

ADRIEN CLAUDE FINZI

Curriculum Vitae

Department of Biology
Boston University
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- EDUCATION**
- | | |
|------------|--|
| 1996 Ph.D. | University of Connecticut & Institute of Ecosystem Studies |
| 1994 M.S. | University of Connecticut |
| 1990 B.S. | Environmental Studies, University of New Hampshire |
- POSITIONS HELD**
- | | |
|----------------|--|
| 2009 – Present | Chair, Ph.D. Certificate Program in Terrestrial Biogeoscience, Boston University |
| 2011 - Present | Professor of Biology, Boston University |
| 2005 - 2011 | Associate Professor of Biology, Boston University |
| 2000 - Present | Co-Director, Boston University Stable Isotope Laboratory |
| 2008 – 2009 | Associate Editor, Biogeochemistry |
| 2007 – 2009 | Chair, Biogeosciences Section, Ecological Society of America |
| 1999 – 2005 | Assistant Professor of Biology, Boston University |
| 1998 - 1999 | Visiting Scholar, Stanford University, CA, USA |
| 1996 - 1998 | Duke University, <i>Alexander Hollaender Postdoctoral Fellow</i>
Department of Energy, National Competition |
| 1991 – 1996 | Doctoral Candidate, University of Connecticut & Institute of Ecosystem Studies, Millbrook, NY, USA |
- UNIVERSITY SERVICE**
- | | |
|--|-------------------------|
| Terrestrial Biogeosciences, PhD Program Chair | 2009-Present |
| Chair, Biology Advancement, Promotion and Tenure Committee | 2007-Present |
| Co-Director, Boston University Stable Isotope Laboratory | 2000-Present |
| Faculty Searches | |
| Biology, <i>Microbial Ecology, Chair</i> | 2011-2012 |
| Geog. & Emt, <i>Environmental Modeling</i> | 2010-2011 |
| Geog. & Emt, <i>Carbon Cycle Science</i> | 2008-2009 |
| Biology, <i>Environmental Ecologist, Chair</i> | 2003-2004 |
| Biology, <i>Evolutionary Ecology</i> | 2003-2004,
2000-2002 |
| Earth Sciences, <i>Land Surface Interactions</i> | 2001-2002 |
| Graduate Committee, Department of Biology | 2000-05 |
- TEACHING**
- | | |
|----------------------------|--|
| College of Arts & Sciences | Biology 303, General Ecology |
| College of Arts & Sciences | Biology 643/443, Terrestrial Biogeochemistry |
| College of Arts & Sciences | Biology 582, Ecosystem Science Seminar |
| College of Arts & Sciences | GRS BI/GE/ES 719 Colloquium in Terr. Biogeoscience |
| College of Arts & Sciences | GRS BI/GE/ES 720 Practicum in Terr. Biogeoscience |
- SERVICE, MEMBERSHIPS, ACTIVITIES, AWARDS &**
- Organized Symposia*
- | | |
|---|--|
| 2009 NSF Funded Review of Coupled Biogeochemical Cycles (CBC) Program,
Three sessions co-organizers Jon Cole & Beth Holland (NCAR) | |
| <i>CBC I: Response of CBCs to Global Change</i> | |
| <i>CBC II: Response of CBCs to Climate Variability</i> | |
| <i>CBC III: CBCs across space and time</i> | |
| 2009 <i>Long-Term Response of Communities and Ecosystems to Global Change</i> , ESA, | |

**SERVICE,
MEMBERSHIPS,
ACTIVITIES,
AWARDS**

- Co-organizer Rich Norby (ORNL)
- 2009 North American Carbon Program Meeting. Breakout Session Leader: Carbon-Nitrogen Interactions in the Context of Global Scale Carbon Cycle Models. 2/17-2/20 San Diego, CA.
- 2008 *Role of Limiting Nutrients and Climate on Terrestrial Productivity*, AGU, Co-organizers Atul Jain, Bill Parton (Colo. State)
- 2006 *Multiple Resource Limitation in Terrestrial and Aquatic Ecosystems*, ESA, co-organizer Lars Hedin
- 2004 *Organic N Cycling in Terrestrial Ecosystems*, ESA, Co-organizer Erik Hobbie
- Grant Review Panels*
- 2006, 2007, 2009 National Science Foundation, Ecosystem Science
- 2005 EPA/DOE, Nonlinear Responses to Climate Change
- 2002, 2005 USDA, Managed Ecosystems
- Reviews*
- 2004 - 2008, *Faculty of 1000*, Faculty Contributor, Global Change Ecology
- 1996 - Present Journal Reviewer (18 journals, 53 manuscripts)
- Society Membership*
- 1996 - Present Ecological Society of America
- 2000 - 2006 American Institute of Biological Sciences
- 2000 - Present American Geophysical Union (Biogeoscience)
- 2000 - Present American Association for the Advancement of Science
- Awards*
- 2011 Distinguished Alumni Award, School of Natural Resources, U.N.H.
- Other*
- 2003 Smithsonian Astrophysical Observatory, Commentator, Material Cycles in Ecosystems, Educational Film
- 2002 *Metcalf Award for Excellence in Teaching* at Boston University, Nominee
- 1996 - 1998 *Alexander Hollaender Postdoctoral Fellow*, US Department of Energy
- 1994 - 2006 Christadora Environmental Studies, Educator, Norfolk, CT

GRANTS (updated 11/26/2012)

Pending:

Effects of experimental warming and elevated CO₂ on trace gas emissions from a northern Minnesota black spruce peatland. US Department of Energy. \$576,066/3Years. Project Period 6/01/13 – 5/30/16. PI: Adrien Finzi.

