

## William Vizquete

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### EDUCATION

Ph.D. in Chemical Engineering, University of Texas - Austin, TX 2005  
M.S. in Chemical Engineering, University of Texas - Austin, TX 2003  
B.S. Cum Laude in Chemical Engineering, University of Missouri - Rolla, MO 1998

### PROFESSIONAL EXPERIENCE

*Full Professor* 2022-present  
Dept. of Environmental Sciences & Engineering  
University of North Carolina - Chapel Hill

*Founder, Chief Scientific Officer* 2019-present  
Byers Scientific

*Division Head of Tech. & Entrepreneurship* 2018-present  
UNC Institute for Environmental Health Solutions

*Associate Professor* 2012-2021  
Dept. of Environmental Sciences & Engineering  
University of North Carolina - Chapel Hill

*Director* 2017-2022  
UNC MSEE Program

*Founder, Chief Scientific Officer* 2011-2017  
Biodeptronix, LLC

*Assistant Professor* 2005-2012  
Dept. of Environmental Sciences & Engineering  
University of North Carolina - Chapel Hill

*Process Engineer* 1998-2000  
ExxonMobil, Baton Rouge, LA

### HONORS, AWARDS AND RECOGNITIONS

- Teaching Excellence and Innovation Award UNC-Chapel Hill 2020
- RTI International University Scholar 2019
- National Center of Atmospheric Research Visiting Professor Faculty Fellowship Program 2016
- National Science Foundation Innovation Corps Teams Program for Faculty Entrepreneurship 2013
- NC Translational and Clinical Sciences Institute Kickstart Award for Faculty Entrepreneurship 2012
- National Center of Atmospheric Research Visiting Professor Faculty Fellowship Program 2007
- Thrust - Uniden Endowed Graduate Fellowship in Engineering 2002–2005
- National Consortiums for Graduate Degrees for Minorities in Engineering and Science Fellowship 2000–2002

## HONORS, AWARDS AND RECOGNITIONS TO STUDENTS ADVISED BASED IN WHOLE OR IN PART ON THEIR RESEARCH ACTIVITIES IN THE VIZUETE RESEARCH GROUP

- UNC-Chapel Hill MS Achievement Award Tessa Szalkowski 2021
- Jacobs Technology Inc. Graduate Research Scholarships 2017-2019
- Ann Cynthia Price Award Chi-Tsan Wang 2017
- Greenberg Award for Excellence in Doctoral Research Hang Nguyen 2016
- National Center Atmospheric Research's Advanced Study Program's Graduate Student Fellowship Chi-Tsan Wang 2016
- Student Poster NC Breathe Conference Shih Ying Chang 2016
- 3rd Place Winner Student Poster Competition Air & Waste Management Association Annual Conference Shih Ying Chang 2015
- UNC George C. Bunker Award Yuzhi Chen 2014
- UNC Gillings School of Global Public Health's Koch Travel Award Pradeepa Vennam 2014
- UNC Gillings School of Global Public Health's Koch Travel Award Shih Ying Chang 2014
- 9th annual Joseph A. Hartman Student Paper Competition from the PARTNER Center of Excellence Pradeepa Vennam 2013
- UNC Environmental Sciences Achievement Award Evan Couzo 2012
- 2nd Place Air and Waste Management Association Doctoral Dissertation Award Barron Henderson 2012
- American Geophysical Union Outstanding Student Paper Award Harshal Parikh 2011
- American Geophysical Union Outstanding Student Paper Award Evan Couzo 2011
- Student Travel Award American Association for Aerosol Research Annual Conference Harshal Parikh 2010
- Student Travel Award American Geophysical Union Harshal Parikh 2010
- 2nd Place National Leadership Training Organization (NLTO) Presentation Competition Barron Henderson 2009
- UNC Environmental Sciences Achievement Award Barron Henderson 2008
- National Center Atmospheric Research's Advanced Study Program's Graduate Student Fellowship Barron Henderson 2008
- Weiss Urban Livability Fellowship Leiran Biton 2007

## ACTIVE MEMBERSHIPS IN PROFESSIONAL ASSOCIATIONS

American Association for Aerosol Research	2010-present
American Geophysical Union	2007-present
Air & Waste Management Association	2007-present

## PUBLICATIONS

### *Books and Chapters*

1. Rao V., **Vizueté, W.**, "Particulates Matter" First Edition, Paperback ISBN: 9780128169049, eBook ISBN: 9780128169056, Elsevier, USA (2020)
2. Vennam, L., Arunachalam, S., Baek B.H., Omary M., Binkowski F.S., Olsen S., Mathur R., **Vizueté, W.**, Fleming G., "A Multiscale Modeling Study to Assess Impacts of Full-Flight Aircraft Emissions on Upper Troposphere and Surface Air Quality" in D.G. Steyn and R. Mathur (editors), "Air Pollution Modeling and its Application XXIII", ISBN: 978-3-319-04378-4 (Print) 978-3-319-04379-1 (Online), Springer, The Netherlands (2014)

3. Li Y., Puggioni G., Jat P. Hasan M., Serre M., Sexton K., West J.J., Arunachalam S., Shankar U., **Vizuete, W.**, Farooqui Z., “Burden of Disease from Outdoor Air Pollution” in Gibson J.M., Brammer A., Davidson C., Folley T., Launay F., Thomasen J., (editors), “Environmental Burden of Disease Assessment” Springer, New York, pp. 73-108 (2013)
4. Li Y., Puggioni G., Jat P. Hasan M., Davidson C., Serre M., Sexton K., West J.J., Arunachalam S., Shankar U., **Vizuete, W.**, Farooqui Z., “Outdoor Air” in Macdonald-Gibson, J. (editor), “National Strategy and Action Plan for Environmental Health United Arab Emirates” Environment Agency Abu Dhabi, United Arab Emirates (2010)

**Peer Reviewed Publications (Total=80)**

<sup>c</sup> = Dr. Vizuete as corresponding author

\* = student supervised by Dr. Vizuete

1. **Vizuete W.**, Nielsen-Gammon J., Dickey J., Couzo. E., Blanchard C., Breitenbach P., Rasool Q., Byun D., (2022) “Meteorological based parameters and ozone exceedances in Houston and other cities in Texas.” Journal of the Air & Waste Management Association *In Press*
2. Chen C, Whitsel EA, Espeland MA, Snetselaar L, Hayden KM, Lamichhane AP, Serre ML, **Vizuete W.**, Kaufman J.D., Wang X., Chui H.C., D’Alton M.E., Chen J.C., Kahe K. (2022) “B vitamin intakes modify the association between particulate air pollutants and incidence of all-cause dementia: findings from the Women’s Health Initiative Memory Study.” Alzheimer’s & Dementia: The Journal of the Alzheimer’s Association <https://doi.org/10.1002/alz.12515>
3. Chen C., Hayden K.M., Kaufman J.D., Espeland M.A., Whitsel E.A., Serre M.L., **Vizuete W.**, Orchard T.S., Wang X., Chui H.C., D’Alton M.E., Chen J.C., Kahe K. (2021) “Adherence to a MIND-like dietary pattern, long-term exposure to fine particulate matter air pollution, and MRI-based measures of brain volume: The Women’s Health Initiative Memory Study-MRI.” Environmental Health Perspectives 129(12) <https://doi.org/10.1289/EHP8036>
4. Younan, D., Wang, X., Gruenewald, T., Gatz, M., Serre, M.L., **Vizuete, W.**, Braskie, M.N., Woods, N.F., Kahe, K., Garcia, L. and Lurmann, F., (2021) “Racial/Ethnic Disparities in Alzheimer’s Disease Risk: Role of Exposure to Ambient Fine Particles.” The Journals of Gerontology: Series A. glab231, <https://doi.org/10.1093/gerona/glab231>
5. Younan, D., Wang, X., Casanova, R., Barnard, R., Gaussoin, S.A., Saldana, S., Petkus, A.J., Beavers, D.P., Resnick, S.M., Manson, J.E., Serre, M.L., **Vizuete, W.**, Henderson, V.W., Sachs, B.C., Salinas, J., Gatz, M., Espeland, M.A., Chui, H.C., Shumaker, S.A., Rapp, S.R., Chen, J.C. (2021) “PM<sub>2.5</sub> Associated with Gray Matter Atrophy Reflecting Increased Alzheimer Risk in Older Women.” Neurology, 96(8): e1190-e1201. <https://doi.org/10.1212/WNL.0000000000011149>
6. Younan, D., Wang, X., Petkus, A., Gruenewald, T., Casanova, R., Serre, M., **Vizuete, W.**, Beavers, D., Braskie, M., He, K. (2020) “Increased neuroanatomic risk for Alzheimer’s disease at preclinical stage: Exploring the interaction of fine particle exposure and psychosocial stress: Epidemiology: Effects of air pollution on cognition.” Alzheimer’s & Dementia 16: e046623. <https://doi.org/10.1002/alz.046623>
7. Eaves, L., Nguyen, H.T.\*, Rager, J. E., Sexton, K. G., Howard, T., Smeester, L., Freedman, A. N., Aagaard, K. M., Shope, C., Lefer, B. Flynn, J. H., Erickson, M. H.Fry, R. C., **Vizuete, W.**<sup>c</sup> (2020) “Identifying the Transcriptional Response of Cancer and Inflammation-Related Genes in Lung Cells in Relation to Ambient Air Chemical Mixtures in Houston, Texas.” Environmental Science & Technology 54(21): 13807-13816. <https://doi.org/10.1021/acs.est.0c02250>
8. Schmedding, R.\*, Rasool, Q.Z.\*, Zhang, Y., Pye, H.O.T., Zhang, H., Chen, Y., Surratt, J.D., Lopez-Hilfiker, F.D., Thornton, J.A., Goldstein, A.H. and **Vizuete, W.**<sup>c</sup> (2020) “Predicting secondary organic aerosol phase state and viscosity and its effect on multiphase chemistry in a regional-scale air quality model.” Atmospheric Chemistry and Physics 20(13): 8201-8225.

