

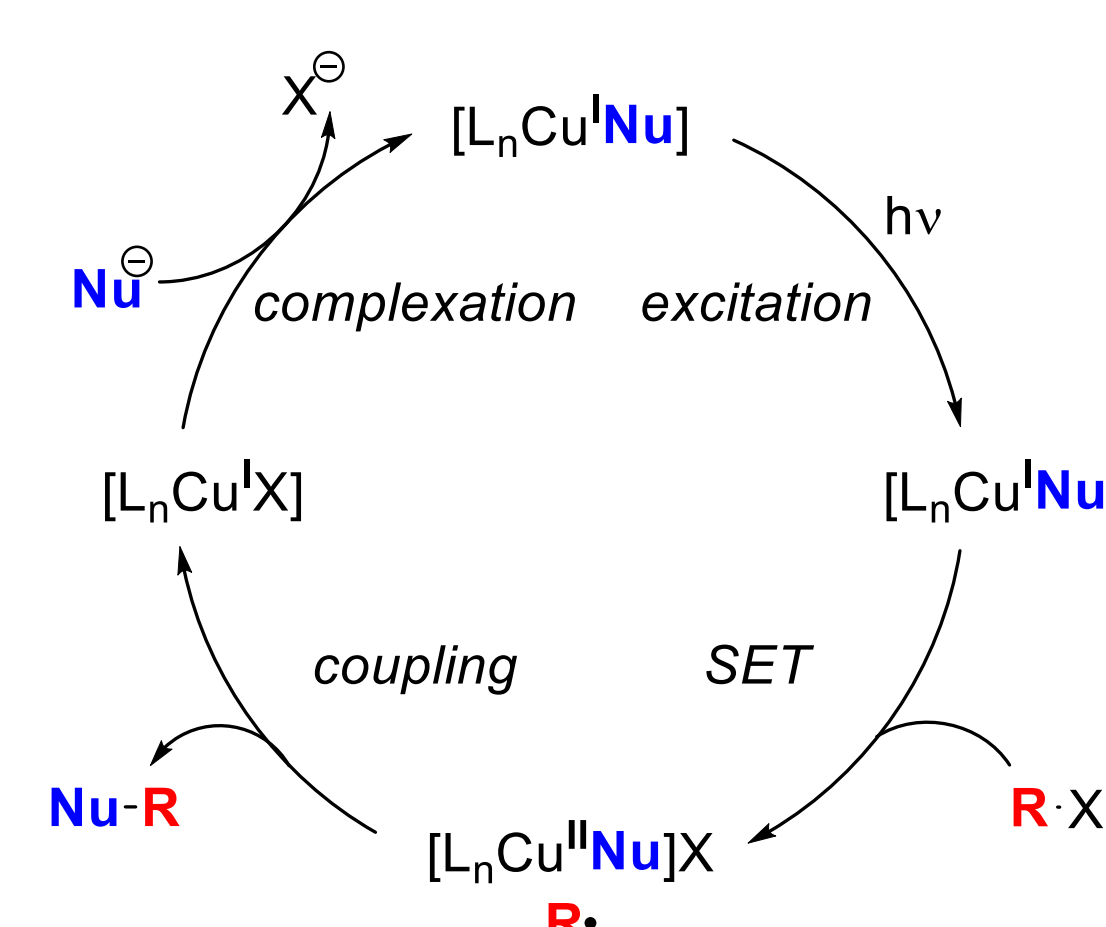
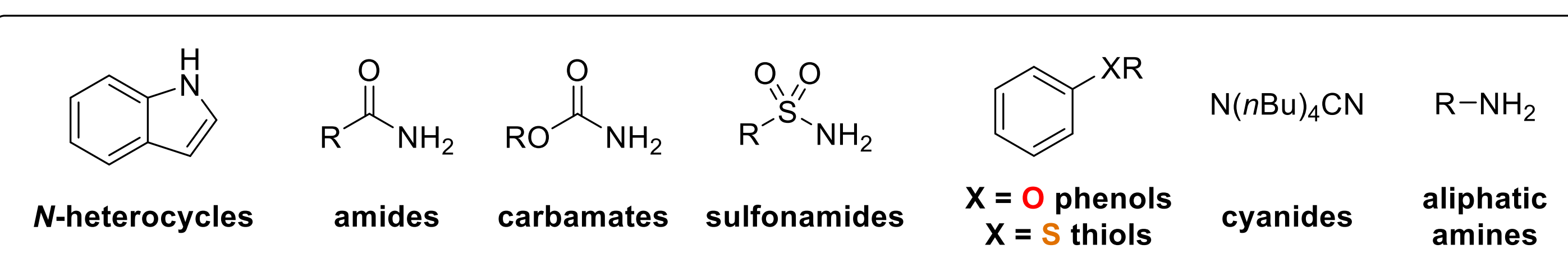
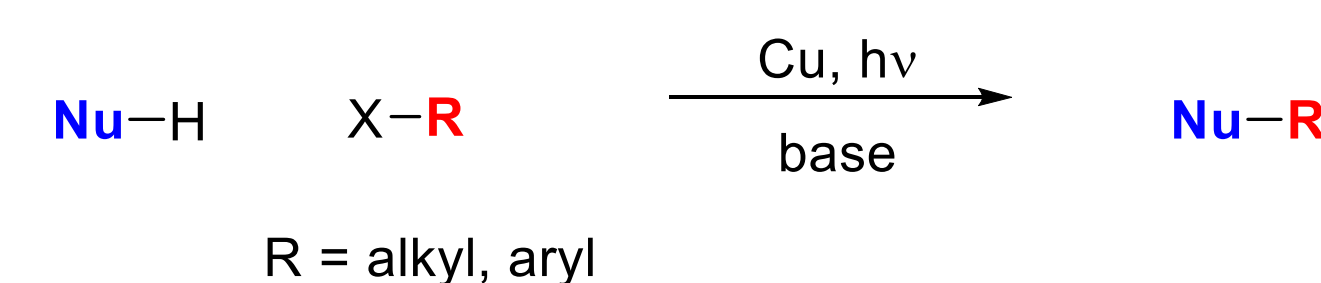