Incorporating the effects of invasive insects on forest carbon balance in Earth system models: hemlock decline as a data-ready system to test a general modeling framework. US Department of Energy. \$879,826. Project Period 6/01/13 – 5/30/16. PI: Adrien Finzi. CoPIs: Michael Dietze, David Foster, Aaron Ellison, David Orwig.

Collaborative Research: Analysis of Soil Organic Matter Decomposition in Ecosystem Models. National Science Foundation. \$406,689/3 years. Project Period 01/01/13 – 21/30/2016. PI: Adrien Finzi. CoPIs: Mark Kramer, Steven Allison.

Acquisition of Research Equipment in Support of a Core Facility and PhD Program in Terrestrial Biogeoscience at Boston University. National Science Foundation. \$469,567/3 years. Project Period 02/01/13 – 01/31/2016. PI: Adrien Finzi. CoPIs: Robinson Fulweiler, Lucy Hutyra, Nathan Phillips, Pamela Templer.

Funded

LTER V: New Science, Synthesis, Scholarship and Strategic Vision for Society. PI David Foster. Co-PIs Aaron Ellison, David Orwig, Adrien Finzi & 9 others. National Science Foundation. \$5,000,000/6 years. Project Period 01/01/13 – 12/30/19.

Partitioning CO₂ fluxes with isotopologue measurements and modeling to understand mechanisms of

forest carbon sequestration. US Department of Energy. \$1,050,000/3Years. Project Period 9/01/11 – 8/31/14. PI. Scott Saleska. Co-PIs Adrien Finzi, Eric Davidson, Paul Moorcroft, William Munger.

Duke Forest FACE Experiment: Continuation and Termination. U.S. Department of Energy. \$2,618,652/3 Years. Project Period 8/1/09 – 7/31/12). PI: Ram Oren, Co-PI: Adrien Finzi.

Dissertation Research: Limits to proteolytic enzyme production and activity in temperate forest soils. NSF \$14,994. Project Period 09/01/10 – 08/31/12. PI: Adrien Finzi (nominal), PI: Edward R. Brzostek.

Rhizosphere priming effects on soil nitrogen availability under elevated CO₂. USDA \$385,000. Project Period 9/1/08 – 12/31/10. PI: Richard Phillips, Co-PIs Adrien Finzi, Emily Bernhardt .

Organic Nitrogen Cycling in Temperate forest Soils. NSF. \$527,084. Project Period 3/1/08 – 2/28/11. PI: Adrien Finzi, Co-PI: Erik Hobbie.

Duke Forest FACE Experiment: Continuation. U.S. Department of Energy. \$1,559,016/2 Years. Project Period 8/1/07 – 7/31/09). PI: Ram Oren, Co-PI: Adrien Finzi.

*Dissertation Research: The impact of the invasive species *Allaria petiolata* on nutrient cycling in northern hardwood – conifer forests*. NSF. \$10,772. 2 Years. Project Period: 6/06-5/08 PI: Adrien Finzi (nominal), PI: Vikki L. Rodgers.

Organic Nitrogen Cycling and Uptake in the Northern Forest Region. USDA-NSRC, \$40,000/2 Years. Project Period 9/1/07-8/31/09. PI: Adrien Finzi.

Carbon Cycling Work Group: A Synthesis of Data and Models for the Northern Forests Region. USDA-NSRC, \$17,876/1 Year. Project Period 9/1/07-12/31/08. PI: Adrien Finzi, Co-PIs: Christine L. Goodale, Stuart Findlay, Scott V. Ollinger, Andrew D. Richardson.

Bullard Fellow. Harvard Forest/Harvard University. \$37,500. 7/06-12/06. PI: Adrien Finzi

Duke Forest FACE Experiment: Continuation. U.S. Department of Energy. \$3,600,000/3 Years. Project Period 8/1/04 – 7/31/07). PI: Ram Oren, Co-PI: Adrien Finzi.

Collaborative Research: Effects of Elevated CO₂ on Forest N Cycling: Assessment with Large-Scale 15N Tracers and Modeling. NSF. \$790,000/3 Years. PI: Adrien Finzi, Co-PI's: William Currie, Robert Jackson and William Schlesinger. Project Period: 3/01/03 – 2/29/06.

Forest Dynamics Across a Soil Resource Gradient: A Mechanistic and Modeling Approach. USDA \$285,000/4 years. PI: Adrien Finzi 10/1/00 – 9/31/04.

Duke Forest FACE Experiment: Continuation. U.S. Department of Energy. \$3,211,960/3 Years. Project Period 8/1/01 – 7/31/04. PI. William Schlesinger. BU Subcontract to Finzi.

An Isotope Ratio Mass Spectrometer and Autoanalyzer for Environmental Research. NSF. \$331,624/2 Years. PI: Adrien Finzi, Co-PI's Thomas Kunz, Richard Murray, Ivan Valiela. Project Period 5/1/02 – 5/30/04.

Nutrient Cycling in Response to Forest Growth at Elevated CO₂ (FACE). NSF \$368,411/3 Years. PI: Adrien Finzi, Co-PI: William H. Schlesinger. Project Period: 7/1/99 – 12/30/02.

Feedbacks Between Calcium Cycling and Canopy Tree Dynamics in Northern Temperate Forests. NSF \$450,000/3 years. PI: Charles Canham, Co-PIs: Gary Lovett, Gene Likens, and Nico Van Breemen and Adrien Finzi. Project Period: 4/16/00 – 4/15/02.