9. Wang C.-T\*, Ashworth K., Wiedinmyer C., Ortega J., Harley P.C., Rasool Q.Z., and **Vizuete, W.**<sup>C</sup> (2020) "Ambient measurements of monoterpenes near Cannabis cultivation facilities in Denver, Colorado." *Atmospheric Environment* **232**: 117510.
10. Chen C., Xun P., Kaufman J.D., Hayden K.M., Espeland M.A., Whitsel E.A., Serre M.L., **Vizuete, W.**, Orchard T., Harris W., Wang X., Chui H.C., Chen J.C., and Ka He. (2020) "Erythrocyte Omega-3 Index, Ambient Fine Particle Exposure and Brain Aging." *Neurology* **95**(8): e995-e1007. <https://doi.org/10.1212/WNL.0000000000010074>
11. Younan D., Petkus A. J., Widaman K. F., Wang X., Casanova R., Espeland M. A., Gatz M., Henderson V. W., Manson J. E., Rapp S. R., Sachs B. C., Serre M. L., Gaussoin S. A., Barnard R., Saldana S., **Vizuete, W.**, Beavers D. P., Salinas J. A., Chui H. C., Resnick S. M., Shumaker S. A., and J.C. Chen (2020) "Particulate matter and episodic memory decline mediated by early neuroanatomic biomarkers of Alzheimer's disease." *Brain* **143**(1): 289-302. <https://doi.org/10.1093/brain/awz348>
12. Petkus A. J., Younan D., Widaman K., Gatz M., Manson J. E., Wang X., Serre M., **Vizuete, W.**, Chui H., Espeland M. A., Resnick S., and J.C. Chen (2020). "Exposure to fine particulate matter and temporal dynamics of episodic memory and depressive symptoms in older women" *Environment International* **135**: 105196. <https://doi.org/10.1016/j.envint.2019.105196>
13. Chen, Y., Zhang, Y., Lambe, A.T., Xu, R., Lei, Z., Olson, N.E., Zhang, Z., Szalkowski, T.\*, Cui, T., **Vizuete, W.** and Gold, A. (2020) "Heterogeneous Hydroxyl Radical Oxidation of Isoprene Epoxydiol-Derived Methyltetrol Sulfates: Plausible Formation Mechanisms of Previously Unexplained Organosulfates in Ambient Fine Aerosols." *Environmental Science & Technology Letters* **7**(7): 460-468. <https://doi.org/10.1021/acs.estlett.0c00276>
14. Pfister, G., Wang, C.-T.\*, M. Barth, F. Flocke, **Vizuete, W.**, S. Walters (2019). "Chemical Characteristics and Ozone Production in the Northern Colorado Front Range" *Journal of Geophysical Research – Atmospheres* **124**(23): 13397-13419. <https://doi.org/10.1029/2019JD030544>
15. Shankar, U.\*, D. McKenzie, J.P. Prestemon, B.H. Baek, M. Omary, D. Yang, A. Xiu, K. Talgo, and **Vizuete, W.**<sup>C</sup> (2019). "Evaluating wildfire emissions projection methods in comparisons of simulated and observed air quality." *Atmospheric Chemistry & Physics* **19**: 15157–15181, <https://doi.org/10.5194/acp-19-15157-2019>
16. Wang, C.-T.\*, C. Wiedinmyer, K. Ashworth, P. C. Harley, J. Ortega and **Vizuete, W.**<sup>C</sup> (2019). "Leaf enclosure measurements for determining volatile organic compound emission capacity from Cannabis spp." *Atmospheric Environment* **199**: 80-87.
17. Wang, C.-T.\*, C. Wiedinmyer, K. Ashworth, P. Harley, J. Ortega, Q. Z. Rasool and **Vizuete, W.**<sup>C</sup> (2019). "Potential Regional Air Quality Impacts of Cannabis Cultivation Facilities in Denver, Colorado." *Atmospheric Chemistry & Physics* **19**: 13973–13987, <https://doi.org/10.5194/acp-19-13973-2019>
18. Schmedding, R.\*, M. Ma, Y. Zhang, S. Farrell\*, H. O. T. Pye, Y. Chen, C.-T. Wang\*, Q. Z. Rasool, S. H. Budisulistiorini, A. P. Ault, J. D. Surratt and **Vizuete, W.**<sup>C</sup> (2019). "α-Pinene-Derived organic coatings on acidic sulfate aerosol impacts secondary organic aerosol formation from isoprene in a box model." *Atmospheric Environment* **213**: 456-462.
19. Riva, M., Y. Chen, Y. Zhang, Z. Lei, N. Olson, H. C. Boyer, S. Narayan, L. D. Yee, H. Green, T. Cui, Z. Zhang, K. D. Baumann, M. Fort, E. S. Edgerton, S. Budisulistiorini, C. A. Rose, I. Ribeiro, R. L. e Oliveira, E. Santos, S. Szopa, C. Machado, Y. Zhao, E. Alves, S. de Sa, W. Hu, E. Knipping, S. Shaw, S. Duvoisin Junior, R. A. F. d. Souza, B. B. Palm, J. L. Jimenez, M. Glasius, A. H. Goldstein, H. O. T. Pye, A. Gold, B. J. Turpin, **Vizuete, W.**, S. T. Martin, J. Thornton, C. S. Dutcher, A. P. Ault and J. D. Surratt (2019). "Increasing Isoprene Epoxydiol-to-Inorganic Sulfate Aerosol (IEPOX:Sulfinorg) Ratio Results in Extensive Conversion of Inorganic Sulfate to Organosulfur Forms: Implications for Aerosol Physicochemical Properties." *Environmental Science & Technology* **53**(15): 8682-8694. <https://doi.org/10.1021/acs.est.9b01019>.
20. Petkus, A. J., D. Younan, X. Wang, M. Serre, **Vizuete, W.**, S. Resnick, M. A. Espeland, M. Gatz, H. Chui and J. E. Manson (2019). "Particulate air pollutants and trajectories of depressive symptoms in older women." *The American Journal of Geriatric Psychiatry* **27**(10): 1083-1096.
21. Zhang, Y., Y. Chen, A. T. Lambe, N. E. Olson, Z. Lei, R. L. Craig, Z. Zhang, A. Gold, T. B. Onasch, J. T. Jayne, D. R. Worsnop, C. J. Gaston, J. A. Thornton, **Vizuete, W.**, A. P. Ault and J. D. Surratt (2018). "Effect of the Aerosol-Phase State on Secondary Organic Aerosol Formation from the Reactive Uptake of Isoprene-

- Derived Epoxydiols (IEPOX)." Environmental Science & Technology Letters **5**(3): 167-174. *Awarded ES&T's Top 5 best papers of the year.*
22. Younan, D., X. Wang, A. J. Petkus, R. Casanova, R. Barnard, S. A. Gaussoin, S. Saldana, S. M. Resnick, M. Serre and **Vizuete, W.** (2018). "Environmental Determinants of Neuroanatomic Risk for Alzheimer's Disease in Older Women: Role of Fine Particulate Matter." Alzheimer's & Dementia: The Journal of the Alzheimer's Association **14**(7): P278.
  23. Younan, D., X. Wang, F. Lurmann, M. Serre, **Vizuete, W.**, K. He, M. N. Braskie, M. Gatz, H. C. Chui and M. A. Espeland (2018). "Racial-Ethnic Disparities in Alzheimer's Risk: Role of Exposure to Ambient Fine Particles." Alzheimer's & Dementia: The Journal of the Alzheimer's Association **14**(7): P1613.
  24. Shankar, U.\*, J. P. Prestemon, D. McKenzie, K. Talgo, A. Xiu, M. Omary, B. H. Baek, D. Yang and **Vizuete, W.** (2018). "Projecting Wildfire Emissions Over the South-eastern United States to Mid-century." International Journal of Wildland Fire **27**(5): 313-328.
  25. Xu, Y.\*, M. L. Serre, J. M. Reyes and **Vizuete, W.**<sup>C</sup> (2017). "Impact of Temporal Upscaling and Chemical Transport Model Horizontal Resolution on Reducing Ozone Exposure Misclassification." Atmospheric Environment **166**: 374-382.
  26. Vennam, L. P.\*, **Vizuete, W.**, K. Talgo, M. Omary, F. S. Binkowski, J. Xing, R. Mathur and S. Arunachalam (2017). "Modeled Full-Flight Aircraft Emissions Impacts on Air Quality and Their Sensitivity to Grid Resolution." Journal of Geophysical Research: Atmospheres **122**(24): 13,472-413,494.
  27. Reyes, J., Y. Xu\*, **Vizuete, W.** and M. Serre (2017). "Regionalized PM<sub>2.5</sub> Community Multiscale Air Quality Model Performance Evaluation across a Continuous Spatiotemporal Domain." Environmental Science & Technology **148**: 258–265.
  28. Lin, Y.-H., M. Arashiro, P. W. Clapp, T. Cui, K. G. Sexton, **Vizuete, W.**, A. Gold, I. Jaspers, R. C. Fry and J. D. Surratt (2017). "Gene Expression Profiling in Human Lung Cells Exposed to Isoprene-Derived Secondary Organic Aerosol." Environmental science & technology **51**(14): 8166-8175.
  29. Chen, J., X. Wang, R. Casanova, M. Serre, **Vizuete, W.**, H. Chui, S. Resnick and M. Espeland (2017). "Neurotoxic Effects of Ambient Air Pollution on Brain Structure and Dementia Risk in Older Women." Innovation in Aging **1**(Suppl 1): 632.
  30. Chang, S. Y.\*, **Vizuete, W.**<sup>C</sup>, M. Serre, L. P. Vennam, M. Omary, V. Isakov, M. Breen and S. Arunachalam (2017). "Finely Resolved On-Road PM<sub>2.5</sub> and Estimated Premature Mortality in Central North Carolina." Risk Analysis **37**(12): 2420-2434.
  31. Cacciottolo, M., X. Wang, I. Driscoll, N. Woodward, A. Saffari, R. J., M. Serre, **Vizuete, W.**, C. Sioutas, T. Morgan, M. Gatz, H. C. Chui, S. S.A., S. M. Resnick, M. A. Espeland, F. C.E. and J. C. Chen (2017). "Particulate Air Pollutants, APOE Alleles, and Their Contributions to Cognitive Impairment in Older Women and to Amyloidogenesis in Experimental Models." Translational Psychiatry **7**(1): 8.
  32. Ashworth, K. and **Vizuete, W.**<sup>C</sup> (2017). "High Time to Assess the Environmental Impacts of Cannabis Cultivation." Environmental Science & Technology **51**(5): 2531-2533.
  33. Zavala, J.\*, O'brien, K. Lichtveld, K. Sexton, I. Rusyn, I. Jaspers and **Vizuete, W.**<sup>C</sup> (2016). "Assessment of Biological Responses of EpiAirwayTM 3-D Cell Constructs vs. A549 Cells for Determining Toxicity of Ambient Air Pollution." Inhalation Toxicology **28**(6): 251-259.
  34. Xu, Y. \*, M. L. Serre, J. Reyes and **Vizuete, W.**<sup>C</sup> (2016). "Bayesian Maximum Entropy Integration of Ozone Observations and Model Predictions: A National Application." Environ Sci Technol **50**(8): 4393-4400.
  35. Riedel, T. P., Z. Zhang, K. chu, J. Thornton, **Vizuete, W.**, A. Gold and J. D. Surratt (2016). "Constraining Condensed-Phase Formation Kinetics of Secondary Organic Aerosol Components from Isoprene Epoxydiols." Atmospheric Chemistry and Physics **16**(3): 1245-1254.
  36. Couzo, E.\*, J. McCann, **Vizuete, W.**, S. Blumsack and J. J. West (2016). "Modeled Response of Ozone to Electricity Generation Emissions in the Northeastern United States Using Three Sensitivity Techniques." Journal of the Air & Waste Management Association **66**(5): 456-469.
  37. Casanova, R., X. Wang, J. Reyes, Y. Akita, M. L. Serre, **Vizuete, W.**, H. C. Chui, I. Driscoll, S. M. Resnick, M. A. Espeland, J. C. Chen, A. D'Abreu and G. Spalletta (2016). "A Voxel-Based Morphometry Study Reveals Local Brain Structural Alterations Associated with Ambient Fine Particles in Older Women." Front Hum Neurosci **10**: 495.

38. Arashiro, M., Y.-H. Lin, K. Sexton, Z. Zhang, I. Jaspers, R. Fry, **Vizuete, W.**, A. Gold and J. Surratt (2016). "In Vitro Exposures to Isoprene-Derived Secondary Organic Aerosol: Assessing the Effects on Inflammation-Associated Gene Expression in Human Bronchial Epithelial Cells using a Direct Deposition Approach." Atmospheric Chemistry and Physics **16**: 14079-14090.
39. **Vizuete, W.<sup>C</sup>**, K. G. Sexton, H. Nguyen, L. Smeester, K. M. Aagaard, C. Shope, B. Lefer, J. H. Flynn, S. Alvarez, M. H. Erickson and R. C. Fry (2015). "From the Field to the Laboratory: Air Pollutant-Induced Genomic Effects in Lung Cells." Environ Health Insights **9**(Suppl 4): 15-23.
40. Vennam, L. P. \*, **Vizuete, W.** and S. Arunachalam (2015). "Evaluation of Model-Predicted Hazardous Air Pollutants (Haps) Near a Mid-Sized US Airport." Atmospheric Environment **119**: 107-117.
41. Seltzer, K. M., **Vizuete, W.** and B. H. Henderson\* (2015). "Evaluation of Updated Nitric Acid Chemistry on Ozone Precursors and Radiative Effects." Atmospheric Chemistry and Physics **15**(10): 5973-5986.
42. Riedel, T. P., Y. H. Lin, H. Budisulistiorini, C. J. Gaston, J. A. Thornton, Z. F. Zhang, **Vizuete, W.**, A. Gold and J. D. Surratt (2015). "Heterogeneous Reactions of Isoprene-Derived Epoxides: Reaction Probabilities and Molar Secondary Organic Aerosol Yield Estimates." Environmental Science & Technology Letters **2**(2): 38-42.
43. Karamchandani, P., C. Emery, G. Yarwood, B. Lefer, J. Stutz, E. Couzo and **Vizuete, W.** (2015). "Implementation and Refinement of a Surface Model for Heterogeneous HONO Formation in a 3-D Chemical Transport Model." Atmospheric Environment **112**: 356-368.
44. Couzo, E. \*, B. Lefer, J. Stutz, G. Yarwood, P. Karamchandani, B. Henderson and **Vizuete, W.<sup>C</sup>** (2015). "Impacts of Heterogeneous HONO Formation on Radical Sources and Ozone Chemistry in Houston, Texas." Atmospheric Environment **112**: 344-355.
45. Chen, Y. Z. \*, K. G. Sexton, R. E. Jerry, J. D. Surratt and **Vizuete, W.<sup>C</sup>** (2015). "Assessment of SAPRC07 with Updated Isoprene Chemistry against Outdoor Chamber Experiments." Atmospheric Environment **105**: 109-120.
46. Chang, S. Y. \*, **Vizuete, W.<sup>C</sup>**, A. Valencia, B. Naess, V. Isakov, T. Palma, M. Breen and S. Arunachalam (2015). "A Modeling Framework for Characterizing Near-Road Air Pollutant Concentration at Community Scales." Sci Total Environ **538**: 905-921.
47. Chang, S. Y. \*, **Vizuete, W.<sup>C</sup>**, M. Breen, V. Isakov and S. Arunachalam (2015). "Comparison of Highly Resolved Model-Based Exposure Metrics for Traffic-Related Air Pollutants to Support Environmental Health Studies." Int J Environ Res Public Health **12**(12): 15605-15625.
48. Casanova, R., X. Wang, J. Reyes, Y. Akita, M. Serre, **Vizuete, W.**, H. C. Chui, I. Driscoll, S. M. Resnick and M. A. Espeland (2015). "Exposures to Fine Particulate Air Pollutants are Associated with Smaller Brain Volumes in Older Women: A Voxel-Based Analysis." Alzheimer's & Dementia: The Journal of the Alzheimer's Association **11**(7): P148-P149.
49. Zavala, J. \*, K. Lichtveld, S. Ebersviller, J. L. Carson, G. Walters, I. Jaspers, H. Jeffries, K. Sexton and **Vizuete, W.<sup>C</sup>** (2014). "The Gillings Sampler A Portable Electrostatic Air Sampler as an Alternative Method for Aerosol In Vitro Exposure Studies." Chemico-Biological Interactions **220**: 158-168.
50. Lin, Y.-H., K. G. Sexton, I. Jaspers, Y.-R. Li, J. D. Surratt and **Vizuete, W.<sup>C</sup>** (2014). "Application of Chemical Vapor Generation Systems to Deliver Constant Gas Concentrations for In Vitro Exposure to Volatile Organic Compounds." Environmental Science: Processes & Impacts **16**(12): 2703-2710.
51. Haman, C. L., E. Couzo \*, J. H. Flynn, **Vizuete, W.**, B. Heffron and B. L. Lefer (2014). "Relationship Between Boundary Layer Heights and Growth Rates with Ground-Level Ozone in Houston, Texas." Journal of Geophysical Research-Atmospheres **119**(10): 6230-6245.
52. Weir, C. H. \*, K. B. Yeatts, J. A. Sarnat, **Vizuete, W.**, P. M. Salo, R. Jaramillo, R. D. Cohn, H. Chu, D. C. Zeldin and S. J. London (2013). "Nitrogen Dioxide and Allergic Sensitization in the 2005–2006 National Health and Nutrition Examination Survey." Respiratory medicine **107**(11): 1763-1772.
53. Parikh, H. M. \*, H. E. Jeffries, K. G. Sexton, D. J. Luecken, R. M. Kamens and **Vizuete, W.<sup>C</sup>** (2013). "Evaluation of Aromatic Oxidation Reactions in Seven Chemical Mechanisms with an Outdoor Chamber." Environmental Chemistry **10**(3): 245-259.
54. Lin, Y. H., H. F. Zhang, H. O. T. Pye, Z. F. Zhang, W. J. Marth, S. Park, M. Arashiro, T. Q. Cui, H. Budisulistiorini, K. G. Sexton, **Vizuete, W.**, Y. Xie, D. J. Luecken, I. R. Piletic, E. O. Edney, L. J. Bartolotti,

