

**AARON J. PIETRUSZKA, Ph.D. — ASSOCIATE SPECIALIST**

**DEPARTMENT OF EARTH SCIENCES/SOEST**  
**1680 East-West Rd., University of Hawai'i, Honolulu, HI 96822**  
**(808) 956-9607/apietrus@hawaii.edu/POST 612A**

**PUBLICATIONS** (\* = student 1st author)

33. **Pietruszka A.J.**, D.E. Heaton, M.O. Garcia, J.P. Marske (2019). Explosive summit collapse of Kīlauea Volcano in 1924 preceded by a decade of crustal contamination and anomalous Pb isotope ratios. *Geochimica et Cosmochimica Acta* 258:120-137, doi.org/10.1016/j.gca.2019.05.029.
32. Tucker, J.M., E.H. Hauri, **A.J. Pietruszka**, M.O. Garcia, J.P. Marske, F.A. Trusdell (2019). A high carbon content of the Hawaiian mantle from olivine-hosted melt inclusions. *Geochimica et Cosmochimica Acta* 254:156-172, doi.org/10.1016/j.gca.2019.04.001.
31. **Pietruszka A.J.**, J.P. Marske, D.E. Heaton, M.O. Garcia, J.M. Rhodes (2018). An isotopic perspective into the magmatic evolution and architecture of the rift zones of Kīlauea Volcano. *Journal of Petrology* 59:2311-2352.
30. **Pietruszka A.J.**, L.A. Neymark (2017). Evaluation of laser ablation double-focusing SC-ICPMS for “common” Pb isotopic measurements in silicate glasses and minerals. *Journal of Analytical Atomic Spectrometry*, 32:1135-1154, doi:10.1039/c7ja00005g.
29. Garcia M.O., B.R. Jicha, J.P. Marske, **A.J. Pietruszka** (2017). How old is Kīlauea Volcano (Hawai'i)? Insights from <sup>40</sup>Ar/<sup>39</sup>Ar dating of the 1.7-km-deep SOH-1 core. *Geology* 45:79-82, doi:10.1130/G38419.1.
28. Neymark L.A., C.S. Holm-Denoma, **A.J. Pietruszka**, J.N. Aleinikoff, C.M. Fanning, R.M. Pillers, R.J. Moscati (2016). High spatial resolution U-Pb geochronology and Pb isotope geochemistry of magnetite-apatite ore from the Pea Ridge iron oxide-apatite deposit, St. Francois Mountains, southeast Missouri, USA. *Economic Geology* 111:1915-1933, doi:10.2113/econgeo.111.8.1915.
27. Konter J.G., **A.J. Pietruszka**, B.B. Hanan, V.A. Finlayson, P.R. Craddock, M.G. Jackson, N. Dauphas (2016). Unusual  $\delta^{56}\text{Fe}$  values in Samoan rejuvenated lavas generated in the mantle. *Earth and Planetary Science Letters* 450:221-232.
26. Vlastélic I., **A.J. Pietruszka** (2016). A review of the recent geochemical evolution of Piton de la Fournaise Volcano (1927-2010), in Bachèlery P., J.-F. Lenat, A. Di Muro, L. Michon (eds.), *Active volcanoes of the southwest Indian Ocean: Piton de la Fournaise and Karthala: Active Volcanoes of the World*, p. 185-201, doi:10.1007/978-3-642-31395-0\_11.

## PUBLICATIONS (continued)

---

25. **Pietruszka A.J.**, D.E. Heaton, J.P. Marske, M.O. Garcia (2015). Two magma bodies beneath the summit of Kīlauea Volcano unveiled by isotopically distinct melt deliveries from the mantle. *Earth and Planetary Science Letters* 413:90-100.
24. Garcia M.O., D. Weis, L. Swinnard, G. Ito, **A.J. Pietruszka** (2015). Petrology and geochemistry of volcanic rocks from the South Kauaʻi Swell Volcano, Hawaiʻi: Implications for the lithology and composition of the Hawaiian mantle plume. *Journal of Petrology* 56:1173-1197, doi:10.1093/petrology/egv033.
23. Greene A.R., M.O. Garcia, **A.J. Pietruszka**, D. Weis, J.P. Marske, M.J. Vollinger, J. Eiler (2013). Temporal geochemical variations in lavas from Kīlauea's Pu'ū Ō'ō eruption (1983–2010): cyclic variations from melting of source heterogeneities. *Geochemistry, Geophysics, Geosystems*, 14:4849-4873, doi:10.1002/ggge.20285.
22. **Pietruszka A.J.**, M.D. Norman, M.O. Garcia, J.P. Marske, D.H. Burns (2013). Chemical heterogeneity in the Hawaiian mantle plume from the alteration and dehydration of recycled oceanic crust. *Earth and Planetary Science Letters* 361:298-309.
21. \*Marske J.P., **A.J. Pietruszka**, F.A. Trusdell, M.O. Garcia (2011). Geochemistry of southern Pagan Island lavas, Mariana arc: the role of subduction zone processes. *Contributions to Mineralogy and Petrology* 162:231-252.
20. \*Tian L., P.R. Castillo, D.R. Hilton, J.W. Hawkins, B.B. Hanan, **A.J. Pietruszka** (2011). Major and trace element and Sr-Nd isotope signatures of the northern Lau Basin lavas: implications for the composition and dynamics of the back-arc basin mantle. *Journal of Geophysical Research* 116, B11201, doi:10.1029/2011JB008791.
19. **Pietruszka A.J.**, M.J. Keyes, J.A. Duncan, E.H. Hauri, R.W. Carlson, M.O. Garcia (2011). Excesses of seawater-derived  $^{234}\text{U}$  in volcanic glasses from Lō'ihī Seamount due to crustal contamination. *Earth and Planetary Science Letters* 304:280-289.
18. **Pietruszka A.J.**, E.H. Hauri, J. Blichert-Toft (2009). Crustal contamination of mantle-derived magmas within Piton de la Fournaise Volcano, Réunion Island. *Journal of Petrology* 50:661-684.
17. \*Tian L., P.R. Castillo, J.W. Hawkins, D.R. Hilton, B.B. Hanan, **A.J. Pietruszka** (2008). Major and trace element and Sr-Nd isotope signatures of lavas from the Central Lau Basin: implications for the nature and influence of subduction components in the back-arc mantle. *Journal of Volcanology and Geothermal Research* 178:657-670, doi:10.1016/j.jvolgeores.2008.06.039.
16. \*Marske J.P., M.O. Garcia, **A.J. Pietruszka**, J.M. Rhodes, M.D. Norman (2008). Geochemical variations during Kīlauea's Pu'ū Ō'ō eruption reveal a fine-scale mixture of mantle heterogeneities within the Hawaiian plume. *Journal of Petrology* 49:1297-1318.
15. **Pietruszka A.J.**, A.D. Reznik (2008). Identification of a matrix effect in the MC-ICP-MS due to sample purification using ion exchange resin: an isotopic case study of molybdenum. *International Journal of Mass Spectrometry* 270:23-30.

