



## 2025-2026 POCC Lecture Series

March 19, 2026, 7:30 PM

Prof. Sharon Neufeldt

Montana State University

*New Cross-Coupling Selectivity*

*Enabled by a New Cross-Coupling Mechanism*

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!

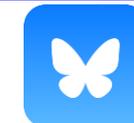
The Philadelphia Organic  
Chemist's Club



[POCCclub.org](http://POCCclub.org)



[@POCC\\_Chem](https://twitter.com/POCC_Chem)



[@POCCChem](https://www.facebook.com/POCCChem)

**Sponsored By:**

**Johnson  
& Johnson**

&



**Abstract:** Pyrimidines appear frequently in synthetic drugs, most notably in protein kinase inhibitors, which are a rapidly growing class of therapeutic agents used primarily to treat cancer and inflammatory diseases. 4-Substituted-2-(arylamino)pyrimidines are particularly privileged, and these can be readily prepared from inexpensive 2,4-dichloropyrimidines. However, synthesis of such compounds in the context of drug discovery can be limited by the requirement to install the 4-substituent prior to the 2-amino group due to the greater reactivity of the C4 site toward both  $S_NAr$  and cross-coupling. Here, the first catalyst-controlled C2-selective amination of 2,4-dichloropyrimidines is described, affording 4-chloro-2-(arylamino)pyrimidines as products. We report evidence that the observed inversion of selectivity arises from a novel catalytic cycle that differs from the canonical mechanism for Pd-catalyzed cross-coupling.

**Bio:** Sharon Neufeldt is an Associate Professor of Chemistry at Montana State University. Her research program centers around mechanistic organometallic chemistry with applications towards new catalytic methods, especially for controlling selectivity. Dr. Neufeldt earned B.S. in Chemistry at Northern Arizona University in Flagstaff and a Ph.D. in Chemistry at the University of Michigan in Ann Arbor. At Michigan, she worked with Melanie Sanford on the development of Pd-catalyzed CH functionalization reactions. She then became the Cram Teacher-Scholar at UCLA where she undertook postdoctoral research with Ken Houk using DFT to study the mechanism and selectivity of transition metal-catalyzed C—H activations. She began her independent career at Montana State University in 2016 and was promoted to Associate Professor in 2023. Her recognitions include an NSF CAREER award (2019), a Thieme Chemistry Journals Award (2020), a Cottrell Scholars Award (2020), and a Presidential Early Career Award for Scientists and Engineers (PECASE, 2024).

The Philadelphia Organic Chemists' Club • Great chemistry for more than seventy years!