- A. Gold and J. D. Surratt (2013). "Epoxide as a Precursor to Secondary Organic Aerosol Formation from Isoprene Photooxidation in the Presence of Nitrogen Oxides." Proceedings of the National Academy of Sciences of the United States of America **110**(17): 6718-6723.
55. Kolling, J. S. \*, J. E. Pleim, H. E. Jeffries and **Vizuete, W.<sup>C</sup>** (2013). "A Multisensor Evaluation of the Asymmetric Convective Model, Version 2, In Southeast Texas." Journal of the Air & Waste Management Association **63**(1): 41-53.
  56. Couzo, E. \*, H. E. Jeffries and **Vizuete, W.<sup>C</sup>** (2013). "Houston's Rapid Ozone Increases: Preconditions and Geographic Origins." Environmental Chemistry **10**(3): 260-268.
  57. Weir, C. \*, K. Yeatts, **Vizuete, W.**, S. London, P. Salo, R. Jaramillo and D. Zeldin (2012). "Ambient Air Pollution and Allergic Sensitization: Results from the National Health and Examination Survey (NHANES) 2005-2006." The Journal of Allergy and Clinical Immunology **129**(2): AB19.
  58. Parikh, H. M. \*, A. G. Carlton, Y. Zhou, H. F. Zhang, R. M. Kamens and **Vizuete, W.<sup>C</sup>** (2012). "Modeling Secondary Organic Aerosol Formation from Xylene and Aromatic Mixtures Using a Dynamic Partitioning Approach Incorporating Particle Aqueous-Phase Chemistry (II)." Atmospheric Environment **56**: 250-260.
  59. Lichtveld, K., S. Ebersviller, K. Sexton, **Vizuete, W.**, J. H.E. and I. Jaspers (2012). "*In Vitro* Exposures in Diesel Exhaust Atmospheres: Resuspension of PM from Filters Verses Direct Deposition of PM from Air." Environmental Science & Technology **46**(16): 9062-9070.
  60. Henderson, B. \*, R. Pinder, J. Crooks, R. Cohen, A. Carlton, H. Pye and **Vizuete, W.<sup>C</sup>** (2012). "Combining Bayesian Methods and Aircraft Observations to Constrain the HO + NO<sub>2</sub> Reaction Rate." Atmospheric Chemistry and Physics **12**(2): 653-667.
  61. Couzo, E. \*, A. Olatosi, H. E. Jeffries and **Vizuete, W.<sup>C</sup>** (2012). "Assessment of a Regulatory Model's Performance Relative to Large Spatial Heterogeneity in Observed Ozone in Houston, Texas." Journal of the Air & Waste Management Association **62**(6): 696-706.
  62. **Vizuete, W.<sup>C</sup>**, H. E. Jeffries, T. W. Tesche, E. P. Olaguer and E. Couzo \* (2011). "Issues with Ozone Attainment Methodology for Houston, TX." Journal of the Air & Waste Management Association **61**(3): 238-253.
  63. Parikh, H. M. \*, A. G. Carlton, **Vizuete, W.** and R. M. Kamens (2011). "Modeling Secondary Organic Aerosol Using a Dynamic Partitioning Approach Incorporating Particle Aqueous-Phase Chemistry." Atmospheric Environment **45**(5): 1126-1137.
  64. Henderson, B. H. \*, R. W. Pinder, J. Crooks, R. C. Cohen, W. T. Hutzell, G. Sarwar, W. S. Goliff, W. R. Stockwell, A. Fahr, R. Mathur, A. G. Carlton and **Vizuete, W.<sup>C</sup>** (2011). "Evaluation of Simulated Photochemical Partitioning of Oxidized Nitrogen in the Upper Troposphere." Atmospheric Chemistry and Physics **11**(1): 275-291.
  65. Henderson, B. H. \*, Y. Kimura, E. McDonald-Buller, D. T. Allen and **Vizuete, W.<sup>C</sup>** (2011). "Comparison of Lagrangian Process Analysis Tools for Eulerian Air Quality Models." Atmospheric Environment **45**(29): 5200-5211.
  66. **Vizuete, W.<sup>C</sup>**, L. Biton \*, H. E. Jeffries and E. Couzo (2010). "Evaluation of Relative Response Factor Methodology for Demonstrating Attainment of Ozone in Houston, Texas." Journal of the Air & Waste Management Association **60**(7): 838-848.
  67. Li, Y., J. M. Gibson, P. Jat, G. Puggioni, M. Hasan, J. J. West, **Vizuete, W.**, K. Sexton and M. Serre (2010). "Burden of Disease Attributed to Anthropogenic Air Pollution in the United Arab Emirates: Estimates Based on Observed Air Quality Data." Science of The Total Environment **408**(23): 5784-5793.
  68. Henderson, B. H. \*, H. E. Jeffries, B.-U. Kim and W. G. **Vizuete<sup>C</sup>** (2010). "The Influence of Model Resolution on Ozone in Industrial Volatile Organic Compound Plumes." Journal of the Air & Waste Management Association **60**(9): 1105-1117.
  69. Xu, Y. \*, **Vizuete, W.** and M. Serre (2009). "Characterization of Air Quality Ozone Model Performance Using Land Use Regression Model: An Application in Exposure Assessment for Epidemiology Studies." Perspectives **117**(4): 537-544.
  70. Olaguer, E. P., B. Rappengluck, B. Lefer, J. Stutz, J. Dibb, R. Griffin, W. H. Brune, M. Shauck, M. P. Buhr, H. Jeffries, **Vizuete, W.** and J. Pinto (2009). "Deciphering the Role of Radical Precursors during the Second Texas Air Quality Study." Journal of the Air & Waste Management Association **59**(11): 1258-1277.

71. **Vizuete, W.**<sup>c</sup>, B.-U. Kim, H. Jeffries, Y. Kimura, D. T. Allen, M.-A. Kioumourtzoglou, L. Biton and B. Henderson (2008). "Modeling Ozone Formation from Industrial Emission Events in Houston, Texas." Atmospheric Environment **42**(33): 7641-7650.
72. Song, J., **Vizuete, W.**, S. Chang, D. Allen, Y. Kimura, S. Kemball-Cook, G. Yarwood, M.-A. Kioumourtzoglou, E. Atlas, A. Hansel, A. Wisthaler and E. McDonald-Buller (2008). "Comparisons of Modeled and Observed Isoprene Concentrations in Southeast Texas." Atmospheric Environment **42**(8): 1922-1940.
73. Nam, J., M. Webster, Y. Kimura, H. Jeffries, **Vizuete, W.** and D. T. Allen (2008). "Reductions in Ozone Concentrations Due to Controls on Variability in Industrial Flare Emissions in Houston, Texas." Atmospheric Environment **42**(18): 4198-4211.
74. Kimura, Y., E. McDonald-Buller, **Vizuete, W.** and D. T. Allen (2008). "Application of a Lagrangian Process Analysis tool to Characterize Ozone Formation in Southeast Texas." Atmospheric Environment **42**(23): 5743-5759.
75. Webster, M., J. Nam, Y. Kimura, H. Jeffries, **Vizuete, W.** and D. T. Allen (2007). "The Effect of Variability in Industrial Emissions on Ozone Formation in Houston, Texas." Atmospheric Environment **41**(40): 9580-9593.
76. Nam, J., Y. Kimura, **Vizuete, W.**, C. Murphy and D. T. Allen (2006). "Modeling the Impacts of Emission Events on Ozone Formation in Houston, Texas." Atmospheric Environment **40**(28): 5329-5341.
77. Junquera, V., M. M. Russell, **Vizuete, W.**, Y. Kimura and D. Allen (2005). "Wildfires in Eastern Texas in August And September 2000: Emissions, Aircraft Measurements, and Impact on Photochemistry." Atmospheric Environment **39**(27): 4983-4996.
78. **Vizuete, W.**, V. Junquera and D. T. Allen (2004). "Sesquiterpene Emissions and Secondary Organic Aerosol Formation Potentials for Southeast Texas Special Issue of Aerosol Science and Technology on Findings from the Fine Particulate Matter Supersites Program." Aerosol Science and Technology **38**(Suppl 1): 167-181.
79. **Vizuete, W.**, V. Junquera, E. McDonald-Buller, G. McGaughey, G. Yarwood and D. Allen (2002). "Effects of Temperature and Land Use on Predictions of Biogenic Emissions in Eastern Texas, USA." Atmospheric Environment **36**(20): 3321-3337.
80. Barnett, W. M., R. G. Baughman, H. L. Collier and **Vizuete, W.** (1999). "Synthesis and Crystal Structure of 1, 1'-Di (Ethylpropionato)-2, 2'-Biimidazole, A Macromolecular Precursor." Journal of Chemical Crystallography **29**(7): 765-768.

### ***Patents***

- United States patent serial no. 13/559,004 for Systems and Methods for Collecting and Depositing Particulate Matter onto Tissue Samples 2013

### **PRESENTATIONS**

#### ***Invited Keynote and Plenary Presentations***

- "Connecting Ozone Exceedances in Houston TX to Variability in Industrial Emissions: Implications for federal attainment," keynote speaker, Refinery and Chemical Industry Emissions Symposium, Davis, California (November 2019)
- "Connecting Ozone Exceedances in Houston TX to Variability in Emissions and Meteorology: Implications for Federal Attainment" plenary speaker, Meteorology and Climate – Modeling for Air Quality Conference, Davis, California (September 2019)
- "Does the Atmosphere Make Pollution More Deadly?" keynote speaker, Congreso Anual de Meteorología y Calidad del Aire Conference, Quito, Ecuador (April 2016)
- "Insights into Atmospheric Chemistry" keynote Speaker the National GEM Consortiums 2015 Annual Meeting for Minority STEM researchers, Boston, MA (August 2015)



- “Effects of anthropogenic air pollution on health in the U.A.E.” keynote speaker Qatar University Life Science Symposium, Doha, Qatar (December 2013)
- “Air Pollution: A global killer” keynote speaker and advisor at Universidad Nacional de Asuncion, Paraguay (April 2011).
- “Air Pollution: A global killer” keynote speaker and advisor at Universidad Catolica Asuncion, Paraguay (April 2011).