PUBLICATIONS (total citations = 3620; updated 1/29/2013)

In Literature

1. Drake JE, Darby BA, Giasson MA, Kramer MA, Phillips RP, and **A. C. Finzi**. 2013. Stoichiometry constrains microbial responses to root exudation: insights from a model and experiment in a temperate forest. *Biogeosciences* 10:821-838
2. Rao, P., L. Hutyra, S. Raciti, and **A.C. Finzi**. 2013. Field and remotely sensed measures of soil and vegetation carbon and nitrogen across an urbanization gradient in the Boston metropolitan area. *Urban Ecosystems In Press*.
3. Brzostek, E., A. Greco, J. Drake, and **A.C. Finzi**. 2012. Root carbon inputs to the rhizosphere stimulate extracellular enzyme activity and increase nitrogen availability in temperate forest soils. *Biogeochemistry* DOI 10.1007/s10533-012-9818-9

4. Houlton, B., E. Boyer, **A.C. Finzi**, J. Galloway, A. Leach, D. Liptzin, J. Melillo, T. Rosenstock, D. Sobota, and A. Townsend. 2012. Intentional versus unintentional nitrogen use in the United States: trends, efficiency and implications. *Biogeochemistry* DOI 10.1007/s10533-012-9801-5
5. Phillips, R. P., I. C. Meier, E. S. Bernhardt, A. S. Grandy, K. Wickings, and **A. C. Finzi**. 2012. Roots and fungi accelerate carbon and nitrogen cycling in forests exposed to elevated CO₂. *Ecology Letters* **15**:1042-1049.
6. Drake, J. E., A. C. Oishi, M. A. Giasson, R. Oren, K. H. Johnsen, and **A. C. Finzi**. 2012. Trenching reduces soil heterotrophic activity in a loblolly pine (*Pinus taeda*) forest exposed to elevated atmospheric CO₂ and N fertilization. *Agricultural and Forest Meteorology* **165**:43-52.
7. Brzostek, E. R., J. M. Blair, J. S. Dukes, S. D. Frey, S. E. Hobbie, J. M. Melillo, R. J. Mitchell, E. Pendall, P. B. Reich, G. R. Shaver, A. Stefanski, M. G. Tjoelker, and **A. C. Finzi**. 2012. The effect of experimental warming and precipitation change on proteolytic enzyme activity: positive feedbacks to nitrogen availability are not universal. *Global Change Biology* **18**:2617-2625.
8. Raciti SM, LR Hutyra and **AC Finzi** (2012) Depleted soil carbon and nitrogen pools beneath impervious surfaces, *Environmental Pollution* 164:248-251
9. Raciti SM, LR Hutyra, P Rao and **AC Finzi** (2012). Inconsistent definitions of “urban” result in different conclusions about the size of urban carbon and nitrogen stocks. *Ecological Applications* **22**:1015-1035
10. Brzostek ER and **AC Finzi**. (2011). Seasonal variation in the temperature sensitivity of proteolytic enzyme activity in temperate forest soils. *Journal of Geophysical Research – Biogeoscience In Press*.
11. Averill CM and **AC Finzi**. (2011). Plant regulation of microbial enzyme production in situ. *In Press*.
12. Hofmockel KS, Gallet-Budynek A, WS Currie, RB Jackson and **AC Finzi**. Sources of increased nitrogen uptake in forest trees growing under elevated CO₂: results of a large-scale 15N tracer study. *Global Change Biology* 17:3338-3350.
13. Yang Y, Y Luo and **AC Finzi**. (2011). Carbon-nitrogen interactions during forest stand development: a global synthesis. *New Phytologist* 190:977-989
14. Brzostek ER and **AC Finzi**. (2011). Substrate supply, fine roots and temperature control proteolytic enzyme activity in temperate forest soils. *Ecology* 92:892-902
15. Averill CM and **AC Finzi**. (2011). Increasing plant dependence on organic nitrogen along an elevation gradient is reflected in nitrogen uptake rates and ecosystem δ¹⁵N at Mount Eisenhower, NH, USA. *Ecology* 92:883-891.
16. Phillips RP, **AC Finzi** and ES Bernhardt. (2011). Enhanced root exudation induces microbial feedbacks to N cycling in a pine forest under long-term CO₂ fumigation. *Ecology Letters* 14(2): 187-194. DOI: 10.1111/j.1461-0248.2010.01570.x
17. Drake JE, Budynek AE, Hofmockel KR, Bernhardt ES, Billings SA, Jackson RB, Johnsen KS, Lichter J, McCarthy HR, McCormack L, Moore DJP, Oren R, Palmroth S, Phillips RP, Pippen JS, Pritchard SS, Treseder KK, Schlesinger WH, DeLucia EH and **Finzi AC**. (2011) Increases in the flux of carbon belowground stimulate nitrogen uptake and sustain the long-term enhancement of forest productivity under elevated CO₂. *Ecology Letters* doi: 10.1111/j.1461-0248.2011.01593.x
18. **Finzi AC**, Doney SC, Jackson RB, Holland EA, Cole J. (2011). Research frontiers in the analysis of coupled biogeochemical cycles. *Invited Special Feature Article in Frontiers in Ecology and the Environment* **9**: 74–80. doi:10.1890/100137
19. **Finzi AC**, Austin A, Cleland E, Houlton BZ, Wallenstein MD. (2011). Alterations and feedbacks of coupled biogeochemical cycles to global change in terrestrial ecosystems. *Invited Special Feature Article in Frontiers in Ecology and the Environment* **9**: 61–67. doi:10.1890/100001
20. Schlesinger WH, Cole C, **Finzi AC** and EA Holland (2011). Introduction to Coupled Biogeochemical Cycles. *Invited Special Feature Article in Frontiers in Ecology and the Environment* **9**: 5–8. doi:10.1890/090235
21. Melack J, **Finzi AC**, Siegel D, MacIntyre S, Nelson C, Aufdenkampe A and ML Pace (2011). New ways of seeing and measuring ecosystems advance understanding of coupled biogeochemical cycles. *Invited Special Feature Article in Frontiers in Ecology and the Environment* 9:37-43. doi:10.1890/100004
22. Way, DA, Ladeau SL, McCarthy HR, Clark JS, Oren R, **Finzi AC**, Jackson RB (2010). Greater seed production in elevated CO₂ is not accompanied by reduced seed quality in *Pinus taeda* L. *Global Change*