## PUBLICATIONS (continued)

---

14. \*Marske J.P., **A.J. Pietruszka**, D. Weis, M.O. Garcia, J.M. Rhodes (2007). Rapid passage of a small-scale mantle heterogeneity through the melting regions of Kīlauea and Mauna Loa Volcanoes. *Earth and Planetary Science Letters* 259:34-50.
13. \*Snyder D.C., E. Widom, **A.J. Pietruszka**, R.W. Carlson, H.-U. Schmincke (2007). Time scales of formation of zoned magma chambers: U-series disequilibria in the Fogo A and 1563 A.D. trachyte deposits, São Miguel, Azores. *Chemical Geology* 239:138-155.
12. **Pietruszka A.J.**, E.H. Hauri, R.W. Carlson, M.O. Garcia (2006). Remelting of recently depleted mantle within the Hawaiian plume inferred from the  $^{226}\text{Ra}$ - $^{230}\text{Th}$ - $^{238}\text{U}$  disequilibria of Pu'u 'Ō'ō eruption lavas. *Earth and Planetary Science Letters* 244:155-169.
11. **Pietruszka A.J.**, R.J. Walker, P.A. Candela (2006). Determination of mass-dependent molybdenum isotopic variations by MC-ICP-MS: an evaluation of matrix effects. *Chemical Geology* 225:121-136.
10. Norman M., M.O. Garcia, **A.J. Pietruszka** (2005). Trace-element distribution coefficients for pyroxenes, plagioclase, and olivine in evolved tholeiites from the 1955 eruption of Kīlauea Volcano, Hawai'i, and the petrogenesis of differentiated rift-zone lavas. *American Mineralogist* 90:888-899.
9. \*Snyder D.C., E. Widom, **A.J. Pietruszka**, R.W. Carlson (2004). The role of open-system processes in the development of silicic magma chambers: a chemical and isotopic investigation of the Fogo A trachyte deposit, São Miguel, Azores. *Journal of Petrology* 45:723-738.
8. Garcia M.O., **A.J. Pietruszka**, J.M. Rhodes (2003). A petrologic perspective of Kīlauea Volcano's summit magma reservoir. *Journal of Petrology* 44:2313-2339.
7. **Pietruszka A.J.**, R.W. Carlson, E.H. Hauri (2002). Precise and accurate measurement of  $^{226}\text{Ra}$ - $^{230}\text{Th}$ - $^{238}\text{U}$  disequilibria in volcanic rocks using plasma ionization multicollector mass spectrometry. *Chemical Geology* 188:171-191.
6. **Pietruszka A.J.**, K.H. Rubin, M.O. Garcia (2001).  $^{226}\text{Ra}$ - $^{230}\text{Th}$ - $^{238}\text{U}$  disequilibria of historical Kīlauea lavas (1790-1982) and the dynamics of mantle melting within the Hawaiian plume. *Earth and Planetary Science Letters* 186:15-31.
5. Garcia M.O., **A.J. Pietruszka**, J.M. Rhodes, K. Swanson (2000). Magmatic processes during the prolonged Pu'u 'Ō'ō eruption of Kīlauea Volcano, Hawai'i. *Journal of Petrology* 41:967-990.
4. **Pietruszka A.J.**, M.O. Garcia (1999). The size and shape of Kīlauea Volcano's summit magma storage reservoir: a geochemical probe. *Earth and Planetary Science Letters* 167:311-320.

## **PUBLICATIONS** (continued)

---

3. **Pietruszka A.J.**, M.O. Garcia (1999). A rapid fluctuation in the mantle source and melting history of Kīlauea Volcano inferred from the geochemistry of its historical summit lavas (1790-1982). *Journal of Petrology* 40:1321-1342.
2. Garcia M.O., E. Ito, J.M. Eiler, **A.J. Pietruszka** (1998). Crustal contamination of Kīlauea Volcano magmas revealed by oxygen isotope analyses of glass and olivine from Pu‘u ‘Ō‘ō eruption lavas. *Journal of Petrology* 39:803-817.
1. Garcia M.O., J.M. Rhodes, F.A. Trusdell, **A.J. Pietruszka** (1996). Petrology of lavas from the Pu‘u ‘Ō‘ō eruption of Kīlauea Volcano: III. The Kupaianaha episode (1986-1992). *Bulletin of Volcanology* 58:359-379.