

## **Barbara J. Turpin**

Professor and Chair

Environmental Sciences and Engineering  
Gillings School of Global Environmental Health  
University of North Carolina at Chapel Hill  
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### **Education**

- B.S. California Institute of Technology, 1984  
Major: Engineering and Applied Science  
Academic Focus: Mechanical/Environmental Engineering  
Research Focus: Air Pollution
- Ph.D. Oregon Health and Science University, 1990  
OGI School of Science and Engineering (previously Oregon Graduate Institute)  
Environmental Science and Engineering

### **Professional Experience**

#### ***Employment and Academic Rank***

- Professor with tenure, UNC at Chapel Hill, 2015 - present
- Distinguished Professor with tenure, Rutgers University Dept. of Environmental Sciences, 2013 - 2015
- Full Professor with tenure at Rutgers, 2005 - 2013
- Associate Professor with tenure at Rutgers, 2000 - 2005
- Assistant Professor and Air Quality Specialist at Rutgers, 1994 - 2000
- Postdoctoral Research Associate, 1990 – 1994  
University of Minnesota Particle Technology Laboratory, Dr. Peter McMurry, Advisor
- Doctoral Student and Postdoctoral Associate, 1984 – 1990  
Oregon Health Sciences University (Formerly Oregon Graduate Center), Environmental Science and Engineering, Dr. James Huntzicker, Advisor
- Summer undergraduate research, 1984  
California Institute of Technology, Environmental Engineering Science, Dr. Glen Cass, Advisor
- Summer Undergraduate Research Fellow, 1983  
Dr. Ned Munger, Advisor, “Public Attitudes toward Water Reuse in Namibia, Southwest Africa,”  
California Institute of Technology

## Academic Appointments

Chair, Department of Environmental Sciences and Engineering, UNC at Chapel Hill, 2016-pres.  
Cook Campus Dean for Undergraduate Education, Rutgers University 2011-2015  
Director, Environmental Sciences Graduate Program, Rutgers, MS & PhD, ~100 students, 2002-2005  
Director, Bioresource Engineering Graduate Program, Rutgers, MS, 2000-2003  
Member, Environmental and Occupational Health Sciences Institute, Rutgers and UMDNJ  
Adjunct member, NIEHS Center of Excellence, Rutgers and UMDNJ  
Member, Environmental Sciences Graduate Faculty, Rutgers  
Member, Atmospheric Sciences Graduate Faculty, Rutgers  
Member, Joint Graduate Program in Exposure Science, Rutgers and UMDNJ  
Member, NIEHS Exposure Science Training Grant, 2010 – 2015, Rutgers and UMDNJ

## Honors

Fellow, American Association for Aerosol Research, 2014  
Fellow, American Geophysical Union, 2013  
Fellow, American Association for the Advancement of Science, 2011  
David Sinclair Award for “sustained excellence in aerosol research and technology by an established scientist still active in his/her career,” American Association for Aerosol Research (AAAR), 2010  
Haagen Smit Prize, 2009  
Cook College/NJAES Research Excellence Award, Rutgers University, 2004  
Merle Adams, Rutgers Cooperative Extension Research Award, 1999  
United States Fencing Team, 1989, 1992, National Champion 1992

## Memberships

American Association for the Advancement of Science (AAAS)  
American Association for Aerosol Research (AAAR)  
American Association of University Women (AAUW)  
American Chemical Society (ACS)  
American Geophysical Union (AGU)  
International Society for Exposure Science (ISES)

## Bibliography

### *Books and Book Chapters*

6. **Turpin, B. J.** “Characterizing Exposures to Atmospheric Carcinogens,” IARC Scientific Publication No 161, *Air Pollution and Cancer*, K. Straif, A. Cohen, and J. Samet, Eds., International Agency for Research on Cancer, World Health Organization, Lyon, France, 2013, ISSN 0300-5085. <http://www.iarc.fr/en/publications/books/sp161/index.php>, page 35-48.
5. Wilson,\* W., Claiborn, C. S., Hemming, B. L., Cahill, T., Chow, J. C., Peterson, M. R., Schauer, J. J., **Turpin, B. J.**, Watson, J. G. (2004) Volume 1, Chapter 2: “Physics, Chemistry and

- Measurement of Particulate Matter,” *2004 Air Quality Criteria for Particulate Matter*, US Environmental Protection Agency, EPA/600/P-99/002aF, 2004, ~20 pages.
4. Pinto,\* J. P., Lefohn, A. S., **Turpin, B. J.**, Schauer, J. J., Willis, R. D. (2004) Volume 1, Chapter 3: “Concentrations, Sources and Emissions of Atmospheric Particulate Matter,” *2004 Air Quality Criteria for Particulate Matter*, US Environmental Protection Agency, EPA/600/P-99/002aF, 2004, ~24 pages.
  3. Watson,\* J, **Turpin, B. J.**, and Chow, J. Chapter 11: “The Measurement Process: Precision, Accuracy, and Validity,” *Air Sampling Instruments*, B. Cohen, Ed., ACGIH, 2001, page 202-216.
  2. **Turpin,\* B. J.**, Liu, S. P., McMurry, P. H. and Eisenreich, S. J. "Definitive Measurement of Semivolatile PAHs With a Diffusion Separator: Design and Investigation of Sampling Artifacts in Filter-Adsorbent Samplers," *Gas and Particle Phase Partition Measurements of Atmospheric Organic Compounds*, Gordon and Breach Science Publishers, 1999, page 369-392.
  1. Altshuller, P., Ewald, W., Gillani, N., Gillette, D., Hering, S., Lioy, P.J., Noll, K., Pandis, S., Pankow, J., Schwartz, S., Wilson, W. E., Contributors: Barnes, M., Cahill, T., Tilton, B., Friedlander, S., McMurry, P., Soderholm, S., **Turpin, B. J.** Chapter 3: “Physics and Chemistry of Particulate Matter," *EPA Criteria Document for Particulate Matter*, EPA/600/P-95/001aF, 1996, 21 pages.

### Peer Reviewed Journal Publications

(<http://www.researcherid.com/rid/D-8346-2012>)

(\*indicates corresponding author; \*\* indicates member of Dr. Turpin’s research group)

107. Lim,\* Y.B., Kim, H., Kim, J.Y., **Turpin, B.J.** (2016) Photochemical organonitrate formation in wet aerosols. *Atmos. Chem. Phys.*, doi:10.5194/acp-2016-345.
106. Sandrini, S., van Pinxteren, D., Giulianelli, L., Herrmann, H., Poulain, L., Facchini, M.C., Gilardoni, S., Rinaldi, M., Paglione, M., **Turpin, B.J.**, Pollini, F., Zanca, N., Decesari,\* S. (2016) Size-Resolved Aerosol Composition at an Urban and a Rural Site in the Po Valley in Summertime: Implications for Secondary Organic Aerosol Formation, *Atmos. Chem. Phys. Disc*, doi:10.5194/acp-2015-1036.
105. Sareen,\*\* N., Carlton, A.M.G., Felipe, H., Lopez-Hilfiker, D., Mohr, C., Thornton, J.A., Zhang, Z., Gold, A., Surratt, J.D., Lim, Y.B., **Turpin, B.J.** (2016) Identifying precursors and aqueous organic aerosol formation pathways during the SOAS campaign, *Atmos. Chem. Phys. Disc*, doi:10.5194/acp-2016-200
104. Ortiz-Montalvo,\*\* D.L., Schwier, A.N., Lim,\*\* Y.B., McNeill, V.F., **Turpin,\* B.J.** (2016) Volatility of methylglyoxal cloud SOA formed through OH radical oxidation and droplet evaporation, *Atmos. Environ.*, 130, 145-152. doi: 10.1016/j.atmosenv.2015.12.013
103. Sullivan, A.P., Hodas,\*\* N., **Turpin, B.J.**, Skog, K., Keutsch, F.N., Gilardoni, S., Paglione, M., Rinaldi, M., Decesari, S., Facchini, M.C., Poulain, L., Herrmann, H., Wiedensohler, A., Nemitz, E., Twigg, M.M., Collett, Jr.,\* J.L. (2015) Evidence for ambient aqueous SOA formation in the Po Valley, Italy, *Atmos. Chem. Phys. Disc.*, 15, 35485-35521. doi:10.5194/acpd-15-35485-2015

102. Lim,\* Y.B., **Turpin, B.J.** (2015) Organic peroxide and OH formation in aerosol and cloud water: Laboratory evidence for this aqueous chemistry, *Atmos. Chem. Phys.*, 15, 12867-12877.
101. Hodas,\*\* N., Sullivan, A., Skog, K., Keutsch, F.N., Collett Jr., J.L., Decesari, S., Facchini, M.C., Carlton, A.G., Laaksonen, A., **Turpin,\* B.J.** (2014) Aerosol liquid water driven by anthropogenic nitrate: Implications for lifetimes of water-soluble organic gases and potential for secondary organic aerosol, *Environ. Sci. Technol.*, 48(19), 11127-11136. doi: 10.1021/es5025096
100. Ervens,\* B., Lim, Y.B., Sorooshian, A., **Turpin, B.J.** (2014) Key parameters controlling aqSOA formation, *J. Geophys. Res.* 119 (7), 3997-4016. doi: 10.1002/2013JD021021
99. Hodas,\*\* N., Meng, Q.Y., Lunden, M.M, **Turpin,\* B.J.** (2014) Toward refined estimates of ambient PM<sub>2.5</sub> exposure: Evaluation of a mechanistic outdoor-to-indoor transport model, *Atmos. Environ.*, 83, 229-236. doi: org/10.1016/j.atmosenv.2013.11.026
98. Hodas,\*\* N., **Turpin,\* B.J.** (2014) Shifts in the gas-particle partitioning of ambient organics with transport into the indoor environment, *Aerosol Sci. Technol.*, 48, 270-280. doi: 10.1080/02786826.2013.871500
97. Ortiz-Montalvo, D.L., Häkkinen, S.A.K., Schwier, A., Lim, Y.B., McNeill, V.F, **Turpin,\* B.J.** (2014) Ammonium addition (and aerosol pH) has a dramatic impact on volatility and yield of glyoxal SOA, *Environ. Sci. Technol.*, 48 (1): 255-262. doi: 10.1021/es4035667
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95. Carlton,\* A. M., **Turpin, B. J.** (2013) Particle partitioning potential of organic compounds is highest in the eastern US and driven by anthropogenic water, *Atmos. Phys. Chem.*, 13, 10203-10214. doi: 10.5194/acp-13-10203-2013
94. Rich,\* D. Q., Özkaynak, H., Crooks, J., Baxter, L., Burke, J., Kipen, H. M., Zhang, J., Kostis, J. B., Thevenet-Morrison, K., Lunden, M., Hodas,\*\* N., **Turpin, B. J.** (2013) Triggering of myocardial infarction by fine particles is enhanced when particles are enriched in secondary species, *Environ. Sci. Technol.*, 47, 9414-9423. doi: 10.1021/es4027248
93. Hodas,\*\* N., **Turpin, B. J.**, Lunden, M., Baxter, L., Özkaynak, H., Burke, J., Ohman-Strickland, P., Thevenet-Morrison, K., Rich,\* D. Q. (2013) Refined ambient PM<sub>2.5</sub> exposure surrogates and the risk of myocardial infarction, *J. Exposure Sci. Environ. Epidemiol.*, 23, 573-580. doi: 10.1038/jes.2013.24
92. Baxter,\* L., Burke, M., Lunden, M., **Turpin, B. J.**, Rich, D., Thevenet-Morrison, K., Hodas,\*\* N., and Özkaynak, H. (2013) Influence of human activity patterns and residential air exchange rates on modeled distributions of PM<sub>2.5</sub> exposure compared to central-site monitoring data, *J. Exposure Sci. Environ. Epidemiol.*, 23, 241-247. doi: 10.1038/jes.2012.118
91. Lim,\*\* Y. B., Tan,\*\* Y., **Turpin, B. J.** (2013) Chemical insights, explicit chemistry and yields

- of secondary organic aerosol from methylglyoxal and glyoxal, *Atmos. Chem. Phys.*, 13, 8651-8667, 2013. doi: 10.5194/acp-13-8651-2013
90. Kirkland,\*\* J.R., Lim,\*\* Y. B., Tan,\*\* Y., Altieri,\*\* K.E., and **Turpin,\* B.J.** (2013) Toward validation of glyoxal SOA chemistry in clouds and wet aerosols: Inorganic nitrogen and oligomers, *Environ. Chem.*, 10, 158-166. doi: 10.1071/EN13074
89. Tolocka,\* M., **Turpin, B. J.** (2012) Contribution of organosulfur compounds to organic aerosol mass, *Environ. Sci. Technol.*, 46, 7978–7983. doi: 10.1021/es300651v
88. Hodas,\*\* N., Lunden, M., Meng, Q. Y., Baxter, L., Ozkaynak, H., Burke, J., Rich, D., Ohman-Strickland, P., **Turpin, B. J.** (2012) Heterogeneity in the fraction of ambient PM<sub>2.5</sub> found indoors contributes exposure error and may contribute to spatial and temporal differences in reported PM<sub>2.5</sub> health effect estimates, *J. Exposure Sci. Environ. Epidemiol.*, **22**, 448–454. doi: 10.1038/jes.2012.34
87. Ortiz-Montalvo,\*\* D. L., Lim,\*\* Y. B., Perri,\*\* M. J., Seitzinger, S. P., **Turpin,\* B. J.** (2012) Volatility and yield of glycolaldehyde SOA formed through aqueous photochemistry and droplet evaporation, *Aerosol Sci. Technol.*, 46:9, 1002-1014. doi: 10.1080/02786826.2012.686676
86. Tan,\*\* Y., Lim,\*\* Y. B., Altieri,\*\* K. E., Seitzinger, S., **Turpin, B. J.** (2012) Mechanisms leading to oligomers and SOA through aqueous photooxidation: Insights from OH radical oxidation of acetic acid and methylglyoxal, *Atmos. Phys. Chem.*, 12, 801-813. doi: 10.5194/acp-12-801-2012
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84. Maimone,\*\* F., **Turpin,\* B. J.**, Solomon, P., Meng, Q. Y., Robinson, A. L., Subramanian, R., Polidori,\*\* A. (2011) Correction methods for organic carbon artifacts when using quartz-fiber filters in large particulate matter monitoring networks: The regression method and other options, *J. Air Waste Manag. Assoc.*, 61, 696-710.
83. Lim,\*\* Y. B., Tan,\*\* Y., Perri,\*\* M. J., Seitzinger, S. P., **Turpin, B. J.** (2010) Aqueous chemistry and its role in secondary organic aerosol (SOA) formation, *Atmos. Chem. Phys.*, 10, 10521-10539.
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79. Meng,\*\* Q. Y., Spector, D., Colome, S., **Turpin,\* B. J.** (2009) Determinants of indoor and personal exposure to PM<sub>2.5</sub> of indoor and outdoor origin during the RIOPA Study, *Atmos. Environ.*, 43, 5750-5758.

