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**Education:** June 2002 - March 2005 **Postdoctoral Research Associate**  
University of California, Berkeley  
Mentors: Dr. Paul Bartlett, Dr. Dean Toste  
Aug. 1998 - May 2002 **Ph.D.** Department of Chemistry  
University of Maryland, College Park  
Mentor: Dr. Jeffery T. Davis  
Sept. 1994 - July 1997 **MS**, Department of Chemistry  
Nankai University, China  
Sept. 1990 - July 1994 **BS**, Department of Chemistry  
Nankai University, China

## Professional Experience:

August 2015 - present Associate Professor  
Department of Chemistry  
University of South Florida  
June 2011 - August 2015 Associate Professor  
Director of Graduate Study  
Bennett Department of Chemistry  
West Virginia University  
Aug. 2005 - May 2011 Assistant Professor  
Bennett Department of Chemistry  
West Virginia University  
April 2005 - July 2005 Platform Research Scientist  
General Electric Advanced Material  
June 2002 - March 2005 Postdoctoral Research Associate  
University of California, Berkeley

## Publications:

### *Independent research (since 2005):*

- (92) Smith, C. A.; Motika, S. E.; Wojtas, L.; Shi, X.\* "Accessing Alternative Reaction Pathways of the Intermolecular Condensation between Homo-Propargyl Alcohols and Terminal Alkynes through Divergent Gold Catalysis" *Chem. Commun.* **2017**, 53, 2315-2318.
- (91) Cai, R.; Ye, X.; Sun, Q.; He, Q.; He, Y.; Ma, S.\*; Shi, X.\* "Anchoring Triazole-Gold(I) Complex into Porous Organic Polymer to Boost the Stability and Reactivity of Gold(I) Catalyst" *ACS Catal.* **2017**, 7, 1087-1092.