### ***Invited Workshop or Panel***

- Expert panel for the Air and Waste Management Association annual conference “Quantifying VOC Emissions from the Marijuana Industry and Modeling Regional Ozone Impacts” (July 2019)
- Workshop leader for American Association for Aerosol Research “New Technologies for *in vitro* Aerosol Exposures at Air Liquid Interfaces” (October 2017)
- Workshop leader McDougale Middle School Science teachers to develop air pollution curriculum into 6th grade Atmosphere/Weather Science (October 2016)
- NASA Teacher Workshop of Air Quality Concerns in a Changing Climate (September 2014)
- Clean Air Institute Workshop of Critical review of methodologies to assess greenhouse gas and local pollutant emission impacts of transport interventions for Bogota Columbia, Washington D.C., USA (September 2010).
- Texas Commission on Environmental Quality Rapid Science Synthesis Group workshop (October 2006).

### ***Invited International Presentations***

- “The Galapagos Science Center and Climate Change” World Summit, Galapagos Science Center, San Cristobal, Ecuador (June 2022)
- “Marine Aerosols and The Galapagos” Ecuadorian Parque Nacional, San Cristobal, Ecuador Virtual (September 2021)
- “Climate Change: Marine Aerosols and The Galapagos” Galapagos Science Center, San Cristobal, Ecuador (September 2020)
- “Does the atmosphere make pollution more deadly?” Universidad San Francisco de Quito, Quito, Ecuador (April 2016)
- “Lung cell exposures in the lab and field: Linking atmospheric chemistry and genomic responses” Health Canada, Ottawa, Canada (March 2016)
- “*In vitro* biosensors” University of Munster, Munster, Germany (October 2014)
- “Houston: A Tale of Two Ozones” Barcelona University, Barcelona Spain (December 2013)
- “Outdoor Air Quality: Improving Understanding Informing Decisions” Abu Dhabi Environment Agency, Abu Dhabi, United Arab Emirates (September 2011)
- “UAE Environmental Health Project Final Results” Abu Dhabi Environment Agency, Abu Dhabi, United Arab Emirates (October 2010)
- “Modeling and Monitoring Outdoor Air Quality” Abu Dhabi Environment Agency, Abu Dhabi, United Arab Emirates (May 2010)

### ***Other Invited Presentations***

- “Empirical Relationships and Ozone Exceedances in Texas” Texas Commission on Environmental Quality Air Quality Deputy Director Invited Seminar (December 2020)

- “Linking Particulate Matter and Atmospheric Chemistry: Engineering solutions for public health” Washington University Seminar (March 2020)
- “Linking Particulate Matter and Atmospheric Chemistry: Engineering solutions for public health” Rice University Seminar (March 2020)
- “Linking Particulate Matter and Atmospheric Chemistry: Engineering solutions for public health” RTP chapter of Air and Waste Management Association (May 2018)
- “Can the Legalization of Marijuana Impact Air Quality” North Carolina Museum of Science Café (March 2018)
- “Emissions from Marijuana and Air Quality” University of North Carolina Asheville Seminar (February 2017)
- “From Local to Global: Exploring Environmental Sustainability” UNC World Views symposium for community college educators (November 2016)
- “Emissions from marijuana and air quality” East Chapel Hill Rotary Club (November 2016)
- “Insights into Atmospheric Chemistry” Missouri University of Science and Technology (April 2016)
- “What’s Up? — Exploring atmospheric chemistry and air pollution” Durham Public Schools Teacher Workshop (March 2016)
- “Patentable instrument for analyzing airborne substances and their toxicity.” Research Triangle Park (March 2013)
- “A Tale of Two Ozones: Houston Texas” University of Houston (November 2012)
- “Lunch with a Scientist” ScienceWriters conference (May 2012)
- “Issues with Ozone Attainment Methodology for Houston, TX” North Carolina State Marine, Earth, & Atmospheric Sciences Seminar (August 2011).
- “EPA Ozone Attainment Demonstration and Houston, TX” Southeast Texas Photochemical Modeling Technical Committee meeting (April 2010).
- “Assessment of the Attainment Guidance for 8-hr Ozone in Houston, TX” Center for Environmental and Energy Research at University of Texas-Austin (October 2009).
- “Influence of Highly Variable Spatial and Temporal VOC Emissions in Houston Texas on 1-H and 8-H Ozone SIP Modeling” EPA Earth Day Seminar (April 2009).
- “A Detailed Process Based Evaluation of Photochemical Air Quality Model Simulations of Houston, TX” NCAR ACD division seminar (June 2007).
- “Investigation of Limited Radical Source Strength in the Houston Regulatory Ozone Model” TERC Science advisor committee (November 2006).
- “A Process Based Method for Understanding Model Predictions” U.S. EPA Seminar (May 2006).
- “Houston Galveston Beaumont SIP-Relevant Research” TERC Science advisory committee (April 2006).
- “Simulating our Atmosphere: Challenges and Opportunities” UNC-Chapel Hill Seminar (February 2006).
- “Houston Galveston Beaumont Problem Statement” TERC Science advisory committee (November 2005).
- “How Should We Design the TexAQS II-2006 Intensive” TERC Science advisory committee (November 2005).

***Presentations at Conferences by Vizuite or research group (Total=84)***

1. "F0AM Model integration of ISORROPIA and the CMAQ 5.3.2 Aerosol Module: Framework for Secondary Organic Aerosol Development," Jaime Green, Yuzhi Chen, Jason D. Surratt, **Vizuite, W.**, AGU Fall Meeting (December 2021)
2. "Evaluation of Glass Transition Temperature in an Air Quality Model and the Impact on Aerosol Phase State and Secondary Formation," **William Vizuite**, Sara Farrell, Quazi Rasool, Yue Zhang, Ying Li, Yuzhi Chen, Chi-Tsan Wang, Haofei Zhang, Ryan Schmedding, Manabu Shiraiwa, Jaime Ross Green, and Jason D Surratt, AGU Fall Meeting (December 2021)
3. "The air toxicants (Styrene and BTEX) emission estimate in support of their human exposure assessment in the U.S. Gulf region," Chi-Tsan Wang, Bok Baek, **William Vizuite**, Marc L Serre, Richard Strott, and Jaime Ross Green, AGU Fall Meeting (December 2021)
4. "Marine Sources of Secondary Organic Aerosol (SOA): Chemical Characterization in the Galápagos Islands," Tessa Szalkowski, Tianqu Cui, Karsten Baumann, Ryan Schmedding, Zhenfa Zhang, Jason D Surratt, Jackson Seymore and **Vizuite, W.**, AGU Fall Meeting (December 2020)
5. "Modeling Kinetically-Limited IEPOX-SOA Uptake via Volatility based and Compositionally defined Glass Transition Temperatures," **Vizuite, W.**, Sara Farrell, Quazi Rasool, Havala Olson Taylor Pye, Yue Zhang, Ying-Hsuan Lin, Yuzhi Chen, Chi-Tsan Wang, Haofei Zhang, Ryan Schmedding, Manabu Shiraiwa and Jason D Surratt, AGU Fall Meeting (December 2020)
6. "Toxicity of Complex Aerosols emitted from Woody Biomass Combustion assessed using a novel In Vitro technology," **Vizuite, W.**, Karsten Baumann, Jose Zavala, Prakash Doraiswamy, Jean Kim, Solomon Bililign, Marc Fiddler, Damon Michael Smith, Robert Newman, Ryan Chartier, Hadley Hartwel, Vikram Rao and Jackson Seymore, AGU Fall Meeting (December 2020)
7. "In Vitro Toxicity of Complex Aerosols from Woody Biomass Combustion" **Vizuite, W.**, Karsten Baumann, Jose Zavala, Prakash Doraiswamy, Jean Kim, Solomon Bililign, Marc Fiddler, Damon Smith, Robert Newman, Ryan Chartier, Hadley Hartwell, Laquaundra Hampton, Ese Ekhatior, Jade Scales, Nalyn Siripanichgon, Erin Dowell, Rudra Pokhrel, Vikram Rao, Ninell Mortensen, Jackson Seymore, American Association for Aerosol Research (October 2020)
8. "Chemical Characterization of Isoprene- and Monoterpene-Derived Secondary Organic Aerosol (SOA) Tracers in Marine Aerosols from the Galápagos Islands." Tessa Szalkowski, Tianqu Cui, Karsten Baumann, Ryan Schmedding, Zhenfa Zhang, Jason Surratt, Jackson Seymore, **Vizuite, W.**, American Association for Aerosol Research (October 2020)
9. "Heterogeneous Hydroxyl Radical Oxidation of Isoprene Epoxydiol-Derived Methyltetrol Sulfates: Plausible Formation Mechanisms of Previously Unexplained Organosulfates in Ambient Fine Aerosols." Yuzhi Chen, Yue Zhang, Andrew Lambe, Rongshuang Xu, Ziyang Lei, Nicole Olson, Zhenfa Zhang, Tessa Szalkowski, Tianqu Cui, **Vizuite, W.**, Avram Gold, Barbara Turpin, Andrew Ault, Man Nin Chan, Jason Surratt, American Association for Aerosol Research (October 2020)
10. "Simulations of Kinetically-Limited IEPOX-SOA Reactive Uptake with Glass Transition Temperatures Predicted by Volatility and Chemical Composition Implemented in CMAQv5.3." Sara Farrell, Quazi Rasool, Havala Pye, Yue Zhang, Ying Li, Yuzhi Chen, Chitsan Wang, Haofei Zhang, Ryan Schmedding, Manabu Shiraiwa, Jason Surratt, **Vizuite, W.**, American Association for Aerosol Research (October 2020)
11. "Empirical relationships among wind conditions and ozone exceedances in Houston and other cities in Texas: Implications for State Implementation Plans" **Vizuite, W.**, Harvey Jeffries, Quazi Rasool, Air & Waste Management Annual Conference (June 2020)
12. "The Industrial-scale Cultivation of Cannabis and its Impact on Regional Ozone" **Vizuite, W.**, Chitsan Wang, Chrisintine Wiedinmyer, Kirsti Ashworth, Air & Waste Management Annual Conference (June 2020)
13. "Pre-surgical exposure air pollution may decrease patency rates after lower extremity revascularization: a pilot study." Edward Bahnsen, Paula Strassle, Ruozhang Xu, **Vizuite, W.**, Marc L. Serre, Katharine L. McGinagle, Vascular Annual Meeting (June 2020)

