

Daesung Lee

Department of Chemistry
University of Illinois at Chicago
845 W. Taylor Street
Chicago, IL 60607

Telephone: (312) 996-5189
Fax: (312) 996-0431
E-mail: dsunglee@uic.edu

Education

- 1988 **BS**, Chemistry, Seoul National University, Seoul, Korea
1990 **MS**, Chemistry, Seoul National University, Seoul, Korea
1998 **PhD**, Chemistry, Stanford University
Advisor: Prof. Paul A. Wender; Thesis: "Synthetic Studies on Taxol and Its Analogues"
1998–2000 **Postdoctoral Fellow**, Chemistry, Harvard University
Advisor: Prof. Stuart L. Schreiber, Research in Diversity-Oriented Synthesis

Professional Experience

- 06/2000–05/2007 **Assistant Professor of Chemistry**, University of Wisconsin-Madison, WI
06/2007–07/2014 **Associate Professor of Chemistry**, University of Illinois at Chicago, IL
08/2014– **Professor of Chemistry**, University of Illinois at Chicago, IL

Research Interest

Development of new synthetic methods and their application to natural product syntheses.
Metathesis chemistry and metallotropic shift. Carbene-based transformations.
Aryne-based benzannulation reactions

Honors and Awards

- Alfred P. Sloan Foundation Research Fellowship (2005)
Camille and Henry Dreyfus New Faculty Award (2000)
Syntex Graduate Fellowship (1993)

Publications

106. Venkata R. Sabbasani, Sang Young Yun, and Daesung Lee* "Structure and Reactivity of Sulfonamide- and Acetate-Chelated Ruthenium Alkylidene Complexes" *Org. Chem. Front* **2016**, DOI: 10.1039/C6QO00148C.
105. Rajdip Karmakar and Daesung Lee* "Reactions of Arynes Promoted by Silver Ion" *Chem. Soc. Rev.* **2016**, DOI: 10.1039/c5cs00835b.
104. Rajdip Karmakar, Kung-Pern Wang, Sang Young Yun, Phani Mamidipalli and Daesung Lee* "Hydrohalogenative aromatization of multiynes promoted by ruthenium alkylidene complexes" *Org. Biomol. Chem.* **2016**, 14, 4782–4788.
103. Matthew J. O'Connor, Chunrui Sun, Xinyu Guan, Venkata R. Sabbasani, and Daesung Lee* "Sequential 1,4-/1,2-Addition of Lithiumtrimethylsilyldiazomethane onto Cyclic Enones to Induce C–C Fragmentation and N–Li Insertion" *Angew. Chem., Int. Ed.*, **2016**, 55, 2222–2225 (P 1928–Cover Picture).
102. Venkata R. Sabbasani, Yuanzhi Xia*, and Daesung Lee* "Complementary Iron-Catalyzed Oxidative Transformations of Allenes with Different Oxidants" *Angew. Chem., Int. Ed.* **2016**, 55, 1151–1155.
101. Daesung Lee* and Matthew J. O'Connor "Enyne Metathesis-Based Domino Reactions in Natural Product Synthesis" in *Science of Synthesis: Applications of Domino Transformations in Organic Synthesis Vol. 1*, **2015**, pp 67–130; Thieme.
100. Matthew J. O'Connor, Huaqing Liu, Daesung Lee*, Tao Zhou, Yuanzhi Xia* "DFT Studies on the Stereoselectivity of α -Silyloxy Diazoalkane Cycloadditions" *Molecules* **2015**, 20, 21433–21441.
99. Yanhua Mi, Tao Zhou, Kung-Pern Wang, Daesung Lee* and Yuanzhi Xia* "Mechanistic Study on the Divergent Cyclizations of *o*-Alkynylbenzaldehyde Acetals and Thioacetals Catalyzed by Metal Halides: Insights into the Regioselective Cyclization of π -Alkyne Complexes and the Chemoselective [1,2]-Migration in Carbenoid Intermediates" *Chem.–Eur. J.* **2015**, 21, 17256–17268 (17133–Cover Picture; 17137–Cover Profile).