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77. Altieri,\*\* K., **Turpin, B. J.**, Seitzinger, S. P. (2009) The composition of dissolved organic nitrogen in continental precipitation investigated by ultra-high resolution FT-ICR mass spectrometry, *Environ. Sci. Technol.*, 43:6950-6955.
76. Altieri,\*\* K. E., **Turpin, B. J.**, Seitzinger, S. P. (2009) Oligomers, organosulfates, and nitrooxy organosulfates in rainwater identified by ultra-high resolution electrospray ionization FT-ICR mass spectrometry, *Atmos. Chem. Phys.*, 9:2533-2542.
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74. Tan,\*\* Y., Perri,\*\* M. J., Seitzinger, S. P., **Turpin,\* B. J.** (2009) Effects of precursor concentration and acidic sulfate in aqueous glyoxal – OH radical oxidation and implications for secondary organic aerosol, *Environ. Sci. Technol.*, 43, 8105-8112.
73. Polidori,\*\* A., **Turpin,\* B. J.**, Davidson, C. I., Rodenburg, L. A., Maimone,\*\* F. (2008) Organic PM<sub>2.5</sub>: Fractionation by polarity, FTIR spectroscopy, and OM/OC ratio for the Pittsburgh aerosol, *Aerosol Sci. Technol.*, 42:233-246.
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69. Mochida,\* M., Umemoto, N., Kawamura K., Lim,\*\* H. and **Turpin, B. J.** (2007) Bimodal size distributions of various organic acids and fatty acids in the marine atmosphere: Influence of anthropogenic aerosols, Asian dusts, and sea spray off the coast of East Asia, *J. Geophys. Res.*, 112, D15209, doi:10.1029/2006JD007773.
68. Carlton,\*\* A. C., **Turpin,\* B. J.**, Altieri,\*\* K. E., Reff,\*\* A., Seitzinger, S., Lim,\*\* H. J., and Ervens, B. (2007) Atmospheric Oxalic Acid and SOA Production from Glyoxal: Results of Aqueous Photooxidation Experiments, *Atmos. Environ.* 41:7588-7602.
67. Meng,\*\* Q. Y., **Turpin,\* B. J.**, Polidori,\*\* A., Lee,\*\* J. H., Weisel, C. P., Morandi, M., Colome, S., Zhang, J. Stock, T., and Winer, A. (2007) How Does Infiltration Behavior Modify the

Composition of Ambient PM<sub>2.5</sub> in Indoor Spaces? An Analysis of RIOPA Data, *Environ. Sci. Technol.* 41:7315-7321.

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65. Sunil, V. R., Laumbach, R., Patel, K. J., **Turpin, B. J.**, Lim,\*\* H. J., Kipen, H. M., Laskin, J. D., and Laskin,\* D. L. (2007) Pulmonary Effects of Inhaled Limonene Ozone Reaction Products in Elderly Rats, *Toxicol. Appl. Pharmacology*, 222:211-220.
64. Liu, W., Zhang\*, J., Korn, L., Zhang, L., Weisel, C.P., **Turpin, B.J.**, Morandi, M.T., Stock, T.S., and Colome, S. (2007) Predicting personal exposure to airborne carbonyls using residential measurements and time/activity data, *Atmos. Environ.*, 41:5280-5288.
63. Carlton,\*\* A. G., **Turpin,\* B. J.**, Lim,\*\* H. J., Altieri,\*\* K. E., and Seitzinger, S. (2006) Link Between Isoprene and SOA: Pyruvic Acid Oxidation Yields Low Volatility Organic Acids in Clouds, *Geophys. Res. Let.*, 33, L06822, doi: 10.1029/2005GL025374.
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57. Pang,\* Y., **Turpin, B.J.** and Gundel, L.A. (2006) On the importance of organic oxygen for understanding organic aerosol particles, *Aerosol Sci. Technol.* 40, 128-133.
56. Liu, W., Zhang\*, J., Zhang, L., **Turpin, B.**, Weisel, C., Morandi, M., Stock, T., Colome, S. Korn, L. (2006) Estimating contributions of indoor and outdoor sources to indoor carbonyl concentrations in three urban areas of the United States, *Atmos. Environ.*, 40:2202-2214.

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54. Weitkamp, E.A., Lipsky, E.M., Pancreas, P., Ondov, J., Polidori,\*\* A., **Turpin, B.J.**, Robinson,\* A.L. (2005) Fine particle emission profile for a large coke production facility based on highly time resolved fence line measurements, *Atmos. Environ.* 39:6719-6733.
53. Lim,\*\* H.J., Carlton,\*\* A.G., **Turpin,\* B.J.** (2005) Isoprene forms secondary organic aerosols through cloud processing: Model simulations, *Environ. Sci. Technol.*, 39:4441-4446.
52. Meng,\*\* Q.Y., **Turpin, B.J.\*** Polidori,\*\* A., Lee,\*\* J.H., Weisel, C., Morandi, M., Colome, S., Stock, T., Winer, A., Zhang, J.J. (2005) PM<sub>2.5</sub> of ambient origin: Estimates and exposure errors relevant to PM epidemiology, *Environ. Sci. Technol.*, 39:5105-5112.
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48. Reff,\*\* A., **Turpin,\* B. J.**, Porcja,\*\* R., Giovenetti,\*\* R., Cui,\*\* W., Weisel, C., Zhang, J., Kwon, J., Alimokhtari, S., Morandi, M., Stock, T., Maberti, S., Colome, S., Winer, A., Shendell, D., Jones, J., Farrar, C. (2005) Functional Group Characterization of Indoor, Outdoor, and Personal PM<sub>2.5</sub>: Results from RIOPA, *Indoor Air*, 15:53-61.
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1. Hering\*, S. V., Appel, B. R., Cheng, W., Salaymeh, F., Cadle, S. H., Mulawa, P. A., Cahill, T. A., Eldred, R. A., Surovik, M., Fitz, D., Howes, F. E., Knapp, K. T., Stockburger, L., **Turpin, B. J.**, Huntzicker, J. J., Zhang, X. -Q., and McMurry, P. H. (1990) Comparison of Sampling Methods for Carbonaceous Aerosols in Ambient Air, *Aerosol Sci. Technol.* 12:200-213.

### ***Peer Reviewed Journal Publications – In Preparation***

1. Kirkland, J.R., Lim, Y.B., Sullivan, A.P., Collett Jr., J.L., Skog, K., Keutsch, F.N., Decesari, S., Facchini, C.M., **Turpin, B.J.** (2016) Amines, Organic Acids, and Aqueous Photooxidation of

Water-Soluble Gases from the Po Valley, Italy, in preparation, 44 pages.

## ***Products of Engaged Scholarship***

### **Testimony**

New Jersey Clean Air Council Annual Public Hearing Testimony, NJ Clean Air Council Annual Public Hearing: Indoor Air Quality, Setting an Agenda for a Cleaner Future, Trenton, NJ, April 2006.

New Jersey Clean Air Council Annual Public Hearing Testimony, NJ Clean Air Council Annual Public Hearing: Fine Particulate Matter in the Atmosphere: Health Impacts in New Jersey and Need for Control Measures, Trenton, NJ, April 2004.

DEP Commissioner Briefing, "Application of New Source Apportionment Tools to NJ Atmospheric Deposition Network Data," DEP Commissioner Shinn, Trenton, NJ, June 2000.

New Jersey Clean Air Council Annual Public Hearing Testimony, Public Hearing on the Proposed Fine Particulate Matter Health Standard, NJ Clean Air Council, Trenton, NJ, April 1997.

### **Extension Fact Sheets**

**Turpin\***, **B. J.** and Battagliese,\*\* T. (1997; rev. 1998) "Compliance Assurance Monitoring (CAM)," Rutgers Fact Sheet #FS874, 4 pages.

Zwerling,\*\* E. M., Pinto, D. M., Hanna, P., Lepis, J. M., and **Turpin, B. J.** (1997) "Local Noise Enforcement Options and Model Noise Ordinance: With Pre-Approved Language for the State of New Jersey," Rutgers Publication #E215, 16 pages.

**Turpin\***, **B. J.**, Ahtau,\*\* M., Szulecki,\*\* S., Zussman,\*\* L., and Motherwell,\*\* B. (1996) "The Clean Air Act and New Jersey," Rutgers Fact Sheet #F864, 4 pages.

### **Expert Witness**

Expert Witness for NJ Attorney General, United States et al v. Ohio Edison, US District Court, Southern District of Ohio, Eastern Division, 2003-2005.

## ***Refereed Other Products of Scholarship***

### **Plenary and Keynote Talks (invited)**

European Aerosol Conference, *Plenary Lecturer*, "Secondary Organic Aerosol Formation through Atmospheric Chemistry: Atmospheric Evidence, Chemistry, Partitioning and Prediction," Granada, Spain, September 2012.

Association of Environmental Engineering and Science Professors (AEESP) (Invited) *Plenary Lecturer*, “Secondary Organic Aerosol Formation Through Reactions in Atmospheric Waters,” American Association for Aerosol Research Annual Conference, Portland, OR, October, 2010.

International Global Atmospheric Chemistry (IGAC) *keynote lecture*, “Enhancing the Prognostic Capability of Global Aerosol Models: Atmospheric Aqueous Chemistry and Its Role in Secondary Organic Aerosol (SOA) Formation,” Halifax, Nova Scotia, 11-16 July, 2010.

Berkeley Atmospheric Sciences Symposium *keynote lecture*, “Secondary Organic Aerosol Formation through Reactions in Atmospheric Waters,” University of California, Berkeley, CA, February 2010.

Gordon Research Conference on Atmospheric Chemistry *plenary lecture*, “In-Cloud Formation of Secondary Organic Aerosol”, Big Sky, MT, Sept 2005.

Health Effects Institute Annual Conference *plenary lecture*, “Linking Sources to Indoor and Personal Exposures (RIOPA Study),” Seattle, WA, April 2002.

### Peer-Reviewed Reports

Laskin,\* D., Mainelis, G., **Turpin, B. J.**, Patel., K. J., Sunil, V. R. (2010) “Pulmonary effects of Inhaled Diesel Exhaust in Young and Old Mice: A Pilot Project,” Health Effects Institute Report 151, available at [www.healtheffects.org](http://www.healtheffects.org), 58 pages.

**Turpin,\* B.J.**, Weisel, C., Morandi, M., Colome, S., Stock, T., Eisenreich, S., and Buckley, B. (2007) “Relationships of Indoor, Outdoor and Personal Air (RIOPA): Part II. Analyses of Concentrations of Particulate Matter Species,” Health Effects Institute Report 130 Part II, available at [www.healtheffects.org](http://www.healtheffects.org), 92 pages.

Weisel,\* C.P., Zhang, J.J., **Turpin, B.J.**, Morandi, M.T., Colome, S., Stock, T.H., and Spektor, D.M. (2005) “Relationships of Indoor, Outdoor, and Personal Air (RIOPA): Part I. Collection Methods and Descriptive Analyses,” Health Effects Institute Report 130, Part I, available at [www.healtheffects.org](http://www.healtheffects.org), 127 pages.

Laskin,\* D. L., Morio, L., Hooper, K., Li,\*\* T.-H., Buckley, B. and **Turpin, B. J.** (2003) “Peroxides and Macrophages in Toxicity of Fine Particulate Matter,” Health Effects Institute Report 117, available at [www.healtheffects.org](http://www.healtheffects.org), 66 pages.

### Invited Lectures and Seminars

Environmental Protection Agency STAR Progress Review Talk, “Organic Aerosol Formation in the Humid, Photochemically-Active Southeastern US: SOAS Experiments and Simulations,” EPA, Raleigh, NC, March 2016.

