



Professor Alison Frontier University of Rochester

Friday, April 14, 2023

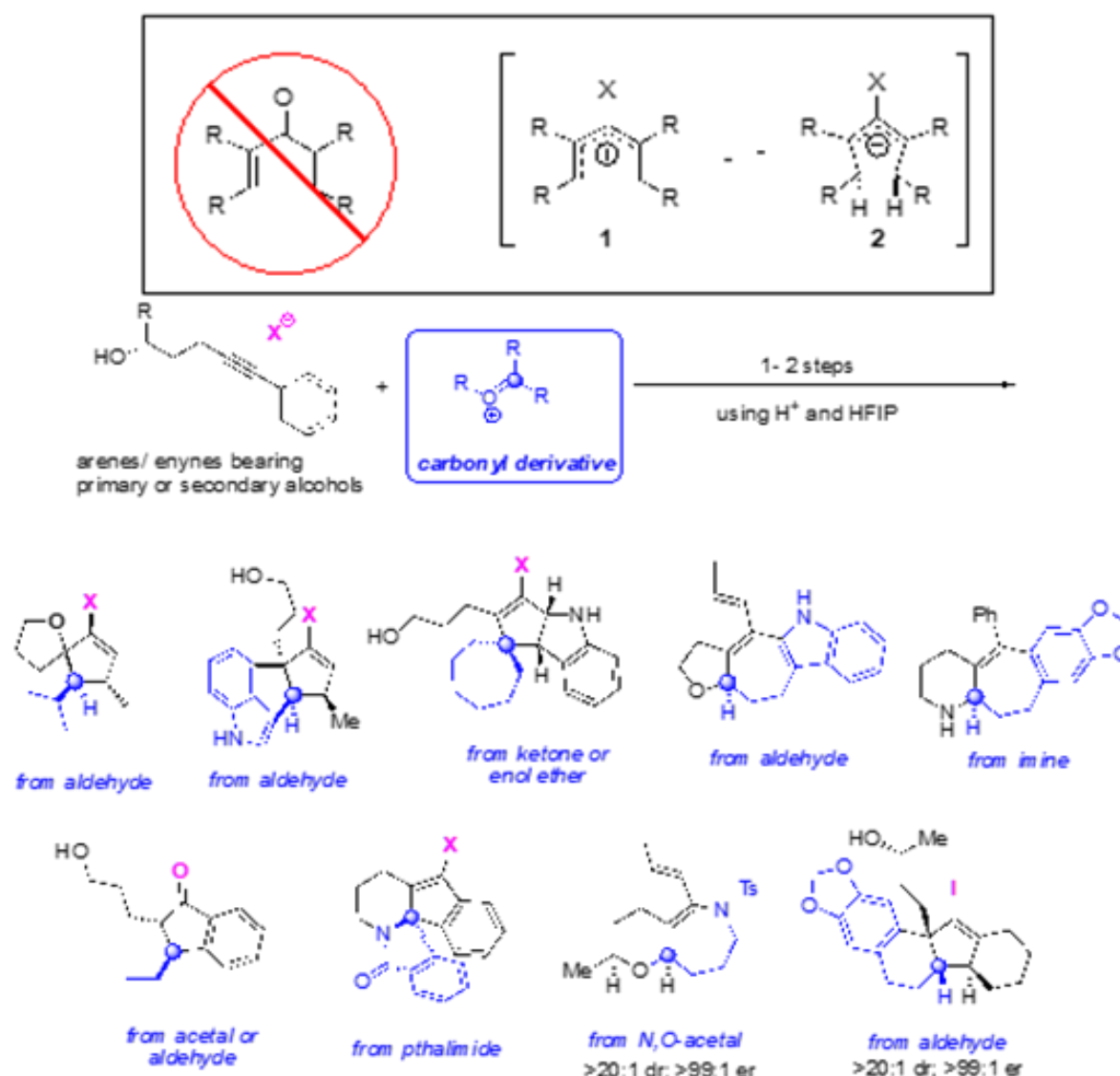
12:30AM-2:30PM—Panel Session w/ Students
On-site—CCB 1203

4:00—5:30PM—Speaker Seminar Presentations
On-site—CCB 1303
Virtual—Zoom*

Host: Professor Kate Waldie

“Stereocontrolled Cationic Cascades for Organic Synthesis”

The development of new cyclization strategies for rapid assembly of complex molecules from simple precursors will be described. These strategies have arisen from our work on the Nazarov pentannulation; an electrocyclic, cationic cyclization that occurs diastereospecifically. Its versatility began to increase dramatically when chemists learned to capitalize on the multistep nature of the reaction. Advances in (a) reactant design and (b) method used to generate the cationic intermediates expand the scope of the cyclization, extending far beyond the preparation of cyclopentenones. This talk focuses on recent advances, featuring new Prins coupling/ cyclization sequences designed and implemented in our lab. These cascade reactions combine simple reactants and enable access to a variety of different cyclopentanoid derivatives, as well as fused N-heterocyclic scaffolds. Reaction cascades predicated on the “halo-Nazarov” cyclization will be described, as part of a general approach to constructing densely functionalized molecules that we refer to as a “carbonyl pinch” strategy.



*For Zoom information, please contact Loretta Lupu @ lal275@chem.rutgers.edu