

唯实求真
协力创新

最新动态

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施 敏

男，1963年1月生于上海，现为中国科学院上海有机化学研究所研究员，在金属有机开放实验室从事研究工作，课题组长。2000年国家自然科学基金委杰出青年基金获得者，国家重点基础研究项目973的子课题负责人。

个人简历 (学习和工作经历)

- 1980年9月 - 1984年7月，华东理工大学精细化工系，获学士学位
- 1984年7月 - 1985年10月，大连外国语学院出国留学预备班进修日语
- 1985年10月 - 1988年3月，日本岐阜大学工业化学系，获硕士学位 (有机合成化学)
- 1988年4月 - 1991年3月，日本大阪大学工学部，获博士学位 (有机光化学)
- 1991年4月 - 1993年3月，日本岐阜Shellac高分子材料公司开发部，技术员
- 1993年4月 - 1995年10月，日本岐阜药科大学药品合成化学研究室，助教 (不对称合成化学)
- 1995年10月 - 1996年12月，国俄克拉亥玛大学从事博士后的研究工作 (金属有机)
- 1996年12月 - 1998年3月，日本科学技术振兴事业团 -ERATO，井上光不对称反应课题组从事博士后的研究工作 (不对称光化学反应)
- 1998年4月，进有机所工作

在国外学习和工作时的主要学术成就

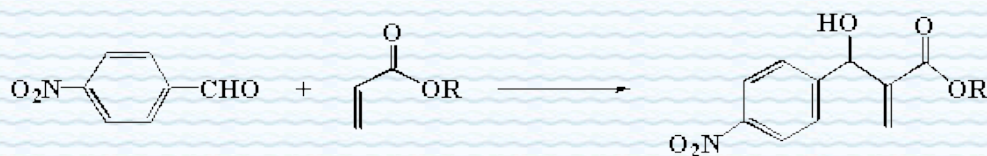
1. 发现了一些三苯甲基的衍生物经过光的直接照射，二个苯基会发生偶联脱离，并产生一个卡宾中间体的新光化学反应
2. 从糖类化合物出发，合成了一些新的具有C2-对称性的四氢吡咯环的 β -氨基醇和 β -氨基硫醇，在这些催化量的手性配体存在下，醛类化合物和金属锌试剂加成反应产物的ee值可以达到99%

3. 发现了烯丙基锡在金属钯催化下，可以和CO₂发生一个定量型的新的插入反应，这一研究结果对地球大气中的主要温室气体CO₂的固定，开辟了一崭新的研究方向

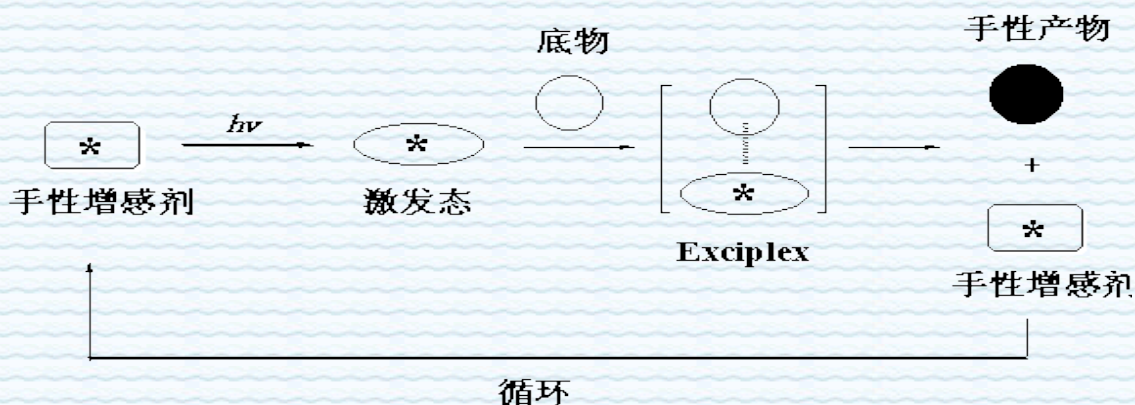
完成以上三个方面的工作后，共有39篇论文得到发表并被SCI收录，在SCI中被他人引用共有44次