Photoinduced, Copper-Catalyzed Cross-Coupling

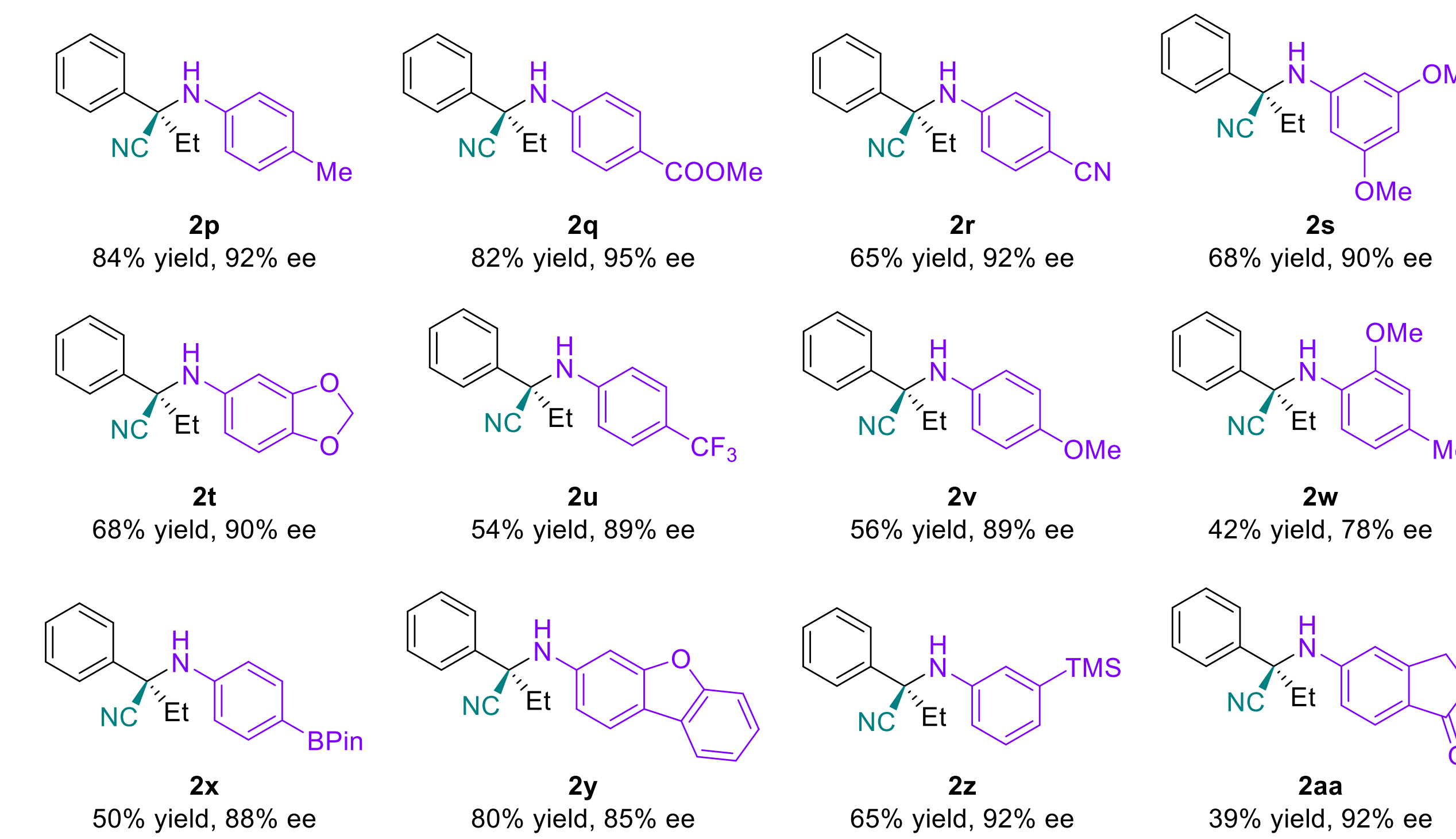
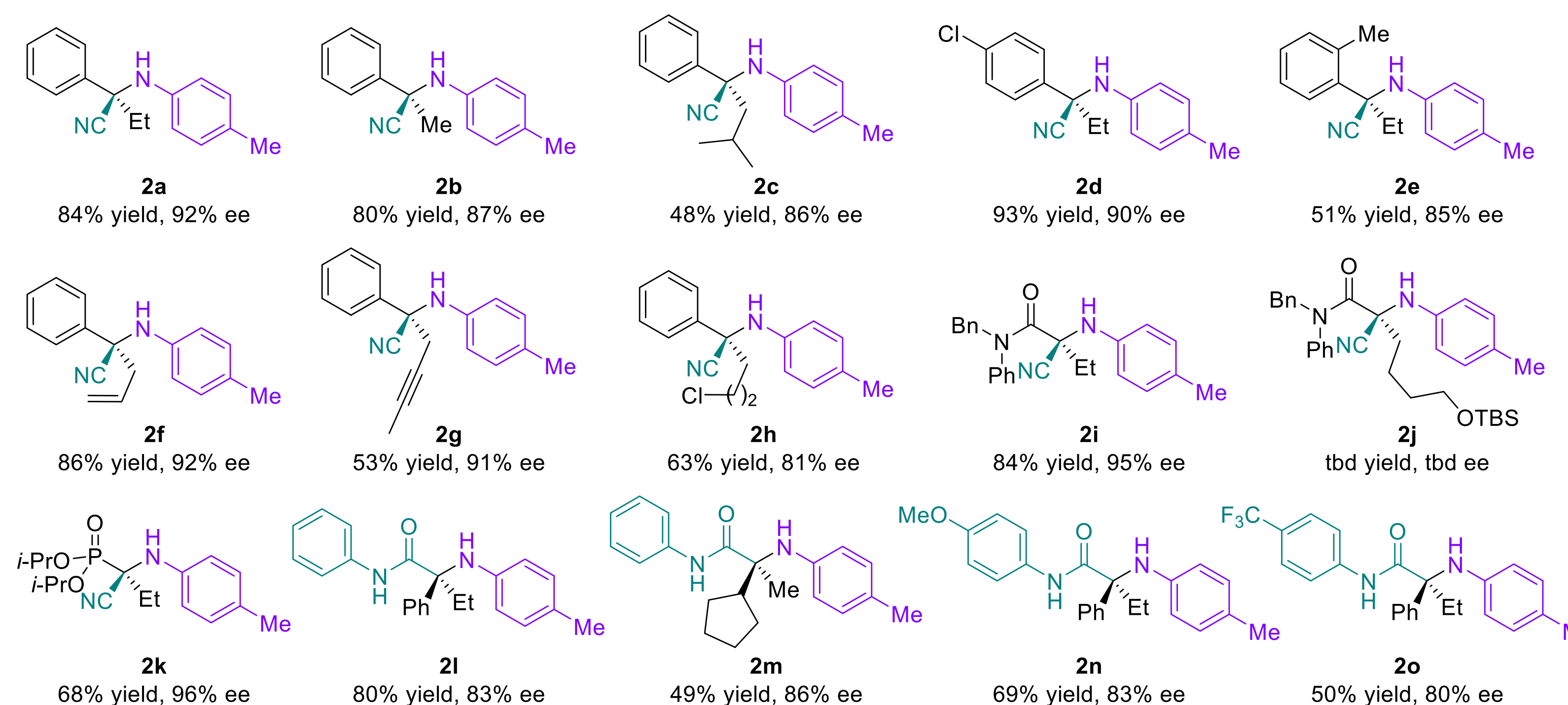
