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DEPARTMENT OF CHEMISTRY AND BIOCHEMISTRY

presents

Special Organic Seminar

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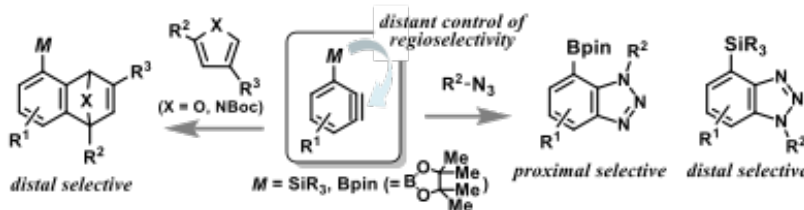
Professor Takashi Ikawa



Graduate School of Pharmaceutical Sciences
Osaka University

“Challenges in Regiocontrol of Benzyne Reactions”

Abstract. Benzyne (= *ortho*-Benzyne) is one of the most important reactive intermediates bearing a triple bond in a benzene ring. Numerous benzyne reactions have been developed during the last three decades while a mild benzyne generation using a fluoride ion has been recognized as an extraordinary useful method. However, it is also true that chemists have suffered from low regioselectivities of unsymmetrically substituted benzyne. Therefore, specific directing groups that have a strong effect on controlling the orientation of the cycloaddition reactions and also can be converted into any other substituents after the cycloaddition have been long desired. In this seminar, I would like to present some of our recent work on regioselectivity control of benzyne reactions using substituent effect of silyl and boryl groups. The origin of regiochemistry would be theoretically explained by DFT (density functional theory) calculation at the B3LYP/6-31G(d) level and NBO (Natural Bond Orbital) analysis.



Monday, August 18, 2014

3:00 PM

Cram Conference Room – 3440 Molecular Sciences Bldg

For further information, contact David Gingrich at gingrich@chem.ucla.edu