今后的工作设想

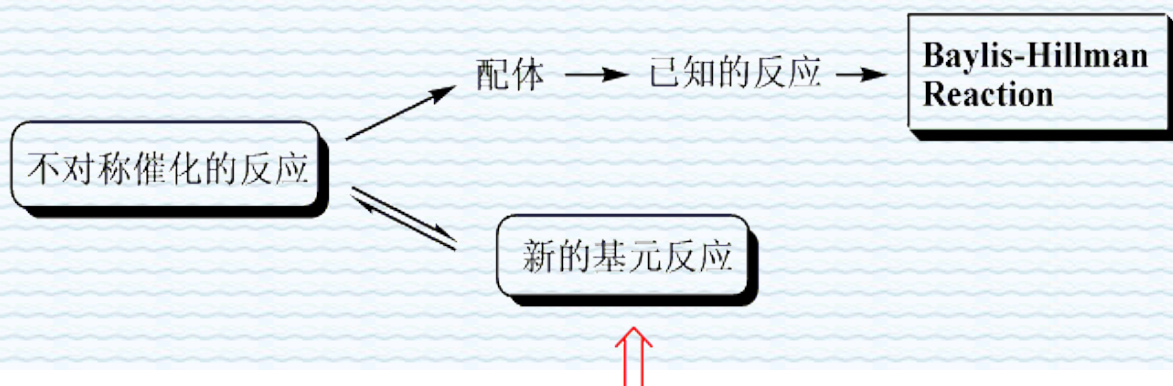
- 新型手性金属络合物和手性配体的合成及其不对称催化反应的研究，争取能够把催化反应的手性金属络合物分离得到，并能通过X-ray 晶体衍射确定其结构
- 我们现在正在合成一些新配体用于 Baylis-Hillman 反应中作为手性催化剂，希望对于该反应的手性诱导能有突破

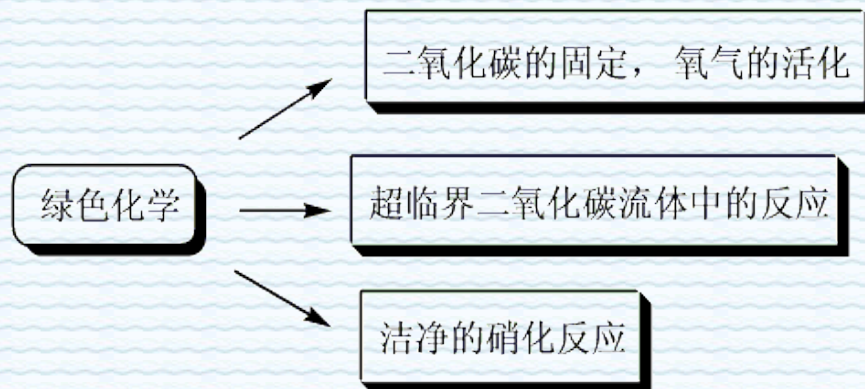
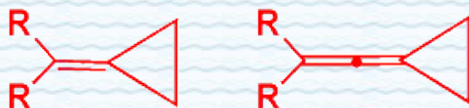


- 进一步研究利用化学反应固定CO₂的方法，研究其反应机理.除了通过有机胺以外，我们还打算结合以前在国外所作的利用金属Pd催化固定CO₂的反应，研究一些利用金属催化剂固定CO₂的新反应
- 我们同日本大阪工学部井上教授的井上Photochemistry ERATO Project (JST) 有一个国际合作研究项目，主要是在利用光和手性增感剂进行手性诱导



施敏小组研究工作示意图





主要论文目录

1. Chiral C_2 -symmetric 2,5-Disubstituted Pyrrolidine Derivatives as Catalytic Chiral Ligands in the Reaction of Diethylzinc with Arylaldehydes.

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13. Photolyses of Bis(methoxyphenyl) Methylphosphonates, Their Emission Spectra and Formation of Dimethoxybiphenyl and Dimethoxy-9,10-dioxanthracene.

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