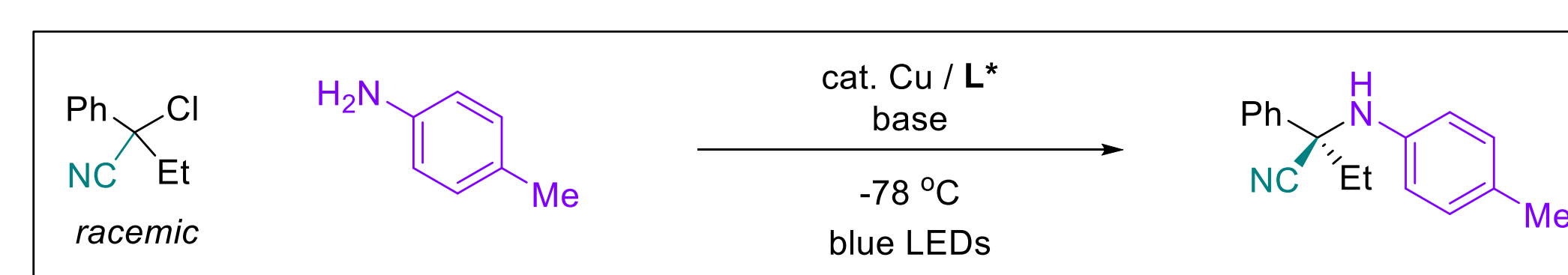
Fu Group Research Highlights 2020



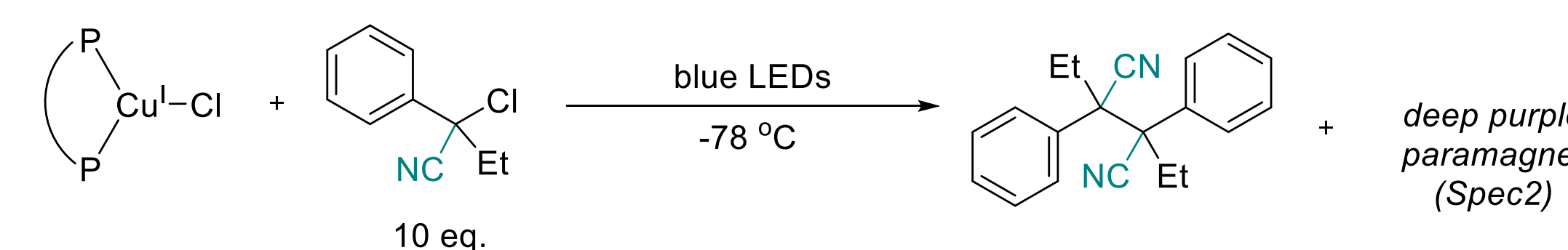
