
J. Clarence Karcher

Lecture

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We Are Pleased to Announce a Seminar
Presented By

John Montgomery
University of Michigan

Friday, February 17, 2023
4:15 pm
NWC 1313

New Catalytic Strategies for Aldehyde and Acetal Functionalization

This presentation will describe our current efforts towards the development of a suite of new synthetic processes for aldehyde additions and for iterative oligosaccharide assembly. The carbonyl addition approach seeks to develop practical methods avoid the requirement of generating metalated nucleophiles such as Grignard reagents. Through the strategy we have developed, a wide array of functional groups including redox-active esters, alkyl bromides, epoxides, and alkyl tosylates can undergo direct addition to aldehydes under reductive conditions. Current work is extending this strategy to include the direct addition of unactivated C-H bonds to carbonyl substrates through site-selective C-H activation. In the carbohydrate area, the presentation will describe our efforts to rapidly prepare stereochemically defined oligosaccharides in a single step starting from monosaccharide precursors. The presentation will describe practical methodological advances as well as a description of mechanism in boron-catalyzed glycosylations.

Refreshments will be served.