连亚静

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教育背景

2011.09－至今	美国耶鲁大学化学系 师从 **Prof. Jonathan A. Ellman**	博士后研究
2008.08－2011. 08	美国埃默里大学化学系 师从 **Prof. Huw M. L. Davies**	获得博士学位
2006.08－2008.08	美国纽约州立大学布法罗分校化学系 师从 **Prof. Huw M. L. Davies**	博士阶段
2003.08－2005.12	美国威廉玛丽学院化学系 师从 **Prof. Robert J. Hinkle**	获得硕士学位
1999.09－2003.07	厦门大学化学系 师从郑兰荪院士	获得学士学位

科研经历

博士后研究（耶鲁大学化学系 Prof. Jonathan A. Ellman）

- 发现以三价铹为催化剂的新型碳氢键活化反应，基此以醛和亚胺为原料设计合成系列具有广泛药物活性的杂环化合物，包括苯酞，呋喃，吡咯和吲唑等.
- 发展以三价铹为催化剂的新型[3 + 3]环加成串联反应，此新型串联反应包括系列碳氢键的活化，胺化，环化和芳构化反应，成功实现以芳香叠氮化物为原料一步合成吖啶和吩嗪系列化合物。

博士研究（埃默里大学化学系 Prof. Huw M. L. Davies）

- 探索以二价铑为催化剂的新型乙烯基卡宾不对称反应，该系列反应主要包括其与吲哚[3 + 2]的环加成反应，与二烯的[4 + 3]环加成反应，　以及同吲哚/吡咯的插烯反应。
- 成功应用[4 + 3]环加成反应设计合成了系列天然产物，其中包括（-）-5-*epi*-vibsanin E，（+）- barekoxide 和（-）-barekol。
- 通过理论计算深入探讨乙烯基卡宾诱发的碳氢键活化/ Cope 重排的反应机制，并以该理论计算为基础巧妙地设计合成了系列重要的插烯化合物，该系列反应具有高度的结构特异性和立体选择性。
- 与多位著名教授成功合作，系列研究成果均发表于 *J. Am. Chem. Soc.*, *Angew. Chem., Int. Ed.*杂志。

硕士研究（威廉玛丽学院化学系 Prof. Robert J. Hinkle）

- 研究探索对环境友好的催化剂铋溴在有机合成中的应用，成功将其应用于二氢吡喃和四氢吡喃的非对映选择性合成，首次实现将羟醛缩合和环化反应串联，构建了新型三组分一步反应。
- 成功实现 (+)-(*S,S*)-(*cis*-6-methyltetrahydro-pyran-2-yl)acetic acid 的全合成。

科研成果

20. **Yajing Lian**, Joshua R. Hummel, Robert G. Bergman and Jonathan A. Ellman* "Facile Synthesis of Unsymmetrical Acridines and Phenazines by a Rh(III)-Catalyzed Amination/Cyclization/Aromatization Cascade"
J. Am. Chem. Soc. **2013**, *135*, 12548.

19. **Yajing Lian**, Robert G. Bergman, Luke D. Lavis* and Jonathan A. Ellman* "Rhodium(III)-Catalyzed Indazole Synthesis by C-H Bond Functionalization and Cyclative Capture"
J. Am. Chem. Soc. **2013**, *135*, 7122.

18. **Yajing Lian**, Tatjana Huber, Kevin D. Hesp, Robert G. Bergman and Jonathan A. Ellman* "Rhodium(III)-Catalyzed Alkenyl C-H Bond Functionalization: Convergent Synthesis of Furans and Pyrroles" '
Angew. Chem., Int. Ed. **2013**, *52*, 629.

17. **Yajing Lian**, Robert G. Bergman* and Jonathan A. Ellman* "Rhodium(III)-Catalyzed Synthesis of Phthalides by Cascade Addition and Cyclization of Benzimidates with Aldehydes"
Chem. Sci. **2012**, *3*, 3088. **One of the 10 most-accessed *Chem. Sci.* articles in August 2012**

16. Damien Valette, **Yajing Lian**, John P. Haydek, Kenneth I. Hardcastle and Huw M. L. Davies* "Alkynoate Synthesis through the Vinylogous Reactivity of Rhodium(II) Carbenoids"
Angew. Chem., Int. Ed. **2012**, *51*, 8636. **Featured in *SynFacts***

15. Huw M. L. Davies* and **Yajing Lian** "The Combined C-H Functionalization/Cope Rearrangement: Discovery and Applications in Organic Synthesis"
Acc. Chem. Res. **2012**, *45*, 923.

14. **Yajing Lian** and Huw M. L. Davies* "Rh_2(*S*-biTISP)$_2$-Catalyzed Asymmetric Functionalization of Indoles and Pyrroles with Vinylcarbenoids"
Org. Lett. **2012**, *14*, 1934.

