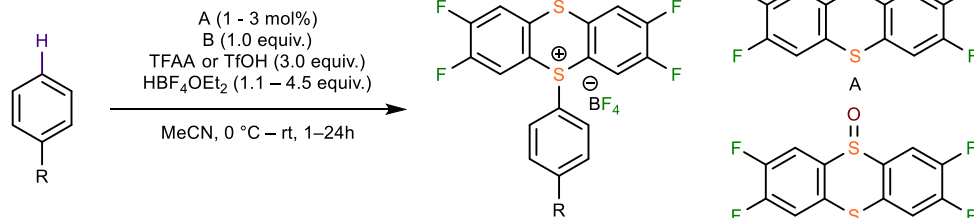
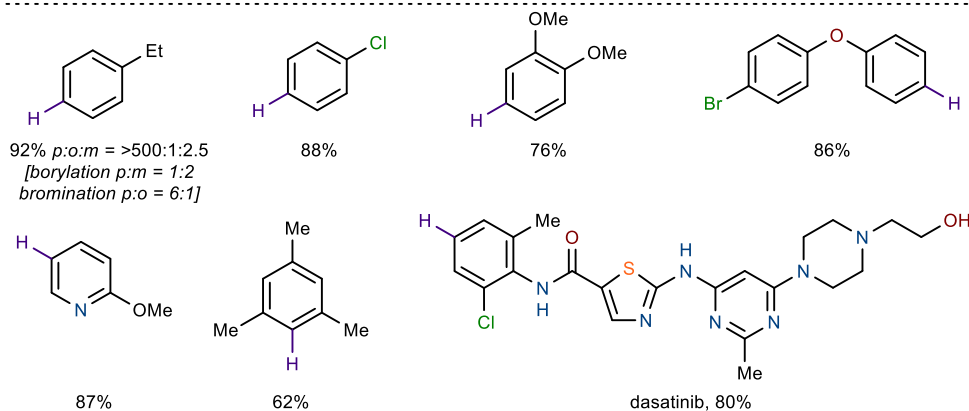


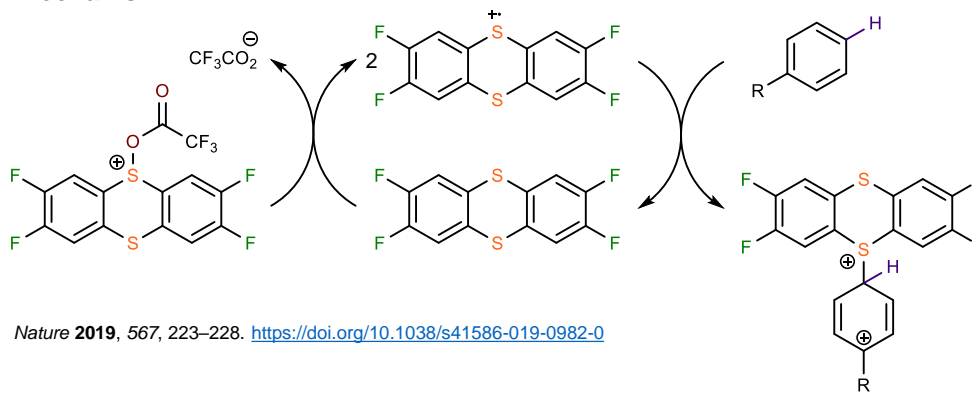
Initial studies of selectivity/scope



Selected examples:

