

Michael P Poland

List of Publications by Citations

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

104 papers	2,867 citations	34 h-index	50 g-index
116 ext. papers	3,553 ext. citations	5.5 avg, IF	5.49 L-index

#	Paper	IF	Citations
104	The 2018 rift eruption and summit collapse of Kīlauea Volcano. <i>Science</i> , 2019 , 363, 367-374	33.3	226
103	A mantle-driven surge in magma supply to Kīlauea Volcano during 2003–2007. <i>Nature Geoscience</i> , 2012 , 5, 295-300	18.3	130
102	Mapping Three-Dimensional Surface Deformation by Combining Multiple-Aperture Interferometry and Conventional Interferometry: Application to the June 2007 Eruption of Kilauea Volcano, Hawaii. <i>IEEE Geoscience and Remote Sensing Letters</i> , 2011 , 8, 34-38	4.1	116
101	Volcanology: Lessons learned from Synthetic Aperture Radar imagery. <i>Journal of Volcanology and Geothermal Research</i> , 2014 , 289, 81-113	2.8	86
100	New Episodes of Volcanism at Kilauea Volcano, Hawaii. <i>Eos</i> , 2008 , 89, 37-38	1.5	71
99	Time-averaged discharge rate of subaerial lava at Kīlauea Volcano, Hawaii measured from TanDEM-X interferometry: Implications for magma supply and storage during 2011–2013. <i>Journal of Geophysical Research: Solid Earth</i> , 2014 , 119, 5464-5481	3.6	70
98	Evolution of dike opening during the March 2011 Kamoamoa fissure eruption, Kīlauea Volcano, Hawai'i. <i>Journal of Geophysical Research: Solid Earth</i> , 2013 , 118, 897-914	3.6	70
97	A new model for the growth of basaltic shields based on deformation of Fernandina volcano, Galápagos Islands. <i>Earth and Planetary Science Letters</i> , 2013 , 377-378, 358-366	5.3	69
96	A volcano bursting at the seams: Inflation, faulting, and eruption at Sierra Negra volcano, Galápagos. <i>Geology</i> , 2006 , 34, 1025	5	69
95	The May 2005 eruption of Fernandina volcano, Galápagos: The first circumferential dike intrusion observed by GPS and InSAR. <i>Bulletin of Volcanology</i> , 2011 , 73, 679-697	2.4	67
94	Geodetic evidence for an echelon dike emplacement and concurrent slow slip during the June 2007 intrusion and eruption at Kīlauea volcano, Hawaii. <i>Journal of Geophysical Research</i> , 2010 , 115,		64
93	Magma reservoir failure and the onset of caldera collapse at Kīlauea Volcano in 2018. <i>Science</i> , 2019 , 366,	33.3	63
92	Bayesian estimation of magma supply, storage, and eruption rates using a multiphysical volcano model: Kīlauea Volcano, 2000–2012. <i>Earth and Planetary Science Letters</i> , 2016 , 447, 161-171	5.3	60
91	The added value of time-variable microgravimetry to the understanding of how volcanoes work. <i>Earth-Science Reviews</i> , 2017 , 169, 146-179	10.2	58
90	The 2005 eruption of Sierra Negra volcano, Galápagos, Ecuador. <i>Bulletin of Volcanology</i> , 2008 , 70, 655-673	2.4	57
89	Lava lake level as a gauge of magma reservoir pressure and eruptive hazard. <i>Geology</i> , 2015 , 43, 831-834	5	56
88	Constraints on the mechanism of long-term, steady subsidence at Medicine Lake volcano, northern California, from GPS, leveling, and InSAR. <i>Journal of Volcanology and Geothermal Research</i> , 2006 , 150, 55-78	2.8	56

