

## Dr Leigh Crilley

Research Fellow in Atmospheric Chemistry

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### About

Leigh Crilley is a chemist specializing in the field of air pollution/atmospheric chemistry. His current research involves investigating the rate of ozone production in the boundary layer using in situ field measurements

### Qualifications

Bachelor of Applied Science (Chemistry)

Doctor of Philosophy

### Biography

Leigh Crilley has recently been awarded his PhD thesis on the physiochemical properties of airborne particles at the Queensland University of Technology, where he completed his undergraduate studies in chemistry. This is his first post-doctoral position.

### Doctoral research

**PhD title** Investigations of the physical and chemical properties of ambient fine particles in urban schools

### Research

#### Research interests

- Chemical composition and source apportionment of airborne particles
- Tropospheric ozone chemistry
- Atmospheric HONO measurements and sources

### Publications

**Crilley, L. R.**, Jayaratne, E. R., Ayoko, G. A., Miljevic, B., Ristovski, Z., and Morawska, L.: Observations on the Formation, Growth and Chemical Composition of Aerosols in an Urban Environment, *Environmental Science & Technology*, 48, 6588-6596, 10.1021/es5019509, 2014.

**Crilley, L. R.**, Bloss, W. J., Yin, J., Beddows, D. C. S., Harrison, R. M., Allan, J. D., Young, D. E., Flynn, M., Williams, P., Zotter, P., H. Prevot, A. S., Heal, M. R., Barlow, J. F., Halios, C. H., Lee, J. D., Szidat, S., and Mohr, C.: Sources and contributions of wood smoke during winter in London: assessing local and regional influences, *Atmospheric Chemistry and Physics Discussions*, 14, 27459-27530, 10.5194/acpd-14-27459-2014, 2014.

**Crilley, L. R.**, Qadir, R. M., Ayoko, G. A., Schnelle-Kreis, J., Abbaszade, G., Orasche, J., Zimmermann, R., and Morawska, L.: Identification of the sources of primary organic aerosols at urban schools: A molecular marker approach, *Environmental Pollution*, 191, 158-165, <http://www.sciencedirect.com/science/article/pii/S026974911400164X> (<http://www.sciencedirect.com/science/article/pii/S026974911400164X>), 2014 .

**Leigh R. Crilley**, Godwin A. Ayoko and Lidia Morawska. *First measurements of source apportionment of organic aerosols in the Southern Hemisphere*. *Environmental Pollution*. 2014. 184 81-88.

**Leigh R. Crilley**, Godwin A. Ayoko and Lidia Morawska. *Analysis of organic aerosols collected on filters by Aerosol Mass Spectrometry for source identification*. *Analytica Chimica Acta*. 2013; 803: 91-96.

**Leigh R. Crilley**, Godwin A. Ayoko, E. Rohan Jayaratne, Farhad Salimi and Lidia Morawska. *Aerosol Mass Spectrometric analysis of the chemical composition of non-refractory PM<sub>1</sub> samples from school environments in Brisbane, Australia*. *Science of the Total Environment*. 2013; 458-460: 81-89.

Farhad Salimi, Mandana Mazaheri, Sam Clifford, **Leigh Crilley**, Rusdin Laiman and Lidia Morawska. *Spatial variation of particle number concentration in school microscale environments and its impact on exposure assessment*. *Environmental Science and Technology*. 2013; 47: 5251-8.

**Leigh R. Crilley**, Luke D. Knibbs, Branka Miljevic, Xiaochun Cong, Kathryn E. Fairfull-Smith, Steve E. Bottle, Zoran D. Ristovski, Godwin A. Ayoko and Lidia Morawska. *Concentration and oxidative potential of on-road particle emissions and their relationship with traffic composition: Relevance to exposure assessment*. *Atmospheric Environment* 2012; 59: 533-539.

