



## 2025-2026 POCC Lecture Series

### The Student Choice Lecture:

September 18, 2025, 7:30 PM

Prof. Courtney Roberts

University of California–Berkeley

*Arynes as Synthetic Building Blocks*

IN PERSON @:

Carolyn Hoff Lynch Lecture Hall

Chemistry Building, University of Pennsylvania

6:30 Reception in the Nobel Hall

Food and drinks to be provided!

*The Philadelphia Organic  
Chemist's Club*



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**Abstract:** Research in the Roberts group involves looking at unsolved problems in organic synthesis through the perspective of organometallic/inorganic chemistry. One main area of interest for the group is the synthesis of heterocycles through aryne intermediates. Despite their useful reactivity, a number of challenges still remain in the use of arynes including problems with regioselectivity and the synthesis of N-heterocyclic arynes. Using fundamental principles of Ni chemistry, our group is the first to be able to access previously “inaccessible” 5-membered heterocyclic arynes for the first time since they were hypothesized to exist 120 years ago. We are also the first group to demonstrate catalyst controlled regioselectivity in arynes, where all previous examples operated under substrate control. Finally, our group has developed a new class of aryne precursors that can be activated by visible light. Efforts towards these three areas will be discussed.

**Bio:** Prof. Courtney C. Roberts is the 3M-Alumni Professor of Chemistry and McKnight Land-Grant Professor at the University of Minnesota. She obtained her B.S. in chemistry from Pepperdine University in Los Angeles, CA. She then pursued her graduate studies at the University of North Carolina at Chapel Hill, becoming the first graduate student in the laboratory of Prof. Simon Meek. During graduate school, Courtney developed rhodium olefin hydrofunctionalization catalysts using a new class of ligands called carbodicarbenes. After completing her Ph.D. in 2016, Courtney became a postdoctoral research fellow in the laboratory of Prof. Melanie Sanford at the University of Michigan where she explored C–H functionalization reactions using high valent Ni. Courtney began her career as an Assistant Professor at the University of Minnesota in the Fall of 2019 and was promoted with tenure in 2025. The Roberts group focuses on the development of d0 metal catalysts for alkyl–alkyl cross coupling as well as harnessing heterocyclic aryne intermediates for medically relevant building blocks. While at UMN, she has been the recipient of the Amgen Young Investigator Award, the BMS Unrestricted Research Grant, the Sloan Fellowship, the Camille Dreyfus Teacher Scholar Award, the George Taylor Award for Teaching, the 3M-Alumni Professorship in Chemistry, and McKnight Land-Grant Professorship.