- (90) Basanta-Sanchez, M.; Wang, R.; Liu, Z.; Ye, X.; Li, M.; Shi, X.; Agris, P. F.; Zhou, Y.; Huang, Y.\*; Sheng, J.\* "TET1-Mediated Oxidation of 5-Formylcytosine (5fC) to 5-Carboxycytosine (5caC) in RNA" *ChemBioChem*. **2017**, *18*, 72-76.
- (89) Hosseyni, S.; Smith, C. A.; Shi, X.\* "Gold-Catalyzed Vinyl Ether Hydroalkynylation: An Alternative Pathway for the Gold-Catalyzed Intermolecular Reaction of Alkenes and Alkynes" *Org. Lett.* **2016**, *18*, 6336-6339.
- (88) Motika, S. E.; Wang, Q.; Akhmedov, N. G.; Wojtas, L.; Shi, X.\* "Regioselective Amine-Borane Cyclization: Towards the Synthesis of 1,2-BN-3-cyclohexene via Copper Assisted Triazole Gold Catalysis" *Angew. Chem. Int. Ed.* **2016**, *55*, 11582-11586.
- (87) Peng, H.; Cai, R.; Chang, X.; Chen, H.\*; Shi, X.\* "Nucleophile Promoted Gold Redox Catalysis with diazonium: C-Br, C-S and C-P Bond Formation through Catalytic Sandmeyer Coupling" *Chem. Sci.* **2016**, *7*, 6190-6196.
- (86) Yang, Y.; Hu, W.; Ye, X.; Wang, D.\*; Shi, X.\* "Preparation of Triazole Gold(III) Complex as an Effective Catalyst for the Synthesis of E-a-Haloenones" *Adv. Synth. Catal.* **2016**, *358*, 2583-2588.
- (85) Thummanapelli, S.; Hosseyni, S.; Su, Y.; Akhmedov, N.; Shi, X.\* "Ligand-Controlled Gold-Catalyzed Cycloisomerization of 1,n-Enyne Esters toward Synthesis of Dihydronaphthalene" *Chem. Commun.* **2016**, *52*, 7687-7690.
- (84) Ye, X.; Xu, C.; Wojtas, L.; Akhmedov, N.; Chen, H.\*; Shi, X.\* "Silver-Free Palladium-Catalyzed sp<sup>3</sup> and sp<sup>2</sup> C-H Alkynylation Promoted by a 1,2,3-Triazole Amine Directing Group" *Org. Lett.* **2016**, *18*, 2970-2973.
- (83) Hosseyni, S.; Wojtas, L.; Li, M.; Shi, X.\* "Intermolecular Homopropargyl Alcohol Addition to Alkyne and a Sequential 1,6-Enyne Cycloisomerization with Triazole-Gold Catalyst" *J. Am. Chem. Soc.* **2016**, *138*, 3994-3997.
- (82) Yang, Y.; Qin, A.; Zhao, K.; Wang, D.\*; Shi, X.\* "Design and Synthesis of Alanine Triazole Ligands and Application in Promotion of Hydration, Allene Synthesis and Borrowing Hydrogen Reactions" *Adv. Synth. Catal.* **2016**, *358*, 1433-1439.
- (81) Yang, Y.; Shen, Y.; Wang, X.; Zhang, Y.; Wang, D.\*; Shi, X.\* "Triazole Acetyl Gold(III) Catalyzed Meyer-Schuster Rearrangement of Propargyl Alcohols" *Tetrahedron Lett.* **2016**, *57*, 2280-2282.
- (80) Ye, X.; Zhang, Y.; He, Y.; Shi, X.\* "1,2,3-Triazole amine as directing group in promoting catalytic oxidative C-H olefination under aerobic conditions" *Tetrahedron*, **2016**, *72*, 2756-2762.
- (79) Wang, D.\*; Yu, X.; Yao, W.; Hu, W.; Ge, C.; Shi, X.\* "Copper-Catalyzed Reaction Cascade of Thiophenol Hydroxylation and S-Arylation through Disulfide-Directed C-H Activation" *Chem. Eur. J.* **2016**, *22*, 5543-5546.
- (78) Ma, Z.; Lin, Y.; Cheng, Y.; Wu, W.; Cai, R.; Chen, S.; Shi, B.; Han, B.; Shi, X.; Zhou, Y.; Du, L.; Li, M.\* "Discovery of the First Environment-Sensitive Near-Infrared (NIR) Fluorogenic Ligand for  $\alpha$ 1-Adrenergic Receptors Imaging in Vivo" *J. Med. Chem.* **2016**, *59*, 2125-2162.
- (77) Dong, B.; Xi, Y.; Su, Y.; Akhmedov, N. G.; Petersen, J. L.; Shi, X.\* "Gold/gallium-catalyzed annulation of 1,3-dicarbonyl compounds and cyclopropylacetylenes for synthesis of substituted cyclopentenes" *RSC Adv.* **2016**, *6*, 17386-17389.
- (76) Hosseyni, S.; Ding, S.; Su, S.; Akhmedov, N. G.; Shi, X.\* "Triazole-Gold Promoted Intermolecular Propargyl Alcohol Addition to Alkyne: Reaction Cascade Toward