Massachusetts Institute of Technology Seminar, “Controlling Exposure to Fine Atmospheric Particles: The Role of Liquid Water,” MIT Department of Civil and Environmental Engineering,

- Cambridge, MA, March 2016.
- National Academy of Medicine Health Risks of Indoor Particulate Matter Exposure Workshop Talk, “Indoor Air Characterization Provides Insights into PM Sources and Transformations,” Washington, DC, February, 2016.
- North Carolina State University Seminar, “Controlling Exposures to Fine Atmospheric Particles: The Role of Liquid Water,” NC State Department of Civil and Environmental Engineering, Raleigh, NC, January 2016.
- Sloan Foundation Workshop Presentation “Does Aqueous Chemistry Alter Exposures in Damp Buildings?” Sloan Foundation, New York, NY, September 2015.
- University of North Carolina Seminar “Anthropogenic Waters Alter Atmospheric Chemistry. What Are The Implications to Air Quality and Exposure in a Changing World,” University of North Carolina, Department of Environmental Science and Engineering, Chapel Hill, NC, August 2015.
- Rutgers University – Newark Seminar, “Atmospheric Water: A Medium for Organic Transformations,” Rutgers University – Newark, Department of Earth and Environmental Sciences, Newark, NJ, October 2014.
- University of North Carolina Seminar “Controlling Exposure to Fine Particles: In and Out of the Clouds,” University of North Carolina, Department of Environmental Science and Engineering, Chapel Hill, NC, June 2014.
- New Jersey Institute of Technology Seminar, “Exploring Atmospheric Aqueous Chemistry and Secondary Organic Aerosol Formation,” New Jersey Institute of Technology, Department of Chemistry, Newark, NJ, February 2014.
- Mid-Atlantic Regional Air Management Association (MARAMA) 2012 Monitoring Committee Meeting, “Secondary Organic Aerosol Formation in the Eastern U.S.,” Philadelphia, PA, September 2012.
- EPRI-A&WMA Workshop, “State of the Science and Research Needs: Heterogeneous Chemistry and Prediction of Organic Aerosol,” EPRI-A&WMA Workshop on Future Air Quality Model Development Needs, Washington, DC, September 2011.
- Princeton University Seminar, “Atmospheric Aqueous Photochemistry Forms Complex Organic Matter,” Princeton University, Department of Geosciences, Princeton, NJ May 2011.
- Firmenich Seminar, "Atmospheric Chemical Processes from Regional to Personal Scale Dictate Exposure to Particulate Air Pollution," Firmenich Inc., Plainsboro, NJ, March 2011.
- University of Wisconsin - Madison Seminar, “Secondary Organic Aerosol Formation Through Aqueous Photochemistry in Clouds, Fogs and Aerosols,” University of Wisconsin, Department of Chemistry, Madison, WI, May 2009.
- Arizona State University Seminar, “Secondary Organic Aerosol Formation Through Aqueous Photochemistry,” Arizona State University, Department of Chemistry, Tempe, AZ, February 2009.
- University of Minnesota Seminar, “Secondary Organic Aerosol Formation Through Cloud Processing,” University of Minnesota, Department of Mechanical Engineering, Minneapolis, MN, October 2008.
- Model Development Workshop, “Prediction of In-Cloud SOA Production: Problems and Prospects,” Electric Power Research Institute, Palo Alto, CA, May 2008.
- Columbia University Seminar, “Secondary Organic Aerosol Formation Through Cloud Processing of Isoprene Oxidation Products,” Columbia University, Department of Chemical Engineering, NY, January 2008.
- Gordon Research Conference Featured Presentation, “In-Cloud SOA Formation from Water-Soluble Products of Biogenic Emissions,” Gordon Research Conference on Biogenic Hydrocarbons and the Atmosphere, Ventura, CA, February 2007.

- Environment Canada Seminar, "Atmospheric Processes from Regional to Personal Scales Dictate Exposure to Particulate Air Pollution," Environment Canada, Toronto, Canada, January 2007.
- Health Effects of Organic Aerosols Workshop, "Health Effects of Organic Aerosols: Exposure Issues and Measurement Approaches," Health Effects of Organic Aerosols Workshop, Palo Alto, CA, October 2006.
- International Agency for Research on Cancer (IARC) Monograph Planning Meeting, "Characterizing Exposures to Atmospheric Pollutants," IARC, Lyon, France, December 2004.
- Mid-Atlantic Regional Air Management Association (MARAMA) Workshop, "Organic Aerosol Measurement: Problems and Prospects," MARAMA Meeting, Cape May, NJ, October 2003.
- Specialty Conference Workshop Panel Speaker, "Semi-Continuous Methods for Measuring PM," Particulate Matter: Atmospheric Sciences, Exposure, and the Fourth Colloquium on PM and Human Health, Pittsburgh, PA, April 2003.
- Specialty Conference Plenary Panel Speaker, "When and Where Are People Exposed to PM?" Particulate Matter: Atmospheric Sciences, Exposure, and the Fourth Colloquium on PM and Human Health, Pittsburgh, PA, April 2003.
- NJ Department of Environmental Protection (NJ DEP) Seminar, "Sources of Air Toxics to the Hudson River Harbor Estuary: Analyses of the New Jersey Atmospheric Deposition Network," NJ DEP, Trenton, NJ, January 2003.
- New York University Seminar, "Fine particle processes: Regional and personal effects," Department of Environmental Medicine, New York University, Tuxedo, NY, September 2000.
- Northeast States for Coordinated Air Use Management (NESCAUM) meeting, "Organic speciation for source apportionment and SIP development," NESCAUM Monitoring and Assessment Committee Meeting, Glens Falls, NY, June 2000.
- EOHSI Public Forum Panel Speaker, "Air Pollution Exposure and Effects: Global Implications," *Panelist*, Presented at the Public Forum: Environmental Health in the Twenty-first Century: Opportunities and Challenges, EOHSI, Piscataway, NJ, January 2000.
- University of Delaware Seminar, "Measurement of Organic Aerosol," University of Delaware Department of Mechanical Engineering, Newark, DE, November 1997.
- Specialty Conference Featured Lecture, "Measuring and Simulating Particulate Organics in the Atmosphere: Problems and Prospects," Air and Waste Management Association International Specialty Conference on Visual Air Quality, Aerosols and Global Radiation Balance, Bartlet, NH, September 1997.
- Featured Conference Lecture, "Characterizing Personal Exposures to Fine Particulate Matter and Their Relationships to Indoor and Outdoor Concentrations," Presented at the American Society of Heating, Refrigeration and Air Conditioning Engineers Annual Meeting, Boston, MA, June 1997.
- EOHSI Symposium Featured Lecture, "Organic Aerosols: Personal Monitoring and Characterization," Presented at the Tenth Anniversary Symposium of the Exposure Measurement and Assessment Division, Environmental and Occupational Health Sciences Institute (EOHSI), Rutgers University and UMDNJ, Piscataway, NJ, December 1995.
- Environmental Sciences Graduate Student Seminar, "The Other Side of the Canyon," Department of Environmental Sciences, Rutgers University, New Brunswick, NJ, November 1995.
- EOHSI Graduate Student Seminar, "Atmospheric Aerosol Characterization, Exposure and Health Research," Environmental and Occupational Health Sciences Institute (EOHSI), Rutgers University/UMDNJ, Piscataway, NJ, November 1995.
- Rutgers Cooperative Extension Seminar, "Techniques for Investigating Atmospheric Transformations Affecting Particulate Pollutants," Rutgers University, New Brunswick, NJ, April 1994.
- Colorado State University Seminar, "Techniques for Investigating Atmospheric Transformations



- Affecting Particulate Pollutants,” Department of Atmospheric Sciences, Colorado State University, Fort Collins, CO, March 1994.
- University of Illinois Seminar, “Techniques for Investigating Atmospheric Transformations Affecting Particulate Pollutants,” Department of Mechanical Engineering, University of Illinois, Chicago, IL, March 1994.
- University of Santa Barbara Seminar, “The Study of Atmospheric Transformations Affecting Particulate Pollutants,” University of California, Santa Barbara, CA, October 1993.
- Pacific Northwest Laboratories Seminar, “The Study of Atmospheric Transformations Affecting Particulate Pollutants,” Battelle: Pacific Northwest Laboratories, Richland, WA, February 1993.
- Carnegie Mellon University Seminar, “Techniques for Investigating Atmospheric Transformations Affecting Particulate Pollutants,” Department of Chemical Engineering, Carnegie Mellon University, Pittsburgh, PA, January 1993.
- University of California – Berkeley Seminar, “Secondary Formation of Organic Aerosol: Investigation of the Diurnal Variations of Organic and Elemental Carbon,” Department of Civil Engineering, University of California, Berkeley, CA, April 1992.
- Clarkson University Seminar, “Secondary Formation of Organic Aerosol: Investigation of the Diurnal Variations of Organic and Elemental Carbon,” Department of Civil Engineering, Clarkson University, Potsdam, NY, March 1992.
- New Mexico Institute of Technology Seminar, “Secondary Formation of Organic Aerosol: Investigation of the Diurnal Variations of Organic and Elemental Carbon,” New Mexico Institute of Technology, Socorro, NM, May 1991.

### **Selected Conference Presentations (2002 – 2016)**

(underline indicates presenter)

- Duncan, S, **Turpin, BJ**, “Aqueous Chemistry as a Sink and Source of Organic Compounds in Indoor Air and its Effects on Exposure,” Poster presentation at the International Society of Exposure Science Annual Conference, Henderson, NV, October 2015.
- Sullivan, A, Hodas, N, **Turpin, BJ**, Skog, K, Keutsch, F, Gilardoni, S, Paglione, M, Rinaldi, M, Decesari, S, Facchini, MC, Poulain, L, Herrmann, H, Wiedensohler, A, Nemitz, E, Twigg, M, Collett, J, “Evidence for Ambient Dark Aqueous SOA Formation in the Po Valley, Italy,” Platform presentation at the American Association for Aerosol Research Annual Conference, Minneapolis, MN, October 2015.
- Nakao, S, Lim, YB, **Turpin, BJ**, Boris, A, Collett Jr, JL, Kreidenweis, SM, “The Role of Aqueous Chemistry in Cloud Formation: Impact of Oligomerization,” Platform presentation at the American Association for Aerosol Research Annual Conference, Orlando, FL, October 2014.
- Duncan, SM, Lim, YB, Kirkland, JR, **Turpin, BJ**, “Preliminary Evidence for Aqueous Oxidation of Organic Compounds in Indoor Air,” Poster presentation at the American Association for Aerosol Research Annual Conference, Orlando, FL, October 2014.
- Sareen, N, Carlton, AG, **Turpin, BJ**, “Identifying Precursors and Aqueous Organic Aerosol Formation Pathways in the Humid, Photochemically-Active Southeastern US during the SOAS Campaign,” Platform presentation at the American Association for Aerosol Research Annual Conference, Orlando, FL, October 2014.
- Kirkland, JR, Lim, YB, Mazzoleni, L, Collett Jr, JL, Decesari, S, Facchini, MC, Sullivan, AP, Keutsch, F, **Turpin, BJ**, “Characterization of Organic Precursors and Products during Aqueous Hydroxyl

- Radical Oxidation of Po Valley, Italy and Fresno, CA Fog Water,” Poster presentation at the American Association for Aerosol Research Annual Conference, Orlando, FL, October 2014.
- Sareen, N, Carlton, AMG, **Turpin, BJ**, “Organic Aerosol Formation in the Humid, Photochemically-Active Southeastern US: SOAS Experiments and Simulations,” Poster presentation at the International Global Atmospheric Chemistry Conference, Natal, Brazil, September 2014.
- Sareen, N, Carlton, AMG, **Turpin, BJ**, "Organic Aerosol Formation in the Humid, Photochemically-Active Southeastern US: SOAS Experiments and Simulations," Poster presentation at the Southeast Atmospheres Study Workshop, Boulder, CO, March 2014.
- Sareen, N, Lim, YB, Carlton, AMG, **Turpin, BJ**, "Organic Aerosol Formation in the Humid, Photochemically-Active Southeastern US: SOAS Experiments and Simulations," Poster presentation at the American Geophysical Union Fall Meeting, San Francisco, CA, December 2013.
- Ervens, B, Lim, YB, Sorooshian, A, **Turpin, BJ**, “Key Parameters Controlling the Formation of Secondary Organic Aerosol in the Aqueous Phase (aqSOA),” Presented at the American Geophysical Union Fall Conference, San Francisco, CA, December 2013.
- Turpin, BJ**, Kirkland, J., Lim, YB, Ortiz-Montalvo, D., Sullivan, A, Häkkinen, S, Schwier, A, Tan, Y, McNeill, VF, Collett Jr., J, Skog, K, Keutsch, F, Carlton, AG, Decesari, S, Facchini, MC, “Exploring Atmospheric Aqueous Chemistry (and Secondary Organic Aerosol Formation) through OH Radical Oxidation Experiments, Droplet Evaporation and Chemical Modeling,” Presented at the American Geophysical Union Fall Conference, San Francisco, CA, December 2013.
- Hodas, N, **Turpin, BJ**, “Shifts in the Gas - Particle Partitioning of Ambient Organics with Transport into the Indoor Environment,” Platform presentation at the American Association for Aerosol Research Annual Conference, Portland, OR, October 2013.
- Kirkland, J, Lim, YB, Decesari, S, Facchini, MC, Collett, JL, **Turpin, BJ**, “Aqueous Photooxidation of Fresno, CA and Po Valley, Italy fog water,” Poster presentation at the American Association for Aerosol Research Annual Conference, Portland, OR, October 2013.
- Turpin, BJ**, Kirkland, J, Lim, YB, Sullivan, A, Sareen, N, Collett Jr., J., Keutsch, F, Carlton, AG, Decesari, S, Facchini, MC, “Exploring Aqueous Photooxidation in Real Atmospheric Waters: Insights into Secondary Organic Aerosol Formation,” Poster presentation at the Atmospheric Chemistry Gordon Research Conference, Mt Snow, VT, July 2013.
- Hodas, N, **Turpin, BJ**, “Shifts in the Gas - Particle Partitioning of Ambient Organics with Transport into the Indoor Environment,” Poster presentation at the Atmospheric Chemistry Gordon Research Conference, Mt Snow, VT, July 2013.
- Turpin, BJ**, Ervens, B, Lim,\*\* YB, “Oxidant Supply and Aqueous Photochemical SOA Formation in Cloud Droplets and Aqueous Aerosol,” Platform presentation at the American Geophysical Union Fall Conference, San Francisco, CA, December 2012.
- Kirkland,\*\* J, Lim,\*\* YB, Sullivan, AP, Decesari, S, Facchini, C, Collett, JL, Keutsch, FN, **Turpin, BJ**, “Aqueous Photooxidation of Ambient Po Valley Italy Air Samples: Insights into Secondary Organic Aerosol Formation,” Poster presentation at the American Geophysical Union Fall Conference, San Francisco, CA, December 2012.
- Lim, YB**, Tan, Y, Ortiz-Montalvo,\*\* DL, **Turpin, BJ**, “Aqueous Chemistry and Yields of Secondary Organic Aerosol Formed from Glyoxal and Methylglyoxal in Atmospheric Waters,” Platform presentation at the American Geophysical Union Fall Conference, San Francisco, CA, December 2012.

