

# Zhongxing Huang

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## Positions

2019-current      **Assistant Professor, University of Hong Kong**  
2017-2019        **Postdoctoral Fellow, Stanford University**  
                      Advisor: Professor Barry M. Trost

## Education

2012-2017        **Ph.D. in Chemistry, University of Chicago**  
                      Advisor: Professor Guangbin Dong  
2008-2012        **B.S. in Chemistry, Peking University**  
                      Advisor: Professor Jianbo Wang and Professor Yan Zhang

## Awards and Honors

1. Chinese Government Award for Outstanding Self-Financed Students Abroad (2015)
2. International Precious Metals Institute (IPMI) Elemental graduate student award (2015)
3. BaoSteel Scholarship, Peking University (2010-2011)

## Publications

1. Trost, B. M.; Wang, Y.; Buckl, A. K.; **Huang, Z.**; Nguyen, M. H.; Kuzmina, O., "Total Synthesis of Bryostatin 3", *Science* **2020**, *368*, 1007.
2. Trost, B. M.; **Huang, Z.**, "Catalytic (3+2) Palladium-Aminoallyl Cycloaddition with Conjugated Dienes", *Angew. Chem. Int. Ed.* **2019**, *58*, 6396.
3. Trost, B. M.; **Huang, Z.**; Murhade, G. M., "Catalytic Palladium-Oxyallyl Cycloaddition", *Science* **2018**, *362*, 564.
4. **Huang, Z.**; Dong, G., "Palladium-Catalyzed Redox Cascade for Direct  $\beta$ -Arylation of Ketones", *Tetrahedron* **2018**, *74*, 3253.
5. Zhu, Z.; Li, X.; Chen, S.; Chen, P.; Billett, B.; **Huang, Z.**; Dong, G., "Cobalt-Catalyzed Intramolecular Alkyne/Benzocyclobutenone Coupling: C–C Bond Cleavage via a Tetrahedral Dicobalt Intermediate", *ACS Catal.* **2018**, *8*, 845.
6. **Huang, Z.**; Dong, G., "Site-Selectivity Control in Organic Reactions: A Quest to Differentiate Reactivity among the Same Kind of Functional Groups", *Acc. Chem. Res.* **2017**, *50*, 465 (invited commentary).
7. **Huang, Z.**; Wang, C.; Dong, G., "A Hydrazone-Based Directing Group Strategy for  $\beta$ -C–H Oxidation of Aliphatic Amines", *Angew. Chem. Int. Ed.* **2016**, *55*, 5209.
  - Highlighted by *Organic Chemistry Portal*, Jan. 2017
8. Xu, Y.; Su, T.; **Huang, Z.**; Dong, G., "Practical Direct  $\alpha$ -Arylation of Simple Cyclopentanones via Palladium-Enamine Cooperative Catalysis", *Angew. Chem. Int. Ed.* **2016**, *55*, 2559.
9. **Huang, Z.**; Lim, H. N.; Mo, F.; Young, M.; Dong, G., "Transition Metal-Catalyzed Ketone-Directed or Mediated C–H Functionalization", *Chem. Soc. Rev.*, **2015**, *44*, 7764 (invited review).
10. **Huang, Z.**; Sam, Q. P.; Dong, G., "Palladium-Catalyzed Direct  $\beta$ -Arylation of Ketones with Diaryliodonium Salts: a Stoichiometric Heavy Metal-Free and User-Friendly Approach", *Chem. Sci.* **2015**, *6*, 5491.
11. **Huang, Z.**; Dong, G., "Catalytic C–C Bond Forming Transformations via Direct  $\beta$ -C–H Functionalization of Carbonyl Compounds", *Tetrahedron Lett.* **2014**, *55*, 5869 (invited review).
12. **Huang, Z.**; Dong, G., "Catalytic Direct  $\beta$ -Arylation of Simple Ketones with Aryl Iodides", *J. Am. Chem. Soc.* **2013**, *135*, 17747.
  - Highlighted by *C&EN News*, "Metal Duo Makes  $\beta$ -Aryl Ketones", **2013**, *91*, 28.

- Highlighted by SynForm, **2014**, 2.
  - Highlighted by *Organic Chemistry Portal*, Sep. 2014
13. **Huang, Z.**; Yang, Y.; Xiao, Q.; Zhang, Y.; Wang, J., "Auto-Tandem Catalysis: Synthesis of Acridines by Pd-Catalyzed C=C Bond Formation and C(sp<sup>2</sup>)-N Cross-Coupling", *Eur. J. Org. Chem.* **2012**, 6586.
  14. Xia, Y.; Qu, S.; Xiao, Q.; Wang, Z.; Qu, P.; Chen, L.; Liu, Z.; Tian, L.; **Huang, Z.**; Zhang, Y.; Wang, J., "Palladium-Catalyzed Carbene Migratory Insertion Using Conjugated Ene-Yne-Ketones as Carbene Precursors", *J. Am. Chem. Soc.* **2013**, *135*, 13502.
  15. Li, Y.; **Huang, Z.**; Xu, P.; Zhang, Y.; Wang, J., "Studies on the Reactivity of Migrating Group in [2,3]-Sigmatropic Rearrangement of Sulfur Ylides", *Acta Chimica Sinica* **2012**, *70*, 2024.
  16. Li, Y.; **Huang, Z.**; Wu, X.; Xu, P.; Jin, J.; Zhang, Y.; Wang, J., "Rh(II)-Catalyzed [2,3]-Sigmatropic Rearrangement of Sulfur Ylides derived from *N*-Tosylhydrazones and Sulfides", *Tetrahedron* **2012**, *68*, 5234.
  17. Li, Y.; Shi, Y.; **Huang, Z.**; Wu, X.; Xu, P.; Zhang, Y.; Wang, J., "Catalytic Thia-Sommelet-Hauser Rearrangement: Application to the Synthesis of Indolin-2-ones", *Org. Lett.* **2011**, *13*, 1210.

### Patents

1. Dong, G.; **Huang, Z.**, "Direct  $\beta$ -Arylation of Carbonyl Compounds", US Patent App 20160229778 A1.

### Presentations

1. "Direct  $\beta$ -Arylation of Simple Ketones with Aryl Halides", **Huang, Z.**; Dong, G. 247<sup>th</sup> ACS National Meeting, March 2014, Dallas.
2. "Direct  $\beta$ -Arylation of Simple Ketones with Aryl Halides", **Huang, Z.**; Dong, G. Procter & Gamble Post Competition, October, 2013, University of Texas at Austin.
3. "Palladium-Catalyzed Reaction of *o*-Dihalobenzenes and *N*-Tosylhydrazones: A Novel Approach to Acridines", **Huang, Z.**; Zhang, Y.; Wang, J. CCME-IOC & ICCAS-LMRF Alfa Aesar Research Seminar, February 2012, Beijing, China.