

Xiaodong Michael Shi

Department of Chemistry
University of South Florida
Tampa, FL 33620

Website: <http://xmshi.myweb.usf.edu>

Phone: 240-350-4723
Fax: 813-974-3203
Email: xmshi@usf.edu

Education:

06/2002 - 04/2005	Postdoc , Dept. of Chemistry, Univ. of California, Berkeley Mentors: Dr. Paul Bartlett, Dr. Dean Toste
08/1998 - 05/2002	Ph.D. Dept. of Chemistry, Univ. of Maryland, College Park Mentor: Dr. Jeffery T. Davis
09/1994 - 07/1997	MS , Dept. of Chemistry, Nankai University, China
09/1990 - 07/1994	BS , Dept. of Chemistry, Nankai University, China

Professional Experience:

08/2019 - present	Associate Chair, Dept. of Chemistry, Univ. of South Florida
05/2017 - present	Professor, Dept. of Chemistry, Univ. of South Florida
08/2015 - 05/2017	Associate Professor, Dept. of Chemistry, Univ. of South Florida
08/2005 - 08/2015	Assistant, Associate and Full Professor, Dept. of Chemistry, West Virginia University
04/2005 - 08/2005	Platform Research Scientist, General Electric Advanced Material

Honors and Awards:

- Stanford University List of World Top 2% Scientists: Annual 2019, 2020
- Chair of Graduate Recruiting at USF Chemistry Department, 2016-now.
- Changjiang Visiting Scholar 2018
- Director of Graduate Study at WVU 2010-2015
- CAPA (Chinese American Professor Association) Distinguished Faculty Award (2017)
- NSF Career award (2009)
- Outstanding Faculty Award, Department of Chemistry, West Virginia University (2009, 2011)
- Outstanding Research Assistant Awards from University of Maryland (2002)

Selected recent publications from independent career:

- 1) *J. Am. Chem. Soc.* **2021**, 143, 4074-4082.
- 2) *Angew. Chem. Int. Ed.* **2020**, 59, 20470-20474.
- 3) *ACS Catal.* **2020**, 10, 11693-11699.
- 4) *Chem* **2020**, 6, 1420-1431.
- 5) *Angew. Chem. Int. Ed.* **2019**, 58, 17226-17230.
- 6) *Chem* **2018**, 4, 1983-1993.
- 7) *Nat. Commun.* **2018**, 9, 1972.
- 8) *Angew. Chem. Int. Ed.* **2018**, 57, 6915-6920.
- 9) *ACS Catal.* **2017**, 7, 1087-1092.
- 10) *Angew. Chem. Int. Ed.* **2016**, 55, 11582-11586.
- 11) *Angew. Chem. Int. Ed.* **2016**, 55, 350-354.
- 12) *J. Am. Chem. Soc.* **2016**, 138, 3994-3997.
- 13) *J. Am. Chem. Soc.* **2015**, 137, 8912-8915.
- 14) *Angew. Chem. Int. Ed.* **2015**, 54, 8772-8776.

- 15) *J. Am. Chem. Soc.* **2014**, *136*, 13174-13177.
- 16) *Angew. Chem. Int. Ed.* **2014**, *53*, 9975-9979.
- 17) *Angew. Chem. Int. Ed.* **2014**, *53*, 5418-5422.
- 18) *Angew. Chem. Int. Ed.* **2014**, *53*, 4657-4661.
- 19) *J. Am. Chem. Soc.* **2012**, *134*, 134, 9012-9019.
- 20) *J. Am. Chem. Soc.* **2009**, *131*, 12100-12102.
- 21) *Angew. Chem. Int. Ed.* **2009**, *48*, 1279-1282.

