

July 15, 2014

**Isobel J. Simpson**

Department of Chemistry  
 University of California, Irvine  
 Irvine, CA, USA 92697-2025  
 Email: isimpson@uci.edu

**EDUCATION**

- 1996 Ph.D. (Micrometeorology)** **University of Guelph**  
 Thesis advisor: Prof. George W. Thurtell  
*NSERC Graduate Research Scholarship; Mary Edmund Williams Scholarship;  
 W. Brad Drowley Memorial Scholarship Award; Campbell Scientific Student Paper Award;  
 Air and Waste Management Association Graduate Scholarship; Latornell Travel Grant;  
 Davidson Travel Grant; NOAA/AMS/DOE Travel Scholarship*
- 1993 M.Sc. (Micrometeorology)** **University of Guelph**  
 With distinctions; Thesis advisor: Prof. George W. Thurtell  
*H. S. Armstrong Excellence in Research Award (Sigma Xi Outstanding M.Sc. Thesis);  
 NSERC Graduate Research Scholarship; Soden Scholarship in Agriculture*
- 1990 B.Sc. (Agriculture)** **University of British Columbia**  
 With honours; Thesis advisor: Prof. T. Andrew Black  
*C. A. Rowles Alumni Scholarship; Rhona Clare Gillis Scholarship; Dean Blythe Eagles Medal;  
 D. G. Laird Prize in Soil Science; NSERC Undergraduate Research Grant*
- 1986 International Baccalaureate Diploma** **Sir Winston Churchill**  
*B.C. Provincial Scholarship; Federal/Provincial French Scholarship; Churchill Citizenship Award*

**PROFESSIONAL APPOINTMENTS**

- 2014–present Research Specialist, Dept. Chemistry** **University of California, Irvine**
- 2005–2014 Assoc. Research Specialist, Dept. Chemistry** **University of California, Irvine**  
*2011 Editor's Citation for Excellence in Refereeing (JGR-Atmospheres)  
 NASA Group Achievement Award (ARCTAS)*
- 1999–2005 Asst. Research Specialist, Dept. Chemistry** **University of California, Irvine**  
*Comer Foundation Abrupt Climate Change Fellowship*
- 1997–1999 Visiting Postgraduate Researcher** **University of California, Irvine**  
 Hosts: Prof. F. Sherwood Rowland and Prof. Donald R. Blake  
*NSERC Postdoctoral Fellowship; NASA Group Achievement Award (SONEX)*

**REPRESENTATIVE PEER-REVIEWED PUBLICATIONS**

- Simpson, I. J.**, O. S. Aburizaiza, A. Siddique, B. Barletta, N. J. Blake, A. Gartner, H. Khwaja, S. Meinardi, J. Zeb, and D. R. Blake, Air quality in Mecca and surrounding holy places in Saudi Arabia during Hajj: Initial survey, *Environ. Sci. Technol.*, doi:10.1021/es5017476, 2014.
- Simpson, I. J.**, J. E. Marrero, S. Batterman, S. Meinardi, B. Barletta, and D. R. Blake, Air quality in the Industrial Heartland of Alberta, Canada and potential impacts on human health, *Atmos. Environ.*, 81, 702-709, 2013.
- Simpson, I. J.**, M. P. Sulbaek Andersen, S. Meinardi, L. Bruhwiler, N. J. Blake, D. Helmig, F. S. Rowland, and D. R. Blake, Long-term decline of global atmospheric ethane concentrations and implications for methane, *Nature*, 488, 490–494, doi:10.1038/nature11342, 2012.
- Simpson, I. J.**, N. J. Blake, B. Barletta, G. S. Diskin, H. E. Fuelberg, K. Gorham, L. G. Huey, S. Meinardi, F. S. Rowland, S. A. Vay, A. J. Weinheimer, M. Yang, and D. R. Blake, Characterization of trace gases

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measured over Alberta oil sands mining operations: 76 speciated C<sub>2</sub>-C<sub>10</sub> volatile organic compounds (VOCs), CO<sub>2</sub>, CH<sub>4</sub>, CO, NO, NO<sub>2</sub>, NO<sub>y</sub>, O<sub>3</sub> and SO<sub>2</sub>, *Atmos. Chem. Phys.*, 10, 11931–11954, doi:10.5194/acp-10-11931-2010, 2010.