87	Patterns of magma flow in segmented silicic dikes at Summer Coon volcano, Colorado: AMS and thin section analysis. <i>Earth and Planetary Science Letters</i> , 2004 , 219, 155-169	5.3	52
86	Magmatically triggered slow slip at Kilauea Volcano, Hawaii. <i>Science</i> , 2008 , 321, 1177	33.3	51
85	Shallow magma accumulation at Kilauea Volcano, Hawaii revealed by microgravity surveys. <i>Geology</i> , 2010 , 38, 1139-1142	5	50
84	Tracking lava flow emplacement on the east rift zone of Kilauea, Hawaii with synthetic aperture radar coherence. <i>Geochemistry, Geophysics, Geosystems</i> , 2012 , 13,	3.6	49
83	Magma supply, storage, and transport at shield-stage Hawaiian volcanoes. <i>US Geological Survey Profesional Paper</i> , 179-234		45
82	Geodetic observations and modeling of magmatic inflation at the Three Sisters volcanic center, central Oregon Cascade Range, USA. <i>Journal of Volcanology and Geothermal Research</i> , 2006 , 150, 35-54	2.8	44
81	Magma degassing triggered by static decompression at Kilauea Volcano, Hawaii <i>Geophysical Research Letters</i> , 2009 , 36,	4.9	43
80	A model for radial dike emplacement in composite cones based on observations from Summer Coon volcano, Colorado, USA. <i>Bulletin of Volcanology</i> , 2008 , 70, 861-875	2.4	43
79	Continuous gravity measurements reveal a low-density lava lake at Kilauea Volcano, Hawaii <i>Earth and Planetary Science Letters</i> , 2013 , 376, 178-185	5.3	42
78	Interferogram formation in the presence of complex and large deformation. <i>Geophysical Research Letters</i> , 2007 , 34,	4.9	42
77	Gravity changes and deformation at Kilauea Volcano, Hawaii, associated with summit eruptive activity, 2009-2012. <i>Journal of Geophysical Research: Solid Earth</i> , 2014 , 119, 7288-7305	3.6	40
76	Thermal, Deformation, and Degassing Remote Sensing Time Series (CE 2000-2017) at the 47 most Active Volcanoes in Latin America: Implications for Volcanic Systems. <i>Journal of Geophysical Research: Solid Earth</i> , 2019 , 124, 195-218	3.6	38
75	Volcano Geodesy: Recent developments and future challenges. <i>Journal of Volcanology and Geothermal Research</i> , 2017 , 344, 1-12	2.8	37
74	Monitoring lava-dome growth during the 2004-2008 Mount St. Helens, Washington, eruption using oblique terrestrial photography. <i>Earth and Planetary Science Letters</i> , 2009 , 286, 243-254	5.3	36
73	Spatiotemporal evolution of dike opening and differential slip at Kilauea Volcano, Hawaii. <i>Journal of Geophysical Research</i> , 2011 , 116,		35
72	Steady subsidence of Medicine Lake volcano, northern California, revealed by repeated leveling surveys. <i>Journal of Geophysical Research</i> , 2002 , 107, ECV 8-1-ECV 8-16		35
71	The changing shapes of active volcanoes: History, evolution, and future challenges for volcano geodesy. <i>Journal of Volcanology and Geothermal Research</i> , 2006 , 150, 1-13	2.8	34
70	The 2017-19 activity at Mount Agung in Bali (Indonesia): Intense unrest, monitoring, crisis response, evacuation, and eruption. <i>Scientific Reports</i> , 2019 , 9, 8848	4.9	32

