

화학과 대학원 세미나

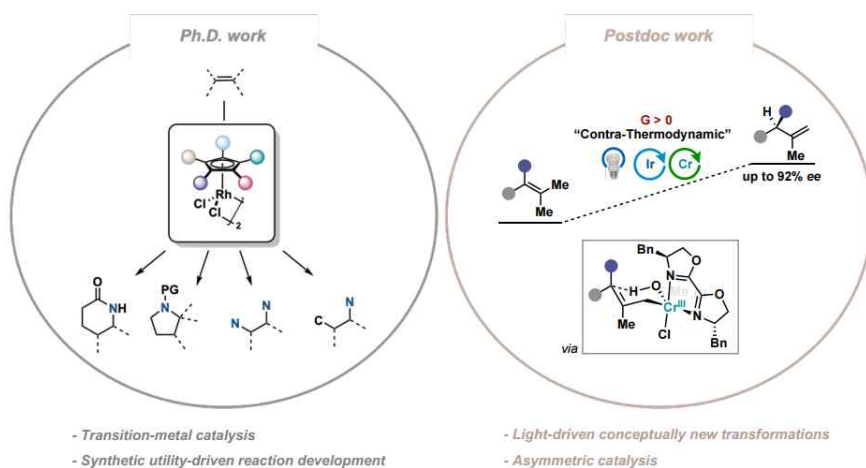
일시 : 2023년 10월 19일 (목) 오후 4 : 30 장 소 : 이학관 331

Rh(III)-Catalyzed Difunctionalization and Contra-Thermodynamic Enantioselective Isomerization of Alkenes

Alkenes are ubiquitous functional groups in numerous organic molecules. Although significant progress has been made in the stereoselective synthesis of alkenes and their interconversions into other functional groups, the development of new and efficient synthetic transformation converting alkenes into valuable products is still of great interest.

In the first part of the talk, I will present my Ph.D. works utilizing Rh(III) catalysis to develop unique and efficient synthetic strategies that give rapid access to biologically essential nitrogen-containing products from readily available alkenes.¹⁻³

In the second part of the talk, I will introduce light-driven contra-thermodynamic catalysis that converts thermodynamically more stable internal alkenes into less stable terminal alkenes in a redox-neutral, catalytic, and asymmetric fashion using photoredox & Cr dual catalysis.⁴⁻⁵



(1) **Lee, S.**; Lei, H.; Rovis, T*. A Rh(III)-Catalyzed Formal [4+1] Approach to Pyrrolidines from Unactivated Terminal Alkenes and Nitrene Sources. *J. Am. Chem. Soc.* **2019**, 141, 12536.

(2) **Lee, S.**; Semakul, N.; Rovis, T*. Direct Regio- and Diastereoselective Synthesis of δ -Lactams from Acrylamides and Unactivated Alkenes Initiated by Rh(III)-Catalyzed C-H Activation. *Angew. Chem. Int. Ed.* **2020**, 59, 4965.

(3) **Lee, S.**; Rovis, T*. Rh(III)-Catalyzed Three-Component Syn-Carboamination of Alkenes Using Arylboronic Acids and Dioxazolones. *ACS Catalysis* **2021**, 11, 8585.

(4) **Lee, S.**; Xu, E. Y.; Knowles, R. R*. **2023**, Manuscript in preparation.

(5) **Lee, S.**; Lin, A.; Knowles, R. R*. **2023**, *Acc. Chem. Res.* Manuscript in preparation.

이 수 민 교수
건국대학교 화학과