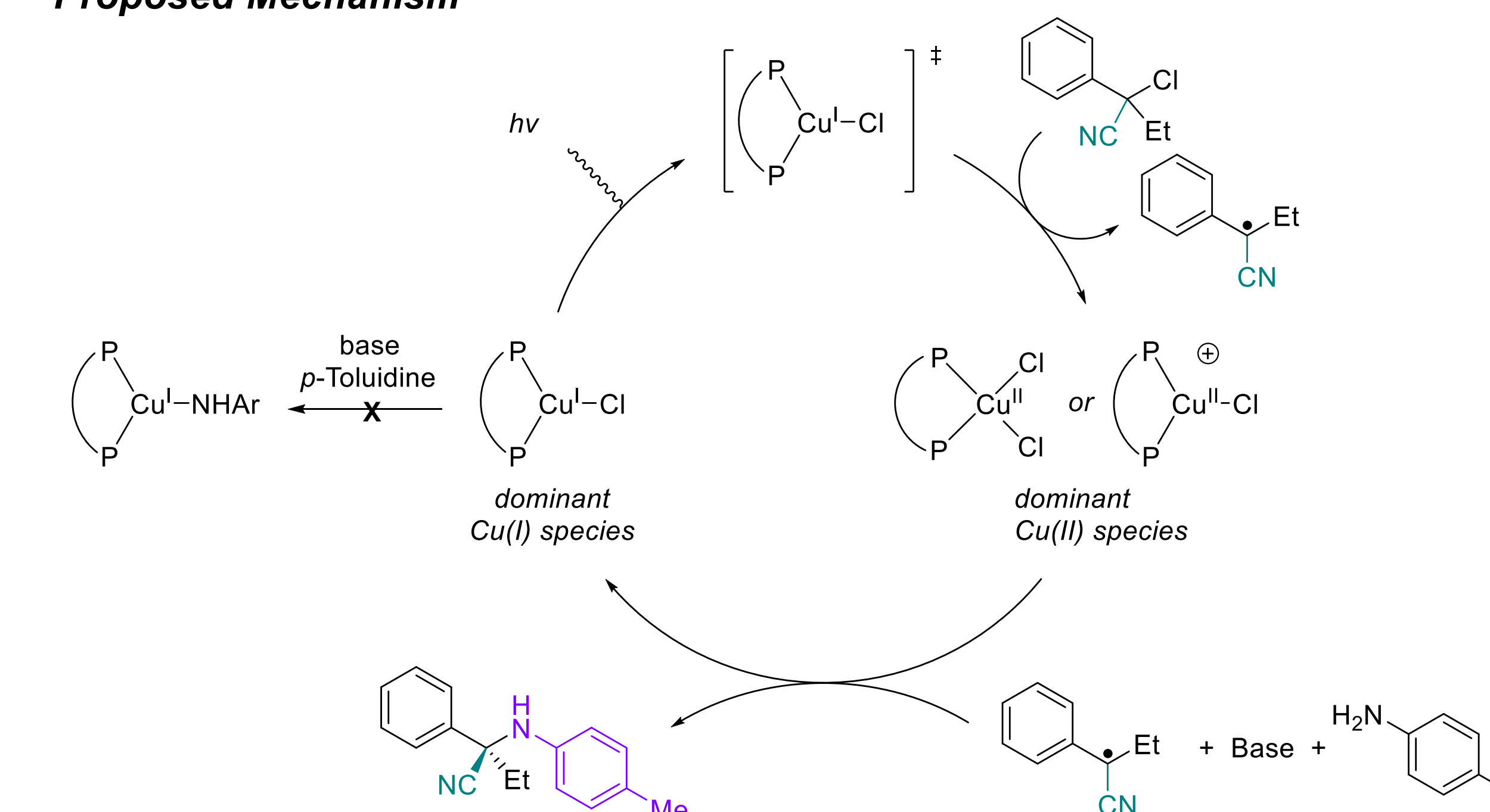
Copper-Catalyzed Cross-Coupling (In Collaboration with the Peters Group)