**Simpson, I. J.**, F. S. Rowland, S. Meinardi, and D. R. Blake, Influence of biomass burning during recent fluctuations in the slow growth of tropospheric methane, *Geophys. Res. Lett.*, 33, L22808, 10.1029/2006GL027330, 2006.

**Simpson, I. J.**, T. Wang, H. Guo, Y. H. Kwok, F. Flocke, E. Atlas, S. Meinardi, F. S. Rowland, and D. R. Blake, Long-term atmospheric measurements of C<sub>1</sub>-C<sub>5</sub> alkyl nitrates in the Pearl River Delta region of southeast China, *Atmos. Environ.*, 40 (9), 1619–1632, 2006.

**Simpson, I. J.**, S. Meinardi, N. J. Blake, F. S. Rowland, and D. R. Blake, Long-term decrease in the global atmospheric burden of tetrachloroethene (C<sub>2</sub>Cl<sub>4</sub>), *Geophys. Res. Lett.*, 10.1029/2003GL019351, 2004.

**Simpson, I. J.**, S. Meinardi, D. R. Blake, N. J. Blake, F. S. Rowland, E. Atlas, and F. Flocke, A biomass burning source of C<sub>1</sub>-C<sub>4</sub> alkyl nitrates, *Geophys. Res. Lett.*, 29 (24), 2168, 2002.

**Simpson, I. J.**, G. W. Thurtell, H. H. Neumann, G. den Hartog, and G. C. Edwards, The validity of similarity theory in the roughness sublayer above forests, *Boundary-Layer Meteorol.*, 88, 69–99, 1998.

**Simpson, I. J.**, G. W. Thurtell, G. E. Kidd, M. Lin, T. H. Demetriades-Shah, I. D. Flitcroft, E. T. Kanemasu, D. Nie, K. F. Bronson, and H. U. Neue, Tunable diode laser measurements of methane emissions from an irrigated rice paddy field in the Philippines, *J. Geophys. Res.*, 100, 7283–7290, 1995.

## SYNERGISTIC ACTIVITIES

### 1. Peer review and outreach:

Associate Editor: *Elementa*

External reviewer for journals: *Agricultural and Forest Meteorology*, *Atmospheric Chemistry and Physics*, *Atmospheric Environment*, *Environment International*, *Environmental Science & Technology*, *Geophysical Research Letters*, *Journal of Atmospheric Chemistry*, *Journal of Geophysical Research*, *Nature*, *Nature Geoscience*, *Proceedings of the National Academy of Sciences*

External proposal reviewer: NASA, NSF

Contributor: *UNEP Scientific Assessment of Ozone Depletion: 2010, 2014*

Seminars/conference presentations: ACS, AGU, CSC, HKPU, GRC (*Atm. Chem.*), NOAA/ESRL, U Montana

Invited talks: ACS 2001; U Montana 2010; AGU 2011, 2013; CSC 2012, 2014

AGU Outstanding Student Paper Award judge (2012, 2013)

### 2. Research collaborations:

Eric Apel (NCAR); Elliot Atlas (U Miami); Murat Aydin (UCI); Stuart Batterman (U Michigan); Philippe Bousquet (U Versailles); Lori Bruhwiler (NOAA); James Crawford (NASA); Joost de Gouw (NOAA); Glenn Diskin (NASA); Ed Dlugokencky (NOAA); Alan Fried (U Colorado); Henry Fuelberg (FSU); Chris Gill (VIU); Hai Guo (HKPU); Detlev Helmig (U Colorado); Rebecca Hornbrook (NCAR); Greg Huey (GIT); Stefanie Kirschke (U Versailles); Erik Krogh (VIU); Jennifer Logan (Harvard U); Barkley Sive (ASU); Mads Sulbaek Andersen (JPL); Amy Townsend-Small (U Cincinnati); Stephanie Vay (NASA); Tao Wang (HKPU); Xinming Wang (GIG); Andrew Weinheimer (NCAR); Paul Wennberg (CIT); Christine Wiedinmyer (NCAR); Oliver Wingenter (NMT); Armin Wisthaler (U Innsbruck); Melissa Yang (NASA); Robert Yokelson (U Montana)

### 3. Community service:

*Present*: Amnesty International (mentor)

*Past*: Guelph Correctional Center (literacy tutor); Canadian National Institute for the Blind (volunteer); Victoria Order of Nurses (volunteer); Vancouver General Hospital (volunteer)