* student author, ** graduate student I mentored, *** undergraduate student I mentored, [P]Post-doc I mentored

26) [P]Cassel, E.J. and **Breecker, D.O.** Long-term Stability of Hydrogen Isotope Ratios in Hydrated Volcanic Glass. (*In press at Geochimica et Cosmochimica Acta*).

25) **Breecker, D.O.** (2017) An atmospheric CO_2 control of speleothem carbon isotope compositions. *Earth and Planetary Science Letters*: 458, 58-68.

24) Anderson V.J., Horton B.K., Saylor J.E., Mora A., Téson E., **Breecker, D.O.**, Ketcham, R.A. (2016) Andean topographic growth and basement uplift in southern Colombia: Implications for the evolution of the Magdalena, Orinoco, and Amazon river systems. Geosphere: GES01276.1. doi: 10.1130/GES01294.1.

23) **Warden J.G., Casaburi G., Omelon C.R., Bennett P.C., **Breecker D.O.** and Foster J.S. (2016) Characterization of Microbial Mat Microbiomes in the Modern Thrombolite Ecosystem of Lake Clifton, Western Australia Using Shotgun Metagenomics. Front. Microbiol. 7:1064. doi: 10.3389/fmicb.2016.01064.

22) Nie, J., Stevens, S., Rittner, M., Stockli, D., Garzanto, E., Limonta, M., Bird, A., Ando, Vermeesch, P., Saylor, J., Lu, H., **Breecker, D.**, Hu, X., Liu, S., Resentini, A., Vezzoli, G., Peng, W., Carter, A., Ji, S., Pan, B. (2015) Loess Plateau storage of Northweastern Tibetan derived Yellow River sediment. Nature Communications: 6, 8511.

21) Wong, C.I. and **Breecker, D.O.** (2015) Advancements in the use of speleothems as climate archives. Quaternary Science Reviews: 127, 1-18.

20) **Breecker, D.O.,** ***Bergel, S., ***Nadel, M., ***Osuna, R., ***Tremblay, M., Larson, T.E., Sharp, Z.D. (2015) Minor stable carbon isotope fractionation between respired carbon dioxide and bulk soil organic matter during laboratory incubation of topsoil. *Biogeochemistry*: 123, 83-98.

19) [P]Cassel, E.J.; **Breecker, D.O.**, Henry, C.D.; Larson, T.E., Stockli, D.F. (2014) Continuous high topography across the present-day Basin and Range, western U.S., 40-23 million years ago. *Geology*: 42, 1007-1010.

18) **Meyer, K.W.; Feng, W.; **Breecker, D.O.**; Banner, J.L., Guilfoyle, A. (*2014*) Interpretation of speleothem calcite $\delta^{13}C$ values: Evidence from monitoring soil CO_2, drip water and modern speleothem calcite in central Texas. *Geochimica et Cosmochimica Acta*: 142, 281-298.

17) **Breecker, D.O.,** Retallack, G. (2014) Refining the pedogenic carbonate atmospheric CO_2 proxy and application to Miocene CO_2. *Palaeogeography, Palaeoclimatology, Palaeoecology:* 406, 1-8.

16) **Meyer, N.A.; **Breecker, D.O.**; Young, M.H.; Litvak, M.E. (2014) Simulating the effect of vegetation in formation of pedogenic carbonate. *Soil Science Society of America Journal:* 78, 914-924.

15) Larson, T.E. and **Breecker, D.O.** (2014) Adsorption isotope effects for carbon dioxide from illite- and quartz-packed column experiments. *Chemical Geology*: 370, 58-68.

14) **Breecker, D.O.** (2013) Quantifying the uncertainty of atmospheric CO_2 concentrations determined using paleosol carbonates. *Geochemistry, Geophysics, Geosystems*: 14, 3210-3220.

13) Liu, Z.; **Breecker, D.O.**; Mayer, L.; Zhong, J. (2013) Composition of size-fractioned sedimentary organic matter in coastal environments affected by different physical forcings. *Organic Geochemistry:* 60, 20-32.

12) *Michel, L.A.; Driese, S.G.; Nordt, L.C.; **Breecker, D.O.**; Labotka, D.M. (2013) Stable Carbon Isotope Geochemistry of Vertisols Formed on Marine Limestone and Implications for Deep-time Paleoenvironmental Reconstructions. *Journal of Sedimentary Research*: 83, 300-308.

11) **Breecker, D.O.**; **Yoon, J.; *Michel, L.A.; *Dinka, T.M.; Driese, S.G.; *Mintz, J.S., Nordt, L.C.; Romanak, K.D.; Morgan, C.L.S. (2013) CO_2 concentrations in Vertisols: Seasonal variability and shrink-swell. *In* Driese, S.G., Nordt, L.C., McCarthy, P.J. eds. New Frontiers in Paleopedology and Terrestrial Paleoclimatology, SEPM special publication No. 104, 35-45.

10) Kirk, M.; Martini, A.; **Breecker, D.O**., Colman, D.R., Takacs-Vesbach, C., Petsch, S.T. (2012) Impact of commercial natural gas production on geochemistry and microbiology in a shale-gas reservoir. *Chemical Geology*: 332-333, 15-25.

9) **Breecker, D.O.**; ***Quinn, A.; Quade, J.; Banner, J.; ***Ball, C; **Meyer, K.W. (2012*)* The sources and sinks of CO_2 in caves under mixed woodland and grassland vegetation. *Geochimica et Cosmochimica Acta*: 96, 230-246.

8) **Breecker, D.O.**; McFadden, L.D.; Sharp, Z.D.; ***Martinez, M.; Litvak, M.E. (2012) Deep autotrophic soil respiration in shrubland and woodland ecosystems in central New Mexico. *Ecosystems*:15, 83-96.

7) Quade, J., **Breecker, D.O.**, Daëron, M., Eiler, J. (2011) The Paleoaltimetry of Tibet: An Isotopic Perspective. *American Journal of Science*: 311, 77-115.

6) *Mintz, J.S., Driese, S.G., **Breecker, D.O.**, and Ludvigson, G.A. (2011) Influence of changing hydrology on pedogenic calcite precipitation in Vertisols, Dance Bayou, Brazoria County, TX: Implications for estimating paleoatmospheric pCO_2. *Journal of Sedimentary Research*: 81, 394-400.

5) **Breecker, D.O.**, 2010, Improving paleosol carbonate based estimates of ancient atmospheric CO_2. Geochemical News, September 2010 issue: http://www.geochemsoc.org/publications/geochemicalnews/gn144sep10/improvingpaleosolcarbonate.htm

4) **Breecker, D.O.**, Sharp, Z.D. and McFadden, L. (2010) Atmospheric CO_2 concentrations during ancient greenhouse climates were similar to those predicted for A.D. 2100. *Proceedings of the National Academy of Sciences of the United States of America*: 107, 576-580.

3) **Breecker, D.**, Sharp, Z.D. and McFadden, L. (2009) Seasonal bias in the formation and stable isotope composition of pedogenic carbonate in modern soils from central New Mexico. *GSA Bulletin*: 121, 630-640.

2) **Breecker, D.** and Sharp, Z.D. (2008) A field and laboratory method for monitoring the concentration and isotopic composition of soil CO_2. *Rapid Communications in Mass Spectrometry*: 22, 449-454.

1) **Breecker, D.** and Sharp, Z.D. (2007) A monazite oxygen isotope thermometer. *American Mineralogist*: 92, 1561-1572.