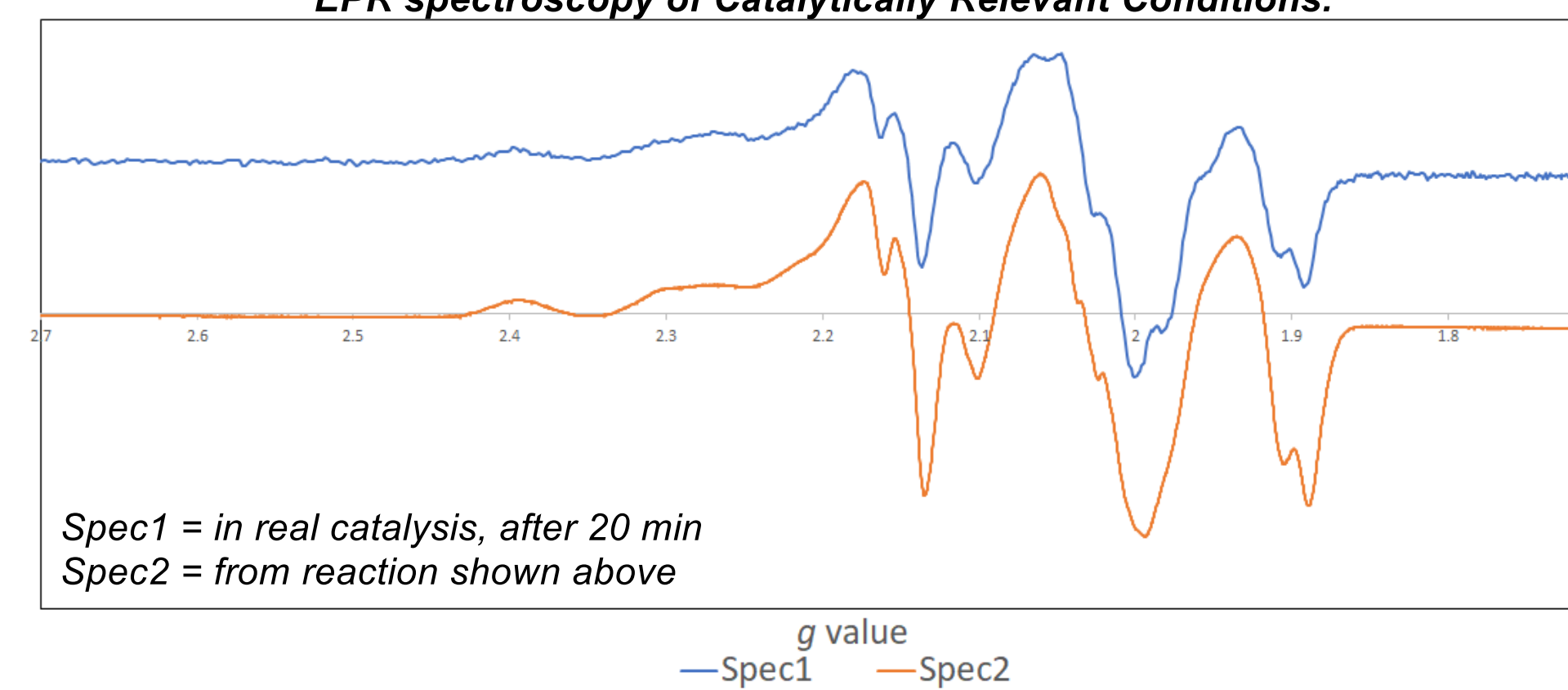
Hyungdo (2nd year) Enantioconvergent C–N Cross-Coupling of Tertiary Alkyl Halides with Anilines



