**Timothy R. Filley (405)325-6524**

**Professor of Geochemistry and Soil Science** [**filley@OU.edu**](mailto:filley@OU.edu)

**Department of Geography and Environmental Sustainability; School of Geosciences**

**University of Oklahoma, Norman, OK 73019**

**Education**

Loyola University of Chicago, Chicago, IL Chemistry, B.S. 1990

The Pennsylvania State University, State College, PA Geosciences, Ph.D. 1997

Carnegie Institution of Washington, Washington, DC Geophysical Lab, Postdoc 1998-2000

**Professional Experience**

2021-present Professor, Department of Geography and Environmental Sustainability; School of Geosciences, University of Oklahoma

2021-present Executive Director, Institute for Resilient Environmental and Energy Systems, University of Oklahoma

2018 -2021 U.S. Director, the Arequipa Nexus Institute for Food, Energy, Water, and the Environment, Arequipa, Peru

2019-2021 Director, Center for the Environment, Purdue University

2013-2021 Professor, Department of Earth, Atmospheric, and Planetary Sciences and Department of Agronomy, Purdue University

2017-2018 Acting Director, Center for the Environment, Purdue University

2015 Visiting Professor, Civil and Environmental Engineering, Northwestern University, Evanston, IL.

2012-2016 U.S. Director, US-China EcoPartnership for Environmental Sustainability

May-Oct 2011 Visiting Senior Professor, Chinese Academy of Sciences

2007-2010 Associate Head, Department of Earth, Atmospheric, and Planetary Sciences, Purdue University

2007-2010 Graduate Committee Chair, Department of Earth, Atmospheric, and Planetary Sciences, Purdue University

2007-2008 Elected National Program Chair, Geochemistry Division of the American Chemical Society

2006-2013 Associate Professor, Department of Earth and Atmospheric Sciences, Purdue University

2006 Visiting Professor, Rangeland Ecology Department, Texas A&M University, College Station, TX.

2000-2006 Assistant Professor, Department of Earth and Atmospheric Sciences, Purdue University

# Publication Summary

1. Kumar, P., Anders, A., Bauer, E., Blair, N., Cain, M., Dere, A., Druhan, J., **Filley, T**., Giannopoulos, C., Goodwell, A., Grimley, D., Karwan, D., Keefer, L., Kim, J., Marini, L., Muste, M., Papanicolaou, ANT, Rhoads, B., Hernandez, L., Roque-Malo, S., Schaeffer, S., Stumpf, A., Ward, A., Welp, L., Wilson, G., Yan, Q., Zho, S. (2023) Emergent role of critical interfaces in the dynamics of intensively managed landscapes, Earth-Science Reviews, 104543
2. PCcanccapa-Cartagena, A., Paredes, B., Vera, C., Chavez-Gonzales, F., Olson, E., Welp, L., Zyaykina, N., **Filley, T.R.,** Warsinger, M., Jafvert, C.T. (2021) Occurrence and probabilistic health risk assessment (PRA) of dissolved metals in surface water sources in Southern Peru. *Environmental Advances.* 5, 100102.
3. Brecheisen, Z., Hamp‐Adams, N., Tomasek, A., PFoster, E.J., **Filley, T.R.,** Villalta Soto, M., Zuniga, L., , Lima Moraes, A., Schulze, D.G. (2020) Using Remote Sensing to Discover Historic Context of Human‐Environmental Water Resource Dynamics. *Journal of Contemporary Water Research & Education* 171 (1), 74-92
4. Kumar, P., Le, P., Papanicolaou, T., Rhoads, B., Anders, A., Stumpf, A., Wilson, C., Bettis, E., Ward, A., **Filley, T.R.**, Lin, H., Keefer, L., Keefer, D., Lin, Y.F., Muste, M. Royer, T., Foufoula-Georgiou, E., Belmont, P., Blair, N. (2018) Critical Transition in Critical Zone of Intensively Managed Landscapes. *Anthropocene* 22, 10-19.
5. Chang, C.H., Szlavecz, K., **Filley, T.R.,** Buyer, J.S., Bernard, M.J., and Pitz S.L. (2015) Belowground competition among invading detritivores. *Ecology*. http://dx.doi.org/10.1890/15-0551.1
6. Hopkins, F.M., Filley, T.R., Gleixner, G., Lange, M., Top, S.M., Trumbore, S.E., (2014) Increased belowground carbon inputs and warming promote loss of soil organic carbon through complementary microbial pathways. *Soil Biology and Biochemistry* 76, 57-69.
7. Kleber, M., Nico, P., Plante, A., **Filley, T.R.,** Kramer, M., Swanston, C., Sollins, P. (2010) Old and stable soil organic matter is not necessarily chemically recalcitrant: Implications for modeling concepts and temperature sensitivity. *Global Change Biology*. DOI: 10.1111/j.1365-2486.2010.02278.x
8. Dalzell, B.J., **Filley, T.R.,** Harbor, J.M. (2007) The role of hydrology in annual organic carbon loads and terrestrial organic matter export from a midwestern agricultural watershed. *Geochim. Cosmochim. Acta* (2007), doi:10.1016/j.gca.2006.12.009.
9. **Filley, T.R.,** Boutton, T.W. (2006) Ecosystems in flux: Molecular and stable isotope assessments of soil organic matter storage and dynamics. *Soil Biology and Biochemistry* 38 (11): 3181-3183 (commentary).
10. **Filley, T.R.,** Filley, R.M., Eser, S., Freeman, K. (1997) Compound-specific isotope analyses of products from carbonization of a fluid catalytic cracking decant oil doped with C-13-enriched 4-methyldibenzothiophene. *Energy and Fuels*, 11, 637-646