13. **Yajing Lian**, Kenneth I. Hardcastle and Huw M. L. Davies* "Computationally Guided Stereocontrol of the Combined C-H Functionalization/Cope Rearrangement"
Angew. Chem., Int. Ed. **2011**, *50*, 9370. **Featured in *SynFacts***

12. **Yajing Lian** and Huw M. L. Davies* "Combined C-H Functionalization/Cope Rearrangement with Vinyl Ethers as a Surrogate for the Vinylogous Mukaiyama Aldol Reaction"
J. Am. Chem. Soc. **2011**, *133*, 11940. **Featured in *SynFacts***

11. Jørn H. Hansen, Timothy M. Gregg, Stephanie R. Ovalles, **Yajing Lian**, Jochen Autschbach and Huw M. L. Davies* "On the Mechanism and Selectivity of the Combined C-H Activation/Cope Rearrangement"
J. Am. Chem. Soc. **2011**, *133*, 5076. **Featured in *C&EN News***

10. Jie Wu, Jorge Becerril, **Yajing Lian**, Huw M. L. Davies,* John A. Porco Jr. and James S. Panek* "Sequential Transformations to Access Polycyclic Chemotypes: Asymmetric Crotylation and Metal Carbenoid Reactions"
Angew. Chem., Int. Ed. **2011**, *50*, 5938.

9. **Yajing Lian**, Laura C. Miller, Stephen Born, Richmond Sarpong* and Huw M. L. Davies* "Catalyst-Controlled Formal [4 + 3] Cycloaddition Applied to the Total Synthesis of (+)-Barekoxide and (-)-Barekol"
J. Am. Chem. Soc. **2010**, *132*, 12422. **Featured in RSC's *Chemistry World* and *SynFacts***

8. **Yajing Lian** and Huw M. L. Davies* "Rhodium-Catalyzed [3 + 2] Annulation of Indoles"
J. Am. Chem. Soc. **2010**, *132*, 440.

7. **Yajing Lian** and Huw M. L. Davies* "Rhodium Carbenoid Approach for Introduction of 4-Substituted (*Z*)-Pent-2-enoates into Sterically Encumbered Pyrroles and Indoles"
Org. Lett. **2010**, *12*, 924.

6. Brett D. Schwartz, Justin R. Denton, **Yajing Lian**, Huw M. L. Davies* and Craig M. Williams* "Asymmetric [4 + 3] Cycloadditions between Vinylcarbenoids and Dienes: Application to the Total Synthesis of the Natural Product (-)-5-*epi*-Vibsanin E"
J. Am. Chem. Soc. **2009**, *131*, 8329. **One of the 10 most-accessed *J. Am. Chem. Soc.* articles during April-June 2009**, **Featured in *SynFacts*** and ***Organic Chemistry Highlights***

5. **Yajing Lian** and Huw M. L. Davies* "Synthesis of a *N*-Mesityl Substituted Aminoindanol-derived Triazolium Salt"
Org. Synth. **2010**, *87*, 362. (**Checker**)

4. R. Frederick Lambert, Robert J. Hinkle,* Stephen E. Ammann, **Yajing Lian**, Jia Liu, Shane E. Lewis and Robert D. Pike "$Bi(OTf)_3$-, TfOH-, and TMSOTf-Mediated, One-Pot Epoxide Rearrangement, Addition, and Intramolecular Silyl-Modified Sakurai (ISMS) Cascade toward Dihydropyrans: Comparison of Catalysts and Role of $Bi(OTf)_3$"
J. Org. Chem. **2011**, *76*, 9269.

3. Robert J. Hinkle,* **Yajing Lian**, Lee C. Speight, Heather E. Stevenson, Melissa M. Sprachman, Lauren A. Katkish and M. Christa Mattern "Synthesis of 2,6-Disubstituted Dihydropyrans via an Efficient $BiBr_3$-Initiated Three Component, One-pot Cascade"
Tetrahedron **2009**, *65*, 6834.

2. **Yajing Lian** and Robert J. Hinkle* "$BiBr_3$-Initiated Tandem Addition/Silyl-Prins Reactions to 2,6-Disubtituted Dihydropyrans"
J. Org. Chem. **2006**, *71*, 7071. **Featured in *SynFacts***

1. Robert J. Hinkle,* **Yajing Lian**, Nichole D. Litvinas, Alex T. Jenkins and Daniel C. Burnette "$BiBr_3$ Initiated Cyclization-Addition Reactions: Effect of π-Nucleophile on Oxocarbenium ion Addition and Total Syntheses of (+)-(*S,S*)-(*cis*-6-methyl tetrahydropyran-2-yl)acetic Acid and its *trans*-Diastereomer"
Tetrahedron **2005,** *61*, 11679.