69	Towards coordinated regional multi-satellite InSAR volcano observations: results from the Latin America pilot project. <i>Journal of Applied Volcanology</i> , 2018 , 7,	2.6	32
68	Volcano monitoring using GPS: Developing data analysis strategies based on the June 2007 Kīlauea Volcano intrusion and eruption. <i>Journal of Geophysical Research</i> , 2010 , 115,		30
67	The spectrum of persistent volcanic flank instability: A review and proposed framework based on Kīlauea, Piton de la Fournaise, and Etna. <i>Journal of Volcanology and Geothermal Research</i> , 2017 , 339, 63-80	2.8	29
66	Abundant carbon in the mantle beneath Hawaiʻi <i>Nature Geoscience</i> , 2017 , 10, 704-708	18.3	29
65	Nyamulagiraʻs magma plumbing system inferred from 15 years of InSAR. <i>Geological Society Special Publication</i> , 2013 , 380, 39-65	1.7	28
64	Measurement of slow-moving along-track displacement from an efficient multiple-aperture SAR interferometry (MAI) stacking. <i>Journal of Geodesy</i> , 2015 , 89, 411-425	4.5	27
63	Insights into shallow magmatic processes at Kīlauea Volcano, Hawaiʻi, from a multiyear continuous gravity time series. <i>Journal of Geophysical Research: Solid Earth</i> , 2016 , 121, 5477-5492	3.6	26
62	The 2014–2015 Pāhoehoe lava flow crisis at Kīlauea Volcano, Hawaiʻi Disaster avoided and lessons learned. <i>GSA Today</i> , 2016 , 4-10	2.8	25
61	Dome growth at Mount Cleveland, Aleutian Arc, quantified by time series TerraSAR-X imagery. <i>Geophysical Research Letters</i> , 2015 , 42, 10,614-10,621	4.9	23
60	Long-term changes in quiescent degassing at Mount Baker Volcano, Washington, USA; Evidence for a stalled intrusion in 1975 and connection to a deep magma source. <i>Journal of Volcanology and Geothermal Research</i> , 2009 , 186, 379-386	2.8	23
59	Seismic detection of increased degassing before Kīlauea's 2008 summit explosion. <i>Nature Communications</i> , 2013 , 4, 1668	17.4	22
58	Gravity fluctuations induced by magma convection at Kīlauea Volcano, Hawaiʻi <i>Geology</i> , 2012 , 40, 803-806		22
57	Toward continuous 4D microgravity monitoring of volcanoes. <i>Geophysics</i> , 2008 , 73, WA19-WA28	3.1	22
56	Partly Cloudy With a Chance of Lava Flows: Forecasting Volcanic Eruptions in the Twenty-First Century. <i>Journal of Geophysical Research: Solid Earth</i> , 2020 , 125, e2018JB016974	3.6	21
55	The role of viscous magma mush spreading in volcanic flank motion at Kīlauea Volcano, Hawaiʻi <i>Journal of Geophysical Research: Solid Earth</i> , 2013 , 118, 2474-2487	3.6	20
54	TerraSAR-X interferometry reveals small-scale deformation associated with the summit eruption of Kīlauea Volcano, Hawaiʻi <i>Geophysical Research Letters</i> , 2013 , 40, 1279-1283	4.9	20
53	Coupling at Mauna Loa and Kīlauea by stress transfer in an asthenospheric melt layer. <i>Nature Geoscience</i> , 2012 , 5, 826-829	18.3	20
52	The cascading origin of the 2018 Kīlauea eruption and implications for future forecasting. <i>Nature Communications</i> , 2020 , 11, 5646	17.4	20