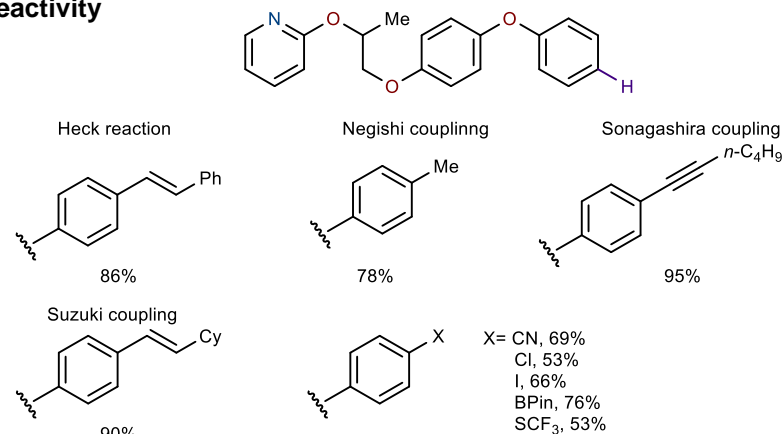


Mechanism



Nature 2019, 567, 223-228. <https://doi.org/10.1038/s41586-019-0982-0>

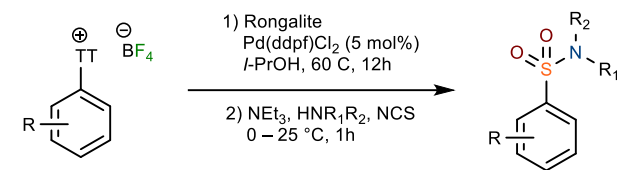
Reactivity



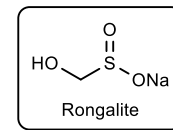
Further elaboration



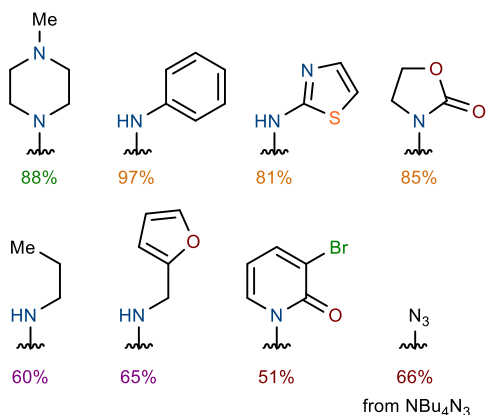
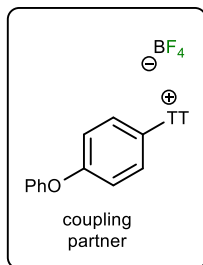
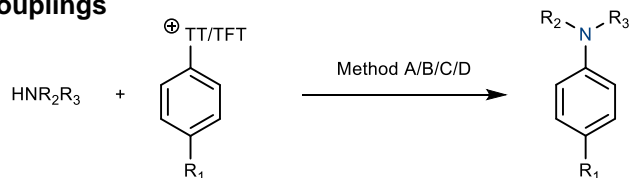
J. Am. Chem. Soc. 2021, 143, 7909-7914. <https://doi.org/10.1021/jacs.1c03459>



Org. Lett. 2020, 22, 4593-4596. <https://doi.org/10.1021/acs.orglett.0c00982>



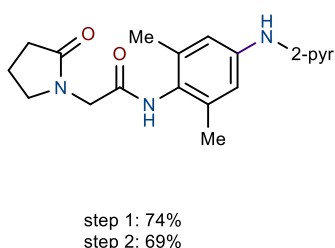
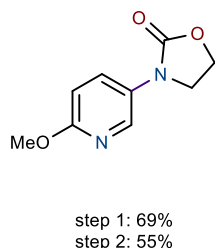
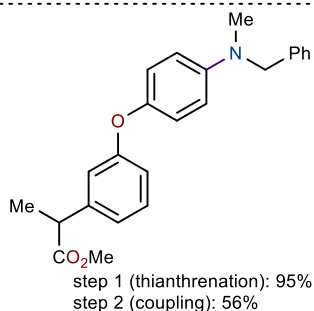
C-N couplings