- Biology 16:1046-1056. *Citations=0*
23. McCarthy HR, Oren R, Jackson RB, Palmroth S, Gallet A, Pritchard SG, Cook CW, LaDeau S, Johnsen K, **Finzi AC** (2010). Reassessment of plant carbon dynamics at the Duke free air CO₂ enrichment site: interactions of atmospheric [CO₂] with nitrogen and water availability and stand development. *New Phytologist* 185:514-528. *Citations = 1*
 24. **Finzi AC** and VL Rodgers (2009). Bottom-up rather than top-down processes regulate the abundance and activity of nitrogen fixing plants in two Connecticut old-field ecosystems. *Biogeochemistry* 95:309-321. *Citations = 1*
 25. **Finzi AC** (2009). Decades of enhanced atmospheric N deposition do not increase the occurrence of P limitation or N saturation in two southern New England forests. *Biogeochemistry* 92(3):217-229. *Citations = 2*
 26. Anne Gallet-Budynek, Brzostek E, Rodgers VL, Talbot JM Hyzy S, **Finzi AC** (2009). Amino acid uptake in northern hardwood-conifer forests. *Oecologia* 160(1):129-138. *Citations = 2*
 27. Franklin O, McMurtrie RE, Iversen CM, Crous KY, **Finzi AC**, Tissue DT, Ellsworth DS, Oren R, Norby RJ (2009). Forest fine-root production and nitrogen use under elevated CO₂: contrasting responses in evergreen and deciduous trees explained by a common principle. *Global Change Biology* 15(1) 132-144. *Citations = 5*
 28. Lichter J, Billings SA, Ziegler SE, Gaindh D, Ryals R, **Finzi AC**, Jackson RB, Stemmler EA, Schelsinger WH (2008). Soil carbon sequestration in a pine forest after 9 years of atmospheric CO₂ enrichment. *Global Change Biology* 14(12):2910-2922. *Citations = 6*
 29. Rodgers VL, Werden L, Wolfe B, **Finzi AC** (2008). The invasive species *Alliaria petiolata* (garlic mustard) increases soil nutrient availability in northern hardwood-conifer forests. *Oecologia* 157(3):459-471. *Citations = 4*
 30. Natali SM, Sanudo-Wilhelmy SA, Norby RJ, Zhang H, **Finzi AC**, Lerdau MT (2008). Increased mercury in forest soils under elevated carbon dioxide. *Oecologia* 158(2):343-354. *Citations = 2*
 31. Talbot JM, **Finzi AC** (2008). Differential Effects of Sugar Maple, Red Oak, and Hemlock Tannins on Carbon and Nitrogen Cycling in Temperate Forest Soils. *Oecologia*. 155(3):583-592. *Citations = 3*
 32. Rodgers VL, Stinson KA, **Finzi AC** (2008). Ready or not, garlic mustard is moving in: *Alliaria petiolata* as a member of eastern North American forests. *Bioscience* 58(5):426-436. *Citations = 3*
 33. Pritchard SG, Strand AE, McCormack ML, Davis MA, **Finzi AC**, Jackson RB, Matamala R, Rogers HH, and Oren R. (2008). Fine root dynamics in a loblolly pine forest are influenced by Free-Air- CO₂ Enrichment (FACE): a six-year minirhizotron study. *Global Change Biology* 14(3):588-602. *Citations = 14*
 34. McCarthy HL, Oren R, **Finzi AC**, Ellsworth DS, Kim HS, Johnsen KS, Millar BS (2007). Temporal dynamics and spatial variability in the enhancement of canopy leaf area under elevated atmospheric CO₂. *Global Change Biology* 13:2479-2497. *Citations = 13*
 35. Zaccherio MT, **Finzi AC**. (2007). Atmospheric N deposition and acid rain may affect the composition of northern hardwood-conifer forests by altering the availability of soil nitrogen and calcium. *Ecological Applications* 17:1929-1941. *Citations = 6*
 36. **Finzi AC**, Norby RJ, Calapietra C, Gallet A, Gielen B, Holmes WE, Hoosbeek MR, Iversen CI, Jackson RB, Kubiske ME, Ledford J, Liberloo M, Oren R, Polle A, Pritchard S, Zak DR, Schlesinger WH, Ceuelmans. (2007). Increases in nitrogen uptake rather than nitrogen-use efficiency support higher rates of forest productivity under elevated CO₂. *Proceedings of the National Academy of Sciences of the United States of America* 104:14014-14019. *Citations = 59*
 37. McCarthy H.R., R. Oren, **A.C. Finzi**, and K.H. Johnsen (2006). Canopy leaf area constrains [CO₂]-induced enhancement of productivity and partitioning among aboveground carbon pools. *Proceedings of the National Academy of Sciences of the United States of America* 103: 19356-19361. *Citations = 23*
 38. Palmroth S, R. Oren, H.R. McCarthy, K.H. Johnsen, **A.C. Finzi**, J.R. Butnor, M.G. Ryan, and W.H. Schlesinger (2006). Aboveground sink strength in forests controls the allocation of carbon below ground and its [CO₂]-induced enhancement. *Proceedings of the National Academy of Sciences of the United States of America* 103: 19362-19367. *Citations = 29*
 39. Berthrong, S.T. and **A.C. Finzi**. (2006). Amino acid cycling in three cold-temperate forests. *Soil Biology and Biochemistry*. 38(5): 861-869. *Citations = 21*
 40. **Finzi, A.C.**, Sinsabaugh, R.L., T.M. Long, and M.P. Osgood. (2006) Microbial community responses to atmospheric CO₂ enrichment in a *Pinus taeda* forest. *Ecosystems* 9(2): 215-226. *Citations = 18*