14. "Ambient measurements of biogenic VOCs near Cannabis facilities in Denver, CO" Chi-Tsan Wang, **Vizuete, W.**, Christine Wiedinmyer, Kirsti Ashworth, Peter Harley, John Ortega Air and American Geophysical Union annual Conference (December 2019)
15. "Predicting the Phase State of Atmospherically Relevant Aerosols and Its Impact on Multiphase Chemistry in a Regional-scale Atmospheric Model" Quazi Rasool, Ryan Schmedding, Yue Zhang, Havala Pye, Haofei Zhang, Yuzhi Chen, Jason Surratt, **Vizuete, W.** American Association for Aerosol Research Annual Conference (October 2019)
16. "The Effects of Aerosol-Phase State and Chemical Composition on Multiphase Chemistry Leading to Isoprene-Derived Secondary Organic Aerosol Formation" Yue Zhang, Yuzhi Chen, Andrew Lambe, Nicole Olson, Ziyang Lei, Manjula Canagaratna, Jordan Krechmer, Rebecca Craig, Zhenfa Zhang, Avram Gold, John Jayne, Douglas Worsnop, Timothy Onasch, Cassandra Gaston, Joel A. Thornton, **Vizuete, W.**, Andrew Ault, Jason Surratt American Association for Aerosol Research Annual Conference (October 2019)
17. "Predicted Impact of VOC Emissions from Cannabis spp. Cultivation Facilities on Ozone Concentrations in Denver, CO" Paper # 598842, Chi-Tsan Wang, **Vizuete, W.**, Christine Wiedinmyer, Kirsti Ashworth, Peter Harley, John Ortega Air and Waste Management Association Annual Conference (June 2019)
18. "Exposure to Low Levels of Combined Air Pollutants in Both the First and Second Trimester is Associated with Increased Risk of Preterm Birth (PTB) in High-Risk Women in North Carolina." Dhingra, R., L. Smeester, J. Rager, **Vizuete, W.**, R. Fry and T. Manuck. Reproductive Sciences, Sage Publications Inc 2455 Teller Rd, Thousand Oaks, CA 91320 USA (June 2019)
19. "Understanding Missing Sources of Fine Particulate Organosulfur Compounds in the Atmosphere: Implications from Ambient Measurements and Laboratory Experiments." Riva, M., Yuzhi Chen, Lindsay Yee, Hilary Green, Tianqu Cui, Nicole Olson, Nancy Ziyang, Karsten Baumann, Mike Fort, Eric Edgerton, Eladio Knipping, Stephanie L. Shaw, Sri Hapsari Budisulistiorini, Caitlin Rose, Zhenfa Zhang, Avram Gold, Barbara Turpin, **Vizuete, W.**, Igor O. Ribeiro, Santos e Oliveira, Cristine Machado, Sérgio Duvoisin Junior, Rodrigo A. F. de Souza, Eliane Gomes, et al., presented at the American Association for Aerosol Research 37th Annual Conference (October 2018)
20. "Experimental Study of Condensed-Phase Reaction Kinetics of Secondary Organic Aerosols from Isoprene Epoxydiols." Chen, Y., Matthieu Riva, Theran P. Riedel, Havala Pye, Nicole Olson, Ziyang Lei, Zhenfa Zhang, Avram Gold, **Vizuete, W.**, Barbara Turpin, Andrew Ault, Jason Surratt, presented at the American Association for Aerosol Research 37th Annual Conference (October 2018)
21. "The Predicted Impact of Organic Coatings on Isoprene-Derived Secondary Organic Aerosol Formation." **Vizuete, W.**, Mutian Ma, Yue Zhang, Sri Hapsari Budisulistiorini, Havala Pye, Jason Surratt, Yuzhi Chen, Ryan Schmedding, Sarah Farrell, presented at the American Association for Aerosol Research 37th Annual Conference (October 2018)
22. The Effects of Aerosol-Phase State and Chemical Composition on Multiphase Chemistry Leading to Isoprene-Derived Secondary Organic Aerosol Formation. Zhang, Y., Yuzhi Chen, Andrew Lambe, Nicole Olson, Ziyang Lei, Rebecca Craig, Manjula Canagaratna, Jordan Krechmer, Zhenfa Zhang, Avram Gold, Timothy Onasch, John Jayne, Douglas Worsnop, Cassandra Gaston, Joel A. Thornton, **Vizuete, W.**, Andrew Ault, Jason Surratt, presented at the American Association for Aerosol Research 37th Annual Conference (October 2018)
23. "The Effects of Aerosol Phase State on Secondary Organic Aerosol Formation from the Acid-Catalyzed Reactive Uptake of Isoprene-Derived Epoxydiols." Zhang, Y., Yuzhi Chen, Andrew Lambe, Amy Bondy, Nicole Olson, Rebecca Craig, Zhenfa Zhang, Avram Gold, Timothy Onasch, John Jayne, Douglas Worsnop, Charles Kolb, **Vizuete, W.**, Andrew Ault, Jason Surratt, presented at the American Association for Aerosol Research 36th Annual Conference (October 2017)
24. "The Influence Pre-existing Organics on Secondary Organic Aerosol Formation from Reactive Uptake of Isoprene Epoxydiols in a Regional Scale Model." Ma M., Havala Pye, Yue Zhang, Yuzhi Chen, Chitsan Wang, Jason Surratt, **Vizuete, W.**, presented at the American Association for Aerosol Research 36th Annual Conference (October 2017)

25. "The predicted impact of VOC emissions from Marijuana cultivation operations on ozone concentrations in Denver, CO." Wang C., Wiedinmyer C., **Vizuete, W.**, presented at the Annual Community Modeling and Analysis System (CMAS) Conference (October 2016).
26. "Impacts of Heterogeneous HONO Formation on Radical Sources and Ozone Chemistry in Houston, Texas" **Vizuete, W.**, Couzo E., Lefer B., Stutz J., Yarwood G., Karamchandani P., Henderson B., presented at the American Meteorological Society Annual Conference on Atmospheric Chemistry (January 2016)
27. "Impact of Heterogeneous HONO formation on Radical Sources and Ozone Chemistry in Houston, Texas" **Vizuete, W.**, Lefer B., Karamchandani P., Emery C., Stutz J., Couzo E., Yarwood G., presented at the International Aerosol Modeling Algorithms Conference (December 2015)
28. "Evaluation of aromatic chemical mechanisms" Parikh H.M, Carlton A.G, Zhang H, Zhou Y, Chen E.H, Kamens R.M, **Vizuete, W.** presented at the International Aerosol Modeling Algorithms Conference (December 2015)
29. "The predicted impact of increased formaldehyde emissions from industrial flares on ozone concentrations in Houston, TX." Wang C.T., **Vizuete, W.**, presented at the American Geophysical Union Fall Meeting (December 2015)
30. "A Novel Approach of Understanding and Incorporating Error of Chemical Transport Models into a Geostatistical Framework" Reyes J., **Vizuete, W.**, Serre M., presented at the American Geophysical Union Fall Meeting (December 2015)
31. "The predicted impact of increased formaldehyde emissions from industrial flares on ozone concentrations in Houston, TX." Wang C., Chen Y., Johansson J., McNally D., **Vizuete, W.**, presented at the Annual Community Modeling and Analysis System (CMAS) Conference (October 2015)
32. "A Novel Approach to Characterizing Regionalized PM<sub>2.5</sub> Community Multi-scale Air Quality Model Performance" Reyes J., Serre M., **Vizuete, W.**, presented at the Annual Community Modeling and Analysis System (CMAS) Conference (October 2015)
33. "Bayesian Maximum Entropy Integration of Ozone Observations and Model Predictions at Multiple Time Scales" Xu Y., **Vizuete, W.**, Serre M., presented at the Annual Community Modeling and Analysis System (CMAS) Conference (October 2015)
34. "Evaluation of Aromatic Oxidation Reactions in Seven Chemical Mechanisms with an Outdoor Chamber" **Vizuete, W.**, Parikh H., Jeffries H., Sexton K., Luecken D., Kamens R., presented at the Atmospheric Chemical Mechanisms Conference (December 2014)
35. "Heterogeneous HONO sources and ozone chemistry in Houston, Texas" **Vizuete, W.**, E. Couzo, P. Karamchandani, G. Yarwood, J. Stutz, and B. Lefer presented at the Annual Community Modeling and Analysis System (CMAS) Conference (October 2014)
36. "Integration of observation and air quality model data for improved exposure estimates" Xu Y., **Vizuete, W.**, Serre M., presented at the Annual Community Modeling and Analysis System (CMAS) Conference (October 2014).
37. "Modeled Trends in Impacts of Landing and Takeoff Aircraft Emissions on Surface Air Quality in U.S for 2005, 2010 and 2018" Vennam L.P., Arunachalam S., Bowden J., Baek B.H., Omary M., **Vizuete, W.**, Olsen S., presented at the Annual Community Modeling and Analysis System (CMAS) Conference (October 2014).
38. "Dynamically controlling daily power plant emissions to avoid ozone exceedances by coordinating air quality forecasts with electricity dispatch models" Couzo E., McCann J., Johnson N., Barrows C., Blumsack S., **Vizuete, W.**, Baker K., West J., presented at the Annual Community Modeling and Analysis System (CMAS) Conference (October 2014)
39. "Connecting Fine-scale Air Quality Modeling of Traffic-Related Pollutants with EPA's EnviroAtlas" Chang S.Y., Arunachalam S., Naess B., Talgo K., Valencia A., Isakov V., Palma T., Jackson L., Breen M. presented at the Annual Community Modeling and Analysis System (CMAS) Conference (October 2014)

40. "Assessment of Dust Emissions Model and PM<sub>10</sub> in the United Arab Emirates during Dust Storms using the CMAQ-WRF Modeling System" Farooqui M., West J., Shankar U., Sexton K., Adelman Z., Omary M., Xin A., Arunachalam S., Davis N., **Vizuete, W.**, presented at the American Geophysical Union Fall Meeting (December 2013)
41. "A Modeling Framework for Improved Characterization of Near-Road Air Quality at Fine Scales for Nationwide Exposure Assessment" Chang S.Y., Arunachalam S., Naess B., Talgo K., Valencia A., Isakov V., Palma T., Jackson L., Breen M., **Vizuete, W.**, presented at the Annual Community Modeling and Analysis System (CMAS) Conference (October 2013)
42. "A Tracer Study to Assess Transport of Cruise Altitude Aircraft Emissions to the Surface at Continental and Hemispheric Scales" Vennam L.P., Arunachalam S., Bowden J., Baek B.H., Omary M., **Vizuete, W.**, Olsen S., presented at the Annual Community Modeling and Analysis System (CMAS) Conference (October 2013)
43. "Characterization of Air Quality Model Performance Using Land Use Regression Model" Xu Y., **Vizuete, W.**, Serre M., presented at the Annual Community Modeling and Analysis System (CMAS) Conference (October 2013)
44. "Development of an Aerosol Sampler for *In Vitro* Exposure Studies of Lung Tissue" **Vizuete, W.**, Zavalas J., Sexton K., Jaspers I., Jeffries H., presented at International Conference of Environment and Health (August 2013)
45. "Adjusting electricity generation to avoid exceedances of the ozone air quality standard" McCann J., **Vizuete, W.**, West J.J., Blumsack S.A., presented at the Air and Waste Management Association Annual Conference and Exhibition (June 2013)
46. "Houston's unusually large hourly ozone increases: Preconditions and geographical origins" Couzo E., Jeffries H.E., **Vizuete, W.**, presented at the American Geophysical Union Fall Meeting (December 2012)
47. "Assessment of a regulatory model performance relative to large spatial inhomogeneity in observed ozone in Houston, TX" Couzo, E., Jeffries, H.E., **Vizuete, W.**, presented at the American Geophysical Union Fall Meeting (December 2011)
48. "Sensitivity of intercontinental influence on ozone to chemical sinks of NO<sub>x</sub>" Henderson H., Pinder R., West J.J., **Vizuete, W.**, presented at the American Geophysical Union Fall Meeting (December 2011)
49. "A Combined Kinetic and Volatility Basis Set Approach to Model Secondary Organic Aerosol from Toluene and Diesel Exhaust/Meat Cooking Mixtures" Parikh H., Carlton A.G., Zhang H., Kamens R., **Vizuete, W.**, presented at the American Geophysical Union Fall Meeting (December 2011)
50. "New Algorithms to Describe Secondary Organic Aerosol Formation" Parikh H.M, Carlton A.G, Zhang H, Zhou Y, Chen E.H, Kamens R.M, **Vizuete W.** presented at the 3rd International Aerosol Modeling Algorithms Conference (December 2011)
51. "The Implications of Uncertain NO<sub>2</sub> + OH for Ozone and Precursors" Henderson B.H., Pinder R.W., Akhtar F., Pye H., **Vizuete, W.**, presented at the Annual Community Modeling and Analysis System (CMAS) Conference (October 2011)
52. "An Assessment of Aviation-related Hazardous Air Pollutants from a U.S. airport using CMAQ" Vennam, L.P., **Vizuete, W.**, Arunachalam S. presented at the Annual Community Modeling and Analysis System (CMAS) Conference (October 2011).
53. "NO<sub>x</sub> Chemical Sinks in the Upper Troposphere." Henderson B.H., Pinder R., Crooks J., Cohen R., Goliff W., Stockwell W.R., Fahr A., Sarwar G., Hutzell B., Mathur R., Carlton A., **Vizuete, W.**, presented at the American Geophysical Union Fall Meeting (December 2010)
54. "Ozone sensitivity to industrial ethene emissions events in regulatory air quality modeling simulations for Houston, Texas" Couzo E., Olatosi A., **Vizuete, W.**, presented at the American Geophysical Union Fall Meeting (December 2010)
55. "Evaluation of the Simulated Planetary Boundary Layer in Houston, Texas" Kolling J., Pleim J., **Vizuete, W.**, Jeffries H.E., presented at the American Geophysical Union Fall Meeting (December 2010)

