

Xiaojie Lu



PROFESSIONAL EXPERIENCE

Principal Investigator, *Shanghai Institute of Materia Medica, CAS*, Shanghai, China, July 2017~now.

Associate GSK Fellow, *GlaxoSmithKline*, Waltham, MA, USA, May 2016~June 2017.

Investigator *GlaxoSmithKline*, Waltham, MA, USA, Nov 2010~May 2016.

EDUCATION

Ph.D., Synthetic Organic Chemistry, *Brandeis University*, MA, USA, Sep. 2007~ Nov. 2010.

M.S., Synthetic Organic Chemistry, *Brandeis University*, MA, USA, Sep. 2005~ Aug. 2007.

B.A., Analytical Chemistry and Chemical Engineering, *Nanjing University*, Nanjing, China, Sep. 2001~June. 2005.

HONORS AND AWARDS

- Chinese National 1000 Young Talents Program (2017).
- GSK Silver Award (2017);
- GSK Silver Award (2016);
- GSK Exceptional Science Award (2015);
- GSK Exceptional Science Award (2013);
- GSK Exceptional Science Award (2012);
- Brandeis University Graduate Student Fellow Scholarship (2005);
- Nanjing University Honored Graduate (2005);

RESEARCH PROGRAM

- Design, synthesis and screening of focused DNA encoded library of specific targets for small molecular hit identification, target validation and hit to lead optimization;
- DNA compatible reaction development for the design and synthesis of DNA encoded library
- Discovery of novel E3 ligase small molecular ligands and their application in novel protein degradation Protacs.
- Development of the new generation of DNA encoded library screening platforms

PUBLICATIONS

Xuan Wang, Hui Sun, Jiayang Liu, Wenge Zhong, Mingqiang Zhang, Hu Zhou, Dongcheng Dai*, and **Xiaojie Lu*** "Palladium-Promoted DNA-Compatible Heck Reaction" *Org. Lett.*, **2019**, 21, 719-723.

Hailong Li, Zhen Sun, Wenting Wu, Xuan Wang, Mingqiang Zhang, **Xiaojie Lu**, Wenge Zhong*, and Dongcheng Dai* "Inverse-Electron-Demand Diels–Alder Reactions for the Synthesis of Pyridazines on DNA" *Org. Lett.*, **2018**, 20, 7186–7191.

Gang Yao*, **Xiaojie Lu**, Christopher B. Phelps, Ghotas Evindar, Chapter 7, DNA encoded library technology, page 153-183. "Chemical and Biological Synthesis: Enabling Approaches for Understanding Biology", Royal Society Chemistry, 2018.

Xuan Wang, Hui Sun, Jiayang Liu, Dongcheng Dai, Mingqiang Zhang, Hu Zhou, Wenge Zhong*, and **Xiaojie Lu*** "Ruthenium Promoted C-H Activation Reactions between DNA-conjugated Acryl amide and Aromatic Acids" *Org. Lett.*, **2018**, 20, 4764–4768.

Xiaojie Lu*, Sarah Roberts, George J. Frankline and Christopher P. Davie, "On-DNA Pd and Cu promoted C-N Cross-Coupling Reactions", *MedChemComm*, 2017, **8**, 1614 1617 (2017 Hot Articles in *MedChemComm*).

Xiaojie Lu*, Lijun Fan*, Christopher B. Phelps, Christopher P. Davie, and Christine P. Donahue, "Ruthenium Promoted On-DNA Ring-Closing Metathesis and Cross-Metathesis", *Bioconjugate Chem.*, **2017**, 28, 1625–1629

(This article was highlighted by C&EN, "Making macrocyclic compounds for DNA-encoded libraries", C&EN online July 6, 2017).

Baptiste Thomas, **Xiaojie Lu***, William Birmingham, Kun Huang, Peter Both, Juana Reyes Martinez, Robert Young*, Christopher Davie, Sabine Flitsch*, "Application of Biocatalysis to on-DNA Carbohydrate Library Synthesis", *ChemBioChem*, **2017**, *18*, 858-863. (This article was selected as the cover picture for special issue: DNA encoded chemistry, *ChemBioChem*, **2017**, *18*, 825.)

Xiaojie Lu and Li Deng*, "Hydrogen Bonding-Mediated Cooperative Organocatalysis by Modified Cinchona Alkaloids" *Cooperative Catalysis*. Ed. Peters, R. Weinheim Germany: Wiley-VCH GmbH & Co, **2015**. 145-169.

Lin Hu, **Xiaojie Lu** and Li Deng*, "Catalytic Enantioselective Peroxidation of α,β -Unsaturated Aldehydes for the Asymmetric Synthesis of Biologically Important Chiral Endoperoxides" *J. Am. Chem. Soc.*, **2015**, *137*, 8400-8403.

Xiaojie Lu and Li Deng*, "Catalytic Asymmetric Peroxidation of α,β -Unsaturated Nitroalkenes by a Bifunctional Organic catalyst", *Org. Lett.*, **2014**, *16*, 2358-2361.

Xiaojie Lu, Yan Liu, Bingfeng Sun, Brittany Cindric, and Li Deng*, "Catalytic enantioselective peroxidation of α,β -unsaturated ketones", *J. Am. Chem. Soc.*, **2008**, *130*, 8134-8135 (This communication was highlighted by JACS Select # 7 : *Organocatalysis in Organic Synthesis*. Guest Editor: Louis S. Hege *J. Am. Chem. Soc.*, **2009**, *131*, 15075-15077).

Xiaojie Lu and Li Deng*, "Asymmetric aza-Michael reactions of α,β -unsaturated ketones with bifunctional organic catalysts", *Angew. Chem. Int. Ed.* **2008**, *47*, 7710-7713.

Ravi P. Singh, Keith Bartelson, Yi Wang, Heng Su, **Xiaojie Lu** and Li Deng*, "Enantioselective Diels-Alder reaction of simple α,β -unsaturated ketones with a Cinchona Alkaloid catalyst", *J. Am. Chem. Soc.*, **2008**, *130*, 2422-2423.

REVIEWER FOR THE JOURNALS

Chemical Communication, Chem. Cat. Chem., Chem. Med. Chem., J. Org. Chem., Organic & Biomolecular chemistry, Tetrahedron, Tetrahedron Letters, European Journal of Organic Chemistry, Chemistry- an European Journal, Organic Process Research & Development, Journal of heterocyclic chemistry.