98. Venkata R. Sabbasani, Genping Huang, Yuanzhi Xia*, and Daesung Lee* “Facile Alder Ene Reactions of Silylallenes Involving an Allenic C(sp²)-H Bond” *Chem.–Eur. J.* **2015**, *21*, 17210–17214.
97. Chunrui Sun, Hyunjin Lee, and Daesung Lee* “Synthesis of the Carbocyclic Core of Massadine” *Org. Lett.* **2015**, *17*, 5348–5351.
96. Venkata R. Sabbasani and Daesung Lee* “Oxidative Dimerization of Silylallenes via Activation of the Allenic C(sp²)-H Bond Catalyzed by Copper(I) Chloride and *N*-Hydroxyphthalimide” *Org. Lett.* **2015**, *17*, 4878–4881.
95. Rajdip Karmakar, Sourav Ghorai, Yuanzhi Xia, and Daesung Lee* “Synthesis of Phenolic Compounds by Trapping Arynes with a Hydroxy Surrogate” *Molecules* **2015**, *20*, 15862–15880.
94. Matthew J. O’Connor, Chunrui Sun, and Daesung Lee* “Synthesis of Amathaspiramides by Aminocyanation of Enoates” *Angew. Chem., Int. Ed.* **2015**, *54*, 9963–9966.
93. Jingwei Li and Daesung Lee* “Enyne Metathesis” in *Handbook of Metathesis. Applications in Organic Synthesis*, Vol. 2, 2nd ed., **2015**, pp381–444; Grubbs and O’Leary (Eds)
92. Rajdip Karmakar, Sang Young Yun, Jiajia Chen, Yuanzhi Xia* and Daesung Lee* “Benzannulation of Triynes to Generate Functionalized Arenes via Spontaneous Incorporation of Nucleophiles” *Angew. Chem., Int. Ed.* **2015**, *54*, 6582–6586.
91. Shu-Lin Liu, Ren Sheng, Matthew J. O’Connor, Yang Cui, Youngdae Yoon, Svetlana Kurilova, Daesung Lee*, and Wonhwa Cho* “Simultaneous *In Situ* Quantification of Two Cellular Lipid Pools Using Orthogonal Fluorescent Sensors” *Angew. Chem., Int. Ed.* **2014**, *53*, 14387–14391.
90. Ivan Volchkov and Daesung Lee* “Recent developments of direct rhenium-catalyzed [1,3]-transpositions of allylic alcohols and their silyl ethers” *Chem. Soc. Rev.* **2014**, *43*, 4318–4394.
89. Phani Mamidipalli, Sang Young Yun, Kung-Pern Wang, Tao Zhou, Yuanzhi Xia*, and Daesung Lee* “Formal Hydrogenation of Aryne with Silyl C_β-H Bonds as an Active Hydride Source” *Chem. Sci.* **2014**, *5*, 2362–2367.
88. Nam-Kyu Lee, Sang Young Yun, Phani Mamidipalli, Ryan M. Salzman and Daesung Lee*, Tao Zhou, and Yuanzhi Xia* “Hydroarylation of Arynes Catalyzed by Silver for Biaryl Synthesis” *J. Am. Chem. Soc.* **2014**, *136*, 4363–4368.
87. Chunrui Sun, Matthew J. O’Connor, Daesung Lee*, Donald J. Wink, and Robert D. Milligan “Formal Aminocyanation of α,β -Unsaturated Cyclic Enones as an Efficient Entry to the Synthesis of α -Amino Ketones” *Angew. Chem., Int. Ed.* **2014**, *53*, 3197–3200.
86. Jun-Cheng Zheng, Huaqing Liu, Nam-Kyu Lee, and Daesung Lee* “Dimerization Behaviour of Substituted Bicyclo[3.1.0]hex-1-ene Derivatives” *Eur. J. Org. Chem.* **2014**, 506–510.
85. Rajdip Karmakar, Sang Young Yun, Kung-Pern Wang, and Daesung Lee* “Regioselectivity in the Nucleophile Trapping of Arynes: The Electronic and Steric Effects of Nucleophiles and Substituents” *Org. Lett.* **2014**, *16*, 6–9.