41. **Finzi, A.C.**, D.J.P. Moore, E.H. DeLucia, J. Lichter, K.S. Hofmockel, R.B. Jackson, H.S. Kim, R. Matamala, H.R. McCarthy, R. Oren, J.S. Phippen, and W.H. Schlesinger. (2006). Progressive N Limitation in the Duke Forest FACE Experiment: A Six Year Synthesis. Invited Special Features, *Ecology* 87:15-25. *Citations* = 51
42. Norby, R.J., DeLucia, E.H., Gielen, B., Calfapietra, Giardina, C.P., C, King J.S., Ledford, J., McCarthy, H.R., Moore, D.J., Ceulemans, R., DeAngelis P, **Finzi, A.C.**, Karnosky D.F., Kubiske M.E., Lukac M., Pregitzer, K.S., Scarascia-Mugnozza, G.E., Schlesinger W.H., Oren R. 2005. Forest response to elevated CO₂ is conserved across a broad range of productivity. *Proceedings of the National Academy of Sciences of the United States of America* 102:18052-18056. *Citations* = 163
43. **Finzi, A.C.** and S.T. Berthrong 2005. The uptake of amino acids by microbes and trees in three cold-temperate forests. *Ecology* 86:3345-3353. *Citations* = 25
44. Lichter J, Barron S., **Finzi A.C.**, Irving K.F., Roberts M., Stemmler E.A., and W.H. Schlesinger. 2005. Soil carbon sequestration and turnover in a pine forest after six years of atmospheric CO₂ enrichment. *Ecology* 86:1835-1847. *Citations* = 53
45. Luo, Y., Su, B., Currie, W.S., Dukes, J. S., **Finzi A.C.**, Hartwig, U., Hungate B, McMurtrie R, Oren, R., Parton, W., Pataki, D., Shaw R.M., Zak, D.R., and C.B. Field. 2004. Progressive nitrogen limitation of ecosystem responses to rising atmospheric CO₂. *Bioscience* 54:731-739. *Citations* = 176
46. **Finzi, A.C.**, E.H. DeLucia, and W.H. Schlesinger. 2004. Canopy N and P dynamics of a southeastern US forest exposed to elevated CO₂. *Biogeochemistry* 69:363-378. *Citations* = 13
47. **Finzi, A.C.**, and W.H. Schlesinger. 2003. Soil-N cycling in a pine forest exposed to five years of elevated CO₂. *Ecosystems* 6(5):444-456. *Citations* = 33
48. Zak, D.R., W.E. Holmes, **A.C. Finzi**, R.J. Norby, and W.H. Schlesinger. 2003. Soil nitrogen cycling under elevated CO₂: a synthesis of forest FACE experiments. *Ecological Applications* 13:1508-1514. *Citations* = 64
49. Schafer, K.V.R., Oren, R., Ellsworth, D.S., Lai C.T., Herrick, J.D., **Finzi, A.C.**, Richter, D.D., and Katul, G.G. 2003. Exposure to enriched atmospheric CO₂ alters carbon assimilation and allocation in a pine forest ecosystem. *Global Change Biology* 9:1378-1400. *Citations* = 57
50. Luo, Y., L.W. White, J.G. Canadell, E.H. DeLucia, D.S. Ellsworth, **A.C. Finzi**, J. Lichter, and W.H. Schlesinger. 2003. Sustainability of terrestrial carbon sequestration: a case study in the Duke Forest with inversion approach. *Global Biogeochemical Cycles* 10.1029/2002GB001923. *Citations* = 57
51. **Finzi, A.C.**, and **W.H.** Schlesinger. 2002. Species control variation in litter decomposition in a pine forest exposed to elevated CO₂. *Global Change Biology*, 8:1217-1229. *Citations* = 32
52. **Finzi, A.C.**, DeLucia, E.H., Hamilton, J.G., Richter, D.D., and W.H. Schlesinger. 2002. The nitrogen budget of a pine forest under free-air CO₂ enrichment. *Oecologia* 132:567-578. *Citations* = 78
53. Hamilton, J.S., DeLucia, E.H., George, K., Naidu, S.L., **Finzi, A.C.**, and W.H. Schlesinger. 2002. Forest carbon balance under elevated CO₂. *Oecologia* 131:250-260. *Citations* = 116
54. Geider, R.J., E.H. DeLucia, P.G. Falkowski, **A.C. Finzi**, J.P. Grime, J. Grace, T.M. Kana, J. LaRoche, S.P. Long, B.A. Osborne, T. Platt, I.C. Prentice, J.A. Raven, W.H. Schlesinger, V. Smetacek, V. Stuart, S. Sathyendaranth, R.B. Thomas, T.C. Vogleman, P. Williams, and F.I. Woodward. 2001. Primary productivity of plant earth: biological determinants and physical constraints in terrestrial and aquatic habitats. *Global Change Biology* 8:849-882. *Citations* = 59
55. **Finzi, A.C.**, A.S. Allen, E.H. DeLucia, D.S. Ellsworth and W.H. Schlesinger. 2001. Aboveground litter production, chemistry, and decomposition following two years of free-air CO₂ enrichment. *Ecology* 82(2):470-484. *Citations* = 90
56. **Finzi, A.C.**, and C.D. Canham. 2000. Sapling growth in response to light and nitrogen availability in a southern New England forest. *Forest Ecology and Management* 131:153-165. *Citations* = 68
57. Allen, A.S., J.A. Andrews, **A.C. Finzi**, R. Matamala, D.R. Richter, and W.H. Schlesinger. 2000. Effects of free-air CO₂ enrichment on belowground processes in a Pinus taeda forest. *Ecological Applications* 10(2) 437-448. *Citations* = 74
58. DeLucia, E.H., S.L. Naidu, R.B. Thomas, J.A. Andrews, **A.C. Finzi**, G.R. Hendrey, and W.H. Schlesinger. 1999. Net carbon storage in an intact forest under experimental CO₂ enrichment. *Science* 284:1177 - 1179. *Citations* = 260
59. **Finzi, A.C.**, and C.D. Canham. 1998. Non-additive effects of litter mixtures on net N mineralization in a northern hardwood forest. *Forest Ecology and Management* 105:129 - 136. *Citations* = 43
60. **Finzi, A.C.**, N. van Breemen, and C.D. Canham. 1998. Canopy tree-soil interactions within temperate forests: tree species effects on carbon and nitrogen. *Ecological Applications* 8(2):440 - 446. *Citations*