Full Publications List from *Independent career since 2005*:

- (136) Qi, T.; Li, S.; Ye, X.; Teng, Y.; Zhao, K.; He, Y.; Shan, C.; Wojtas, L.; Richardson, D.; Lan, Y.*; Shi, X.* "Design and Synthesis of Stable Four-Coordinated Benzotriazole-Borane with Tunable Fluorescence Emission" *Chem. Sci.*, **2022**, *13*, 5982-5987.
- (135) Ye, X.; Wang, C.; Zhang, S.; Qi, T.; Wojtas, L.; Li, M.*; Shi, X.* "Chiral Hemilabile P,N-Ligands Assisted Gold Redox Catalysis for Enantioselective Alkene Aminoarylation" *Chem. Eur. J.*, **2022**, ASAP.
- (134) Wang, Z.; Ye, X.; Jin, M.; Tang, Q.; Fan, S.; Song, Z.*; Shi, X.* "4-Aminobenzotriazole (ABTA) as a Removable Directing Group for Palladium-Catalyzed Aerobic Oxidative C-H Olefination" *Org. Lett.* **2022**, *24*, 3107-3112.
- (133) He, Y.; Liu, M.; Teng, S.; Wojtas, L.; Gu, G.; Shi, X.* "Synthesis and characterization of fluorescence active G4-quartet and direct evaluation of self-assembly impact on emission" *Chin. Chem. Lett.* **2022**, *33*, 4203-4207.
- (132) Dong, G.; Ye, X.; Wang, S.; Li, W.; Cai, R.; Du, L.; Shi, X.*; Li, M.* "Au-24 as a potential thioredoxin reductase inhibitor in hepatocellular carcinoma cells" *Pharmacol. Res.* **2022**, *177*, 106113.
- (131) Li, J.; He, Y.; Zou, Y.; Yan, Y.; Song, Z.; Shi, X.* "Achieving a stable COF with the combination of flat and twist large-size rigid synthons for selective gas adsorption and separation" *Chin. Chem. Lett.* **2022**, *33*, 3017-3020.
- (130) He, Y.; Zhang, Y.; Liu, M.; Zhao, K.; Shan, C.; Wojtas, L.; Guo, H.; Ding, A.; Shi, X.* "Synthesis of microporous hydrogen-bonded supramolecular organic frameworks through guanosine self-assembly" *Cell Rep. Phys. Sci.* **2021**, *2*, 100519.
- (129) Jia, T.; Fan, S.; Li, F.; Ye, X.; Zhang, W.; Song, Z.*; Shi, X.* "Achieving Aliphatic Amine Addition to Arylalkynes via the Lewis Acid Assisted Triazole-Gold (TA-Au) Catalyst System" *Org. Lett.* **2021**, *23*, 6019-6023.
- (128) Zhao, K.; He, Y.; Shan, C.; Wojtas, L.; Ren, J.; Yan, Y.; Shi, H.; Wang, H.; Song, Z.*; Shi, X.* "Construction of Stable Helical Metal-Organic Frameworks with Conformationally Rigid "Concave Ligand" *Chem. Eur. J.* **2021**, *27*, 10833-10838.
- (127) Liu, M.; He, Y.; Shan, C.; Wojtas, L.; Ghiviriga, I.; Fathalla, O.; Yan, Y.; Li, X.; Shi, X.* "Anion Mediated, Tunable Isoguanosine Self-Assemblies: Decoding the Conformation Influence and Solvent Effect" *Chem. Sci.* **2021**, *12*, 7569-7574.
- (126) Yuan, T.; Tang, Q.; Wang, J.; Shan, C.; Zhao, P.; Wojtas, L.; Hadler, N.; Chen, H.; Shi, X.* "Alkyne Trifunctionalization via Divergent Gold Catalysis: Combining π -Acid Activation, Vinyl-Gold Addition and Redox Catalysis" *J. Am. Chem. Soc.* **2021**, *143*, 4074-4082.
- (125) Zhang, S.; Ye, X.; Wojtas, L.; Hao, W.; Shi, X.* "Electrochemical Gold Redox Catalysis for Selective Oxidative Arylation" *Green Syn. Catal.* **2021**, *2*, 82-86.
- (124) Wang, Y.; Zheng, L.; Shi, X.*; Chen, Y.* "1,3-Difunctionalization of β -Alkyl Nitroalkenes via Combination of Lewis Base Catalysis and Radical Oxidation" *Org. Lett.* **2021**, *23*, 886-889.
- (123) Li, J.; He, Y.; Wang, L.; Li, G.; Zou, Y.; Yan, Y.; Li, D.; Shi, X.; Song, Z.; Shi, X.* "Construction of fluorescence active MOFs with symmetrical and conformationally rigid N-2-aryl-triazole ligands" *RSC Adv.* **2020**, *10*, 41921-41925.

