

Event Details:

Location: Leikam Brewing - 5812 E Burnside St, Portland, OR 97215

Date: Thursday, May 14th, Time: 6 pm to 9 pm

Speaker: Professor David Stuart, Portland State University

Join us for our monthly lecture series at Leikam Brewing featuring Dr. David Stuart, Professor of Chemistry at Portland State University. This event includes a cocktail hour, catered dinner from a local Portland eatery, and lecture by Dr. Stuart. All ages welcome and encouraged.

Register for a dinner ticket before the event for \$25/person (\$15 for undergraduate students, high school teachers, unemployed members). \$5 added for tickets purchased at the event. To guarantee there is enough food for you, please register at least 48 hours prior to the event.



Lecture Title: Mild and efficient access to arynes via aryl "onium" intermediates or reagents

Lecture Summary: Arynes are broadly useful reactive intermediates for organic synthesis because they undergo a wide variety of mechanistically distinct transformations. Two aryne precursors stand out as they exemplify the two most common approaches to arynes. Aryl halides are an efficient means to arynes because they are broadly commercially available, but *ortho*-deprotonation requires strong bases that are not compatible with many functional groups. *o*-Trimethylsilylaryl triflates are a mild way to generate arynes, but require several synthetic steps (>4, ~ 4 days) to prepare. Therefore, mild *and* efficient

methods to generate arynes would substantially expand access to and uses of these novel intermediates. Aryl "onium" compounds have emerged to fill this role as they can be accessed from readily available building blocks, including simple arenes, aryl halides, and arylboron compounds, in a single synthetic step (or *in situ*) and they can generate arynes mild (carbonate and phosphate) or moderate (*tert*-butoxide) bases that exceed the functional group compatibility of *o*-trimethylsilylaryl triflates. Here, we describe our efforts to develop synthetic methods employing diaryliodonium and aryl thianthrenium salts as the next generation of aryne precursors.

Speaker Bio: Dave obtained his BSc (Honors) degree from the University of Victoria (Prof. Dave Berg, supervisor) in 2005 and his PhD degree from the University of Ottawa (Prof. Keith Fagnou, supervisor) in 2010. He was an NSERC Postdoctoral Fellow with Prof. Eric Jacobsen at Harvard University from 2010-2012. Dave started his independent career at Portland State University in 2012. He was promoted to Associate Professor in 2018 and Full Professor in 2024.

Looking Ahead: Join us in the fall for our monthly dinner/lecture meeting series beginning in September!