= 193

61. **Finzi, A.C.**, N. van Breemen, and C.D. Canham. 1998. Canopy tree-soil interactions within temperate forests: tree species effects on soil pH and exchangeable cations. *Ecological Applications* 8(2):447 - 454. *Citations* = 114
62. Van Breemen, N, and **A.C. Finzi**, 1998. Plant - soil interactions: ecological aspects and evolutionary implications. *Biogeochemistry* 42(1-2):1 - 19. *Citations* = 63
63. Van Breemen, N., **A.C. Finzi**, and C.D. Canham. 1997. Canopy tree-soil interactions within temperate forests: effects of fine-scale variation in soil texture on canopy tree distribution. *Canadian Journal of Forest Research* 27:1110 - 1116. *Citations* = 56
64. Thebaud, C., **A.C. Finzi**, L. Affre, M. Debussche, and J. Escarre. 1996. Assessing why two introduced *Conyza* differ in their ability to invade Mediterranean old fields. *Ecology* 77(3):791 - 804. *Citations* = 76
65. Canham, C.D., **A.C. Finzi**, S.W. Pacala, and D.H. Burbank. 1994. Causes and consequences of resource heterogeneity in forests: interspecific variation in light transmission by canopy trees. *Canadian Journal of Forest Research* 24:337 - 349.

BOOK CHAPTER

Schlesinger W.H., E.S. Bernhardt, E.H. DeLucia, D.S. Ellsworth, A.C. Finzi, G.R. Hendrey, K.S. Hofmockel, J. Lichter, R. Matamala, D. Moore, R. Oren, J.S. Phippen, R.B. Thomas. (2006). The Duke Forest FACE Experiment: CO₂ Enrichment of a Loblolly Pine Forest. IN J. Nösberger, S.P. Long, R.J. Norby, M. Stitt, G.R. Hendrey, H. Blum (eds). *Managed Ecosystems and CO₂: Case Studies, Processes and Perspectives*. Ecological Studies Vol. 187, Springer-Verlag, Berlin, Heidelberg, 2006. Book Chapter.

SELECTED WORKSHOPS

1. 2012 National Science Foundation, All Scientists Meeting, Estes Park Colorado, September 2012. Workshop Organizer: Belowground Processes Across the LTER Network.
2. 27th New Phytologist Symposium on Stoichiometric Flexibility in Terrestrial Ecosystems. *Invited Speaker*. Biosphere 2, Oracle Arizona. September 2011.
3. Rhizosphere Processes Microbial Acclimation Summit. May 9, 2011. Boston University. Conference Organizer
4. INTERFACE meeting: "How Do We Improve Earth System Models: Integrating Earth System Models, Ecosystem Models, Experiments and Long-Term Data?" travel grant. Captiva Island, FL. February 2011.
5. Climate Research Road Mapping for the next decade of DOE Carbon Cycle Science Research. Invited Panelist and White Paper Coauthor. May 13-14, 2010, Arlington VA
6. Exploring the Science Needs for Next Generation Elevated CO₂ and Global Change Experiments, DOE, Washington DC, April 2008
7. FACET Workshop, Future of European Global Change Experiments, ESF, Rome Italy, December 2007. LESC-PESC Science Position Paper. Available at www.esf.org.
8. Belowground Processes at the Duke FACE site: Recent Analysis and Synthesis. Organizer: Adrien Finzi. November 2007
9. Planning Workshop on Data-Model Fusion at Duke FACE. Durham, NC. The Southern Global Change Center, Forest Service USDA. January 2005
10. Progressive N Limitation under Elevated CO₂, National Center for Ecological Analysis and Synthesis, June 2001, 2002

INVITED SEMINAR PRESENTATIONS (2000-2010)