- (122) Zhao, K.; He, Y.; Shan, C.; Ren, J.; Wojtas, L.; Wang, L.; Li, G.; Song, Z.*; Shi, X.* "Orthogonal-Twisted-Arm Ligands for The Construction of Metal-Organic Frameworks: New Topology and Catalytic Reactivity" *Chem. Eur. J.* **2020**, *26*, 16272-16276.
- (121) Li, Z.; Lin, Y.; Song, H.; Qin, X.; Yu, Z.; Zhang, Z.; Dong, G.; Li, X.; Shi, X.; Du, L.; Zhao, W.; Li, M.* "First small-molecule PROTACs for G protein-coupled receptors: inducing $\alpha 1A$ -adrenergic receptor degradation" *Acta Pharm. Sin. B*, **2020**, *10*, 1669-1679.
- (120) Zhang, Y.; He, Y.; Wojtas, L.; Shi, X.*; Guo, H.* "Construction of Supramolecular Organogel with Circularly Polarized Luminescence by Self Assembled Guanosine Octamer" *Cell Rep. Phy. Sci.*, **2020**, *1*, 100211.
- (119) Zhang, X.; Ren, G.*; He, Z.; Yang, W.; Li, H.; Wang, Y.; Pan, Q.*; Shi, X.* "Luminescent detection of Cr(VI) and Mn(VII) based on a stable supramolecular organic framework" *Cryst. Growth Des.* **2020**, *20*, 6888-6895.
- (118) Ye, X.; Wang, C.; Zhang, S.; Wei, J.; Shan, C.; Wojtas, L.; Xie, Y.; Shi, X.* "Facilitating Ir-Catalyzed C-H Alkynylation with Electrochemistry: Anodic Oxidation Induced Reductive Elimination" *ACS Catal.* **2020**, *10*, 11693-11699.
- (117) Zhang, S.; Wang, C.; Ye, X.; Shi, X.* "Intermolecular Alkene Difunctionalization via Gold Catalyzed Oxyarylation" *Angew. Chem. Int. Ed.* **2020**, *59*, 20470-20474.
- (116) Wei, C.; He, Y.; Wang, J.; Ye, X.; Wojtas, L.; Shi, X.* "Hexafluoroisopropanol-Promoted Disulfidation and Diselenation of Alkyne, Alkene, and Allene." *Org. Lett.*, **2020**, *22*, 5462-5465.
- (115) Li, X.; Ye, X.; Wei, C.; Shan, C.; Wojtas, L.; Wang, Q.*; Shi, X.* "Diazo Activation with Diazonium Salts: Synthesis of Indazole and 1,2,4-Triazole." *Org. Lett.*, **2020**, *22*, 4151-4155.
- (114) Yuan, T.; Ye, X.; Zhao, P.; Teng, S.; Yi, Y.; Wang, J.; Shan, C.; Wojtas, L.; Jean, J.; Chen, H.; Shi, X.* "Regioselective Crossed Aldol Reactions under Mild Conditions via Synergistic Gold/Iron Catalysis" *Chem*, **2020**, *6*, 1420-1431.
