgassing Through Dense Rhyolitic Magma. <i>Journal of Geophysical Research: Solid Earth</i> , 2019, 124, 8281-8299.	1.4	29
31	<i>In situ</i> granulation by thermal stress during subaqueous volcanic eruptions. <i>Geology</i> , 2019, 47, 179-182.	2.0	12
32	A general model for welding of ash particles in volcanic systems validated using in situ X-ray tomography. <i>Earth and Planetary Science Letters</i> , 2019, 525, 115726.	1.8	30
33	SO <sub>2</sub> scrubbing during percolation through rhyolitic volcanic domes. <i>Geochimica Et Cosmochimica Acta</i> , 2019, 257, 150-162.	1.6	16
34	Experimental constraints on the textures and origin of obsidian pyroclasts. <i>Bulletin of Volcanology</i> , 2019, 81, 1.	1.1	18
35	The Permeability of Columnar Jointed Lava. <i>Journal of Geophysical Research: Solid Earth</i> , 2019, 124, 11305-11315.	1.4	16
36	In Vulcanâ€™s forge. <i>Nature Geoscience</i> , 2019, 12, 2-3.	5.4	4

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37	Experimental sintering of ash at conduit conditions and implications for the longevity of tuffisites. <i>Bulletin of Volcanology</i> , 2018, 80, 1.	1.1	28
38	Disclosing the temperature of columnar jointing in lavas. <i>Nature Communications</i> , 2018, 9, 1432.	5.8	38
39	High Temperature Reactions Between Gases and Ash Particles in Volcanic Eruption Plumes. <i>Reviews in Mineralogy and Geochemistry</i> , 2018, 84, 285-308.	2.2	44
40	Forecasting Multiphase Magma Failure at the Laboratory Scale Using Acoustic Emission Data. <i>Frontiers in Earth Science</i> , 2018, 6, .	0.8	3
41	Combined effusive-explosive silicic volcanism straddles the multiphase viscous-to-brittle transition. <i>Nature Communications</i> , 2018, 9, 4696.	5.8	39
42	Upscaling permeability in anisotropic volcanic systems. <i>Journal of Volcanology and Geothermal Research</i> , 2018, 364, 35-47.	0.8	22
43	Vesiculation and Quenching During Surtseyan Eruptions at Hunga Tongaâ€Hunga Ha'apai Volcano, Tonga. <i>Journal of Geophysical Research: Solid Earth</i> , 2018, 123, 3762-3779.	1.4	34
44	Fire resistance of the Mt. Epomeo Green Tuff, a widely-used building stone on Ischia Island (Italy). <i>Volcanica</i> , 2018, 1, 33-48.	0.6	15
45	Trashcano: Developing a quantitative teaching tool to understand ballistics accelerated by explosive volcanic eruptions. <i>Volcanica</i> , 2018, 1, 107-126.	0.6	2
46	Introducing Volcanica: The first diamond open-access journal for volcanology. <i>Volcanica</i> , 2018, 1, i-ix.	0.6	4
47	From rock to magma and back again: The evolution of temperature and deformation mechanism in conduit margin zones. <i>Earth and Planetary Science Letters</i> , 2017, 463, 92-100.	1.8	54
48	Local geology controlled the feasibility of vitrifying Iron Age buildings. <i>Scientific Reports</i> , 2017, 7, 40028.	1.6	7
49	Wetting and Spreading of Molten Volcanic Ash in Jet Engines. <i>Journal of Physical Chemistry Letters</i> , 2017, 8, 1878-1884.	2.1	45
50	Time-dependent permeability evolution in compacting volcanic fracture systems and implications for gas overpressure. <i>Journal of Volcanology and Geothermal Research</i> , 2017, 339, 81-97.	0.8	35
51	A viscous to brittle transition in eruptions through clay suspensions. <i>Geophysical Research Letters</i> , 2017, 44, 4806-4813.	1.5	3
52	Sintering of polydisperse viscous droplets. <i>Physical Review E</i> , 2017, 95, 033114.	0.8	22
53	Size limits for rounding of volcanic ash particles heated by lightning. <i>Journal of Geophysical Research: Solid Earth</i> , 2017, 122, 1977-1989.	1.4	30
54	The evolution of pore connectivity in volcanic rocks. <i>Earth and Planetary Science Letters</i> , 2017, 462, 99-109.	1.8	96

