Enantioselective Synthesis of Saturated Heterocycles Via Intramolecular Haloetherification and Aminooxygenation of Alkenes and Applications Thereof

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Abstract: Saturated heterocycles are important moieties in bioactive compounds, and many of them are chiral. Many drug discovery efforts require their concise and versatile synthesis. The development of new copper-catalyzed reactions for the synthesis of chiral saturated oxygen and nitrogen heterocycles will be presented, in particular, haloetherification and aminooxygenation. Mechanistic aspects and synthetic applications will be discussed.

Biography: Prof. Sherry Chemler obtained her PhD in 1999 from Indiana University, where she worked with Prof. Bill Roush on asymmetric polypropionate synthesis. In her subsequent NIH postdoctoral fellowship with Prof. Sam Danishefsky at the Memorial Sloan-Kettering Cancer Institute, she developed *B*-alkyl Suzuki cross coupling macrocyclization technology for application in natural product synthesis. She started her independent career at SUNY, Buffalo in 2002. She is an AAAS Fellow and recipient of the ACS Cope Scholar Award.