- Turpin, BJ**, Lim, YB, Ortiz-Montalvo,\*\* D, Schwier, A, McNeill, VF, “SOA Formation through Aqueous Chemistry: Volatility and Yields,” Platform presentation at the American Association for Aerosol Research Annual Conference, Minneapolis, MN, October 2012.
- Hodas,\*\* N**, Meng, QY, Lunden, MM, **Turpin, B**, “Refined Estimates of Ambient PM<sub>2.5</sub> Exposure: Validation and Refinement of a Mechanistic Indoor Transport Model,” Platform presentation at the American Association for Aerosol Research Annual Conference, Minneapolis, MN, October 2012.
- Turpin, B**, Kirkland,\*\* J, Ramos,\*\* A, Ortiz-Montalvo,\*\* D, Lim,\*\* YB, “Isoprene and Secondary Organic Aerosol: The Case for Aqueous Chemistry,” Invited platform presentation at the American Chemical Society National Meeting, Philadelphia, PA, August 2012.
- Ervens, B**, Lim,\*\* YB, **Turpin, BJ**, “Aerosol Modification by Secondary Organic Aerosol Formation in the Aqueous Phase,” Poster presentation at the 22<sup>nd</sup> International Symposium on Gas Kinetics, Boulder, CO, June 2012.
- Özkaynak, H**, Isakova, V, Baxter, L, Graham, SE, Sarnat, SE, Sarnat, JA, Mulholland, J, **Turpin, B**, Rich, DQ, Lunden, M, “Evaluating Alternative Exposure Metrics Used for Multi-Pollutant Air Quality and Human Health Studies,” Presented at the 32<sup>nd</sup> NATO/SPS International Technical Meeting on Air Pollution Modeling and its Application, Utrecht, Netherlands, May 2012.
- Turpin, B**, Ramos,\*\* A, Kirkland,\*\* J, Lim,\*\* YB, Seitzinger, S, “Insights into Atmospheric Aqueous Organic Chemistry through Controlled Experiments with Cloud Water Surrogates,” Invited symposium talk at the American Geophysical Union Fall Conference, San Francisco, CA, December 2011.
- Turpin, B**, Özkaynak, H, Lunden, M, Hodas,\*\* N, Baxter, L, Ohman-Strickland, P, Burke, J, Thevenet-Morrison, K, Meng, Q, Kipen, H, Kostis, J, Zhang, J, Rich, D, “Use of Refined Exposure Surrogates to Investigate Associations between Myocardial Infarction and PM<sub>2.5</sub> Exposure,” Platform presentation at the International Society for Exposure Science, Baltimore, MD, October 2011.
- Baxter, L**, Burke, J, Lunden, M, Crooks, J, Hodas,\*\* N, **Turpin, B**, Rich, D, Thevenet-Morrison, K, and Özkaynak, H, “Comparison of Five Different Exposure Surrogates Used in Two Established Epidemiological Studies in New Jersey,” Platform presentation at the International Society for Exposure Science, Baltimore, MD, October 2011.
- Hodas,\*\* N**, Lunden, M, **Turpin, B**, “Refined Ambient PM<sub>2.5</sub> Exposure Surrogates: Validating A Mechanistic Model with RIOPA Measurements,” Platform presentation at the International Society for Exposure Science, Baltimore, MD, October 2011.
- Turpin, B**, Ramos,\*\* A, Seitzinger, S, “SOA Formation Through Aqueous Chemistry: Insights Gained Through OH Radical Reactions in Filtered Rainwater,” Platform presentation at the American Association for Aerosol Research Annual Conference, Orlando, FL, October 2011.
- Ortiz-Montalvo,\*\* D**, Perri,\*\* M, Seitzinger, S, **Turpin, B**, “Volatility and Yield of Secondary Organic Aerosol (SOA) Formed through Simulated Cloud Chemistry and Cloud Droplet Evaporation,” Poster presentation at the Gordon Research Conference on Atmospheric Chemistry, Mt Snow, VT, July 2011.
- Lunden, M**, Hodas,\*\* N, Baxter, L, Rich, D, Özkaynak, H, **Turpin, B**, “Improving Exposure Estimates to Outdoor PM<sub>2.5</sub> by Modeling Time-Resolved and Species-Specific Aerosol Penetration and Persistence into Homes,” Platform presentation at the conference, Indoor Air, Austin, TX, June 2011.
- Lim,\*\* YB**, Tan,\*\* Y, Altieri, K, Perri,\*\* M, Carlton,\*\* AG, Seitzinger, S, **Turpin, BJ**, “Secondary Organic Aerosol Formation from Aqueous Chemistry of Glyoxal, Methylglyoxal, and Glycolaldehyde in Atmospheric Waters: Chemical Insights and Kinetic Model Studies,” Platform

- presentation at the American Geophysical Union Fall Meeting, San Francisco, CA, December 2010.
- Lim, \*\* YB, Tan, \*\* Y, Altieri, K, Perri, \*\* M, Carlton, \*\* AG, Seitzinger, S, **Turpin, BJ**, “SOA Formation from Aqueous Chemistry of Glyoxal and Methylglyoxal in Atmospheric Waters: Chemical Insights and Kinetic Modeling Studies,” Poster presentation at the Atmospheric Chemical Mechanisms Meeting, Davis, CA December 2010.
- Kirkland, \*\* J, Lim, YB, Tan, Y, Altieri, KE, Seitzinger, S, **Turpin, BJ**, “Aqueous Glyoxal Photooxidation in the Presence of Inorganic Nitrogen: A Potential Source of Organic Nitrogen in Aerosols and Wet Deposition,” Poster presentation at the American Geophysical Union Fall Meeting, San Francisco, CA, December 2010.
- Lunden, M, Hodas, \*\* N, **Turpin, B**, “Improving Exposure Estimates to Outdoor PM<sub>2.5</sub> by Modeling Time-Resolved and Species-Specific Aerosol Penetration and Persistence into Homes,” Platform presentation at the American Association for Aerosol Research Annual Conference, Portland, OR, October 2010.
- Hodas, \*\* N, Lunden, M, Meng, QY, Rich, D, Ozkaynak, H, **Turpin, B**, “The Effect of PM<sub>2.5</sub> Composition on the Fraction of Outdoor-Generated PM<sub>2.5</sub> in Indoor Air,” Platform presentation at the American Association for Aerosol Research Annual Conference, Portland, OR, October 2010.
- Ortiz-Montalvo, D, Perri, M, Seitzinger, S, and **Turpin, BJ**, “Investigating the Volatility and Yield of SOA Formed from Aqueous Chemistry and Droplet Evaporation,” Platform presentation at the American Association for Aerosol Research Annual Conference, Portland, OR, October 2010.
- Baxter, L, Barzyk, T., Burke, J, **Turpin, BJ**, Rich, D, Lunden, M, Hodas, \*\* N, Özkaynak, H, “Comparison of Exposures Estimated using Ambient PM<sub>2.5</sub> Concentrations with Those Estimated by the Stochastic Human Exposure and Dose Simulation Model (SHEDS) for Two New Jersey Cohorts,” Platform presentation, International Society for Environmental Epidemiology, Seoul, South Korea, August 2010.
- Rich, DQ, **Turpin, BJ**, Lunden, M, Özkaynak, H, Baxter, L, Hodas, \*\* N, Barzyk, T, Burke, J, Ohman-Strickland, P, “Refined Exposure Surrogates for Ambient PM in Epidemiology: Accounting for Temporal/Spatial Variations in Infiltration,” Platform presentation, International Society for Environmental Epidemiology, Seoul, South Korea, August 2010.
- Altieri, KE, Hastings, M, Peters, A, Seitzinger, S, Sigman, D, **Turpin, B**, “The Composition of Organic Nitrogen in Rainwater,” Poster presentation, NOAA Climate and Global Change Post-Doctoral Fellows Summer Institute, Steamboat Springs, CO, July 2010.
- Özkaynak, H, Sarnat, SE, Sarnat, JA, Sheppard, L, Sampson, P, **Turpin, BJ**, Rich, D, “Overview of USEPA/NERL Cooperative Agreement Research Program on Air Pollution Exposure and Health,” Platform presentation, AAAR Specialty Conference – Air Pollution and Health: Bridging the Gap from Sources to Health Outcomes, San Diego, CA, March 2010.
- Hodas, \*\* N, Lunden, M, Rich, D, Özkaynak, H, **Turpin, BJ**, “The Importance of Species-Specific Size Distributions in the Development of Refined Surrogates for Exposure to PM<sub>2.5</sub> of Outdoor Origin,” Poster presentation, AAAR Specialty Conference – Air Pollution and Health: Bridging the Gap from Sources to Health Outcomes, San Diego, CA, March 2010.
- Turpin, BJ**, Lunden, M, Hodas, \*\* N, Rich, D, Kamat, L, Ozkaynak, H, Barzyk, T, Burke, J, Baxter, L, Ohman-Strickland, P, “Refined Exposure Surrogates for Ambient PM in Epidemiology Studies: Accounting for Temporal/Spatial Variations in Infiltration,” Platform presentation at the International Society of Exposure Science Annual Conference, Minneapolis, MN, November 2009.
- Barzyk, TM, Burke, J, Baxter, L, Özkaynak, H, **Turpin, BJ**, Lunden, MM, Rich, DQ, Kamat, K, Hodas, \*\* N, “Modeled Estimates of Human Exposure to PM<sub>2.5</sub> with an Emphasis on Time-

- Activity Patterns and Air Exchange Rates,” Platform presentation at the International Society of Exposure Science Annual Conference, Minneapolis, MN, November 2009.
- Lim, \*\* YB, Tan, \*\* Y, Perri, \*\* M, Altieri, K, Seitzinger, S, **Turpin, BJ**, “Chemical Mechanisms in Aerosol Water and Their Role in Secondary Organic Aerosol (SOA) Formation,” Platform presentation at the American Association for Aerosol Research Annual Conference, Minneapolis, MN, November 2009.
- Tan, \*\* Y, Seitzinger, S, **Turpin, BJ**, “Organic Acid Products of Aqueous Methylglyoxal Oxidation and Implications to Secondary Organic Aerosol Formation,” Poster presentation at the American Association for Aerosol Research Annual Conference, Minneapolis, MN, November 2009.
- Ortiz-Montalvo, \*\* D, Perri, \*\* M, Ramos-Busot, \*\* A, **Turpin, BJ**, “Evaluating In-Cloud Secondary Organic Aerosol Formation by Simulating Cloud Droplet Evaporation,” Poster presentation at the American Association for Aerosol Research Annual Conference, Minneapolis, MN, November 2009.
- Tolocka, MP, **Turpin, BJ**, “Contribution of Organosulfur Compounds to Organic Aerosol Mass,” Poster presentation at the American Association for Aerosol Research Annual Conference, Minneapolis, MN, November 2009.
- Ozkaynak, H, Sarnat, SE, Sheppard, L, **Turpin, BJ**, “Overview of USEPA/NERL Cooperative Agreement Research Program on Air Pollution Exposure and Health, Poster Presentation at the International Society of Environmental Epidemiology Annual Conference, Dublin, Ireland, August 2009.
- Lim, \*\* YB, Tan, \*\* Y, Perri, \*\* M, Altieri, K, **Turpin, BJ**, “Secondary Organic Aerosol Formation Through Reactions in Atmospheric Waters,” Platform presentation at the Goldschmidt Conference, Davos, Switzerland, June 2009.
- Rich, DQ, Kipen, HM, Zhang, JJ, Kamat, L, **Turpin, BJ**, Wilson, AC, Kostis, JB, “Triggering of Transmural Infarction, But Not Non-Transmural Infarction By Ambient Fine Particles and Fine Particle Species,” Poster presentation at the American Thoracic Society Conference, San Diego, CA, May 2009.
- Perri, \*\* M, Ortiz, \*\* D, Seitzinger, S, **Turpin, BJ**, “Secondary Organic Aerosol Production from Aqueous Photooxidation of Glycolaldehyde – Laboratory Studies,” Platform presentation at the American Geophysical Union Fall Meeting, San Francisco, CA, December 2008.
- Turpin, B. J.**, “Cloud Processing,” Invited platform presentation at The Atmospheric Chemical Mechanisms Conference, Davis, CA, December 2008.
- Ramos, \*\* A, **Turpin, BJ**, Tan, \*\* Y, Ortiz, \*\* D, “Secondary Organic Aerosol Formation from Aqueous Glyoxal Oxidation Products,” Poster presentation at the Annual Biomedical Research Conference for Minority Students (ABRCMS), Orlando, FL, November 2008.
- Turpin, BJ**, Carlton, \*\* AG, Ervens, B, Altieri, KE, Perri, \*\* MJ, Tan, \*\* Y, Moore, \*\* M, Seitzinger, S, “Problems and Prospects for Predicting SOA Production Through Cloud Processing,” Poster presentation at the Annual Meeting of the American Association for Aerosol Research, Orlando, FL, October 2008.
- Tan, \*\* Y, Perri, \*\* M, Carlton, \*\* A, Seitzinger, S, **Turpin, BJ**, “In-Cloud SOA Formation: Effects of Acidic Sulfate and Precursor Concentration on Organic Acid Yields,” Platform presentation at the Annual Meeting of the American Association for Aerosol Research, Orlando, FL, October 2008.
- Meng, \*\* Q, Pinto, J, Lau, \*\* G, **Turpin B**, Suh H, Wheeler A, “Exposures of a Panel of Senior Citizens with COPD to Multiple Air Pollutants in Los Angeles,” Poster presentation at the International Society for Environmental Epidemiology and International Society of Exposure Analysis, Pasadena, CA, October 2008.

