



学 术 报 告

—Asian Core Program Lectureship Seminar—

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Young Ho Rhee Seoul National University (BS 1990; MS, 1992), Stanford University (1997-2003) (PhD, 1996, with Prof. Barry M. Trost), Postdoc. University of California at Irvine (2003-2005, with Prof. Larry E. Overman), Assis. Prof. Pohang University of Science and Technology (POSTECH) (2005-2010), Assoc. Prof. POSTECH (2010-).

Awards: Thieme Journal Award (2007), ACP Lectureship Awards (2010, 2011), Excellence Award (Organic Division, Korean Chemical Society) (2012).

Developing New Diversity-Generating Synthetic Strategies Based on Metal Catalysis

The diversity of natural products has attracted synthetic chemists over the past decades. Thus, developing new methodologies that can introduce molecular diversity with high chemical efficiency represents a primary goal in synthetic organic chemistry. Due to their high reactivity and chemoselectivity, organometal catalysts may play a unique role. In this presentation, our achievements in this area will be briefly introduced. First part of the talk will focus on developing structural diversity-generating strategies using Au-catalyzed reactions of 3-alkoxy-1,6-enynes.^{1,2} The second part of talk will reveal our recent results on the synthesis of Pd-catalyzed synthesis of stereodefined *N,O*-acetals and their utilities as key elements in developing stereodiversity-generating^{3,4} and substituent diversity-generating strategies.⁵ Mechanistic aspects of the catalytic reactions as well as potential synthetic applications will be also discussed.

References

- 1). *Angew. Chem. Int. Ed.* **2008**, 47, 2263.
- 2). *Org. Lett.* **2008**, 10, 2605.
- 3). *J. Am. Chem. Soc.* **2009**, 131, 14660.
- 4). *J. Am. Chem. Soc.* **2012**, 134, 4011.
- 5). *Angew. Chem. Int. Ed.* **2012**, in press.

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You are welcome!