Proposed Mechanism

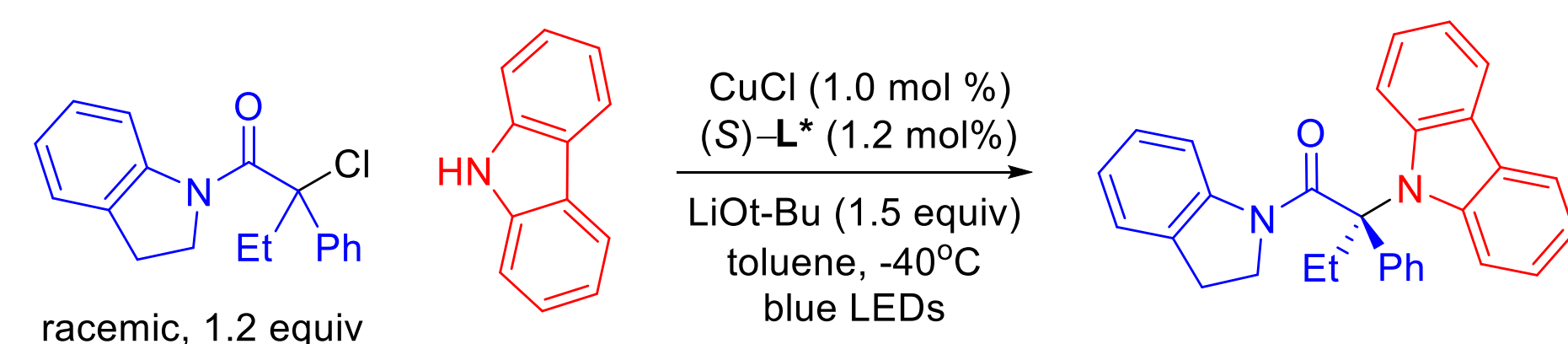


EPR spectroscopy of Catalytically Relevant Conditions.