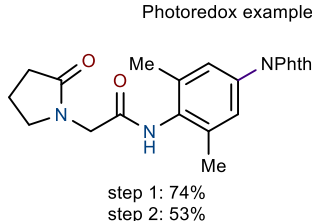
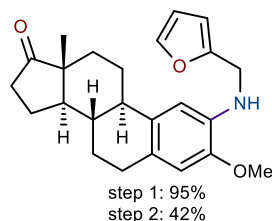
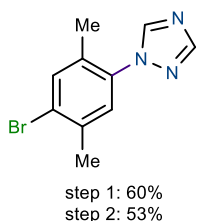
Method A: $[\text{Pd}_2(\text{dba})_3]/\text{RuPhos}$
 HNR_2R_3 , Cs_2CO_3 , DMF, 90 °C
Method B: $[\text{PdAlPhos}]_2\text{COD}$
 HNR_2R_3 , DBU, THF 70 °C

Method C: $[\text{Ru}(\text{bipy})_3](\text{PF}_6)_3$ /
 $[\text{Cu}(\text{MeCN})_4]\text{BF}_4$
 HNR_2R , NMe_4OH or NaH
 Blue LED, 15 °C
Method D: $[\text{Ir}(\text{ppy})_3]$
 $[\text{Cu}(\text{MeCN})_4]\text{BF}_4$
 K_2CO_3
 Blue LED, 15 °C