- Ramos, \*\* A, Turpin, BJ, Tan, \*\* Y, Ortiz, \*\* D, “Secondary Organic Aerosol Formation from Aqueous Glyoxal Oxidation Products,” Poster and platform presentations, Research In Science and Engineering (RISE) Undergraduate Summer Research Program, Rutgers University, Piscataway, NJ, July and August 2008.
- Altieri, KE, Perri, \*\* MJ, Turpin, BJ, Seitzinger, SP, “In-Cloud Photochemistry Produces Complex DOM,” Platform presentation at the American Geophysical Union/American Society of Limnology and Oceanography, Ocean Sciences Meeting, Orlando, FL, January 2008.
- Ervens, B, Carlton, \*\* AG, Turpin, BJ, Altieri, KE, Kreidenweis, SM, Feingold, G, “SOA Formation by Chemical Processes in Cloud Droplets,” Platform presentation at the American Geophysical Union Fall Meeting, San Francisco, CA, December 2007.
- Altieri, KE, Seitzinger, SP, Carlton, \*\* AG, Turpin, BJ, Klein, GC, Marshall, AG, “Chemical Characterization of Secondary Organic Aerosol Formed Through Cloud Processing of Methylglyoxal,” Poster presentation at the American Geophysical Union Fall Meeting, San Francisco, CA, December 2007.
- Perri, \*\* M, Seitzinger, S, Tan, \*\* Y, Turpin, BJ, “SOA Production from Cloud Processing of Glycolaldehyde,” Platform presentation at the American Geophysical Union Fall Meeting, San Francisco, CA, December 2007.
- Turpin, BJ, Meng, \*\* QY, Polidori, \*\* A, Reff, \*\* A, Naumova, Y, Weisel, C, Zhang, J, Morandi, M, Stock, T, Colome, S., Winer, A, “Exposure to Ambient Fine Particulate Matter (PM<sub>2.5</sub>): Insights Relevant to PM Epidemiology,” Platform presentation at the International Society of Exposure Assessment Annual Conference, Durham, NJ, October 2007.
- Anderson, \*\* CB, Maimone, \*\* F., Turpin BJ, Zwierling, E, “Time-Activity Characterization for a Train Noise Exposure Assessment Study: Teaneck, NJ,” Poster presentation at the International Society of Exposure Assessment Annual Conference, Durham, NJ, October 2007.
- Altieri, K, Carlton, \*\* AG, Tan, \*\* Y, Seitzinger, S, Turpin, BJ, “Secondary Organic Aerosol Formation through Cloud Processing: Acids and Oligomers from Aqueous Methylglyoxal Photooxidation,” Platform presentation at the American Association for Aerosol Research Annual Conference, Reno, NV, September 2007.
- Laskin, DL, Laumbach, R, Sunil, V, Turpin, BJ, Mainelis, G., “Design and Characterization of a Small Engine Diesel Exhaust Animal Exposure System for Studies to Assess Mechanisms Underlying Particulate Matter-induced Toxicity in the Elderly,” Poster presentation at the Health Effects Annual Conference, Chicago, IL, April 2007.
- Ervens, B, Carlton, \*\* AM, Turpin, BJ, Kreidenweis, S, and Feingold, G. “Isoprene as SOA Precursor: Aerosol Mass Formation by Processes in Haze Particles and Clouds,” Poster presentation at the American Geophysical Union Conference, San Francisco, CA, December 2006.
- Maimone, \*\* F, Turpin, BJ, Robinson, A, “The Solomon Method of Organic Artifact Estimation: A Quantitative Assessment of Assumptions and Method Performance,” Platform presentation at the International Aerosol Conference, St. Paul, MN, September 2006.
- Reff, \*\* A, Turpin, BJ, Weisel, CP, Zhang, J, Morandi, M, Stock, T, Colome, S, Winer, A, “PM<sub>2.5</sub> Exposures Chemically Characterized by Functional Group: RIOPA Study Results,” Poster presentation at the International Aerosol Conference, St. Paul, MN, September 2006.
- Polidori, \*\* A, Turpin, BJ, Naumova, Y, Eisenreich, S, Meng, \*\* QY, Cui, \*\* W, Giovanetti, \*\* R, Kwon, J, Weisel, C, “Effects of Source Proximity on Residential Outdoor Concentrations of PM<sub>2.5</sub> and its Carbonaceous Components,” Platform presentation at the International Aerosol Conference, St. Paul, MN, September 2006.
- Carlton, \*\* AG, Altieri, K, Seitzinger, S, Turpin, BJ, Lim, HJ, “Secondary Organic Aerosol Formation through Cloud Processing: Kinetics and Products of Aqueous-Phase Glyoxal/Methylglyoxal and

- Hydroxyl Radical Reactions,” Platform presentation at the International Aerosol Conference, St. Paul, MN, September 2006.
- Carlton, \*\* A.G., Turpin, B.J., Altieri, K., Seitzinger, S., “SOA Production from Isoprene: Aqueous-Phase Mechanisms,” Platform presentation at the American Association for Aerosol Science Annual Conference, Austin, TX, October 2005.
- Altieri, K. E., Carlton, \*\* A. G., Turpin, B. J., Seitzinger, S., “Oligomers in Cloud Processing: Reactions of Isoprene Oxidation Products,” Poster presentation, American Association for Aerosol Research, Austin, TX, October 2005.
- Carlton, \*\* A. G., Lim, \*\* H. J., Altieri, K., Seitzinger, S., Turpin, B. J., “Secondary Organic Aerosol Potential from Isoprene: Aqueous-Phase Mechanisms,” Platform presentation, Atmospheric Chemistry Colloquium for Emerging Senior Scientists, Yellowstone National Park, WY, September 2005.
- Carlton, \*\* A. G., Lim, H. J., Altieri, K., Seitzinger, S., Turpin, B. J., “Secondary Organic Aerosol Potential from Isoprene: Aqueous-Phase Mechanisms,” Gordon Research Conference on Atmospheric Chemistry, Big Sky, MT, September 2005.
- Altieri, K. E., Carlton, \*\* A. G., Turpin, B. J., Seitzinger, S., “Oligomers in Cloud Processing: Reactions of Isoprene Oxidation Products,” Platform and poster presentation, Surface Ocean Lower Atmosphere Study (SOLACE) Meeting, Corsica, France, August 2005.
- Polidori, \*\* A, Turpin, B.J., Meng, \*\* QY, Naumova, Y, Reff, \*\* A, Eisenreich, SJ, Weisel, C, Zhang, JJ, Morandi, M, Stock, T, Colome, S, Winer, A, Spektor, D, Lee, JH, “Organics Dominate Indoor-Generated PM<sub>2.5</sub> in RIOPA Homes,” Platform presentation at the International Society of Exposure Analysis Annual Conference, Philadelphia, PA, October 2004.
- Lim, \*\* HJ, Turpin, B.J., Carlton, \*\* AC, “Isoprene and In-Cloud Formation of Secondary Organic Aerosol,” Platform presentation at the American Association for Aerosol Research Annual Conference, Atlanta, GA, October 2004.
- Turpin, B.J., Weisel, C, Morandi, M, Colome, S, Stock, T, Eisenreich, SJ, Buckley, B, “Contributions of Outdoor PM Sources to Indoor Concentrations and Personal Exposures: Analysis of RIOPA PM Species Concentrations,” Poster presentation at the Annual Conference of the Health Effects Institute, Boston, MA, May 2004.
- Turpin, B.J., Meng, \*\* QY, Lau, \*\* G, Polidori, \*\* A, Reff, \*\* A, Porcja, \*\* R, Naumova, Y, Offenberg, \*\* J, Eisenreich, S, Weisel, C, Suh, H, Morandi, M, Stock, T, Colome, S, Winer, A, “Speciated PM<sub>2.5</sub> Exposures Provide Insights into PM Epidemiology and Public Health Protection,” Presented at the American Association for Aerosol Research Annual Conference, Anaheim, CA, October 2003.
- Maria, SF, Russell, LM, Turpin, B.J., Porcja, \*\* RJ, Weber, RJ, Huebert, BJ, “Source Signatures of Carbon Monoxide and Organic Functional Groups in ACE-Asia Submicron Aerosol Types,” Presented at the American Association for Aerosol Research Annual Conference, Anaheim, CA, October 2003.
- Turpin, B.J., Meng, \*\* QY, Naumova, Y, Reff, \*\* A, Polidori, \*\* A, Porcja, \*\* RJ, Lee, \*\* JH, Weisel, CP, Korn, L, Eisenreich, S, Buckley, B, Morandi, MT, Stock, TH, Colome, S, Winer, A, Spektor, DM, “Composition and Origin of Fine Particulate Matter Exposures: Insights from the RIOPA Study,” Poster presentation at the Health Effects Institute Annual Conference, Boulder, CO, May 2003.
- Cabada, JC, Pandis, SN, Wittig, B, Robinson, AL, Subramanian, R, Polidori, \*\* A, Turpin, B.J., “Secondary Organic Aerosol Contribution to Carbonaceous PM<sub>2.5</sub> Concentrations in Pittsburgh,” Poster presentation at Particulate Matter: Atmospheric Sciences, Exposure, and the Fourth Colloquium on PM and Human Health, Pittsburgh, PA, April 2003.

- Offenberg,\*\* JH, Naumova, Y, Eisenreich, SJ, **Turpin, BJ**, Weisel, CP, Morandi, M, Stock, T, Colome, S, Winer, A, “Chlordanes in the Indoor and Outdoor Air of Three US Cities,” Poster presentation at Particulate Matter: Atmospheric Sciences, Exposure, and the Fourth Colloquium on PM and Human Health, Pittsburgh, PA, April 2003.
- Polidori,\*\* A, **Turpin, BJ**, Lake,\*\* S, Giovannetti,\*\* R, Weisel, C, Morandi, M, Colome, S, Stock, T, Winer, A, Kwon, JM, Alimokhtari, S, Shendell, D, Jones, J, Farrar, C, Maberti, S, “Indoor and Outdoor Organic PM<sub>2.5</sub>: Analysis of RIOPA Data,” Poster presentation at Particulate Matter: Atmospheric Sciences, Exposure, and the Fourth Colloquium on PM and Human Health, Pittsburgh, PA, April 2003.
- Lau,\*\* G, **Turpin, BJ**, Wheeler, A, Suh H, Colome, S, Spektor, D, “Assessing Human Exposures of COPD-Diagnosed Individuals to Particulate Matter in Los Angeles County,” Poster presentation at Particulate Matter: Atmospheric Sciences, Exposure, and the Fourth Colloquium on PM and Human Health, Pittsburgh, PA, April 2003.
- Meng,\*\* QY, **Turpin, BJ**, Polidori,\*\* A, Buckley, B, Weisel, C, Morandi, M, Colome, S, Stock, T, Winer, A, Lee,\*\* JH, Giovanetti,\*\* R, Cui,\*\* W, Kwon, JM, Alimokhtari, S, Shendell, D, Jones, J, Farrar, C, Maberti, S, “Analysis of Indoor, Outdoor and Personal PM<sub>2.5</sub> Species to Assess the Sources of Exposure: Results from RIOPA,” Poster presentation at Particulate Matter: Atmospheric Sciences, Exposure, and the Fourth Colloquium on PM and Human Health, Pittsburgh, PA, April 2003.
- Reff,\*\* A, **Turpin, BJ**, Porcja,\*\* R, Lee,\*\* JH, Cui,\*\* W, Maberti, S, Kwon, JM, Alimokhtari, S, Shendell, D, Jones, J, Farrar, C, Weisel, C, Morandi, M, Colome, S, Stock, T, Winer, A, “Mechanistic Analysis of FTIR Spectra from Outdoor, Indoor, and Personal PM<sub>2.5</sub> Samples Collected during RIOPA,” Poster presentation at Particulate Matter: Atmospheric Sciences, Exposure, and the Fourth Colloquium on PM and Human Health, Pittsburgh, PA, April 2003.
- Weitkamp, EA, Lipsky, E., Robinson, A, Anderson, N, Leifeste, H, Subramanian, R, Cabada, J, Khlystov, A, Stanier, C, Lucas, L, Takahama, S, Wittig, B, Davidson, C, Pandis, S, Polidori,\*\* A, Lim,\*\* HJ, **Turpin, BJ**, Pancras, P, Ondov, J, “Fenceline Sampling Adjacent to a Large Coke Production Facility in Pittsburgh, PA,” Poster presentation at Particulate Matter: Atmospheric Sciences, Exposure, and the Fourth Colloquium on PM and Human Health, Pittsburgh, PA, April 2003.
- Lipsky, EM, Robinson, A, Anderson, N, Leifeste, H, Subramanian, R, Cabada, J, Rees, S, Khlystov, A, Stanier, C, Lucas, L, Takahama, S, Wittig, B, Davidson, C, Pandis, S, Polidori,\*\* A, Lim,\*\* HJ, **Turpin, BJ**, “In-Use Vehicle Emissions Source Characterization Study: Squirrel Hill Tunnel, Pittsburgh PA,” Poster presentation at Particulate Matter: Atmospheric Sciences, Exposure, and the Fourth Colloquium on PM and Human Health, Pittsburgh, PA, April 2003.
- Lim,\*\* HJ, **Turpin, BJ** “Automated, Time-Resolved Submicron Organic and Elemental Carbon Measurements on the Ron Brown during ACE-Asia,” Presented at the American Association for Aerosol Research Annual Conference, Charlotte, NC, October 2002.
- Offenberg,\*\* JH, Polidori,\*\* A, Porcja,\*\* R, **Turpin, BJ**, “Functional Group Composition by Size and Polarity in Pittsburgh, PA and Insights into Aerosol Processing,” Presented at the American Association for Aerosol Research Annual Conference, Charlotte, NC, October 2002.
- Weber, RJ, Orsini, D, Ma, Y, Bergin, M, **Turpin, BJ**, Slanina, S, “The Nature of Transient PM<sub>2.5</sub> Events in Atlanta and Houston,” Presented at the American Association for Aerosol Research Annual Conference, Charlotte, NC, October 2002.
- Polidori,\*\* A, **Turpin, BJ**, Lim,\*\* HJ, Robinson, A, Subramanian, R, Cabada, JC, “Semi-Continuous Organic Particulate Matter Measurements during Pittsburgh Air Quality Study (PAQS),” Poster presentation at the American Association for Aerosol Research Annual Conference, Charlotte, NC, October 2002.



