Jenny Pui Shan Wong

Georgia Institute of Technology, School of Earth and Atmospheric Sciences
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Education

2010 - 2015 **Ph.D.** in Environmental Chemistry**,** University of Toronto
Thesis**:** Role of Water on the Formation, Transformation and Fate of Secondary Organic Aerosols**,** Advisor: Jonathan P.D. Abbatt

2009 - 2011 **M.Sc.** in Environmental Chemistry, University of Toronto
Thesis: New Portable Flow Tube Technique to Investigate the Formation and Aging of Secondary Organic Aerosol, Advisor: Jonathan P.D. Abbatt

2005 - 2009 **H.B.Sc.** (Distinction) in Chemistry and Sociology, University of Toronto
Thesis: Measurement of Hydroxyl Radical Formation by *n*-Hexane Soot in Surrogate Lung Fluid, Advisor: Jonathan P.D. Abbatt

Professional Experience

2015 – Present **Post-Doc Researcher**, Georgia Institute of Technology
- Advised by Rodney J. Weber
- Properties of biomass burning aerosol
- Physiochemical properties of 3-D printer emissions

2009 - 2015 **Graduate Research Assistant**, University of Toronto
- Advised by Jonathan P.D. Abbatt
- Characterized the effects of aging (OH oxidation, photolysis) on SOA physiochemical properties
- Designed, assembled, and deployed a portable flow tube technique (Toronto Photo-Oxidation Tube, TPOT)
- Field Measurement Campaigns:
  - CCN measurements at Vancouver Island as part the Network on Climate and Aerosols: Addressing Key Uncertainties in Remote Canadian Environments (NETCARE)
  - CCN measurements and gas-phase OH oxidation of ambient organic aerosol as part of Whistler Aerosol and Cloud Study (WACS) 2010

2012 - 2014 **Research Affiliate Program Student**, Environment Canada
- Co-advised by John Liggio and Shao-Meng Li
- Studied droplet growth kinetics of organic-containing sulfate particles
- Field Measurement Campaign:
  - CCN measurements as part of Diesel Engine Exhaust Research Experiment (DEERE) 2012

2008 **NSERC Summer Undergraduate Student Researcher**, University of Toronto
- Worked on heterogeneous oxidation project with Prof. D. James Donaldson
  - Investigated photoenhanced ozonation of Polycyclic Aromatic Hydrocarbons on urban films using laser-induced fluorescence spectroscopy

Peer Referred Publications

First-Author

3. **Wong, J.P.S**.; Liggio, J.; Li, S.-M.; Nenes, A.; Abbatt, J.P.D. Suppression in Droplet Growth Kinetics by the Addition of Organics to Sulfate Particles, *J. Geophys. Res.* 119, 12222-12232, 2014.

2. **Wong, J.P.S.**; Zhou, S.; Abbatt, J.P.D. Changes in Secondary Organic Aerosol Composition and Mass due to Photolysis: Relative Humidity Dependence, *J. Phys. Chem. A.* Articles ASAP, 2014.

1. **Wong, J.P.S.**; Lee, A.K.Y.; Slowik, J.G.; Cziczo, D.J.; Leaitch, W.R.; MacDonald, A.; Abbatt, J.P.D. Oxidation of Biogenic Secondary Organic Aerosol (SOA) by Hydroxyl Radical: Effects on Cloud Condensation Nuclei Activity, *Geophys. Res. Lett.* 38, L22805, 2011.

Co-Author

7. Wilson, T.W.; Ladino, L.A.; Alpert, P.; Breckels, M.N.; Brooks, L.M.; Browse, J.; Burrows, S.M.; Carslaw, K.S.; Huffmann, J.A.; Judd, C.; Kilthau, W.P.; Mason, R.; McFiggans, G.; Miller, L.A.; Najera, J.; Polishchuck, E.; Rae, S.; Schiller, C.; Si, M.; Vergara Temprado, J.; Whale, T.F.; **Wong, J.P.S.**; Wurl, O.; Yakobi-Hancock, J.D.; Abbatt, J.P.D.; Aller, J.Y.; Bertram, A.K.; Knopf, D.; Murrary, B.J. A marine biogenic source of atmospheric ice nucleating particles, *Nature*, Accepted, 2015.

6. Badali, K.M.; Zhou, S.; Aljawhary, D.; Antinolo, M.; Chen, W.J.; Lok, A.; Mungall, E.; **Wong, J.P.S.**; Zhao, R.; Abbatt, J.P.D. Formation of hydroxyl radicals from photolysis of secondary organic aerosol material, *Atmos. Chem. Phys.* 15, 7831-7840, 2015.

5. Yakobi-Hancock, J.D., Ladino, L.A., Mason, R., Bertram, A.K.; Schiller, C.; Leaitch, W.R., Toom-Sauntry, D.; Jones, K.; **Wong, J.P.S.;** Abbatt, J.P.D. Hygroscopicity of Aerosol and its Organic Component at a Coastal Location, *Atmos. Chem. Phys.* 14, 12307-12317, 2014.

