



Chemical Institute of Canada | *For Our Future*  
Institut de chimie du Canada | *Pour notre avenir*

## CIC local section lecture: Florence Williams: Unusual Observations in Nitrene Reactivity

When: February 21, 2017

When 6:30 Networking (refreshments) 7 PM Lecture

Where: Chemistry Building E3-25

University of Alberta

Edmonton

### Dr. Florence Williams

<https://www.ualberta.ca/science/about-us/contact-us/faculty-directory/florence-williams>

### Unusual Observations in Nitrene Reactivity: Inter- and Intramolecular Aryl Insertion Reactions

Nitrenes are high-energy intermediates that enable challenging transformations such as C-H insertion, de-aromatization and rearrangement processes. Yet, nitrenes often exhibit poor chemoselectivity profiles. As a result, nitrene or nitrenoid-mediated processes typically employ stabilizing groups, such as carbonyl and sulfonyl substituents, or transition metals, in order to promote one desired reaction pathway. In the Williams lab, we are exploring boron and phosphorus(III) as stabilizing agents which can electronically alter the behavior of nitrenes. Our studies have resulted in an unusual synthesis of anilines arising from borylnitrene C-H insertion reactions. Experiments show complete selectivity for aryl C-H bonds, with no reaction at the expected benzylic position. Further, the identity of the boron ligands is intrinsically connected to a chemoselectivity switch in the reaction.

### For more information contact:

Dr. Lucio Gelmini

Instructor/Past Chair of Chemistry

Grant MacEwan University

P.O. Box 1796 Edmonton, Alberta, Canada T5J 2P2

Past Chair and E-mail/Publicity Coordinator

Edmonton Section of the Chemical Institute of Canada

GelminiL@macewan.ca

<http://www.cicedmonton.org/>