- Maria, SF, Russell, LM, **Turpin, BJ**, Porcja,\*\* RJ, Huebert, BJ, "Organic Compound Mass Measurements from FTIR Spectroscopy," Presented at the American Association for Aerosol Research Annual Conference, Charlotte, NC, October 2002.
- Subramanian, R., Robinson, AL, Cabada, JC, Pandis, SN, Wittig, B, Polidori,\*\* A, **Turpin, BJ**, Hering, SV, Modey, WK, Eatough, DJ, "Intercomparison of Ambient Carbonaceous Aerosol Samplers Used during the Pittsburgh Air Quality Study," Poster presentation at the American Association for Aerosol Research Annual Conference, Charlotte, NC, October 2002.
- Meng,\*\* QY, **Turpin, BJ**, Korn, L, Lee,\*\* JH, Giovanetti,\*\* R, Kwon, JM, Alimokhtari, S, Weisel, CP, Shendell, D, Jones, J, Winer, A, Colome, S, Maberti, S, Stock, T, Morandi, M, Spektor, D, "Influence of Outdoor Sources on Indoor and Personal Fine Particle Concentrations: Analyses of RIOPA Data," Poster presentation at the International Society of Exposure Analysis (ISEA) and International Society for Environmental Epidemiology (ISEE) Conference, Vancouver, BC, August 2002.
- Turpin, BJ**, Meng,\*\* QY, Korn, L, Zhang, JJ, Weisel, CP, Morandi, MT, Colome, S, Stock, TH, Spektor, D, Winer, AM, Kwon, JM, Alimokhtari, S, Shendell, D, Jones, J, Maberti, S, Giovanetti,\*\* R, Lee,\*\* JH, "Contributions of Outdoor PM<sub>2.5</sub> Sources on Indoor Concentrations and Personal Exposures: Results from RIOPA," Poster presentation at the Health Effects Institute Annual Conference, Seattle, WA, April 2002.

### *Non-Refereed Publications*

8. Szulecki,\* S, Zwerling,\*\* E., Anderson,\*\* C., **Turpin, B.** (2010) "Modeling with CadnaA to Estimate the Probability of Awakening Associated with Train Horns," *Proc. 2010 National Conference on Noise Control Engineering*, Baltimore, MD, page 317-327.
7. **Turpin,\* B. J.**, Saxena, P., Koutrakis, P. (1997) "Measuring and Simulating Particulate Organics in the Atmosphere: Problems and Prospects," *Proc. 1997 Air Waste Manag. Assoc. Int. Specialty Conference on Visual Air Quality, Aerosols and Global Radiation Balance*, Bartlet, NH, page 16-20.
6. **Turpin,\* B. J.**, Blando,\*\* J. D. and Carlton,\*\* A. G. (1997) "Use of Direct Fourier Transform Infrared (FTIR) Spectroscopy Coupled with Solvent Rinses for Assessment of Organic Aerosol Polarity, Composition, and Size Distribution," *Proc. 1997 Air Waste Manag. Assoc. Int. Specialty Conference on Visual Air Quality, Aerosols and Global Radiation Balance*, Bartlet, NH, page 298-301.
5. Zwerling,\*\* E. M. and **Turpin, B. J.** (1996) "Community Noise Enforcement: Reviving a Moribund Program or Developing One Anew," *Proc. 1996 National Conference on Noise Control Engineering*, Bellevue, WA, page 955-960.
4. **Turpin, B. J.**, Huang, P. -F., Roos, A. and McMurry,\* P. H. (1993) "Elemental Analysis of Single Atmospheric Particles Influencing Visibility at The Grand Canyon," *Proc. 51st Annual Meeting of the Microscopy Society of America*. (G. W. Bailey and C. L. Rieder, eds.) San Francisco Press, San Francisco, pp. 1124-1125.

3. **Turpin, B. J.** and Huntzicker,\* J. J. (1989) "Secondary Formation of Organic Aerosol in the Los Angeles Basin: Investigation of the Diurnal Variations of Organic and Elemental Carbon," *Proc. AWMA Annual Meeting*, Anaheim, CA, paper 89-153.3.
2. Adams, K. M., **Turpin, B. J.**, and Huntzicker,\* J. J. (1989) "Intercomparison of Two Methods for the Measurement of Atmospheric Elemental Carbon," *Proceedings AWMA Annual Meeting, Anaheim, California*, 2 pages.
1. **Turpin, B. J.** (1984) "Cross-Cultural Attitudes toward the Use of Reclaimed Water in SWA-Namibia," *Munger Africana Library Notes* 72:5-12.

## Teaching Activities

### *Courses Taught: University of North Carolina at Chapel Hill*

ENVR:809	Problems in ESE: Air Quality Seminar, Co-Instructor	F2015, Sp2016
	Individual lectures: Reactor Engineering, Aerosol Science, & ENVR400	F2015
ENVR:205 (planned)	Engineering Tools for Environmental Problem Solving, Instructor	Sp2017

### *Courses Taught: Rutgers University – New Brunswick (2011-present)*

All courses taught at Rutgers University – New Brunswick. Provided are semester and year (S/Yr), Rutgers course title and course number, credits (Cr), mode of instruction (MOI) – lecture (Lec) or laboratory (Lab), audience (Aud) – undergraduate major (Unm) or graduate (Grad), degree of responsibility for the course, enrollment (Enrl), number of students who returned an evaluation, course evaluation data for the instructor and the mean of the program (i.e., 375 – Environmental Sciences; 117 – Bioenvironmental Engineering).

- COURSE INFORMATION -								- COURSE EVALUATION -				
S/ Yr	Course Title	Number	Cr	MOI	Aud	Responsibility	Enrl	Evaluation Responses	Teaching Effectiveness (Max = 5)		Course Quality (Max = 5)	
									Instructor	Dept Mean	Instructor	Dept Mean
S15	Physical Principles of Environmental Science	11 :375 :203	3	Lec	Unm	Total	59					
F14	Campus Dean course release											
S14	Physical Principles of Environmental Science	11 :375 :203	3	Lec	Umn	Total	57	52	4.71	4.27	4.50	4.20

								Evaluation Responses	Teaching Effectiveness (Max = 5)		Course Quality (Max = 5)	
S/ Yr	Course Title	Number	Cr	MOI	Aud	Responsibility	Enrl		Instructor	Dept Mean	Instructor	Dept Mean
F13	Campus Dean course release											
S13	Aerosol Science	16 :375 :542	3	Lec	Grad	Total	5	5	4.80	4.37	4.60	4.27
F12	Campus Dean course release											
F12	Seminar in Environmental Sciences	16 :375 :613	1	Lec	Grad	1 Lecture	~20	-	-		-	
F12	Introduction to Bioenvironmental Engineering	11 :117 :100	1	Lec	Unm	1 Lecture	~18	-	-		-	
S12	Physical Principles of Environmental Science	11 :375 :203	3	Lec	Unm	Total	57	50	4.58	4.39	4.36	4.27
F11	Air Pollution Engineering and Source Control for Atmospheric Pollution (taught concurrently)	11 :117 :474 and 16 :375 :524	3	Lec	Unm/ Grad	Total	13	11	4.64	4.52	4.27	4.38
S11	Aerosol Science	16 :375 :542	3	Lec	Grad	Total	7	5	5.0	4.58	4.8	4.56

### *Postdoctoral Research Advisor*

Sophie Tomaz	2016-pres.	With Jason Surratt
Neha Sareen	2012-2015	Co-advisor with Annmarie Carlton
Yong Bin Lim	2008-2012	Dr Lim is now a Research Associate in the Dept.
Mark Perri	2007-2009	with Sybil Seitzinger Dr Perri is an Assist. Professor, Sonoma State Univ.
Qing Yu Meng	2004-2005	Dr. Meng is an Assist. Professor, SPH, UMDNJ
Ho-Jin Lim	2001-2005	Dr Lim is Assoc. Prof, Kyungpook National University, Daegu, Korea
John Offenberg	2001-2003	Dreyfus Postdoc with Dr. Steven Eisenreich Dr. Offenberg is an EPA Scientist, RTP, NC
Jong Hoon Lee	1999-2003	Dr. Lee is a Scientist at the Southern California Air Quality Management District
Wenxuan (William) Cui	1998-1999	Dr. Cui works in the pharmaceutical industry

**PhD Advisor**

- Yuzhi Chen Co-advisor with Jason Surratt, Environmental Science and Engineering, UNC, 2015 – present.
- Sara Duncan “Effects of Indoor Aqueous Chemistry on Human Exposure in Damp Buildings” (Draft title), PhD Candidate, Exposure Science Option, Environmental Sciences, Rutgers University 2012- present.
- Jeffrey Kirkland “Aqueous OH Photooxidation of Atmospherically-Relevant Precursor Systems Through Laboratory Experiments,” PhD Dissertation, Environmental Sciences, Rutgers University, 2008-2014. Now a Postdoctoral Research Associate at Colorado State University.
- Natasha Hodas “Variability in the Fraction of Ambient Fine Particulate Matter in Indoor Air and Implications for Air Pollution Epidemiology,” PhD Dissertation, Atmospheric Sciences, Rutgers University, 2008-2014. Recipient of EPA Graduate Fellowship, Air and Waste Management Association APERG Fellowship, Graduate Assistantship in Areas of National Need (GAANN) Fellowship. Now a Research Associate at California Institute of Technology.
- Diana Ortiz-Montalvo “Quantifying Secondary Organic Aerosol (SOA) Formed Through Cloud Chemistry and Cloud Droplet Evaporation,” PhD Dissertation, Environmental Sciences, Rutgers University, 2007-2013. Recipient of Ford Foundation and APERG Fellowships. Now a Postdoctoral Research Associate at the National Institute of Standards and Technology.
- Yi Tan “Secondary Organic Aerosol (SOA) Formation from Aqueous OH Radical Oxidation of Dicarbonyl Compounds in the Atmosphere,” PhD Dissertation, Environmental Sciences, Rutgers University, 2005-2010. Now a Postdoctoral Associate at Carnegie Mellon.
- Katy Altieri “Insights into the Molecular Level Composition, Sources and Formation Mechanisms of Dissolved Organic Matter in Aerosols and Precipitation,” PhD Dissertation, Marine Sciences, Rutgers University, 2004-2009. Seitzinger Advisor; Turpin Co-Advisor. Wagner Award Winner. Now a science advisor in South Africa.
- Ann Marie Carlton “Secondary Organic Aerosol (SOA) Formation through Cloud Processing: Aqueous Photooxidation of Glyoxal and Methylglyoxal,” PhD Dissertation, Environmental Sciences, Rutgers University, 2003- 2006. NSF Graduate Fellowship, APERG Graduate Fellowship, Now an Assistant Professor at Rutgers University.

- Andrea Polidori “Characterizing the Origin and Polarity of Organic Aerosol,” PhD Dissertation, Environmental Sciences, Rutgers University, 2001-2005. Now at the Southern California Air Quality Management District.
- Adam Reff “PM<sub>2.5</sub> Exposure Assessment Using FTIR Spectroscopy,” PhD Dissertation, Environmental Sciences, Rutgers University, 2000-2005. Now at the US Environmental Protection Agency.
- Qing Yu Meng “Mechanistic Investigation of the Relationship of Indoor, Outdoor and Personal PM<sub>2.5</sub>,” PhD Dissertation, Environmental Sciences, Rutgers University, 2000-2004. (also awarded MS in Statistics) Now an Assistant Professor at Rutgers University School of Public Health.
- Ho-Jin Lim “Semi-Continuous Aerosol Carbon Measurements: Addressing Atmospheric Processes of Local and Global Concern,” PhD Dissertation, Environmental Sciences, Rutgers University, 1996-2001. Now an Associate Professor at Kyungpook National University, Daegu, Korea.
- Nares Chuersuwan “New Jersey PM<sub>2.5</sub>: Issues Pertaining to the Development of Effective Control Strategies,” PhD Dissertation, Environmental Sciences, Rutgers University, 1996-2000. Now with the Government of Thailand.
- Tsung Hung Li “Generation, Characterization, Aerosol Partitioning, and Indoor Measurements of Hydrogen Peroxide for Exposure and Toxicological Assessment,” PhD Dissertation, Environmental Sciences, Rutgers University, 1995-2000. Now works in aerosolized drug delivery.
- James Blando “Secondary Formation of Organic Particulate Matter in the Smoky Mountains,” PhD Dissertation, Environmental Sciences, Rutgers University, 1995-1999. Now an Assistant Professor at Old Dominion after a long tenure at the NJ Department of Health.
- Lisa Zussman “Development of Methods to Examine the Effects of Atmospheric Particulate Matter (PM) on Human Peripheral Blood Leukocytes,” PhD Dissertation, Environmental Sciences, Rutgers University, 1994-1999. Works at the interface between autism research and parents of autistic children.

***MS Advisor (thesis)***

- Liyong Cui “Design of a System to Measure Reactive Uptake on Indoor Surfaces,” MS Thesis, Environmental Science and Engineering, UNC, 2016-present.
- Anjuli Ramos “Formation of Organic Aerosol through Cloud Chemistry: Insights from the OH Radical Oxidation of Filtered Rainwater,” MS Thesis, Environmental Sciences, Rutgers University, 2009-2011.

