

*Organic Syntheses Symposium sponsored by the  
Organic Syntheses Organization and the  
The Department of Chemistry and Biochemistry*

*Presents a Seminar Titled:*

*“Asymmetric Catalysis and Enantioselective  
Fluorescent Sensors”*



*Presented By*

***Dr. Lin Pu***

*Professor of Chemistry  
Dept. of Chemistry  
University of Virginia*

Highly enantioselective catalyst systems based on 1,1'-binaphthyl molecules have been developed for the asymmetric alkyne addition to aldehydes. This has allowed the easy access of a broad range of functional chiral propargylic alcohols with high enantiomeric purity. The use of the chiral propargylic alcohols in the construction of multicyclic organic compounds has been explored. New strategies have been developed to efficiently synthesize the cyclic framework of molecules of biological and pharmaceutical significance. 1,1'-Binaphthyl compounds are also used to construct structurally diverse chiral fluorescent sensors to carry out highly enantioselective and sensitive recognition of chiral amino alcohols, diamines,  $\alpha$ -hydroxycarboxylic acids, and amino acid derivatives. These sensors are potentially useful for the rapid determination of the enantiomeric composition of chiral organic compounds.

**Friday, March 18th at 3:00 in OCNPS 100**