

## Todd K. Hyster

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### Professional Experience

Assistant Professor of Chemistry, Princeton University July 2015 – Current

### Education and Training

NIH-NRSA Postdoctoral Fellow August 2013 – June 2015  
California Institute of Technology, Pasadena CA  
Advisor: Professor Frances H. Arnold

Ph.D. in Chemistry August 2008 – June 2013  
Colorado State University, Fort Collins, CO  
Advisor: Professor Tomislav Rovis

B. Sc. in Chemistry September 2005 – May 2008  
University of Minnesota, Twin Cities, MN  
Advisor: Professor Christopher J. Douglas

### Additional Training and Experience

Marie Curie Fellow January 2012 – April 2012  
University of Basel, Basel, Switzerland  
Advisor: Professor Thomas R. Ward

### Awards and Honors

NIH-Ruth L. Kirschstein NRSA Fellowship August 2013 – June 2015  
Reaxys PhD Prize Finalist 2014  
Aldrich Graduate Student Innovation Award 2013  
Marie Curie Fellowship, International Training Network, BioChemLig 2012  
OMCOS 16 IUPAC Poster Award 2011  
ADC Foundation Scholarship 2004-2008  
Preus Academic Scholarship 2004

### Publications

1. **Hyster, T. K.** High-Valent Ni(II)- and Co(III)-Catalyzed C–H Activation *Catal. Lett.* **2015**, *145*, 458.  
\* Invited Contribution
2. **Hyster, T. K.**; Farwell, C. C.; Buller, A. R.; McIntosh, J. A.; Arnold, F. H.\* Enzyme-Controlled Nitrogen-atom Transfer Enables Regioselective C–H Amination *J. Am. Chem. Soc.* **2014**, *136*, 15505.
3. **Hyster, T. K.** “Di-tert-Butylcyclopentadiene” *Electronic Encyclopedia of Reagents for Organic Synthesis*, 2014.

4. **Hyster, T. K.**; Dalton, D. M.; Rovis, T.\* Ligand Design for Rh(III)-Catalyzed C–H activation: An Unsymmetrical Cyclopentadienyl Group Enables a Regioselective Synthesis of Dihydroisoquinolones. *Chem. Sci.* **2015**, *1*, 254.
5. **Hyster, T. K.**; Arnold, F. H.\* P450<sub>BM3</sub>-Axial Mutations: A Gateway to Non-Natural Reactivity *Isr. J. Chem* **2015**, *55*, 14.  
\* Invited Contribution
6. Farwell, C. C.; McIntosh, J. A.; **Hyster, T. K.**; Wang, Z. J.; Arnold, F. H.\* Enantioselective Imidation of Sulfides via Enzyme-Catalyzed Intermolecular Nitrogen-Atom Transfer *J. Am. Chem. Soc.* **2014**, *136*, 8766.
7. Davis, T. A.; **Hyster, T. K.**; Rovis, T.\* Rh(III)-Catalyzed Intramolecular Hydroarylations, Amidoarylations, and Allylations: Three Pathways Determined by Amide Directing Group. *Angew. Chem. Int. Ed.* **2013**, *52*, 14181.
8. **Hyster, T. K.**; Knörr, L.; Rovis, T.\*; Ward, T. R.\* Biotinylated Rh(III) Complex in Engineered Streptavidin for Rate Enhanced Asymmetric C-H Activation “Practical Methods in Biocatalysis and Biotransformations, *In Press*
9. **Hyster, T. K.**; Rovis, T.\* Rh(III)-Catalyzed C–H Activation Mediated Synthesis of Isoquinolones from Amides and Cyclopropanes. *SynLett.* **2013**, *24*, 1842.
10. **Hyster, T. K.**; Ruhl, K. E.; Rovis, T.\* A Coupling of Benzamides and Donor/Acceptor Diazo Compounds To Form  $\gamma$ -Lactams via Rh(III)-Catalyzed C–H Activation. *J. Am. Chem. Soc.* **2013**, *135*, 5364.
11. **Hyster, T. K.**; Knörr, L.; Ward, T. R.\*; Rovis, T.\* Biotinylated Rh(III) Complex in Engineered Streptavidin for Rate Enhanced Asymmetric C-H Activation. *Science*, **2012** *338*, 500.
12. **Hyster, T. K.** “Ferrocenium Salts” *Electronic Encyclopedia of Reagents for Organic Synthesis*, 2012.
13. Du, Y.; **Hyster, T. K.**; Rovis, T.\* Rhodium(III)-Catalyzed Oxidative Carbonylation of Benzamides with Carbon Monoxide. *Chem. Commun.* **2011**, *47*, 12074.
14. **Hyster, T. K.**; Rovis, T.\* Pyridine Synthesis from Oximes and Alkynes via Rhodium (III) Catalysis: Cp\* and Cp<sup>†</sup> Provide Complementary Selectivity. *Chem. Commun.* **2011**, *47*, 11846.
15. **Hyster, T. K.**; Rovis, T.\* An Improved Catalyst Architecture for Rhodium (III) Catalyzed C–H Activation and its Application to Pyridone Syntheses. *Chem. Sci.* **2011**, *2*, 1606.
16. **Hyster, T. K.**; Rovis, T.\* Rhodium-Catalyzed Oxidative Cycloaddition of Benzamides and Alkynes via C–H/N–H Activation. *J. Am. Chem. Soc.* **2010**, *132*, 10565.
17. Wentzel, M. T.; Reddy, V. J.; **Hyster, T. K.**; Douglas, C. J.\* Chemoselectivity in Catalytic C–C and C–H Bond Activation: Controlling Intermolecular Carboacylation and Hydroarylation of Alkenes. *Angew. Chem. Int. Ed.* **2009**, *48*, 6121.

#### Oral Presentations

1. **Hyster, T. K.**; Ward, T. R.; Rovis, T. Graduate Student Innovation Award Symposium, Milwaukee, WI, August 15, 2013.

2. **Hyster, T. K.;** Ward, T. R.; Rovis, T. 3<sup>rd</sup> International Symposium on Molecular Activation, Steamboat Springs, CO July 26-28, 2013
3. **Hyster, T. K.;** Ward, T. R.; Rovis, T. 2<sup>nd</sup> Meyers Symposium, Fort Collins, CO, Oct. 27, 2012.
4. **Hyster, T. K.;** Ward, T. R.; Rovis, T. Organic Reactions and Processes: Gordon Research Conference, Smithfield, RI, July 15-20, 2012. (*Selected Poster Presentation*)
5. **Hyster, T. K.;** Rovis, T.; Ward, T. R. BioChemLig 2012, Basel, Switzerland, Feb 13-15 2012.
6. **Hyster, T. K.;** Rovis, T. Abstracts of Papers, 240<sup>th</sup> ACS National Meeting and Exposition, Boston, MA, Aug 22-26, 2010; American Chemical Society: Washington, DC, 2010; ORGN 275.