56. "Inter-mechanism Upper Tropospheric NO<sub>x</sub> Evaluation: Findings and Implications" Henderson B.H., Pinder R., Crooks J., Cohen R., Goliff W., Stockwell W.R., Fahr A., Sarwar G., Hutzell B., Mathur R., Carlton A., **Vizuete, W.**, presented at Atmospheric Chemical Mechanisms Conference (December 2010)
57. "An Inter-comparison of Chemical Mechanisms for Aromatic VOCs using Data from UNC Outdoor Chambers" Parikh H.M, Jeffries H.E, Sexton K.G, Kamens R.M, **Vizuete, W.**, presented at the International Conference on Atmospheric Chemical Mechanisms (December 2010)
58. "Importance of Aqueous-phase Secondary Organic Aerosol Formation from Aromatics in an Atmospheric Hydrocarbon Mixture" Parikh H.M, Carlton A.G, **Vizuete W.**, Zhang H, Zhou Y, Chen E.H, Kamens R.M., presented at the 2010 American Geophysical Union Fall Meeting (December 2010)
59. "An Improved Mechanism to Predict Secondary Organic Aerosols from Toluene" Parikh H.M, Carlton A.G, **Vizuete W.**, Chen E.H, Kamens R.M., presented at the American Association for Aerosol Research 29th Annual Conference (October 2010)
60. "Evaluation of the simulated planetary boundary layer in eastern Texas," Kolling J., Pleim J., Jeffries H., **Vizuete, W.**, presented at the 9th Annual Community Modeling and Analysis System (CMAS) Conference (October 2010)
61. "The Implications of Acetone Condensation on Remote Conditions," Henderson B.H., Mathur R., **Vizuete, W.**, presented at the 9th Annual Community Modeling and Analysis System (CMAS) Conference (October 2010).
62. "Windblown Dust and Air Quality of the United Arab Emirates Based on Observations from Multiple Satellites and WRF Model Simulations" Kunhikrishnan T., Davis N., Xiu A., Adelman Z., **Vizuete, W.**, West J., presented at the International Symposium on Computational Wind Engineering (May 2010)
63. "Comparison of the ACM2 vertical mixing scheme with observations taken during the TexAQs II field study," Kolling J. S., Pleim J. E., Jeffries H., **Vizuete, W.**, presented at the 90th Annual Meeting of the American Meteorological Society (January 2010)
64. "Investigation of morning PBL rise and impact on ozone production in regulatory simulations used in the Houston, TX SIP." **Vizuete, W.**, Valencia A., Jeffries H., Henderson B., Parikh H., Presented at the 12th Conference on Atmospheric Chemistry, American Meteorological Society (January 2010)
65. "The Role of Chemistry in Upper Troposphere NO<sub>2</sub> Under-predictions" Henderson B., Pinder R., Goliff W., Stockwell W., Fahr A., Sarwar G., Hutzell B., Mathur R., **Vizuete, W.**, Cohen R., presented at the American Geophysical Union Fall Meeting (December 2009)
66. "An Assessment of the Efficacy of VOC Cap and Trade in Houston" Couzo E., Jeffries H., **Vizuete, W.**, presented at the American Geophysical Union Fall Meeting (December 2009)
67. "Observational analysis of high ozone plumes in Houston, TX from 2000-2008" **Vizuete, W.**, Couzo E., Jeffries H.E., Christoph E., presented at the American Geophysical Union Fall Meeting (December 2009)
68. "The Role of Chemistry in Upper Troposphere NO<sub>2</sub> Under-predictions" Henderson B., Pinder R., Goliff W., Stockwell W., Fahr A., Sarwar G., Hutzell B., Mathur R., **Vizuete, W.**, Cohen R., presented at the Annual Community Modeling and Analysis System (CMAS) Conference (October 2009)
69. "Assessment of Dust Storms within UAE using Observational Data and CMAQ-WRF Modeling Framework" Farooqui Z., Parikh H., **Vizuete, W.**, Henderson B., Davis N., Shankar U., Arunachalam S., Jeffries H., West J., presented at the Annual Community Modeling and Analysis System (CMAS) Conference (October 2009)
70. "The Python Environment for Reaction Mechanism/Mathematics (PERM)." Henderson B. H., **Vizuete, W. G.**, Jeffries H. E., presented at the Annual Community Modeling and Analysis System (CMAS) Conference (October 2009)

71. "Visualization of 3-dimensional Model Mixing Volume Heights for CMAQ and CAMx" Parikh H., Henderson B., **Vizuete, W.**, Jeffries H., presented at the Annual Community Modeling and Analysis System (CMAS) Conference (October 2008)
72. "Process Analysis Techniques to investigate ozone production in regulatory simulations of Houston, TX." **Vizuete, W.**, Valencia A., Henderson B. H., Jeffries H. presented at the Annual Community Modeling and Analysis System (CMAS) Conference (October 2008)
73. "The Influence of Model Resolution on Ozone Chemistry in Industrial VOC Releases" **Vizuete, W.**, Henderson B., Tesche T., presented at the American Meteorological Society 10th Conference on Atmospheric Chemistry (January 2008)
74. "Emission Event Investigation with a Detailed Plume Tracking Process Analysis Tool" **Vizuete, W.**, Henderson B., Jeffries H., Kim B.U., Air & Waste Management Associations 100th Annual Conference & Exhibition (June 2007)
75. "A Detailed Process Based Evaluation of Photochemical Air Quality Model Simulations of Houston, TX" **Vizuete, W.**, Jeffries H., Kioumourtzoglou M., presented at American Geophysical Union Fall Meeting (December 2006)
76. "Process Analysis for Photochemical Reaction Mechanisms" **Vizuete, W.**, Jeffries H., presented at International Conference on Atmospheric Chemical Mechanisms (December 2006)
77. "A Holistic Evaluation of the Houston, Texas Ozone Attainment Episode" Biton L., **Vizuete, W.**, Kim B.U., Jeffries H.E., American Geophysical Union Fall Meeting (December 2006)
78. "Emission Event Investigation: Quantifying Impacts with a Detailed Plume Tracking Process Analysis Tool" Henderson B., Kioumourtzoglou M.A., Kim B.U., **Vizuete, W.**, American Geophysical Union Fall Meeting (December 2006)
79. "Feature Tracking Process Analysis" Henderson B.H., **Vizuete, W.**, Jeffries H.E., presented at the Annual Community Modeling and Analysis System (CMAS) Conference (October 2006)
80. "Development, implementation, and application of an improved model performance evaluation and diagnostics approach" Kim B.U., **Vizuete, W.**, Jeffries H.E., presented at the Annual Community Modeling and Analysis System (CMAS) Conference (October 2006)
81. "Process Analysis Application: The 2000 Houston Ozone Attainment Simulations" Kioumourtzoglou M., **Vizuete, W.**, Jeffries H., Henderson B., presented at the Annual Community Modeling and Analysis System (CMAS) Conference (October 2006)
82. "Feature Tracking Process Analysis" Henderson B., **Vizuete, W.**, Jeffries H., presented at the Annual Community Modeling and Analysis System (CMAS) Conference (October 2006)
83. "Development, Implementation, and Application of an Improved Model Performance Evaluation and Diagnostics Approach" Kim B., **Vizuete, W.**, Jeffries H., presented at the Annual Community Modeling and Analysis System (CMAS) Conference (October 2006)
84. "Comparison of CAMx and CMAQ Simulations of Houston, TX" **Vizuete, W.**, Kim B., Biton L., presented at Air & Waste Management Association's Annual Conference (June 2006)
85. "Application of Process Analysis for Evaluating Biogenic Emission Inventories" **Vizuete, W.**, McDonald-Buller E., Song J., Chang S., Kimura Y., Allen D., presented at Air & Waste Management Association's Annual Conference (June 2005)
86. "The Development of a Stochastic Emissions Inventory for Industrial Emissions in Houston/Galveston Texas and Its Use in Photochemical Modeling" **Vizuete, W.**, Allen D., Murphy C., Kimura Y., Jeffries H., Kim B., Webster M., Symens M., presented at the Air & Waste Management Association Annual Meeting (June 2005)
87. "Wildfires in Eastern Texas in August and September 2000: Emissions, Aircraft Measurements and Impact on Chemical and Physical Processes" **Vizuete, W.**, McDonald-Buller E., Song J., Chang S., Kimura Y., Allen D., presented at the 2005 American Association for Aerosol Research Particulate Matter Supersites Program & Related Studies Conference (February 2005)

## TEACHING ACTIVITIES



### ***UNC Courses (Past five years)***

Spring 2022	Environmental Crisis Management (ENVR 689, 989, 992), 48 students
Fall 2021	Elements of Chemical Reaction Engineering (ENVR 451), 7 students
Fall 2021	Air Quality and Atmospheric Sciences Seminar (ENVR 777), 3 students
Spring 2021	Environmental Crisis Management (ENVR 689, 989, 992), 45 students
Fall 2020	Elements of Chemical Reaction Engineering (ENVR 451), 10 students
Spring 2020	Environmental Crisis Management (ENVR 989), 16 students
Spring 2020	Air Quality and Atmospheric Sciences Seminar (ENVR 777), 3 students
Fall 2019	Air Quality and Atmospheric Sciences Seminar (ENVR 777), 4 students
Spring 2019	Environmental Crisis Management (ENVR 989), 12 students
Fall 2018	Elements of Chemical Reaction Engineering (ENVR 451), 4 students
Summer 2018	Environmental Chemistry Processes (ENVR 403), 11 students
Summer 2018	Environmental Crisis Management (ENVR 989), 4 students
Fall 2017	Elements of Chemical Reaction Engineering Course Director (ENVR 451), 7 students
Summer 2017	Atmospheric Aerosols and Climate (ENVR 296), 8 students
Spring 2017	Modeling Atmospheric Chemistry Course Director (ENVR 773), 4 students
Fall 2016	Elements of Chemical Reaction Engineering Course Director (ENVR 451), 8 students

### **ADVISING ACTIVITIES**

#### ***Research Advisor for Post-doctoral Research Associates (4 total, 1 current)***

1. Jaime Greene (2020-present)
2. Quazi Rasool (2018-2020)
3. Zuber Farooqi (2009-2011)
4. Kunhikrishnan Thengumthara (2009-2010)

#### ***Primary/Research Advisor for Graduate Students (31 total, 4 current)***

##### *Doctoral students (11 total, 2 current)*

1. Sara Farrell (2021-present)
2. Alexandra Ng (2021-present)
3. Chi-Tsan Wang “Emissions from the Cultivation of Cannabis and their Impact on Regional Air Quality” (2013-2019)
4. Uma Shankar “Projecting Wildfire Emissions and Their Air Quality Impacts in the Southeastern U.S. from 2010 to Mid-century” (2007-2019)
5. Pradeepa Vennam “Assessment of Aircraft Emissions Impacts on Air Quality at Multiple Model Scales” (2011-2016)
6. Shih Ying Chang “High Resolution Air Quality Modeling for Improved Characterization of Exposures and Health Risk to Traffic-Related Air Pollutants (TRAPs) in Urban Area” (2011-2016)
7. Yadong Xu “Bayesian Maximum Entropy Integration of Ozone Observations and Air Quality Model Predictions for Improved Exposure Estimates” (2011-2016)
8. Evan Couzo “Air quality models and unusually large ozone increases: identifying model failures, understanding environmental causes, and improving modeled chemistry” (2011-2014)
9. Charles Weir “Ambient air pollution, allergic sensitization, respiratory outcomes and symptoms: findings from the 2005-2006 national health and nutrition examination survey” (2006-2013)
10. Harshal Parikh “Evaluation of Parameterized SOA Formation Mechanisms for Aromatic Oxidation: Implications of Missing Processes, Gas/Particle Mass-Transfer Behavior and Reaction Pathways” (2007-2011)

11. Barron Henderson “Biased Ozone Precursors in the Upper Troposphere: Evaluation, Recommendations, and Implications” (2008-2011)

*Master’s students (22 total, 2 current)*

1. Tamara Jennifer Paris-Davila (M.S.) (2021-present)
2. Zhenduo Yao (M.S.E.E.) (2020-present)
3. Sara Farrell (M.S.) “Modeling Kinetically-Limited IEPOX-SOA Uptake via Volatility based and Compositionally defined Glass Transition Temperatures in CMAQ5.3” (2017-2021)
4. Tessa Szalkowski (M.S.) “Chemical Characterization of Isoprene- And Monoterpene-Derived SOA Tracers in Marine Aerosols from The Galápagos Islands” (2019-2021)
5. Ryan Schmedding (M.S.) “The Effect of Secondary Organic Aerosol Phase Separation and Viscosity in a Regional Scale Air Quality Model” (2017-2018)
6. Hang Nguyen (M.S.) “Assessing Targeted Genomic Expression Following *In Vitro* Exposures of Human Lung Cells to Ambient Gases in Houston, Texas” (2014-2107)
7. Mutian Ma (M.S.) “The Predicted Impact of Organic Coatings on Isoprene Derived Secondary Organic Aerosol Formation” (2016-2017)
8. William Noffsinger (M.S.E.E.) “Cholera Outbreak in Haiti: Fecal Waste Sanitizer” (2016-2017)
9. Yashvi Patel (M.S.E.E.) “From Feces to Fertilizers: Implementing a Pilot Fecal Sludge Management Plan in Urban Syria” (2016-2018)
10. Yan Jin (M.S.E.E.) “Mapping of County-level Formaldehyde Over North Carolina Using Satellite Data” (2015-2016)
11. Yuzhi Chen (M.S.E.E.) “Assessment of SAPRC07 with Updated Isoprene Oxidation Chemistry Against Outdoor Chamber Experiments” (2012-2014)
12. James McCann (M.S.E.E.) “Model Sensitivity of Ozone to Electricity Generation Emissions in the Northeastern US” Winner of UNC 2014 George C. Bunker Award (2011-2013)
13. Evan Couzo (M.S.) “High Ozone Events and Attainment Demonstrations in Houston, TX” (2009-2011)
14. Jenna Kolling (M.S.) “A Multisensor Evaluation of the Asymmetric Convective Model (version 2) in Eastern Texas” (2009-2011)
15. Adey Olatosi (M.S.) “Assessment of Air Quality Model Predictions of Ozone Concentrations Characterized by Large Hourly Changes in Houston, Texas.” (2009-2011)
16. Yadong Xu (M.S.E.E.) “Use of Process Analysis to Assess Predicted Ozone Formation in the United Arab Emirates” (2009-2011)
17. Alejandro Valencia (M.S.E.E.) “Assessment of the Relative Reduction Factor for an Ozone Attainment Demonstration in Houston, TX” (2007-2009)
18. Elizabeth Christoph (M.S.) “The Relationship Between Rotational Wind Patterns and Ozone Exceedances in Houston, Texas” (2007-2009)
19. Barron Henderson (M.S.) “Air Quality Model Resolution Impacts Odd Oxygen and Policy”
20. Leiran Biton (M.S.) “Issues in The Analysis of Air Quality Modeling Data in Attainment Demonstration of the 8-Hr Ozone Standard” (2005-2007)
21. Marianthi-Anna Kioumourtzoglou (M.S.P.H) “Tropospheric Ozone: Health Effects, Control Strategies, Process Analysis and Source Apportionment” (2005-2007)