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55	Topological inversions in coalescing granular media control fluid-flow regimes. <i>Physical Review E</i> , 2017, 96, 033113.	0.8	39
56	Permeability Evolution in Variably Glassy Basaltic Andesites Measured Under Magmatic Conditions. <i>Geophysical Research Letters</i> , 2017, 44, 10,262.	1.5	21
57	Sphere models for pore geometry and fluid permeability in heterogeneous magmas. <i>Bulletin of Volcanology</i> , 2017, 79, 1.	1.1	27
58	Does an inter-flaw length control the accuracy of rupture forecasting in geological materials?. <i>Earth and Planetary Science Letters</i> , 2017, 475, 181-189.	1.8	39
59	Outgassing from Open and Closed Magma Foams. <i>Frontiers in Earth Science</i> , 2017, 5, .	0.8	21
60	Microstructural and petrophysical properties of the Permo-Triassic sandstones (Buntsandstein) from the Soultz-sous-ForÃats geothermal site (France). <i>Geothermal Energy</i> , 2017, 5, .	0.9	56
61	Blowing Off Steam: Tuffisite Formation As a Regulator for Lava Dome Eruptions. <i>Frontiers in Earth Science</i> , 2016, 4, .	0.8	70
62	Universal scaling of fluid permeability during volcanic welding and sediment diagenesis. <i>Geology</i> , 2016, 44, 219-222.	2.0	74
63	Closing an open system: Pore pressure changes in permeable edifice rock at high strain rates. <i>Journal of Volcanology and Geothermal Research</i> , 2016, 315, 40-50.	0.8	31
64	The strength of heterogeneous volcanic rocks: A 2D approximation. <i>Journal of Volcanology and Geothermal Research</i> , 2016, 319, 1-11.	0.8	31
65	Sintering of viscous droplets under surface tension. <i>Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences</i> , 2016, 472, 20150780.	1.0	47
66	Conduit margin heating and deformation during the AD 1886 basaltic Plinian eruption at Tarawera volcano, New Zealand. <i>Bulletin of Volcanology</i> , 2016, 78, 12.	1.1	18
67	Dynamic elastic moduli during isotropic densification of initially granular media. <i>Geophysical Journal International</i> , 2016, 204, 1721-1728.	1.0	9
68	Friendly fire: Engineering a fort wall in the Iron Age. <i>Journal of Archaeological Science</i> , 2016, 67, 7-13.	1.2	9
69	Surface tension driven processes densify and retain permeability in magma and lava. <i>Earth and Planetary Science Letters</i> , 2016, 433, 116-124.	1.8	63
70	The feasibility of vitrifying a sandstone enclosure in the British Iron Age. <i>Journal of Archaeological Science: Reports</i> , 2015, 4, 605-612.	0.2	2
71	Permeability of compacting porous lavas. <i>Journal of Geophysical Research: Solid Earth</i> , 2015, 120, 1605-1622.	1.4	46
72	A novel apparatus for the simulation of eruptive gas-rock interactions. <i>Bulletin of Volcanology</i> , 2015, 77, 1.	1.1	6

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73	Eruption and emplacement timescales of ignimbrite super-eruptions from thermo-kinetics of glass shards. <i>Frontiers in Earth Science</i> , 2015, 3, .	0.8	10
74	Cristobalite in the 2011–2012 Cordón Caulle eruption (Chile). <i>Bulletin of Volcanology</i> , 2015, 77, 1.	1.1	38
75	Thermal vesiculation during volcanic eruptions. <i>Nature</i> , 2015, 528, 544-547.	13.7	52
76	Exhumed conduit records magma ascent and drain-back during a Strombolian eruption at Tongariro volcano, New Zealand. <i>Bulletin of Volcanology</i> , 2015, 77, 1.	1.1	18
77	Fusion characteristics of volcanic ash relevant to aviation hazards. <i>Geophysical Research Letters</i> , 2014, 41, 2326-2333.	1.5	57
78	Nonisothermal viscous sintering of volcanic ash. <i>Journal of Geophysical Research: Solid Earth</i> , 2014, 119, 8792-8804.	1.4	71
79	The thermal stability of Eyjafjallajökull ash versus turbine ingestion test sands. <i>Journal of Applied Volcanology</i> , 2014, 3, .	0.7	55
80	Volcanic sintering: Timescales of viscous densification and strength recovery. <i>Geophysical Research Letters</i> , 2013, 40, 5658-5664.	1.5	91
81	Frictional Behaviour, Wear and Comminution of Synthetic Porous Geomaterials. <i>Frontiers in Earth Science</i> , 0, 8, .	0.8	4
82	Estimating pi using geoscience. <i>Nature Geoscience</i> , 0, , .	5.4	0