- (113) Li, J.; He, Y.; Wang, L.; Pan, Q. H.; Song, Z.; Shi, X.* "Design and Synthesis of Photoluminescent Active Interpenetrating Metal-Organic Frameworks Using N-2-Aryl-1,2,3-Triazole Ligands." *Dalton Trans.*, **2020**, *49*, 5429-5433.
- (112) Wang, J.; Wei, C.; Li, X.; Zhao, P.; Shan, C.; Wojtas, L.; Chen, H.; Shi, X.* "Gold Redox Catalysis with a Selenium Cation as Mild Oxidant." *Chem. Eur. J.* **2020**, *26*, 5946-5950.
- (111) He, Y.; Zhang, Y.; Wojtas, L.; Akhmedov, N.; Pan, Q.; Guo, H.; Shi, X.* "Reversed Cation Selectivity of G8-Octamer and G16-Hexadecamer towards Monovalent and Divalent Cations" *Chem. Asian J.* **2020**, *15*, 1030-1034.
- (110) Qin, X.; Ma, Z.; Yang, X.; Hu, S.; Chen, X.; Liang, D.; Lin, X.; Shi, X.; Du, L.; Li, M.* "Discovery of Environment-Sensitive Fluorescent Agonists for $\alpha 1$ -Adrenergic Receptors" *Anal. Chem.* **2019**, *91*, 12173-12180.
- (109) Peng, X.; Hu, Z.; Zhang, J.; Ning, W.; Zhang, S.; Doing, C.; Shi, X.*; Zhou, H.* "Construction of benzofuranone library via a metal-free, one-pot intermolecular condensation, and their application as efficient estrogen receptor modulators" *Chem. Commun.* **2019**, *55*, 14570-14573.
- (108) Ye, X.; Zhao, P.; Zhang, S.; Zhang, Y.; Wang, Q.; Shan, C.; Wojtas, L.; Guo, H.*; Chen, H.*; Shi, X.* "Facilitating Gold Redox Catalysis with Electrochemistry: An Efficient Chemical-Oxidant-Free Approach" *Angew. Chem. Int. Ed.* **2019**, *58*, 17226-17230.
- (107) Jimoh, A.; Hosseyni, S.; Ye, X.; Wojtas, X.; Hu, Y.*; Shi, X.* "Gold redox catalysis for cyclization/arylation of allylic oximes: synthesis of isoxazoline derivatives" *Chem. Commun.* **2019**, *55*, 8150-8153.
- (106) Wei, C.; Ye, X.; Xing, Q.; Hu, Y.*; Xie, Y.*; Shi, X.* "Synergistic palladium/enamine catalysis for asymmetric hydrocarbon functionalization of unactivated alkenes with ketones" *Org. Biomol. Chem.* **2019**, *17*, 6607-6611.
- (105) He, Y.; Zhang, Y.; Wojtas, L.; Akhmedov, N. G.; Thai, D.; Wang, H.; Li, X.; Guo, H.*; Shi,

