



## 2020-2021 POCC Lecture Series

September 24, 2020, 7:30 PM

6:45 reception by Zoom ([LINK](#))

**Prof. Jessica Hoover**

West Virginia University

*Mapping Decarboxylative Coupling Reactions:  
Uncovering New Principles that Govern Catalysis*

Virtual Seminar by Zoom ([LINK](#))

The Philadelphia Organic  
Chemist's Club



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Jessica Hoover earned a B.S. in Chemistry from Harvey Mudd College, CA in 2004, and completed her Ph.D. in 2009 at the University of Washington in Seattle under the direction of Professors Jim Mayer and Forrest Michael. She conducted postdoctoral work with Shannon Stahl, developing practical copper-catalyzed aerobic alcohol oxidation reactions and studying the corresponding reaction mechanisms. Jessica began her independent academic career at West Virginia University (WVU) in 2012 as Assistant Professor, and she was promoted to Associate Professor in 2018. The Hoover research group at WVU focuses on developing and understanding new reactions, particularly C-C and C-heteroatom bond forming redox reactions, employing first-row transition metal catalysts.

**Abstract:** Oxidative decarboxylative coupling reactions provide an attractive route to generate a diverse array of functionalized arenes from inexpensive and readily available carboxylic acids. These methods, however, are underutilized, in part, due to limitations in the scope of the carboxylic acid coupling partner and the need for stoichiometric silver salt oxidants. Our recent efforts have focused on understanding the mechanisms of these reactions, in particular the origins of these limitations, to enable the design of efficient and universal decarboxylative coupling reactions. In the course of these studies, we have uncovered new fundamental principles that govern catalysis in these systems, and others. This talk will describe our recent work in this area focusing on two newly identified features of catalysis.

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