

Organic Seminar

Catalytic Activation and Transformations Of Small Molecules



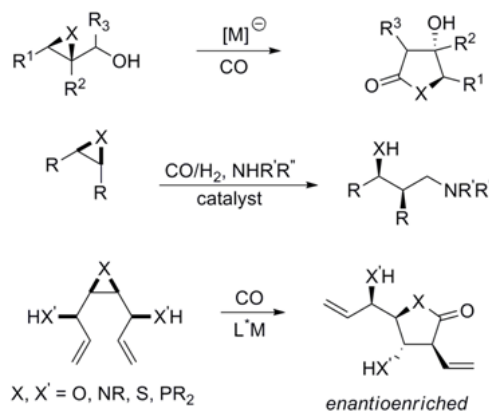
**Professor
Jennifer
Schomaker**

**Thursday,
September 10,
2009
11:00 a.m.**

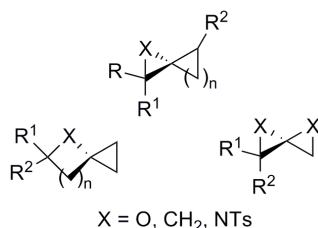
**Room 1315
Chemistry**

New carbonylation methodologies will be discussed as part of a larger program aimed at using inexpensive, readily available heteroatomic gaseous molecules in asymmetric synthesis.

- carbonylative ring expansion of aziridine alcohols
- new methods for the hydroaminomethylation of strained rings
- carbonylative dynamic kinetic asymmetric transformations of strained rings



Initial efforts directed towards the synthesis and reactivity of unusual heteroatom-containing spirocycles will be described.



- building blocks for synthesis
- new catalysts for C-N bond formation
- use of spirocycles as manifolds to develop catalysts tuned for selectivity in the activation of C-H, C-C or C-X bonds

Future plans for the development of catalysts for environmentally friendly oxidations of renewable hydrocarbon feedstocks will be presented.

- development of new catalysts that use N₂O as a mild, selective oxidizing agent
- bimetallic catalysts for the selective oxidation of polyunsaturated substrates