51	Joint analysis of geodetic and earthquake fault-plane solution data to constrain magmatic sources: A case study from Kīlauea Volcano. <i>Earth and Planetary Science Letters</i> , 2016 , 455, 38-48	5.3	16
50	Forecasting, Detecting, and Tracking Volcanic Eruptions from Space. <i>Remote Sensing in Earth Systems Sciences</i> , 2020 , 3, 55-94	3.1	15
49	Post-Eruptive Inflation of Okmok Volcano, Alaska, from InSAR, 2008-2014. <i>Remote Sensing</i> , 2015 , 7, 16778-16794	3.5	15
48	Mass Addition at Mount St. Helens, Washington, Inferred From Repeated Gravity Surveys. <i>Journal of Geophysical Research: Solid Earth</i> , 2018 , 123, 1856-1874	3.6	13
47	Moderate-magnitude earthquakes induced by magma reservoir inflation at Kīlauea Volcano, Hawaiʻi. <i>Geophysical Research Letters</i> , 2013 , 40, 5366-5370	4.9	13
46	Magma at depth: a retrospective analysis of the 1975 unrest at Mount Baker, Washington, USA. <i>Bulletin of Volcanology</i> , 2011 , 73, 175-189	2.4	13
45	Volcano geodesy in the Cascade arc, USA. <i>Bulletin of Volcanology</i> , 2017 , 79, 1	2.4	12
44	History of surface displacements at the Yellowstone Caldera, Wyoming, from leveling surveys and InSAR observations, 1923-2008. <i>US Geological Survey Profesional Paper</i> ,		12
43	Constraints and conundrums resulting from ground-deformation measurements made during the 2004-2005 dome-building eruption of Mount St. Helens, Washington. <i>US Geological Survey Profesional Paper</i> , 281-300		11
42	Space-Based Imaging Radar Studies of U.S. Volcanoes. <i>Frontiers in Earth Science</i> , 2019 , 6,	3.5	10
41	A Cautionary Tale of Topography and Tilt from Kīlauea Caldera. <i>Geophysical Research Letters</i> , 2019 , 46, 4221-4229	4.9	9
40	Petrologic Testament to Changes in Shallow Magma Storage and Transport During 30+ Years of Recharge and Eruption at Kīlauea Volcano, Hawaiʻi. <i>Geophysical Monograph Series</i> , 2015 , 147-188	1.1	9
39	Instrumentation recommendations for volcano monitoring at U.S. volcanoes under the national volcano early warning system. <i>USGS Scientific Investigations Report</i> ,		9
38	Modulation of seismic activity in Kīlauea's upper East Rift Zone (Hawaiʻi) by summit pressurization. <i>Geology</i> , 2019 , 47, 820-824	5	8
37	Identifying hazards associated with lava deltas. <i>Bulletin of Volcanology</i> , 2014 , 76, 1	2.4	8
36	Localized Surface Disruptions Observed by InSAR during Strong Earthquakes in Java and Hawaiʻi. <i>Bulletin of the Seismological Society of America</i> , 2010 , 100, 532-540	2.3	8
35	Learning to recognize volcanic non-eruptions. <i>Geology</i> , 2010 , 38, 287-288	5	7
34	Radar interferometry observations of surface displacements during pre- and co-eruptive periods at Mount St. Helens, Washington, 1992-2005. <i>US Geological Survey Profesional Paper</i> , 361-382		7

33	How and Why Hawaiian Volcanism Has Become Pivotal to Our Understanding of Volcanoes from Their Source to the Surface. <i>Geophysical Monograph Series</i> , 2015 , 1-18	1.1	6
32	Evidence for Large Compositional Ranges in Coeval Melts Erupted from Kīlauea's Summit Reservoir. <i>Geophysical Monograph Series</i> , 2015 , 125-145	1.1	6
31	Continuous Gravity and Tilt Reveal Anomalous Pressure and Density Changes Associated With Gas Pistoning Within the Summit Lava Lake of Kīlauea Volcano, Hawai'i. <i>Geophysical Research Letters</i> , 2018 , 45, 2319-2327	4.9	6
30	Contrasting Volcanism in Hawai'i and the Galápagos. <i>Geophysical Monograph Series</i> , 2014 , 5-26	1.1	6
29	Slow Slip Event at Kilauea Volcano. <i>Eos</i> , 2010 , 91, 118	1.5	6
28	A retrospective look at the February 1993 east rift zone intrusion at Kīlauea volcano, Hawaii. <i>Journal of Volcanology and Geothermal Research</i> , 2018 , 358, 241-251	2.8	6
27	Assessing Seasonal Changes in Microgravity at Yellowstone Caldera. <i>Journal of Geophysical Research: Solid Earth</i> , 2019 , 124, 4174-4188	3.6	5
26	Using Conceptual Models to Relate Multiparameter Satellite Data to Subsurface Volcanic Processes in Latin America. <i>Geochemistry, Geophysics, Geosystems</i> , 2020 , 21, e2019GC008494	3.6	5
25	Post-Collapse Gravity Increase at the Summit of Kīlauea Volcano, Hawai'i. <i>Geophysical Research Letters</i> , 2019 , 46, 14430-14439	4.9	5
24	Hawaiian Fissure Fountains. <i>Geophysical Monograph Series</i> , 2015 , 369-391	1.1	4
23	Interseismic Quiescence and Triggered Slip of Active Normal Faults of Kīlauea Volcano's South Flank During 2001-2018. <i>Journal of Geophysical Research: Solid Earth</i> , 2019 , 124, 9780-9794	3.6	4
22	Magma supply to Kīlauea Volcano, Hawai'i from inception to now: Historical perspective, current state of knowledge, and future challenges 2019 ,		4
21	Insights Into Mixing, Fractionation, and Degassing of Primitive Melts at Kīlauea Volcano, Hawai'i. <i>Geophysical Monograph Series</i> , 2015 , 323-349	1.1	3
20	Lava Flows in 3D. <i>Geophysical Monograph Series</i> , 2015 , 483-505	1.1	3
19	Primitive Components, Crustal Assimilation, and Magmatic Degassing During the Early 2008 Kīlauea Summit Eruptive Activity. <i>Geophysical Monograph Series</i> , 2015 , 439-455	1.1	3
18	Volcano geodesy using InSAR in 2020: the past and next decades. <i>Bulletin of Volcanology</i> , 2022 , 84, 1	2.4	3
17	Applications of Bistatic Radar to Volcano Topography: A Review of Ten Years of TanDEM-X. <i>IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing</i> , 2021 , 14, 3282-3302	4.7	3
16	From Reservoirs and Conduits to the Surface. <i>Geophysical Monograph Series</i> , 2015 , 289-321	1.1	2