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- (75) Qin, C.; Su, Y.; Shi, X.\*; Jiao, N.\* "Split A Substrate to Three Parts and Reassemble: Au-Catalyzed Nitrogenation of Alkynes via C-C and C≡C Bond Cleavages" *Angew. Chem. Int. Ed.* **2016**, 55, 350-354.
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- (73) Jing J.; He L.; Sun, A.; Quintana, A.; Ding, Y.; Ma, G.; Tan, P.; Liang, X.; Zheng, X.; Chen, L.; Shi, X.; Zhang, S.; Zhong, L.; Huang, Y.; Dong, M.; Walker, C. L.; Hogan, P. G.; Wang, Y.; Zhou, Y.\* "Proteomic mapping of ER-PM junctions identifies STIMATE as a regulator of Ca(2+) influx" *Nat. Cell Biol.* **2015**, 17, 1339-1347.
- (72) Peng, H.; Akhmedov, N. G.; Liang, Y.; Jiao, N.\*; Shi, X.\* "Synergistic Gold and Iron Dual Catalysis: Preferred Radical Addition toward Vinyl-Gold Intermediate over Alkene" *J. Am. Chem. Soc.* **2015**, 137, 8912-8915.
- (71) Cai, R.; Lu, M.; Aguilera, E. Y.; Xi, Y.; Akhmedov, N. G.; Petersen, J. L.; Chen, H.\*; Shi, X.\* "Ligand-Assisted Gold-Catalyzed Cross-Coupling with Aryldiazonium Salts: A Case of External Oxidant Free Redox Gold Catalysis" *Angew. Chem. Int. Ed.* **2015**, 54, 8772-8776.
- (70) Ye, X.; Petersen, J. L.; Shi, X.\* "Nickel-Catalyzed Directed Sulfenylation of sp<sup>2</sup> and sp<sup>3</sup> C-H Bonds" *Chem. Commun.* **2015**, 51, 7863 - 7866.
- (69) Shi, Y.; Ye, X.; Gu, Q.; Shi, X.\*; Song, Z.\* "Facile Synthesis and Stereo-Resolution of Chiral 1,2,3-Triazole" *Org. Biomol. Chem.* **2015**, 13, 5407-5411.
- (68) Dong, B.; Su, Y.; Ye, X.; Petersen, J. L.; Shi, X.\* "Synthesis and Characterization of Fluorescent-Active Triazole-Gold Complexes" *Sci. China Chem.* **2015**, 58, 1235-1238.
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- (64) Motika, S. E.; Wang, Q.; Ye, X.; Shi, X.\* "Ambient Synthesis of Dienals via Triazole-Au and Amine Catalysis Relay" *Org. Lett.* **2015**, 17, 290-293.
- (63) Cai, R.; Yan, W.; Bologna, M. G.; de Silva, K.; Finklea, H. O.; Petersen, J. L.; Shi, X.\* "Synthesis and Characterization of N-2-Aryl-1,2,3-Triazole Based Iridium Complexes as Photocatalysts with Tuneable Photoredox Potential " *Org. Chem. Front.* **2015**, 2, 141-144.
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- (60) Xi, Y.; Su, Y.; Yu, Z.; Dong, B.; McClain, E. J.; Lan, Y.\*; Shi, X.\* "Chemoselective Carbophilic Addition of  $\alpha$ -Diazoesters through Ligand-Controlled Gold Catalysis" *Angew. Chem. Int. Ed.* **2014**, *53*, 9975-9979.
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- (56) Cai, R.; Dawei Wang, D.; Chen, Y.; Yan, W.; Geise, N. R.; Sharma, S.; Li, H.; Petersen, J. L.; Li, M.; Shi, X.\* "Facile Synthesis of Fluorescent Active Triazapentalene through Gold-Catalyzed Triazole-Alkyne Cyclization" *Chem. Commun.* **2014**, *50*, 7303-7305.
- (55) Su, Y.; Zhang, Y.; Akhmedov, N. G.; Petersen, J. L.; Shi, X.\* "Ambient Intermolecular [2 + 2] Cycloaddition: An Example of Carbophilicity and Oxophilicity Competition in Au/Ag Catalysis" *Org. Lett.* **2014**, *16*, 2478-2481.
- (54) Wang, Q.; Motika, S. E.; Akhmedov, N. G.; Petersen, J. L.; Shi, X.\* "Synthesis of Cyclic Amine Borane Through Triazole-Gold(I) Catalyzed Alkyne Hydroboration" *Angew. Chem. Int. Ed.* **2014**, *53*, 5418-5422.
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- (46) Xi, Y.; Shi, X.\* "Cinchonine and thiourea" *Chem. Commun.* **2013**, *49*, 8583-8585.
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- "1,2,3-Triazoles as Versatile Directing Group for Selective sp<sup>2</sup> and sp<sup>3</sup> C-H Activation: Cyclization vs Substitution" *Chem. Sci.* **2013**, *4*, 3712-3716.
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- (42) Yan, W.; Shi, X.;\* Zhong, C.\* "Secondary Amine as Lewis Base in Nitroalkene Activation" *Asian. J. Org. Chem.* **2013**, *2*, 904-914.
- (41) Gautam, L. N.; Wang, Q.; Akhmedov, N. G.; Petersen, J. L.; Shi, X.\* "Stereoselective synthesis of N-heterocycles through amine addition to nitroalkenes" *Org. Biomol. Chem.* **2013**, *17*, 1917-1920.
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**Honors and Awards:**

- NSF Career award (2009)
- Outstanding Faculty Award, Department of Chemistry, West Virginia University (2009, 2011)
- Outstanding Research Assistant Awards from University of Maryland (2002)