UCLA Chemistry & Biochemistry

Organic Colloquium

presenting

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"Chiral N,O- and O,O-Acetals: New Chiral Building Blocks"

Abstract. Developing new synthetic methodologies that create chiral building blocks in a selective and efficient manner represents a primary goal in synthetic organic chemistry. Due to their reactivity and chemoselectivity, organometal catalysts have been playing a pivotal role in this area. In this context, we wish to report our recent progress on the synthesis and the use of chiral N,O- and O,O-acetals.

These chiral acetals are found as the key moiety in numerous bioactive natural products and biopolymers (such as oligosaccharides and nucleic acids). In addition, they can be used as precursors of the iminium and oxacarbenium ions that allow late-stage C-C bond formation reactions. The seemingly unstable chiral acetals were successfully synthesized by the simple Pd-catalyzed asymmetric addition of suitably protected amines (and alcohols) to alkoxyallenes with excellent enantioselectivity. In this presentation, optimization process of this unique asymmetric reaction as well as some synthetic application of the method will be introduced.

Thursday, April 7, 2016

5:00 PM

Cram Conference Room – 3440 Molecular Sciences Bldg

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