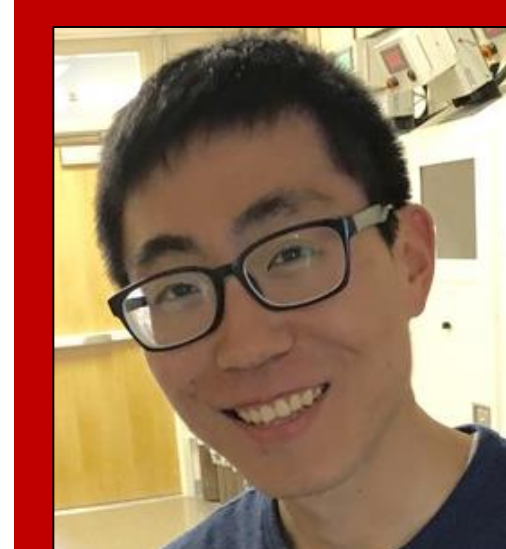
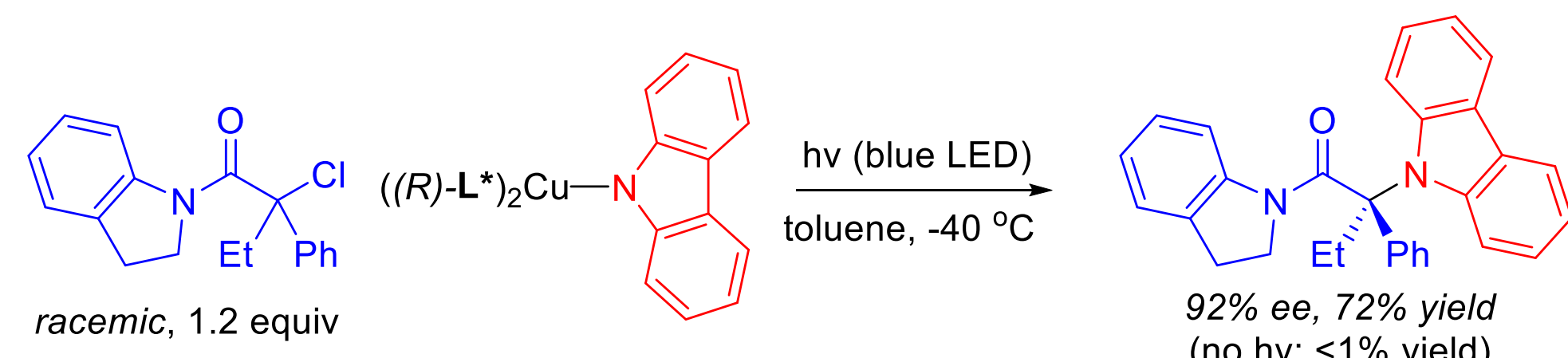
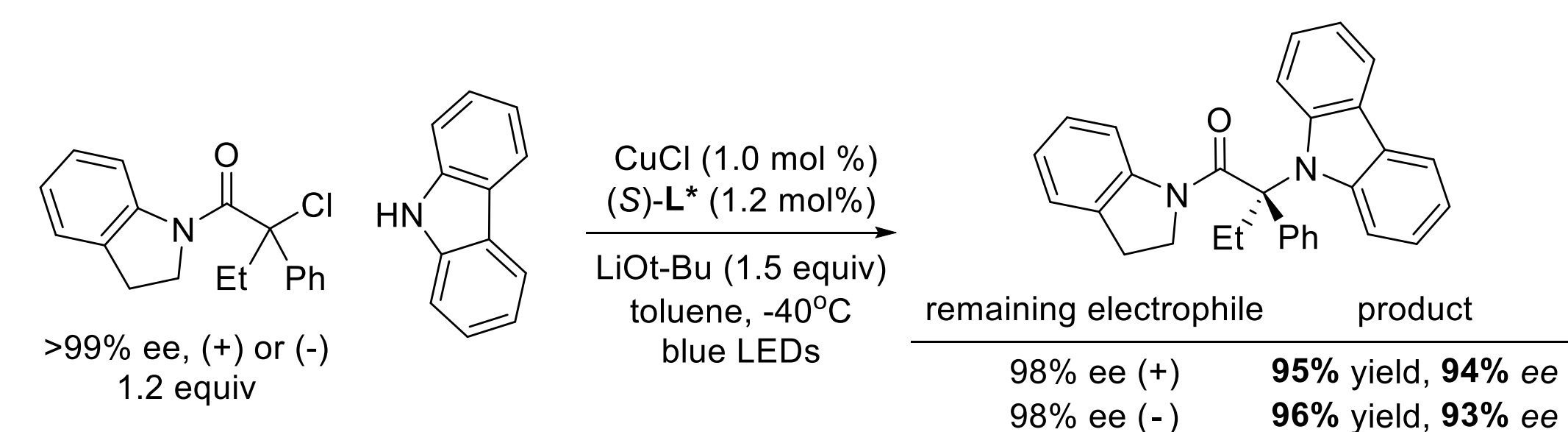
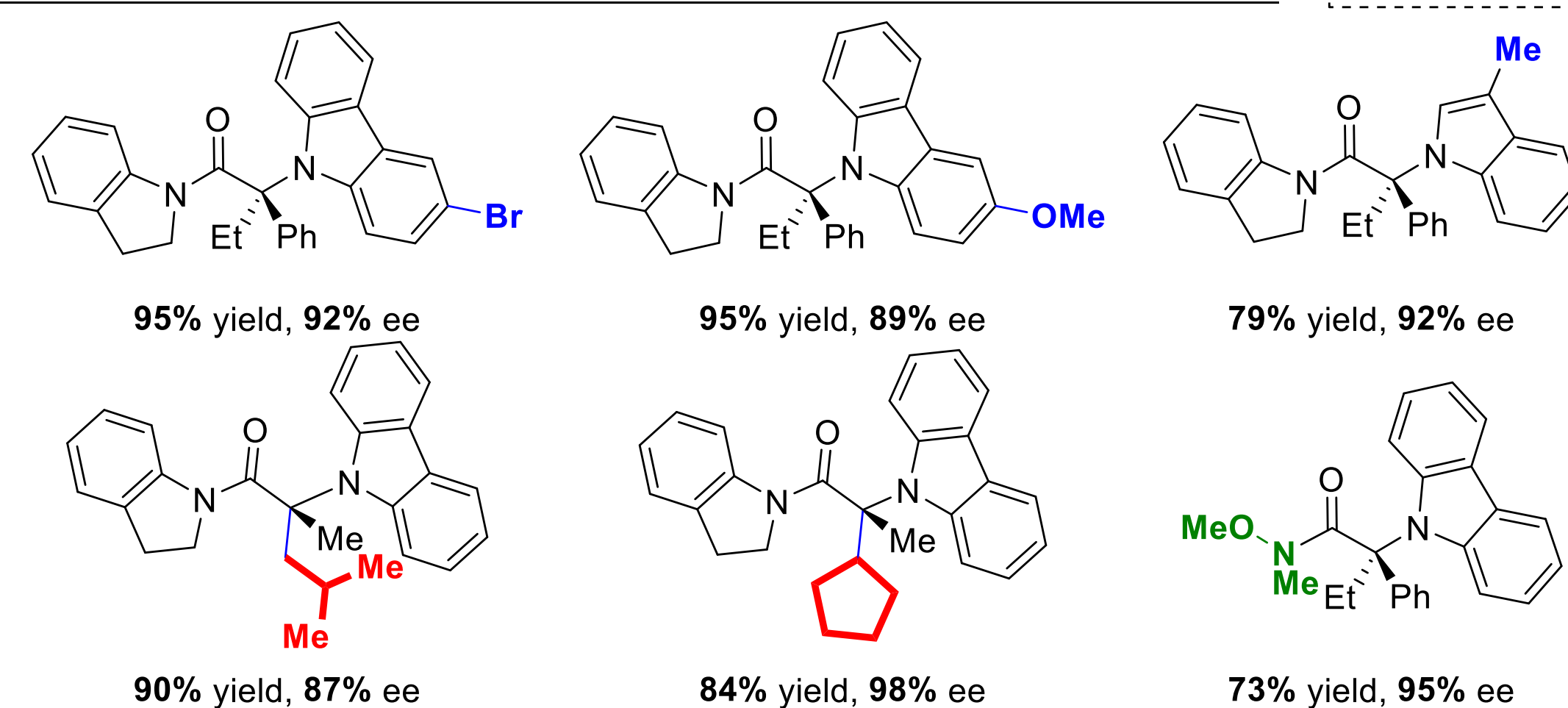
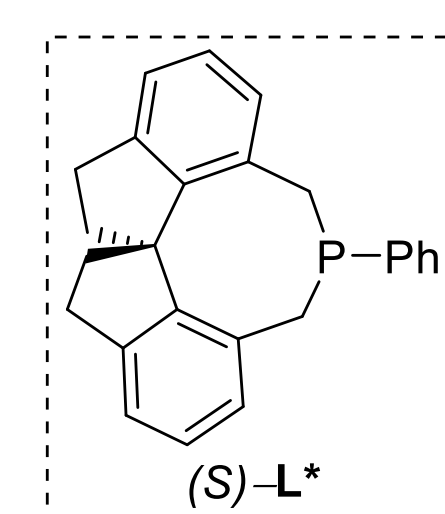


Carson (former grad student) Copper-Catalyzed Asymmetric Alkylation of Carbazoles and Indoles with Tertiary Electrophiles

Science 2016, 351, 681



| deviation from best conditions | % yield | % ee |
|--------------------------------|---------|------|
| none | 95 | 95 |
| no CuCl | <1 | - |
| no hv | <1 | - |
| no (S)-L* | 3 | 0 |
| added water (0.10 equiv) | 83 | 94 |



Joe (former grad student) Development of a Copper Photoredox Catalyst for the Synthesis of Boc-Protected Amines

JACS 2017, 139, 18101