- Craig Anderson "Assesment of Railway Activity and Train Noise Exposure: A Teaneck, New Jersey Case Study," MS Thesis, Atmospheric Sciences, Rutgers University, 2006-2009.
- Yasuko Yoshida "Advanced Trajectory Analysis to Examine the Influence of Sources and Source Regions on the Regional Mid-Atlantic States Aerosol," MS Thesis, Environmental Sciences, Rutgers University, 1999-2001.
- Ann Marie Carlton "Design and Method Development for Size-Segregation and Chemical Analysis of Personal Aerosol Exposures," MS Thesis, Bioresource Engineering, Rutgers University, 1994-1999.
- Nares Chuerswan "Aerosol Carbon in New Jersey," MS Thesis, Environmental Sciences, Rutgers University, 1994-1996.

### ***MS Advisor (coursework) – at Rutgers***

Francesco Maimone	graduated	2004-2008	Environmental Sciences
Stan Mak (returning student)	graduated	2007-2008	Environmental Sciences
Dawn Mason	graduated	2001-2003	Bioresource Engineering
Ritu Mody	graduated	1998-2000	Environmental Sciences
Michael Klien	graduated	1996-1999	Environmental Sciences
James DeNoble	graduated	1996-1999	Environmental Sciences
William Bull	graduated	1994-1997	Environmental Sciences
Keith Glynn	graduated	1993-1995	Environmental Sciences

### ***MS, PhD Committee Member***

(note, Rutgers committees numerous and not provided)

#### **Current**

Chitsan Wang, Environmental Sciences and Engineering, UNC, PhD Student, 2015-present.  
 Ciao-kai Liang, Environmental Sciences and Engineering, UNC, PhD Student, 2015-present.  
 Michael Williams, Environmental Sciences and Engineering, UNC, MS Student, 2015-present.  
 Rachel Long, Environmental Sciences and Engineering, UNC, MS Student, 2015-present.

#### **Past**

Nasrin Aghamohammadi "An Investigation of the Carbon-Sulphur-Nitrogen Fluxes During Experimental Burning of Selected Tropical Biomass Species," PhD Dissertation, University of Malaya, Kuala Lumpur, April 2011.

Mohammed Tawfiq	“Development of Laboratory-Scale Burning Facility to Simulate Real-Time Burning of Tropical Biomass Species,” PhD Dissertation, Nik Mariam Nik Sulaiman advisor, University of Malaya, Kuala Lumpur, October 2009.
Elizabeth Galarneau	“Semivolatile Polycyclic Aromatic Hydrocarbons: Particle/Gas Partitioning Measurements and Models,” PhD Dissertation, Miriam Diamond advisor, University of Toronto, Canada, January 2007.
Raphael Tremblay	“Organic Speciation of Size-Segregated Atmospheric Particulate Matter,” PhD Dissertation, Rod Zika advisor, University of Miami, Coral Gables, Florida, USA, August 2006.
Elizabeth Cunningham	“A Study of Nanoparticles: Silica Fume and Woodsmoke,” PhD Dissertation, John Todd advisor, University of Tasmania, Hobart, Australia, 2002.
Po-Fu Huang	“Single Particle Analysis by Electron Microscopy: Insights Into Atmospheric Transformations,” PhD Dissertation, Peter McMurry advisor, Department of Mechanical Engineering, University of Minnesota, Minneapolis, MN, USA 1997.

### ***Undergraduate Research Advisor - Rutgers***

Esther Rose-Wilen	UG research	Mist chamber characterization	2014-2015
Cinthia Naveendra	Experienced based education	Soluble biomass burning emissions	2013
Nancy Sazo	Public Health internship	Indoor organic pollutants	2013
Justin Corbo*	Aresty, Sr Chemistry Thesis	Aqueous atmospheric chemistry	2012-2013
*Justin received the Henry Rutgers Scholars Award for his research			
Antonio Riggi	UG research	Operation of upper-air met site	2008-2010
Anjuli Ramos	RISE program	Cloud processing SOA yields	2008
Mary Moore	UG research	In-cloud SOA modeling	2007-2008
Taylor Hayes	UG research	Modeling train noise exposure	2007-2008
Sumantha Prasad	UG research	Meadowlands OC/EC	2007-2008
Craig Matis	UG research	Noise exposure assessment	2006-2007
Mary Moore	UG research	Operation of upper-air met site	2005-2008
Mark Papier	UG research	Operation of upper-air met site	2002-2004
Francesco Maimone	UG research	Organic PM analysis methods	2001-2003
Tracy Shrestha	Project SUPER	ICP/MS analysis of PM	summer 2001
Sandra Lake	Sr. Thesis, Physics	Measurement of organic PM <sub>2.5</sub>	2000-2001
Marta Chicano	Int. Exchange, Spain	RIOPA field work	summer 2000
Andrea Polidori	Sr. Thesis, Int. Exch., Italy	Organic PM fractionation	2000
Adam Reff	Sr. Thesis, Chemistry	FTIR Spectroscopy of PM <sub>2.5</sub>	1999-2000
Zareen Dadwad	Project SUPER	Solubility of PM in lung fluid	1999
Robert Styles	Sr. Thesis, Chemistry	ICP/MS optimization for PM	1998-1999
Steve Locilento	UG research	PM <sub>2.5</sub> sampling issues	1996-97

Luke Oman	UG research	Operation of upper-air met site	1999-2001
David Bowman	UG research	Sampling and FTIR analysis	summer 1996
Luz Bigay	ACS SEED (HS Jr.)	Impactor performance	summer 1995
Amy Roos*	UG Research Oppor.	Sliver film TEM substrate	summer 1992
Kathy Podolske*	Sr. Thesis, ChemEng	Diffusion Separator	1991

\*Mentored as a postdoc under advisor Peter McMurry

### ***Undergraduate Co-op Advisor - Rutgers***

Nancy Hanna	Johnson and Johnson	1998-1999
Keith Glenn	Roy Weston, Inc	1998
Bharvi Patel	Ingersoll Rand	1998
Tom Battagliese	Testo Inc.	1996-1997
Gretchen Zeigler	Merck	1996
Martin Eide	Ethicon	1996
Jennifer Trepkau	Rutgers Environ. Sci.	1995-1996
Max Achtau	Testo Inc.	1995-1996

### **Research Interests**

***Vision:*** To improve the scientific understanding needed to predict the concentrations, properties and effects of atmospheric aerosol, for the development of effective climate change mitigation strategies, air pollution control strategies, and public health protection

***Approach:*** Secondary formation of organic aerosols; organic aerosol measurement and characterization; partitioning of organic compounds between gas and particulate phases; exposure assessment; collaborative aerosol health studies.

### **Contracts and Grants**

#### ***Research Grants and Contracts***

“Characterizing Oxidized North American Fire Emissions and Their Aqueous/Multiphase Atmospheric Transformations through the FIREX Campaign,” National Oceanic and Atmospheric Association, Principal Investigator with Co-PI Jason Surratt, 7/1/2016-6/30/2019, \$597,723 total.

“Investigating the Impact of Aqueous Chemistry on Indoor Air,” Alfred P. Sloan Foundation, Principal Investigator, 7/1/2015-6/1/2017, \$200,000 total.



“Organic Aerosol Formation in the Humid, Photochemically-Active Southeastern US: SOAS Experiments and Simulations,” EPA-STAR grant, Principal Investigator with Co-I Ann Marie Carlton, 4/1/2013 – 3/31/2015, \$399,928 total.

"Collaborative Research: Secondary Organic Aerosol Production in Real Atmospheric Waters," NSF grant, Principal Investigator with Co-I's Jeffrey Collett and Frank Keutsch, 4/1/2011-3/31/2015, \$1,264,000 total, \$574,966 Turpin portion.

“Refined Exposure Surrogates for Ambient PM in Epidemiology Studies,” EPA Cooperative Agreement, Principal Investigator with Co-I's Melissa Lunden, David Rich and Pamela Ohman-Strickland, 9/1/08–8/31/11, \$199,999 total.

“Improved Prediction of In-Cloud Biogenic SOA: Experiments and CMAQ Model Revisions,” EPA-STAR, Principal Investigator with Co-I Sybil Seitzinger, 11/01/07-10/31/11, \$598,543 total.

“Investigating the In-Cloud Formation of Secondary Organic Aerosol,” NOAA, Principal Investigator with Co-I Sybil Seitzinger, 07/01/07-06/30/11, \$458,328 total.

“Investigating the Aqueous-Phase Chemistry of In-Cloud Secondary Organic Aerosol Formation,” NSF, Principal Investigator with Co-I Sybil Seitzinger, 10/1/06-9/31/10, \$432,117.

“Study of Train Noise in Teaneck, NJ,” EPA, Principal Investigator with Co-I Eric Zwerling, 9/1/05-8/31/09, \$299,907 total.

“A Study of Nitrogen Fluxes in an Urban Wetland to Determine Potential Enhancement of Denitrification after Wetland Restoration and Enhancement,” New Jersey Water Resources Research Institute, Principal Investigator with Co-I's Sybil Seitzinger and Beth Ravit, 3/1/05-2/28/06, \$30,000 direct.

“Triple Quadrupole GC/MS For Analysis of Trace Organics in Environmental Matrixes,” Rutgers University Academic Excellence Fund Project, Co-Investigator with PI Lisa Totten, 1/1/2005-12/31/2005, \$175,000 direct.

“Baseline Assessment of Meadowlands Air Quality: Particulate Matter Measurements,” Meadowlands Commission, UMDNJ Subcontract Principle Investigator with Project PI Clifford Weisel, 7/1/2004-6/30/2007, Turpin portion \$22,500 total.

“Assessment of the contribution to personal exposures of air toxics from mobile sources: Particulate Matter.” EPA, UMDNJ Subcontract Principle Investigator with Project PI Clifford Weisel, 11/1/03-6/30/04, Turpin portion \$15,550 total.

“Capsaicin and citric acid cough sensitivity: Generation and characterization of exposures,” American Lung Association, UMDNJ Subcontract Principle Investigator with Project PI Robert Laumbach, 7/1/03-6/31/05, Turpin portion \$19,120 total.

“Secondary and Regional Contributions to Organic PM: A Mechanistic Investigation of Organic PM in the Eastern and Southern United States,” EPA, Principal Investigator with Co-I's Sybil Seitzinger and Ho-Jin Lim, 10/1/03-9/30/07, \$446,061 total.

“Exposure to Organic and Elemental Carbon,” New Jersey Center for Environmental Indicators, Principal Investigator, 7/1/03-6/30/05, \$7,000 direct.

“Role of Irritant Receptors in Cardiovascular Effects of Fine Airborne Particulate Matter,” Health Effects Institute, Co-Investigator with PI Christine Nadziejko, 11/1/02-10/31/04, \$50,000 total.

“Measurement of Diesel Indicators: Pilot Study,” New Jersey Center for Environmental Indicators, Principal Investigator with Co-I John Offenber, 6/1/02-5/31/03, \$5,400 direct.

“Characterizing Organic Fine Particulate Matter (PM<sub>2.5</sub>) for the Pittsburgh Supersite,” Electric Power Research Institute, Principal Investigator, 2/1/02-6/30/04, \$50,000 total.

“Sources of Air Toxics to the Hudson River Harbor Estuary: Analysis of New Jersey’s Atmospheric Deposition Network,” New Jersey Department of Environmental Protection, Principal Investigator with Co-I Steven Eisenreich, 3/1/01-2/28/03, \$133,384 total.

“Size and Time-Resolved Measurements of the Organic Fraction of PM<sub>2.5</sub>: Toward a Better Understanding of Exposures and Effective Control Strategies,” Carnegie Mellon University Subcontract, Department of Energy, The Pittsburgh PM Supersite Program: A Multidisciplinary Consortium for Atmospheric Aerosol Research, Subcontract Principal Investigator, 2/1/01-1/31/05, Turpin portion \$322,000 total.

“Collaborative Research: Submicron Organic Aerosol Measurements during ACE-Asia,” NSF, Co-Principle Investigator with project PI Lynn Russell, 9/1/00-8/31/02, Turpin portion \$71,687 total.

“Fine Particle Source Apportionment and Data Analysis,” NJ Department of Environmental Protection, Principal Investigator with Co-I Paul Liroy, 8/1/99-7/31/00, \$83,071 total.

“Time-Resolved Organic and Elemental Carbon Measurements for the Atlanta Supersite Experiment,” Electric Power Research Institute Grant, Principal Investigator, 6/1/99-5/31/00, \$15,000 total.

"Pollutant Exposure of COPD-Diagnosed Individuals in Los Angeles," Harvard University Subcontract, EPA, Subcontract Principal Investigator with Project PI Helen Suh, 10/1/98-9/30/02, Turpin portion \$250,000 total.

"Contributions of Outdoor PM Sources to Indoor Concentrations and Personal Exposures: A Three City Study," Health Effects Institute Grant, Principal Investigator, 7/1/98-12/31/02, \$1,132,206 total.

"Organic PM: Insights Gained from SEAVS and Considerations for Future Studies," Electric Power Research Institute Grant, Principal Investigator, 1/1/98-6/30/99, \$29,977 total.

"Role of Peroxides and Macrophages in Fine Particulate Matter Toxicity," Health Effects Institute Grant, Co Investigator with PI Debra Laskin, 1/1/98-12/31/00, \$440,701 total.

"Contributions of Outdoor Sources to Indoor Concentrations and Personal Exposures to Air Toxics," Mickey Leland Urban Air Toxics Center Grant, Co-Investigator with PI Cliff Weisel, 1/1/98-12/31/01, \$1,499,034 total.

"Development of an Online Flow Cell Fluorescent Spectrometer for the Measurement of Gas and Particle-Phase Peroxides to Examine their Role in Particle-Induced Injury," NIEHS Center of Excellence Exploratory Research Grant, EOHSI, Co-Investigator with PI Brian Buckley and Debbie Laskin, 7/1/97-6/30/98, \$14,950 direct.