15	Onset of a Basaltic Explosive Eruption From Kīlauea's Summit in 2008. <i>Geophysical Monograph Series</i> , 2015 , 421-437	1.1	2
14	Remote camera observations of lava dome growth at Mount St. Helens, Washington, October 2004 to February 2006. <i>US Geological Survey Profesional Paper</i> , 225-236		2
13	Extrusion rate of the Mount St. Helens lava dome estimated from terrestrial imagery, November 2004-December 2005. <i>US Geological Survey Profesional Paper</i> , 237-255		2
12	Evolution of deformation studies on active Hawaiian volcanoes. <i>USGS Scientific Investigations Report</i> ,		2
11	The 2014 annual report for the Hawaiian Volcano Observatory. <i>USGS Scientific Investigations Report</i> ,		2
10	Analysis of Seismicity Rate Changes and Tilt During Early Episodic Fountaining Stage of Puʻu ʻŌ ʻŌ Hawaii Eruption. <i>Geophysical Monograph Series</i> , 2015 , 213-228	1.1	1
9	Using near-real-time monitoring data from Puʻu ʻŌ ʻŌ at Kīlauea Volcano for training and educational purposes. <i>Journal of Applied Volcanology</i> , 2015 , 4,	2.6	1
8	Exploring Hawaiian Volcanism. <i>Eos</i> , 2013 , 94, 72-72	1.5	1
7	Volcanology Curricula Development Aided by Online Educational Resource. <i>Eos</i> , 2011 , 92, 101-101	1.5	1
6	Insight into the May 2015 summit inflation event at Kīlauea Volcano, Hawaii. <i>Journal of Volcanology and Geothermal Research</i> , 2021 , 415, 107250	2.8	1
5	Rainfall an unlikely factor in Kīlauea's 2018 rift eruption.. <i>Nature</i> , 2022 , 602, E7-E10	50.4	0
4	Quantifying Eruptive and Background Seismicity, Deformation, Degassing, and Thermal Emissions at Volcanoes in the United States During 1978-2020. <i>Journal of Geophysical Research: Solid Earth</i> , 2021 , 126, e2021JB021684	3.6	0
3	Volcano geodesy: A critical tool for assessing the state of volcanoes and their potential for hazardous eruptive activity 2021 , 75-115		0
2	Onset and evolution of Kīlauea's 2018 flank eruption and summit collapse from continuous gravity. <i>Earth and Planetary Science Letters</i> , 2021 , 567, 117003	5.3	0
1	Synthetic aperture radar volcanic flow maps (SAR VFMs): a simple method for rapid identification and mapping of volcanic mass flows. <i>Bulletin of Volcanology</i> , 2022 , 84, 1	2.4	0