- X.* "Construction of cross-layer linked G-octamer via conformational control: stable G-quadruplex in H-bond competitive solvent" *Chem. Sci.* **2019**, *10*, 4192-4199.
- (104) Lai, Q.; Liu, Q.; Zhao, K.; Shan, C.; Wojtas, L.; Zheng, Q.; Shi, X.*; Song, Z.* "Rational design and synthesis of yellow-light emitting triazole fluorophores with AIE and mechanochromic properties" *Chem. Commun.* **2019**, *55*, 4603-4606.
- (103) Wei, C.; He, Y.; Shi, X.*; Song, Z.* "Terpyridine-Metal Complexes: Applications in catalysis and supramolecular chemistry" *Coordin. Chem. Rev.* **2019**, *385*, 1-19.
- (102) Ye, X.; Peng, H.; Wei, C.; Teng, Y.; Wojtas, L.; Shi, X.* "Gold-Catalyzed Oxidative Coupling of Alkynes towards the Synthesis of Cyclic Conjugated Diynes" *Chem* **2018**, *4*, 1983-1993.
- (101) Li, P.; Zhao, J.; Shi, L.; Wang, J.; Shi, X.*; Li, F.* "Iodine Catalyzed Diazo Activation to Access Radical Reactivity" *Nat. Commun.* **2018**, *9*, 1972.
- (100) Wang, J.; Zhang, S.; Xu, C.; Wojtas, L.; Akhmedov, N. G.; Chen, H.*; Shi, X.* "Highly Efficient and Stereoselective Thioallylation of Alkynes: Possible Gold Redox Catalysis with No Need of a Strong Oxidant" *Angew. Chem. Int. Ed.* **2018**, *57*, 6915-6920.
- (99) Lai, Q.; Liu, Q.; He, Y.; Zhao, K.; Wei, C.; Wojtas, L.; Shi, X.*; Song, Z.* "Triazole-imidazole (TA-IM) derivatives as ultrafast fluorescent probes for selective Ag⁺ detection" *Org. Biomol. Chem.* **2018**, *16*, 7801.
- (98) Zhang, F.; Lai, Q.; Shi, X.*; Song, Z.* "Triazole-Gold (TA-Au) Catalyzed Three-Component Coupling (A₃ reaction) towards the Synthesis of 2,4-Disubstituted Quinoline Derivatives" *Chin. Chem. Lett.* **2018**, *30*, 392-384.
- (97) Motika, S. E.; Shi, X.* "Synthesis and Application of a Novel Bis-1,2,3-Triazole Ligand Containing a 2,2'-Bipyrrrolidine Core" *Arkivoc*, **2018**, 280-287.
- (96) Lei, X.; Zheng, L.; Zhang, C.; Shi, X.*; Chen, Y.* "Allylic C-S Bond Construction through Metal-Free Direct Nitroalkene Sulfonation" *J. Org. Chem.* **2018**, *83*, 1772-1778.
- (95) Lu, M.; Su, Y.; Zhao, P.; Ye, X.; Cai, Y.; Shi, X.*; Masson, E.*; Li, F.; Campbell, J. L.; Chen, H.* "Direct Evidence for the Origin of Bis-Gold Intermediates: Probing Gold Catalysis with Mass Spectrometry" *Chem. Eur. J.* **2018**, *24*, 2144-2150.
- (94) Ye, X.; Wang, J.; Ding, S.; Hosseyni, S.; Wojtas, L.; Akhmedov, N. G.; Shi, X.* "Investigations on Gold-Catalyzed Thioalkyne Activation Toward Facile Synthesis of Ketene Dithioacetals" *Chem. Eur. J.* **2017**, *23*, 10506-10510.
- (93) Dong, B.; Peng, H.; Motika, S.; Shi, X.* "Gold Redox Catalysis through Base Initiated Diazonium Decomposition toward Alkene, Alkyne and Allene Activation" *Chem. Eur. J.* **2017**, *23*, 11093-11099.
- (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- α -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 sp³ and sp² 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 α 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 cyclopentenones" *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 Substituted Allenes" *Chem. Commun.* **2016**, 52, 296-299.
- (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 $\equiv$ C Bond Cleavages" *Angew. Chem. Int. Ed.* **2016**, 55, 350-354.
- (74) Hosseyni, S.; Su, S.; Shi, X.* "Gold Catalyzed Synthesis of Substituted Furan by Intermolecular Cascade Reaction of Propargyl Alcohol and Alkyne" *Org. Lett.* **2015**, 17, 6010-6013.
- (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.
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- (67) Zhang, Y.; Ye, X.; Petersen, J. L.; Li, M.*; Shi, X.* "Synthesis and Characterization of Bis-N-2-Aryl Triazole as Fluorophore" *J. Org. Chem.* **2015**, 80, 3664–3669.
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