[Pd] – examples

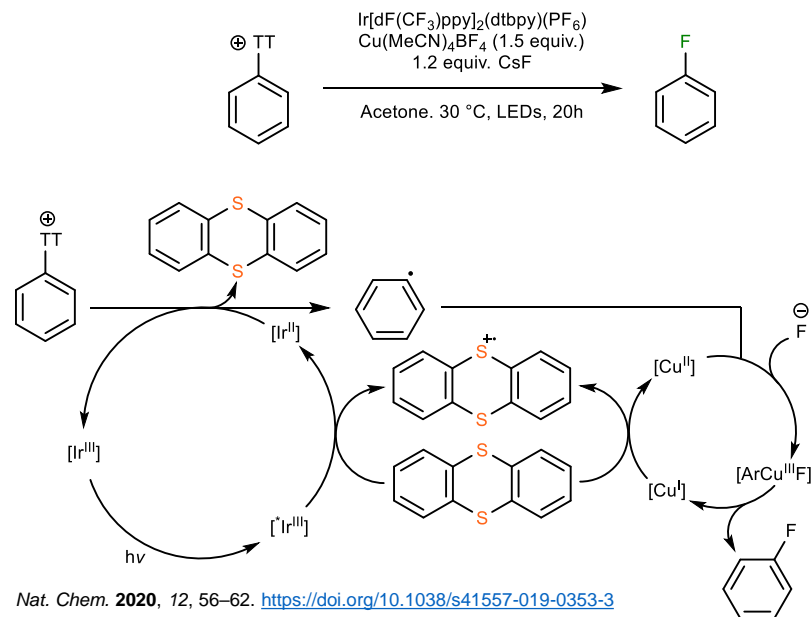


Photoredox examples

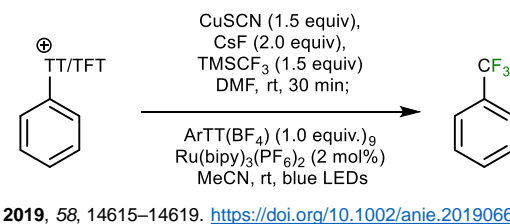


J. Am. Chem. Soc. **2019**, *141*, 13346–13351. <https://doi.org/10.1021/jacs.9b07323>

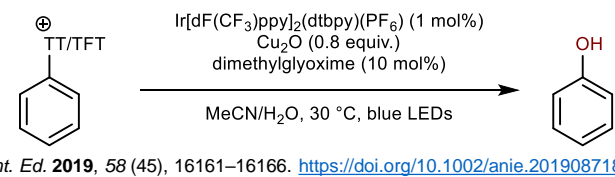
Photoredox fluorination



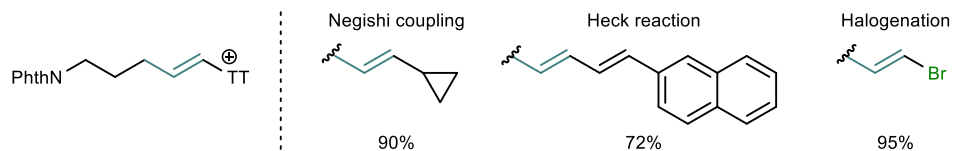
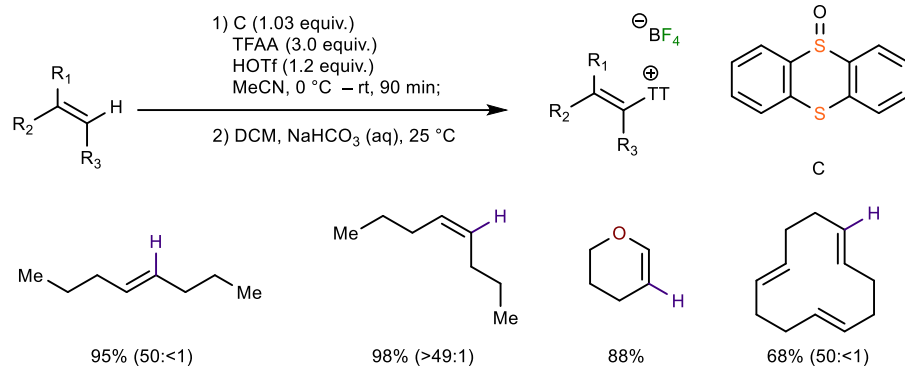
Trifluoromethylation



Oxygenation

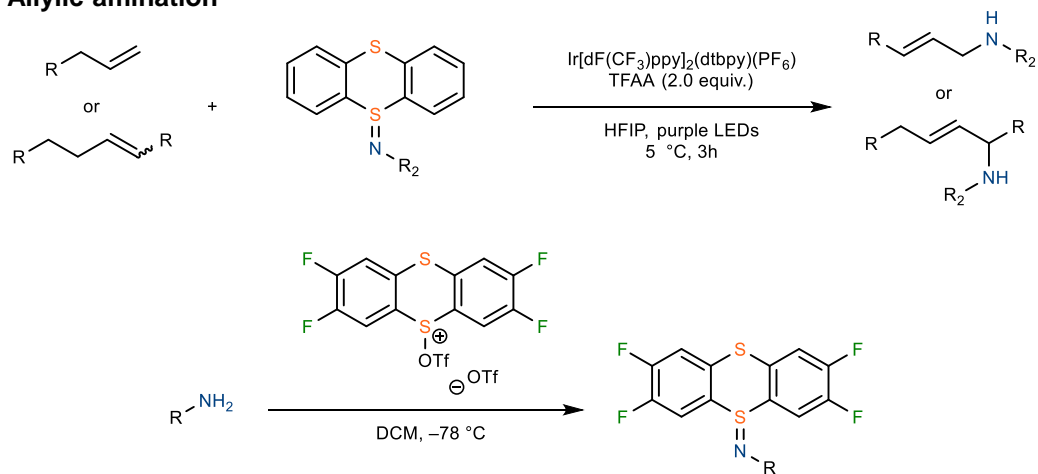


Stereospecific olefin activation



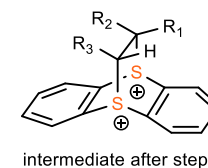
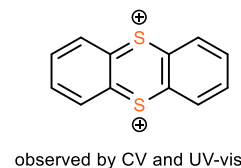
Angew. Chem. Int. Ed. **2020**, *59* (14), 5616–5620. <https://doi.org/10.1002/anie.201914215>

Allylic amination



J. Am. Chem. Soc. **2020**, *142*, 17287–17293. <https://doi.org/10.1021/jacs.0c08248>

Mechanistic investigation



Mechanism