1. University of New Hampshire. Climate-carbon-nitrogen cycle interactions in temperate forests. November 2010.
2. Endicott College. *Scientific basis for climate change*. Keynote speaker at the induction ceremony for the North Shore Chapter of the Sigma Xi honor society. November 2009.
3. Cary Institute of Ecosystem Studies. *Belowground carbon allocation as a major driver of soil organic matter decomposition and nutrient cycling*. January 2009.
4. Michigan State University. *Forest productivity, nitrogen cycling and the long-term response of forests to rising CO₂*. April 2008.
5. Bowdoin College. *Coupled carbon and nitrogen cycles in forests exposed to elevated concentrations of atmospheric CO₂*. October 2008.
6. University of Kentucky. *Forest responses to elevated CO₂: Nitrogen constraints on forest-C uptake*. March 2008
7. Brown University. *Constraints to forest productivity imposed by the terrestrial N cycle: A multi-FACE site analysis of N cycling responses to high CO₂*. March 2008.
8. Yale University. *Coupled carbon and nitrogen cycles in forests exposed to elevated concentrations of atmospheric CO₂*. February 2008
9. State University of New York, Binghamton. *Nitrogen cycling and the response of forest ecosystems to rising atmospheric CO₂: A 10-Year analysis of Duke FACE data*. October 2007
10. Michigan Technical University. *Does soil nitrogen availability contrasing long-term forest responses to rising concentrations of atmospheric CO₂?* September 2007.
11. Cary Institute of Ecosystem Studies, Millbrook NY. *Organic nitrogen cycling in temperate forests: patterns and mechanisms*. January 2007
12. Harvard University, Harvard Forest, Petersham, MA. *Amino acid cycling in three cold-temperate forests*. March 2005
13. University of Massachusetts, Boston. Department of Biology. *Can forest ecosystems absorb excess anthropogenic-CO₂ emissions? Lessons from a warm-temperate forest*. November 2004.
14. University of Indiana, School of Public and Environmental Affairs. *Does soil nitrogen availability control forest productivity and ecosystem carbon storage under elevated CO₂?* January 2004.
15. Boston University, Department of Geography. *Forest Productivity under Elevated CO₂: Results of the first 6 years of forest growth under elevated CO₂*. November 2003.
16. Department of Ecology and Evolutionary Biology, Cornell University. *Resource dynamics in New England forests*. January 2002.
17. Harvard University, Harvard Forest, Petersham Massachusetts. *Nutrient cycling under elevated CO₂*. April 2001.
18. National Center for Ecological Analysis and Synthesis. *Progressive N limitation of plant production under elevated CO₂: A case study of the Duke Forest FACE experiment*. May 2001, 2002
19. US Department of Energy Annual Science Team Meeting. *The response of terrestrial ecosystems to global change*. Argonne National Lab. January 2001
20. Range and Ecosystem Science Department, Colorado State University. *The relationship between NPP and nitrogen cycling in a forest under FACE: 4-Year Results*. March 2001.
21. Boston University, Marine Program Seminar Series. *Net primary production and nutrient cycling in response to forest growth under free-air CO₂ enrichment*. May 2000.
22. Idaho State University, Department of Biology Seminar. *Net primary production and nutrient cycling in response to forest growth under free-air CO₂ enrichment*. March 2000.

MEETING PRESENTATIONS (2000-2010, bold name = presenter)

1. *Contributed 2010. Fall Meeting of the American Geophysical Union. Coupled Biogeochemical Cycles and Global Change in Terrestrial Ecosystems. **Adrien Finzi**
2. *Contributed 2010. Fall Meeting of the American Geophysical Union. The response of amino acid cycling to global change across multiple biomes: Feedbacks on soil nitrogen availability.