*Research Advisor for UNC Undergraduate Students (14 total, 3 current)*

1. Dannys Daimar (2021-present)
2. Caroline Weber (2020-present)
3. Dylan Bradford James (2020-present)
4. Tamara Jennifer Paris-Davila (2020)
5. Jerryl Christopher (2020)

6. Jackson Seymoore (2019)
7. Tessa Szalkowski (2017)
8. Ryan Schmedding (2017)
9. Emily Browning (2016-2017)
10. Riziq Fattah (2016-2017)
11. Jeliyah Clark UNC McNair Scholar (2016)
12. Sara Farrell (2015-2016)
13. Madi Delaney Pfaff (2015-2016)
14. Bonny Blackard (2005-2007)

***Committee Member for Graduate Students Outside the Vizuete Research Group (42 total, 8 current)***

*Doctoral Students (27 total, 5 current)*

1. Prafull Dodd (2021-present)
2. Clara Eichler (2020-present)
3. Haley Elizabeth Plaas (2020-present)
4. Risa Sayre (2018-present)
5. Surendra Kunwar (2017-present)
6. Calvin Arter “Quantifying the Impact of Transportation Sector Emissions on Regional Air Quality” (2017-2021)
7. Alejandro Valencia “Evaluation and Application of Geostatistical Data Fusion Methods to Improve Spatiotemporal Resolution of Air Pollution Exposures from Complex Transportation Environments” (2018-2021)
8. Rizzieri Pedruzzi “Atmospheric Transport of Air Pollutants over Southeastern Brazil: The Impact of Metropolitan Areas Emissions on Air Quality” (2019-2020)
9. Yuzhi Chen “Characterizing the Effects of Aerosol Sulfate, Phase State, and Aging on Atmospheric Secondary Organic Aerosol Formation from Isoprene Epoxydiols” (2016-2020)
10. Alex Gorzalski “Improved Predictions of Contaminant Degradation in Water Treatment Reactors” (2016-2019)
11. Ryan Kingsbury “Investigation of Selective Mass Transport in Ion Exchange Membranes for Clean Energy and Water Processes (2015-2019)
12. Tim Weigand “On the Use of Entropy Production to Improve Mathematical Models and Numerical Methods for Non-Dilute Flow and Transport in Porous Media” (2014-2020)
13. Ciao Kai Liang “The Impact of Air Pollutant Transport on Air Quality and Human Health in Global and Regional Model Applications” (2014-2018)
14. Yuqiang Zhang “Application of Chemical Transport Models to Study Global and Regional Air Quality and Human Health” (2011-2018)
15. Prahlad Jat “Geostatistical Estimation of Water Quality Using River and Flow Covariance Models” (2009-2016)
16. Jeanette Reyes “Geostatistical Data Fusion Estimation Methods of Ambient PM<sub>2.5</sub> and Polycyclic Aromatic Hydrocarbons” (2011-2016)
17. Amanda Dye “Analysis of Two-Fluid-Phase Porous Medium Systems Using Microscale Experiments and Lattice Boltzmann Modeling” (2011-2015)
18. Ted Mansfield “Health Impacts of Transportation and the Built Environment: A Quantitative Risk Assessment” (2012-2015)
19. Ben Allshouse “Modern Space/Time Geostatistical Approaches to Mapping Point Sources of Pollution and Infectious Disease” (2004-2014)
20. Meredith Fry “The Impacts of Short-Lived Ozone Precursors on Climate and Air Quality” (2009-2012)

21. Kim Lichtveld “Using *In Vitro* Cultured Lung Cell Exposure Systems to Compare the Toxicity of Fresh and Aged Diesel Exhaust Utilizing an Outdoor Smog Chamber” (2010-2012)
22. Alex Carll “The Influence of Autonomic Imbalance on Diesel Exhaust-Induced Cardiac Dysfunction in Heart Failure-Prone Rats” (2008-2012)
23. Haofei Zhang “Characterization and Simulation of Isoprene Photooxidation from Smog Chamber Studies” (2008-2012)
24. Seth M. Ebersviller “A Demonstration of Particle Uptake of Hazardous Air Pollutants in Urban Air Mixtures, and Its Effect on Toxicity to Cultured Human Epithelial Lung Cells” (2010-2012)
25. Susan Casper “Using Atmospheric Models to Estimate Global Air Pollution Mortality” (2007-2011)
26. Yasu Akita “Spatial Statistics and Regression Analysis of Environmental Exposure and Disease: From Air Pollution and Microbial Groundwater Contamination Assessment to Diarrhea Disease Mapping” (2007-2010)
27. Christopher Wedding “Understanding Sustainability in Real Estate: A Focus on Measuring and Communicating Success in Green Building” (2005-2008)

*Master’s students (16 total, 2 current)*

1. Marissa Delang (M.S.E.E.) (2019-present)
2. Kevin Chu (M.S.) (2014-present)
3. Richard Strott (M.S.E.E.) “Bayesian Maximum Entropy Geostatistical Estimation of BTEX and Styrene in the United States Gulf Region Using Observational Data” (2019-2021)
4. Jacob Becker (M.S.) “Using Regionalized Air Quality Model Performance and Bayesian Maximum Entropy Data Fusion to Map Global Surface Ozone Concentration and Associated Uncertainty” (2019-2021)
5. Omar Nawaz (M.S.) “Benefits of Reduced Premature Mortality from Decreases in PM<sub>2.5</sub> and Ozone in the United States from 1999 to 2015” (2017-2018)
6. Kesava Anirudh Vajjala (M.S.E.E.) “Characterization of Ozone Emissions from Coal Fired Power Plants and their Impacts” (2015-2016)
7. Elizabeth Blayney (M.S.) “Premature Mortalities Attributable to Ozone and Fine Particulate Exposure: The Effect of Grid Size on Health Burden Estimates in the United States” (2010-2012)
8. Christopher Werner (M.S.E.E.) “U.S. Air Quality Impacts of Nationwide Extension of the In-Use Off-road Diesel Vehicle Regulations Adopted by the California Environmental Protection Agency Air Resources Board (CARB)” (2010-2012)
9. Jeanette M. Reyes (M.S.) “Global Land Use Regression and Bayesian Maximum Entropy Spatiotemporal Estimation of PM<sub>2.5</sub> Yearly Average Concentrations Across the United States” (2009-2011)
10. Jyoti Bapat (M.S.) “The Generation of An Experimental Database for Testing Predictive Models For  $\alpha$ -Pinene Gas and Particle Phase Reactions in The Atmosphere” (2009-2011)
11. Matt Woody (M.S.) “An Investigation of the Impacts of Aviation Emissions on Current and Future Fine Particulate Matter in the U.S.” (2008-2010)
12. Weruka Rattanavaraha (M.S.) “The Reactive Oxidant Potential of Different Types of Aged Atmospheric Particles: An Outdoor Chamber Study” (2008-2010)
13. Julia Rager (M.S.) “A Systems Biology Approach to Investigate Human Lung Cell Response to Air Pollutants” (2008-2010)
14. Nicholas DeFelice (M.S.E.E.) “How Water Subsidies Affect Air Quality in Abu Dhabi, United Arab Emirates” Winner of 2009 UNC George C. Bunker Award (2009-2010)
15. Lars Perlmutter (M.S.) “Spectrophotometric Determination of Carbonyls in Air and Biological Samples; A Faster, Cheaper Method to Quantify Total Carbonyls in a Sample” (2007-2009)
16. Deb Medlin (M.S.) “Air Quality Policy Implications of the Highly Reactive Volatile Organic Compound Cap and Trade Program in the Houston Metropolitan Area” (2005-2006)



## CONTRACTS AND GRANTS

### *Pending Support*

**Project title:** Ground based air quality and GHG monitoring to enable environmental justice in Central North Carolina Native American and African American Communities

Funding Agency: NASA

Role: Co-PI

Project Period: 9/1/2022-8/31/2027

Total Funding: 1,667,819

**Project title:** UNC Asthma and Community Translation for Health (UNC-ACT4Health) Center

Funding agency: NIH

Role: co-investigator; PI: Ilona Jaspers

Project Period: 5/30/21-5/30/26

Total Funding: \$2,485,878

### *Current Support*

**Project title:** Reframing Modeling Approaches for Multiphase Chemistry: Isoprene and Beyond

Funding agency: NSF

Role: PI: Dr. Vizuete

Project Period: 5/30/21-5/30/24

Total Funding: \$500,000

**Project title:** Climate and Health Environmental Engineering Research Solutions (CHEERS)

Undergraduate Scholar Training Program

Funding agency: UNC-CH

Role: PI: Dr. Vizuete

Project Period: 9/1/2021-12/2023

Total Funding: \$230,000

**Project title:** The UNC Chapel Hill Superfund Research Program

Funding agency: NIH/NIEHS

Role: Co-investigator; PI: Dr. Fry

Project Period: 02/02/20-02/02/25

Total Funding: \$13,739,296

**Project title:** Neurological Effects of Environmental Styrene and BTEX Exposure in a Gulf of Mexico Cohort

Funding agency: NIH

Role: co-investigator; PI: Dr. Engels

Project Period: 2/1/20-2/1/23

Total Funding: \$2,368,108

**Project title:** IMPACT - Toxicity of Complex Aerosols from Wood Burning Cook Stoves

Complete Support

Funding agency: RTI International

Role: PI with co-investigators

Project Period: 02/15/2019-02/15/2021

Total Funding: \$105,576

**Project title:** Ozone Trends and Sources in Houston Texas  
Funding agency: Business Coalition for Clean Air  
Role: PI  
Project Period: 01/01/2017-12/31/2020  
Total Funding: \$225,000

### ***Completed Support***

**Project title:** Quantifying Risks from Changing US PM<sub>2.5</sub> Distributions due to Climate Variability and Warming with Large Multi-model Ensembles and High-resolution Downscaling  
Funding agency: USEPA  
Role: co-investigator; PI: Dr. West  
Project Period: 02/01/2016-02/01/2021  
Total Funding: \$788,625

**Project title:** Linking the marine ecosystem to marine aerosols: Field campaign in the Galapagos Islands  
Funding agency: Galapagos Science Center  
Role: PI  
Project Period: 01/01/2019-01/01/2020  
Total Funding: \$5,000

**Project title:** Nanoparticles as Atmospheric Pollutants and Therapeutic Agents  
Funding agency: RTI International  
Role: PI  
Project Period: 04/29/2019-09/31/2019  
Total Funding: \$50,978

**Project title:** NCAR Faculty Fellowship Program  
Funding agency: National Center for Atmospheric Research  
Role: PI  
Project Period: 05/01/2016-08/01/2016  
Total Funding: \$11,326

**Project title:** Condensed Chemical Mechanisms for Ozone and Particulate Matter incorporating the latest in Isoprene chemistry  
Funding agency: Texas Air Quality Research Program  
Role: PI  
Project Period: 09/27/2016-12/31/2017  
Total Funding: \$225,000

**Project title:** Technical Support Ozone Attainment Modeling  
Funding agency: Eight-Hour Ozone Coalition Group  
Role: PI  
Project Period: 01/01/2015-12/01/2016  
Total Funding: \$100,000

**Project title:** Update and Evaluation of Model Algorithms Needed to Predict Particulate Matter from Isoprene

Funding agency: Texas Air Quality Research Program  
Role: PI  
Project Period: 05/28/2014-06/30/2015  
Total Funding: \$200,000

**Project title:** Analysis of Historical Ozone Trends in the Houston Region  
Funding agency: Houston Advanced Research Center  
Role: PI  
Project Period: 01/16/2013-9/30/2015  
Total Funding: \$290,496