# Synergistic Activities

1. From 2012-2016, Filley served as the U.S. Director of the U.S.-China Ecopartnership for Environmental Sustainability (USCEES). Under his leadership, the program established a Visiting Scholar Network (including a searchable database for visiting scholar engagement), an internet portal to Purdue-developed technologies licensable in China, and a series of bi-national annual conferences, technical workshops, and joint research projects on Agroecosystem Dynamics.
2. Filley served as Director of Purdue’s [Center for the Environment (C4E)](https://www.purdue.edu/discoverypark/environment/) from 2017-2021. The C4E, housed in Purdue’s Discovery Park, worked to promote proactive, interdisciplinary research, learning, and engagement, addressing important regional and global challenges related to the environmental and the sustainable use of natural resources. The Center helped to connect its over 195 faculty affiliate members from across departments and disciplines to work on sustainability challenges, it supported innovative projects, and increases the impact of Purdue's work on important environmental issues through outreach and stakeholder engagement activities.
3. Filley co-directed the Purdue Stable Isotope (PSI) facility within the Department of Earth, Atmospheric, and Planetary Sciences from 2005-2021. PSI was a core Purdue University instrumentation facility specializing in analytical services utilizing light stable isotope mass spectrometry for analysis of 1H, 2H, 13C, 12C, 16O, 17O, 18O, 14N, 15N in a variety of natural and synthetic materials. Since coming to the University of Oklahoma, he has embarked on construction of a new stable isotope biogeochemistry facility which will be completed by summer 2023.
4. Filley was the lead PI, architect, and co-Director of the Arequipa Nexus Institute for Sustainable Food, Energy, Water and the Environment ([The Nexus](https://www.purdue.edu/discoverypark/arequipa-nexus/en/index.php)). The Nexus, funded in Jan 2018, was created as a technical and research alliance program between Purdue University and the Universidad Nacional de San Agustin (UNSA) in the Arequipa region of Peru. The Nexus Institute continues to support a collaborative research, education and innovation ecosystem where transformative solutions to challenges faced by Arequipa, Peru, and Latin America are explored. It aims to understand the region’s food, energy and water production and delivery systems in the context of the complex socio-economic-environmental challenges Arequipa faces such as a changing climate, diminishing resources, a legacy of environmental degradation, and diverse communities striving for prosperity and security. During the inaugural phase of the Nexus that was led by Filley (2018-2021), over 60 Purdue faculty spanning 7 colleges, 100 UNSA faculty, and 30 postdoctoral researchers were supported with this effort.
5. Filley is the inaugural director of the University of Oklahoma’s Institute for Resilient Environmental and Energy Systems ([IREES](https://ou.edu/irees)). IREES will work to connect OU faculty members from across disciplines with global and regional stakeholders to address challenges related to observing and predicting earth systems, transforming energy and infrastructure systems, and co-generating community resilience and environmental justice. IREES will serve as a collaborative space for transdisciplinary research teams providing administrative support, analytical research facilities, and research computing infrastructure dedicated to convergence research. IREES is one of four new institutes created in 2021 addressing four strategic areas of research focused on grand challenges in aerospace, defense, and global security; environment, energy, and sustainability; the future of health; and society and community transformation that support OU’s *Lead On* Strategic Plan within the Office of the Vice President for Research and Partnerships ([OVPRP](https://www.ou.edu/research-norman/centers-institutes/strategic-vertical-institutes)).