"Separation of Aerosol Organics by Functional Group Composition Using Thin Layer Chromatography," NIEHS Center of Excellence Exploratory Research Grant, EOHSI, Co-Investigator with PI Monica Mazurek, 7/1/96-6/30/97, \$12,500 direct.

"FTIR Microscopy in the SE Aerosol and Visibility Study," Electric Power Research Institute Grant, Principal Investigator with Co-I Paul Lioy, 9/1/95-8/31/98, \$182,100 total.

"Development of Personal Exposure Monitoring Methods for Organic Aerosols," NIEHS Center of Excellence Exploratory Research Grant, EOHSI, Principal Investigator with Co-I Paul Lioy, 7/1/95-6/30/96, \$12,272 direct.

"Secondary Formation of Organic Aerosol in New Jersey," Rutgers Research Council Grant, Principal Investigator, 7/1/95-6/30/96, \$4,000 direct.

"The Development of Scanning Electron Microscope Techniques to Ascertain the Microscopic Mixing Characteristics of Atmospheric Aerosols," NSF Exploratory Research Grant, Principal Investigator, 3/1/92-2/28/95, \$18,000.

### ***Training/Public Service Grants and Contracts***

Principal Investigator, NJ Department of Environmental Protection Training Grant, "Visible Emission Evaluation and Odor Enforcement Training to NJDEP and CEHA Agency Personnel," Annual Contracts July 1998 – July 2015, totaling \$422,945.

Principal Investigator, NJ Department of Environmental Protection Training Grant, "NJ Noise Enforcement Training and Technical Assistance," with co-investigator Eric Zwerling, Annual Contracts July 1994 – June 2015, totaling \$468,866.

Principal Investigator, NJ Department of Environmental Protection, "Operation of Rutgers University Photochemical Assessment Monitoring Site," 5/1/05-4/30/11. \$244,448.

Principal Investigator, City of Vancouver, "Community Noise Measurement and Enforcement for Vancouver, Canada," 4/08 – 6/08, with Co-PI Eric Zwerling, \$22,133.

Principal Investigator, US Environmental Protection Agency Air Pollution Training Institute, "Air Pollution Training Grant," 10/02-9/07, \$232,500.

Principal Investigator, US Environmental Protection Agency Air Pollution Training Institute, "Air Pollution Training Grant," 9/01-8/02, \$31,500.

Principal Investigator, Dreyfus Foundation Postdoctoral Fellowship, with Dr. Eisenreich, 7/01-6/03, \$48,000.

Principal Investigator, US Environmental Protection Agency Air Pollution Training Institute, "Air Pollution Training Grant," 9/98-8/01, \$210,481.

Principal Investigator, City of Anchorage, "Noise Code Enforcement Training," with co-Investigator Eric Zwerling, 1998, \$5999.

Principal Investigator, NJ Department of Environmental Protection, "Rutgers University Photochemical Assessment Monitoring Site," 1997-2005, Annual contracts totaling \$200,000.

Principal Investigator, City of Seattle, "Noise Enforcement Training Course," with co-investigator Eric Zwerling, 1997-1998, \$5,100.

Principal Investigator, US Environmental Protection Agency Air Pollution Training Institute, "Air Pollution Training Grant," 9/95-8/98, \$192,406.

Principal Investigator, US Environmental Protection Agency Air Pollution Training Institute, "Air Pollution Training Grant," 1994-95, \$48,000.

## **Service**

### ***Department, School, University, State and National***

#### **National and International Advisory and Oversight Committees**

EPA Clean Air Scientific Advisory Committee (CASAC) Particulate Matter Review Panel, 2016-2019  
Scientific Advisory Committee, U. Washington's EPA Air Pollution and Health Center, 2011-2016  
Chair, External Review Team, U. North Carolina, Environ. Sciences and Engineering, 2010  
Haagen Smit Prize Committee, 2010  
Advisory Group, IARC Monographs on Air Pollution, WHO, 2004  
External Advisory Board, AIRES PM Epidemiology Study, 2000-2008

#### **State and National Invited Panelist/Workshop Participant**

National Academy of Medicine Workshop, "Workshop on the Health Risks of Indoor Exposure to Particulate Matter," Washington, DC, February, 2016.  
Sloan Foundation Workshop "The Chemistry of the Indoor Environment Strategy Review," New York,

NY, September 2015.  
 A&WMA-Environmental Sciences Graduate Student Association Mini-Conference on “Pursuing a Successful Career in Science” *From Student to Professor Panelist*, Rutgers University, New Brunswick, NJ, February 2013  
 EPRI-A&WMA Workshop on Future Air Quality Model Development Needs, Washington, DC, September 2011  
 Atmospheric Sciences Collaborations and Enriching Networks (ASCENT) Workshop, for emerging senior atmospheric scientists, *Panelist*, Steamboat Springs, CO, July 2011  
 Higher Education Resource Service academic leadership retreat, Bryn Mawr College, June 2011  
 Southern Oxidant and Aerosol Study (SOAS) Workshop, New Brunswick, NJ, May 2011  
 Particulate Matter Peer Review/Authors Workshop, US Environmental Protection Agency (EPA), Research Triangle Park, NC, June 2008  
 Model Development Workshop, Electric Power Research Institute, Palo Alto, CA, May 2008  
 Session Co-Chair, Ambient Air Quality Monitoring and Health Research: Workshop to Discuss Key Issues, EPA, Research Triangle Park, NC, April 2008  
 Workshop to Discuss Policy-Relevant Science to Inform EPA’s Integrated Plan for the Review of the Primary PM NAAQS, EPA, Research Triangle Park, NC, July 2007  
 Health Effects of Organic Aerosols Workshop, Palo Alto, CA, October 2006  
 Particulate Matter: Atmospheric Sciences, Exposure and the Fourth Colloquium on PM and Human Health, *Plenary Panelist*, Pittsburgh, PA, 2003  
 Semi-continuous Measurement Technologies in the Context of Health Studies Workshop, at Particulate Matter: Atmospheric Sciences, Exposure and the Fourth Colloquium on PM and Human Health, invited participant, Pittsburgh, PA, 2003  
 Health Effects Institute Workshop on Air Toxics, Baltimore, MD, 2002  
 DOE Tropospheric Aerosols Program Workshop, Brookhaven National Laboratory, 1999  
 EPA Particulate Matter Research Needs Workshop, Research Triangle Park, NC, 1999  
 Health Effects Institute Workshop on PM Exposure Assessment, National Academy of Sciences, Washington, DC, 1997  
 EPA Particulate Matter Research Needs Workshop, Research Triangle Park, NC, 1996  
 NJ DEP National Environmental Performance Partnership Workshop, New Brunswick, NJ, 1996  
 DOE Research Needs Workshop, Boulder, CO, 1993

### **National Integrated Science Assessment Reviews**

*Integrated Science Assessment for NO<sub>x</sub> and SO<sub>x</sub>*, US Environmental Protection Agency (EPA), Expert Peer Reviewer; 2015.

*Integrated Science Assessment for Particulate Matter*, US Environmental Protection Agency (EPA), EPA/600/R-08/139F, 2009.

“Assessing Human Exposures of High Risk Sub-Populations to Particulate Matter,” National Exposure Research Laboratory (NERL) Report, US Environmental Protection Agency, July 2001.

“Evaluation of Proposed Methodology to Address Interferences Related to the Current OC/EC Analytical Method for the NERL PM Panel Studies,” National Exposure Research Laboratory (NERL) Report, US Environmental Protection Agency, May 2001.

“Visibility Assessment for the Southeastern US,” Report of the Southern Appalachian Mountains

Initiative, October 1998.

"Chapter 3: Physics and Chemistry of Particulate Matter" in *EPA Criteria Document for Particulate Matter*, EPA/600/P-95/001aF, 1996, pg 3:1 – 3:240.

"Chapter 4: Sampling and Analysis Methods for Particulate Matter and Acid Deposition" in *EPA Criteria Document for Particulate Matter*, EPA/600/P-95/001aF, 1996, pg 4:1 – 4:146.

"Chapter 5: Sources and Emissions of Atmospheric Particles" in *EPA Criteria Document for Particulate Matter*, EPA/600/P-95/001aF, 1996, pg 5:1 – 5:81.

### **Major University and School Committees**

#### ***UNC:***

SPH Organizational Development Plan Steering Committee, 2016

SPH Core Curriculum Implementation Committee, 2016

#### ***Rutgers:***

Chair, Search for Henry Rutgers Professor of Earth, Ocean and Atmospheric Sciences, 2015

New Brunswick Campus Strategic Planning Coordinating Committee, 2014

Rutgers' Honors College Planning Committee, 2014

Vice Chancellor of Student Affairs Search Committee, 2013

Rutgers University Administrative Council, 2011-2014

Cabinet, School of Environmental and Biological Sciences (SEBS), 2011-2015

Faculty Advisor, SEBS Governing Council, 2011-2014

Board of Directors, Cook Community Alumni Association, 2011-2014

Curriculum and Education Committee, SEBS, 2011-2014

Appointments and Promotions Committee, SEBS, 2009-2012

Executive Council of the Graduate School of New Brunswick, 2007-2008

New Brunswick Faculty Council, 2007-2008

Cook College Planning Committee, 2004-2007

University Senate, 2003-2006

Judicial Board, Graduate School-New Brunswick, 2000-2001

Faculty Representative, Cook College Council, 1999-2000

Chair, Affirmative Action Committee, Cook College, 1997-1998

Affirmative Action Committee Member, Cook College, 1996-1998

### **Departmental Search Committees**

#### ***UNC:***

Environmental Science and Engineering Business Manager Search Committee, 2015

#### ***RUTGERS:***

Dept. of Environmental Health, School of Public Health, UMDNJ Faculty Search Committee, 2009-2010

Chair, Environmental Sciences Cluster Hire Faculty Search Committee, 2008-2009

SEBS – Graduate School of Education Faculty Search Committee, 2007-2008

Chair, Environmental Sciences Search Committee, 2000-2001

Rutgers Cooperative Extension Faculty Search Committee, 1999

Environmental Sciences Faculty Search Committees, 7 faculty lines, 1995-2004

### **Graduate Program Committees - Rutgers**

Coordinator, Air Pollution Science and Technology Option, Environmental Sciences Graduate Program, 2010-2015.

Curriculum Committee, Atmospheric Sciences Graduate Program, 2009-2012

Admissions Committee, Environmental Sciences Graduate Program, 2008-2011

Admissions Committee, Atmospheric Sciences Graduate Program, 2007-2010

Graduate Program Director, Environmental Sciences, 2002-2005

Graduate Program Director, Bioresource Engineering, 2000-2003

### **Departmental Committees - Rutgers**

Curriculum and Education Committee, Dept. of Environmental Sciences, 2007-2016

Chair, Curriculum and Education Committee, Dept. of Environmental Sciences, 2007-2010

Chair, Reading Committee for 1 Tenure Candidate, RCE, 2001

Leadership Input Committee (Dept Chair search), Dept. of Environmental Sciences, 1998

External Review Committee, Dept. of Environmental Sciences, 1997-1998

Undergraduate Curriculum Committee (major curricular revisions) Dept. of Environmental Sciences, 1996-2000

### ***Professional Service***

#### **National and International Professional Society Positions**

President, American Association for Aerosol Research (AAAR), 2012-2013

Vice-President, AAAR, 2011-2012

Chair, Development Committee, AAAR, 2011-2012

Chair, Long Range Planning Committee, AAAR, 2011-2012

Member, International Commission for Atmospheric Chemistry and Global Pollution, 2010-2014  
(iCACGP is a Commission of the International Association of Meteorology and Atmospheric Sciences under the International Council for Science)

Board of Directors Executive Committee, AAAR, 2010-2012

Development Committee Member, AAAR, 2009-2012

Conference Chair, American Association for Aerosol Science Annual Conference, 2003

Electorate Nominating Committee Member, American Association for the Advancement of Science (AAAS), 2001-2004

Board of Directors, American Association for Aerosol Research (AAAR), 1997-2000

#### **Editor and Editorial Boards**

Associate Editor, *Environmental Science and Technology*, 2013 – pres.

Editorial Advisory Board, *Aerosol Science and Technology*, 2010 – pres.

Editorial Advisory Board, *Environmental Health Perspectives*, 2009 – pres.

Editorial Advisory Board, *Environmental Science and Technology*, 2008 – pres.  
Editorial Advisory Board, *Aerosol Science and Technology*, 1997-2003

### **Peer Review**

**Proposal reviews:** US National Science Foundation (NSF), National Oceanic and Atmospheric Association (NOAA), Department of Energy (DOE), Environmental Protection Agency (EPA), Health Effects Institute (HEI), National Institute of Health (NIH), Swiss National Science Foundation (SNF), French National Research Agency (ANR)

**Journal reviews:** Science, Nature, Environmental Science and Technology, Atmospheric Chemistry and Physics, Environmental Health Perspectives, Journal of Geophysical Research – Atmospheres, Aerosol Science and Technology, Journal of Aerosol Science, Atmospheric Environment, Journal of Exposure Science and Environmental Epidemiology

### ***Faculty Engaged Activities - Rutgers***

Operation of Rutgers Air Pollution Training Center, which conducts air pollution measurement and enforcement short courses for federal, state and local air pollution practitioners. Presentation of NJ state certification and recertification courses for Visual Emissions, Odor Control and Community Noise Enforcement. Approximately 350 professionals are trained each year by Center personnel. 1994 – 2015.

Operation of the Rutgers Noise Technical Assistance Center, which conducts training, lends noise monitoring equipment and provides technical support to communities, County Environmental Health Agents, other enforcement personnel and the Department of Environmental Protection. Approximately 400 enforcement officers are trained each year by Center personnel. 1994 – 2015.

Operation of the NJ DEP-Rutgers Photochemical Assessment Monitoring Station, providing upper air meteorological data, ozone and ozone precursor concentrations for use in forecasting, air pollution management planning, and education. 1996 – 2012.