**Project title:** SBIR Phase 1: Novel Atmospheric *in vitro* Exposure Device for Chemical and Toxicological Monitoring of Air Quality  
Funding agency: National Institute of Health  
Role: PI  
Project Period: 11/13/2012-10/31/2014  
Total Funding: \$150,000

**Project title:** Photochemically Aged Atmospheric Engineered Nanoparticles and Respiratory Toxicity  
Funding agency: Center for Environmental Health Susceptibility  
Role: PI  
Project Period: 04/01/2012-03/01/2013  
Total Funding: \$25,000

**Project title:** Carolina Kickstart Award  
Funding agency: NC TraCS Institute  
Role: PI  
Project Period: 03/01/2012-03/01/2013  
Total Funding: \$45,000

**Project title:** The Use of a Novel Device for Chemical and Toxicological Analysis of Air  
Funding agency: National Science Foundation  
Role: PI with co-investigators  
Project Period: 01/11/2012-03/31/2013  
Total Funding: \$50,000

**Project title:** Technical Support Ozone Attainment Modeling  
Funding agency: Eight-Hour Ozone Coalition Group  
Role: PI  
Project Period: 08/01/2010-06/01/2012  
Total Funding: \$100,000

**Project title:** Development of Isoprene Mechanism Components and Evaluation Against Smog Chamber Data  
Funding agency: Environmental Protection Agency  
Role: PI with co-investigators  
Project Period: 01/01/2011-05/31/2012  
Total Funding: \$80,000

**Project title:** Evaluation of CB05 Variants Against Smog Chamber Data  
Funding agency: Environmental Protection Agency



Role: PI with co-investigators  
Project Period: 08/01/2010-05/31/2011  
Total Funding: \$75,000

**Project title:** New methods to explain origins of air pollution health effects and plan remediation

Funding agency: UNC-Chapel Hill  
Role: PI with co-investigators  
Project Period: 07/01/2008-07/01/2010  
Total Funding: \$300,000

**Project title:** Multi-model, Multi-episode Process Analysis to Investigate Ozone formation in Houston, TX (H97)

Funding agency: Texas Environmental Research Consortium  
Role: PI  
Project Period: 06/01/2008-10/01/2009  
Total Funding: \$300,000

**Project title:** Review of UAE Air Quality Monitoring Programs

Funding agency: Environmental Agency Abu Dhabi  
Role: Co-Investigator; PI: Dr. Macdonald-Gibson  
Project Period: 06/01/2008-06/01/2010  
Total Funding: \$1,600,000

**Project title:** Atmospheric Research

Funding agency: ExxonMobil Foundation  
Role: PI  
Project Period: 08/01/2006-08/01/2008  
Total Funding: \$205,000

**Project title:** Technical Support Ozone Attainment Modeling

Funding agency: Louisiana Chemical Association  
Role: PI  
Project Period: 06/01/2006-06/01/2008  
Total Funding: \$160,000

**Project title:** NCAR Faculty Fellowship Program

Funding agency: National Center for Atmospheric Research  
Role: PI  
Project Period: 05/01/2007-08/01/2007  
Total Funding: \$28,964

**Project title:** Multi-resolution Simulation and Analysis of TexAQS II Air Pollution (H87)

Funding agency: Texas Environmental Research Consortium  
Role: PI  
Project Period: 04/01/2007-07/01/2008  
Total Funding: \$61,000

**Project title:** Regional Transport Modeling for East Texas (H60)

Funding agency: Texas Environmental Research Consortium  
Role: PI  
Project Period: 11/01/2005-08/01/2006

Total Funding: \$85,000

**Project title:** Technical Support Ozone Attainment Modeling

Funding agency: Eight-Hour Ozone Coalition Group

Role: PI

Project Period: 01/01/2005-12/01/2006

Total Funding: \$80,000

## **PROFESSIONAL SERVICE**

### *International Level Service*

- External Expert Asian Institute of Technology School of Environment, Resources and Development Khlong Nung, Thailand 2016-2019
- Qatar National Research Fund Review Panel 2011-2018
- Expert evaluation of faculty candidates for Shanghai Jiao Tong University, China 2016
- Thesis Evaluator Department of Environmental Sciences Fatima Jinnah Women University, Rawalpindi, Pakistan 2013
- Clean Air Institute Air Quality Workshop for Bogota, Columbia 2010
- Chair workshop Field Campaigns for the United Arab Emirates 2010

### *National Level Service*

#### *Commissions and Advisory Boards*

- North Carolina Governor appointee to Oil and Gas Commission 2020
- Independent Technical Advisory Committee, Texas Environmental Research Consortium Air Quality Research Program 2010-2015
- U.S. National Academy of Sciences Committee to Review National Science Foundation's Atmospheric and Geospace Sciences Draft Science Goals and Objectives 2014
- Environmental Protection Agency Human Exposure and Atmospheric Sciences Atmospheric Modeling and Analysis Division Chemistry Workgroup 2010
- Science Advisory Board, Houston Advance Research Center 2009-2010
- National Science Foundation Cyber-Enabled Discovery and Innovation Review Panel 2009

#### *Session Chair and Workshops*

- Community Modeling and Analysis System Annual Conference 2010-2011, 2016, 2019, 2020
- Refinery and Chemical Industry Emissions Symposium 2019
- American Association for Aerosol Research "New Technologies for *in vitro* Aerosol Exposures at Air Liquid Interfaces" Workshop 2017
- National Center Atmospheric Research Atmospheric Chemistry Center for Observational Research and Data Workshop 2015
- American Geophysical Union Fall Meeting Planning Committee 2008
- Environmental Protection Agency Ozone NAAQS Workshop 2008
- Environmental Protection Agency Modeling Guidance Workshop 2006
- Environmental Protection Agency CMAQ Peer Review Panel 2006

### *Other Service*

- Contributor to National Cannabis Industry Association report on “Environmental Sustainability in the Cannabis Industry: Impacts, Best Management Practices, and Policy Considerations” 2020
- Member EPA CMAQ Aerosol Committee 2019
- Reviewer NASA Atmospheric Composition proposals 2018
- Developed 6th grade curriculum for Air quality and human stewardship topic for Atmosphere/Weather Science unit implemented for 100 students at McDougale Middle School 2016
- Educational air pollution video North Carolina Division of Air Quality 2015
- Reviewer NASA New Investigator Program Atmospheric Composition Panel 2015
- Reviewer U.S. Army Research Office Core Programs 2015
- Scientific Interest Group for the Women’s Health Initiative (WHI) Southeast Regional Center 2011–2015
- Awards Committee of Air & Waste Management Association 2012
- Reviewer National Science Foundation Graduate Fellowships 2010-2011
- Reviewer Environmental Protection Agency Graduate Research Opportunities Fellowships 2007-2009
- Reviewer of Environmental Protection Agency Integrated Science Assessment for CO 2008

### *University Level Service*

- Member Board of Directors for Carolina Latinx Center 2021-present
- Director of Climate and Health Environmental Engineering Research Solutions (CHEERS) Undergraduate Scholar Program 2021-present
- Member Gillings Inclusive Excellence Committee 2021-present
- Member Gillings MPH Health Equity Admissions Committee 2021-present
- Member Conflict of Issue Committee 2020-present
- Division head for Technology & Entrepreneurship for the Institute for Environmental Health Solutions (IEHS) 2018-present
- Invited panelist UNC First-Gen Faculty 2020
- Reviewer for Carolina Global Initiative Award 2018
- Mentor for Lookout Scholars Undergraduate Retention Program University of North Carolina Chapel Hill 2017-2021
- Reviewer and Interviewer for Chancellor’s Science Scholars 2017-2020
- Mentor for Men of Color Engagement program University of North Carolina Chapel Hill 2017-2018
- Advocate for Carolina First program dedicated to student success, appreciating the experiences of first-generation college students, and supporting students on their path to graduation 2016-present
- Mentor McNair Scholars Program designed to prepare undergraduate students for doctoral studies through involvement in research and other scholarly activities 2016-2017
- Mentor Finish Line Project program that supports underrepresented UNC undergraduate men 2015-2017
- Mentor Carolina Millennial Scholars Program designed to promote academic and professional success for newly accepted Carolina males from diverse backgrounds 2015-2017
- Project Uplift volunteer for high-achieving rising seniors to experience college life 2014-2017
- Member of the Advisory Board and volunteer for N.C. Scholars’ Latino Initiative program seeking to create pathways to educational, professional, and civic engagement opportunities for a new generation of Latinx leaders 2012-2016

- Member School of Public Health 2020 Admission Practices Committee 2012-2013
- Member School of Public Health 2020 Teaching and Learning Task Force 2011
- Member School of Public Health Student Travel Fund Review Committee 2009-2012
- Member School of Public Health Design Center Director Search Committee 2007

### ***Department Level Service***

- Member Academic Programming Committee 2021-present
- Co-Lead ESE Inclusive Excellence Committee 2021-present
- Primary instructor and Lead Developer of the Integrative Learning Experience requirement for Master students 2017-present
- Faculty advisor Environmental Student Organization 2005-present
- Primary instructor and lead developer of the undergraduate capstone requirement 2018-2022
- Program Director of the Master of Science in Environmental Engineering 2017-2022
- Primary Lead for Environmental Engineering Minor 2020-2021
- Member Environmental Engineering Program Committee 2005-2015
- Chair Business Manager Search Committee 2015
- Member Admissions Committee 2013-2015
- Member Awards Committee 2009-2014
- Member M.S. Curriculum Committee 2010
- Member One Year Masters Exploratory Committee 2010
- Member Recruitment Committee 2006

### ***Peer Reviewer***

- Advances in Meteorology
- Atmosphere
- Atmospheric Environment
- Atmospheric Research
- Atmospheric Chemistry and Physics
- Atmospheric Science and Global & Planetary Change
- Elsevier, Inc, Education, Reference and Continuity
- Engineering in Life Sciences
- Environmental Pollution
- Environmental Science & Technology
- Environmental Science & Technology Letters
- Geophysical Research Letter
- Industrial & Engineering Chemistry Research
- John Wiley & Sons Publisher Book review
- Journal of Advanced Meteorology
- Journal of the Air & Waste Management Association
- Journal of Exposure Science and Environmental Epidemiology
- Journal of Geophysical Research
- Science of the Total Environment

### ***Diversity, Equity and Inclusion (DEI)***

- Mentor for Lookout Scholars Undergraduate Retention Program University of North Carolina Chapel Hill 2017-present
- Advocate for Carolina First program dedicated to student success, appreciating the experiences of first-generation college students, and supporting students on their path to graduation 2016-present
- UNC's Department of African, African American, and Diaspora Studies webinars (2 hours) 2021
- UC Berkeley biweekly Seminars in Environmental Justice Speaker Series (4 hours) 2021
- MLK Lecture and Awards Ceremony (2.5 hours) 2021
- Mentor for Men of Color Engagement program University of North Carolina Chapel Hill 2017-2018
- Mentor McNair Scholars Program designed to prepare undergraduate students for doctoral studies through involvement in research and other scholarly activities 2016-2017
- Mentor Finish Line Project program that supports underrepresented UNC undergraduate men 2015-2018
- Mentor Carolina Millennial Scholars Program designed to promote academic and professional success for newly accepted Carolina males from diverse backgrounds 2015-2017
- Project Uplift volunteer for high-achieving rising seniors to experience college life 2014-2017
- Member of the Advisory Board and volunteer for N.C. Scholars' Latino Initiative program seeking to create pathways to educational, professional, and civic engagement opportunities for a new generation of Latinx leaders 2012-2016

### *National Media*

- USA Today, "Air pollution could increase your risk of developing Alzheimer's, Parkinson's or other neurological disorders, study suggests" October 2020
- Forbes Magazine, "As Congress Inches Closer to Legalizing Cannabis Nationwide, States with A Head Start Warn of Environmental Complications" September 2020
- Colorado Public Radio, "Is Pot Part of Denver's Ozone Headache? That's What Researchers Want to Find Out" September 2019
- Time.com, "The Environmental Downside of Cannabis Cultivation" June 2019
- JSTOR Daily, "The Environmental Downside of Cannabis Cultivation" June 2019
- Science Magazine, "As legal pot farms expand, so do air pollution worries" January 2019
- National Public Radio, "Questions Raised Over Whether the Cannabis Industry is Contributing to Air Pollution" October 2019
- Radio Encantada Galagapos July 2019
- National Public Radio, "Breathing Easier: How Houston is Working to Clean Up its Air" May 2013
- National Public Radio, "Gizmo uses lung cells to Sniff Out Health Hazards in Urban Air" May 2013
- Chemical and Engineering News, "Air Pollution Test Might Miss Toxicity" August 2012
- Red Guarani television morning Show Asuncion Paraguay April 2011