4. Ahlm, L.; Shakya, K.M.; Russell, L.M.; Schroder, J.C.; **Wong, J.P.S.**, Sjostedt, S.J.; Hayden, K.L.; Liggio, J.; Wentzell, J.J.B.; Wiebe, H.A.; Mihele, C.; Leaitch, W.R.; Macdonald, A.M. Temperature-dependent accumulation mode particles and cloud nuclei concentrations from biogenic sources during WACS2010, *Atmos. Chem. Phys.* 13, 3393-3407, 2013.

3. Slowik, J.G.; **Wong, J.P.S.**; Abbatt, J.P.D. Real-time, controlled OH-initiated oxidation of biogenic secondary organic aerosol, *Atmos. Chem. Phys.* 12, 9775-9790, 2012.

2. Pierce, J.R.; Leaitch, W.R.; Liggio, J.; Westervelt, D.M.; Wainwright, C.D.; Abbatt, J.P.D.; Ahlm, L.; Al-Basheer, W.; Cziczo, D.J.; Hayden, K.L.; Lee, A.K.Y.; LI, S.-M., Li; Russell, L.M.; Sjostedt, S.J.; Strawbridge, K.B.; Travis, M.; Vlansenko, A.; Wentzell, J.J.B.; Wiebe, H.A.; **Wong, J.P.S.**; Macdonald, A.M. Nucleation and condensational growth to CCN sizes during a sustained pristine biogenic SOA event in a forested mountain valley, *Atmos. Chem. Phys.* 12, 3147-3163, 2012.

1. Lambe, A.T.; Ahern, A.T.; Williams, L.R.; Slowik, J.G.; **Wong, J.P.S.**; Abbatt, J.P.D., Brune, W.H.; Ng, N.L.; Wright, J.P.; Croasdale, D.R.; Worsnop, D.R.; Onasch, T.B. Characterization of aerosol photooxidation flow reactors: heterogeneous oxidation, secondary organic aerosol formation and cloud condensation nuclei activity measurements, *Atmos. Meas. Tech.* 4, 445-461, 2011.

Manuscripts Submitted for Publication or In Preparation

1. **Wong, J.P.S.**; Lee, A.K.Y.; Abbatt, J.P.D. Impacts of Sulfate Seed Acidity and Water Content on Isoprene Secondary Organic Aerosol Formation, *Environ. Sci. Technol.*, Submitted, 2015.

Non-Referred Publications

1. Zhao, R.; Lee, A.K.Y.; Wang, C.; Wania, F.; **Wong, J.P.S.**; Zhou, S.; Abbatt, J.P.D. The Role of Water in Organic Aerosol Multiphase Chemistry: Focus on Partitioning and Reactivity, book chapter in *Advances in Chemistry of the Contemporary Atmosphere*, Volume 1, Baker, J. R. and Steiner, A.L., eds.; World Scientific Publishing Company, Submitted, 2015.

Presentations at Meetings and Symposia

“Dependence of Isoprene SOA Yield on the Phase of Ammonium Sulfate Seed Particles” American Geophysical Union Fall Meeting, San Francisco, California, Dec. 2014 (Poster).

"Photochemical Oxidation of Aqueous α-Pinene SOA" American Geophysical Union Fall Meeting, San Francisco, California, Dec. 2013 (Poster).

"Suppression in Droplet Growth Kinetics by the Addition of Organics to Sulfate Aerosol" International Aerosol Modeling Algorithms, Dec. 2013 (Poster).

"Organic Particulates as CCN and their Droplet Growth" Environment Canada, Air Quality Research Division Seminar Series, Toronto, Ontario, Jan. 2013 (Oral).

"The Effects of Organic Compounds on the Growth Rate of Cloud Droplets." American Geophysical Union Fall Meeting, San Francisco, California, Dec. 2012 (Poster).

"Organic Particulates as CCN and their Droplet Growth" 2nd DMT CCNC Users Meeting, Boulder, Colorado, Nov. 2012 (Oral).

"Characterization of the Changes in Hygroscopicity of Ambient Organic Aerosol due to Oxidation by Gas-Phase OH." American Geophysical Union Fall Meeting, San Francisco, California, Dec. 2011 (Poster).

“Hygroscopicity parameter of biogenic aerosols subject to OH-initiated Gas-Phase Oxidation at Whistler, British Columbia.” American Geophysical Union Fall Meeting, San Francisco, California, Dec. 2010 (Poster).

"Development of a Flow Tube Technique for Studying SOA Formation by OH Oxidation" 93rd Canadian Chemistry Conference, Toronto, Ontario, Jun. 2010 (Poster).

"Measurements of Hydroxyl Radical Formation by n-Hexane soot in Surrogate Lung Fluid" 92nd Canadian Chemistry Conference, Hamilton, Ontario, Jun. 2009 (Poster).

Awards

2014	Croft Teaching Assistant Award - Tutor
2013	Alex Harrison Award in Environmental Analytical Mass Spectrometry
2008	Robert and Jean Hadgraft Scholarship in Chemistry
2008	Environment Canada Meteorological Service of Canada Undergraduate Supplement
2007, 2008	NSERC Undergraduate Student Research Award