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3. *Contributed 2010. Fall Meeting of the American Geophysical Union.
4. *Contributed 2010. Annual Meeting of the Ecological Society of America. The response of amino acid cycling to global change across multiple biomes: Feedbacks on soil nitrogen availability. **Edward Brzostek**, Adrien Finzi
5. Contributed 2010. Annual Meeting of the Ecological Society of America. The response of amino acid cycling to global change across multiple biomes: Feedbacks on soil nitrogen availability. **Edward Brzostek**, Adrien Finzi
6. Contributed 2010. Annual Meeting of the Ecological Society of America. Biogeochemical consequences of changes in root-derived carbon inputs to soil in a forest exposed to CO₂ enrichment. **Richard Phillips**, Adrien Finzi.
7. Contributed 2009 Annual Meeting of the Ecological Society of America. Integrating new paradigms in C and N cycling: Rhizo-accelerated mineralization and priming in an elevated CO₂ forest. **Rich Phillips**, Adrien Finzi, Emily Bernhardt.
8. Contributed 2009 Annual Meeting of the Ecological Society of America. Elevation driven dynamics of organic nitrogen cycling and uptake in the White Mountains, NH, USA. **Colin Averill**, Adrien Finzi
9. Invited 2009 Annual Meeting of the Ecological Society of America. Annual Meeting of the Ecological Society of America. Carbon as the common currency linking the biogeochemical cycles of nitrogen and water in ecosystems exposed to experimental increases in atmospheric carbon dioxide. **Adrien Finzi**.
10. Contributed 2009 Annual Meeting of the Ecological Society of America. The role of tree species and mycorrhizal fungi on amino acid production and turnover in temperate forest soils. **Edward Brzostek**, Adrien Finzi
11. Contributed 2009 Annual Meeting of the Ecological Society of America. Belowground carbon dynamics at Duke FACE: A summary. **John Drake**, Evan DeLucia, Adrien Finzi
12. Poster Presentation. 2009 Annual Meeting of the Ecological Society of America. Greater seed production in elevated CO₂ is not accompanied by reduced seed quality in loblolly pine. **Danielle Way**, Shannon LeDeau, Heather R. McCarthy, James S. Clark, Ram Oren, Adrien Finzi, Robert Jackson.
13. Poster Presentation. 2009 Annual Meeting of the Ecological Society of America. Evaluating the role of root exudates in coupling ecosystem C and N cycling using a rhizosphere simulator in forest soils. **Andrea Martin**, Jackie Burmeister, Adrien Finzi, Emily Bernhardt, Richard Phillips.
14. Invited 2009 Soil Science Society of America Meeting. *Extracellular Enzyme Activities in the Soil as the Dynamic Link Between the Nitrogen Cycle and Global Scale Terrestrial Carbon Storage*. **Adrien Finzi**.
15. Contributed 2008 Annual Meeting of the Ecological Society of America. *Nitrogen and phosphorus limitation of tree growth in southern New England Forests*. **Adrien Finzi**.
16. Contributed 2007 Annual Meeting of the Ecological Society of America. Reassessment of carbon accumulation at the Duke free air CO₂ enrichment site: Interactions of atmospheric [CO₂] with nitrogen and water availability and stand development. **Heather R. McCarthy**, Ram Oren, Kurt H. Johnsen, Adrien C. Finzi, Seth G. Pritchard, Robert B. Jackson, Charles W Cook, and Kathleen K. Treseder/Invited, *Symposium 2006 Annual Meeting of the Soil Science Society of America. Microbial community responses to elevated CO₂*. Indianapolis, IN.
17. Invited, 2006 Annual Meeting of the Ecological Society of America. *Causes and consequences of multiple resource limitation in temperate forests*. **Adrien Finzi**.
18. Contributed 2006 Annual Meeting of the Ecological Society of America Nitrogen uptake and net primary productivity in four forest FACE experiments. **Richard Norby**, Adrien Finzi, Evan DeLucia, Reinhart Ceulemans, Birgit Gielen.
19. Contributed 2006 Annual Meeting of the Ecological Society of America. Tannin influences on carbon – nitrogen dynamics in temperate forest soils. **Jennifer Talbot**, Adrien Finzi
20. Contributed 2006 Annual Meeting of the Ecological Society of America. Mycorrhizal dynamics under

- CO₂ and nitrogen enrichment. **Maria Garcia**, Tatevik Ovasapyan, Adrien Finzi, Kathleen Treseder.
21. *Contributed* 2006 Annual Meeting of the Ecological Society of America. The effects of light, soil nutrients, and herbivory on the growth and survivorship of symbiotic, nitrogen-fixing clovers in temperate old fields. **Vikki Rodgers**, Adrien Finzi
 22. *Contributed* 2006 Annual Meeting of the Ecological Society of America. More rapid acquisition of N in forest trees growing under elevated CO₂ I: results of a large-scale 15N study. **Anne Budynek**, Kirsten Hofmockel, William Currie, Robert Jackson, Adrien Finzi.
 23. *Contributed* 2006 Annual Meeting of the Ecological Society of America. More rapid acquisition of N in forest trees growing under elevated CO₂ II. Modeling increased plant N demand and sources for N uptake at the Duke FACE site. **William Currie**, Anne Budynek, Kirsten Hofmockel, Robert Jackson, Adrien Finzi.
 24. *Contributed* 2005 Annual Meeting of the Ecological Society of America. *Atmospheric deposition, soil nutrient availability and the composition of northeastern U.S. forests*. **Adrien Finzi**
 25. *Contributed* 2005 Annual Meeting of the Ecological Society of America. Temporal dynamics and spatial variability in the enhancement of canopy leaf area under elevated CO₂. **Heather McCarthy**, Ram Oren, Adrien Finzi, David Ellsworth, Hyun-Soek Kim, Kurt Johnsen.
 26. *Contributed* 2005 Annual Meeting of the Ecological Society of America. Does *Alliaria petiolata* invasion alter nutrient cycling dynamics in southern New England? **Vikki Rodgers**, Adrien Finzi
 27. *Invited* 2005 Planning Workshop on Data-Model Fusion at Duke FACE. Durham, NC. *N Limitation, Net Primary Production and Elevated CO₂: Extrapolating Duke FACE Results to the Southeastern US*. Funded By: The Southern Global Change Center, Forest Service USDA. **Adrien Finzi**.
 28. *Invited* 2004 Northeastern Ecosystem Research Cooperative. 2nd Annual Meeting, Durham, NH. Soil nitrogen cycling in three temperate forests contrasting in parent material and canopy tree species composition. **Adrien Finzi**
 29. *Invited, Symposium* 2003 Annual Meeting of the Ecological Society of America. *Invited Symposium Talk Progressive N limitation of ecosystem function in the Duke Forest FACE experiment*. Savannah, GA. **Adrien Finzi**
 30. *Contributed* 2002 Annual Meeting of the Ecological Society of America. Tucson, AZ. *Models and mechanisms linking carbon, water and nutrient cycles under elevated CO₂*.
 31. *Invited* 2002 Terrestrial Ecosystem Response and Acclimation to Climate Change (TERACC). *Transient dynamics in plant and microbial processes in a pine forest under elevated CO₂*. University of New Hampshire.
 32. *Contributed* 2001 Annual Meeting of the Ecological Society of America. *The relationship between NPP and nitrogen cycling in a forest under FACE: 4-year results*. Madison, WI.
 33. *Contributed* 2000 Annual Meeting of the Ecological Society of America. *The distribution of N in plants, soils and microbes following three years of FACE in a pine forest*. Snowbird, UT.