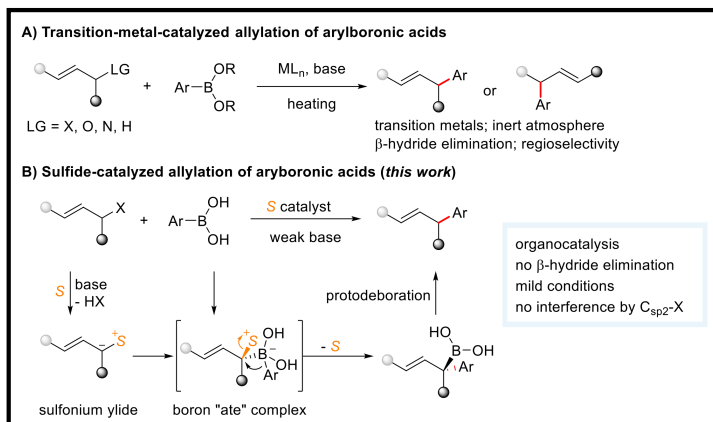


# A Thioether-Catalyzed Cross-Coupling Reaction of Allyl Halides and Arylboronic Acids

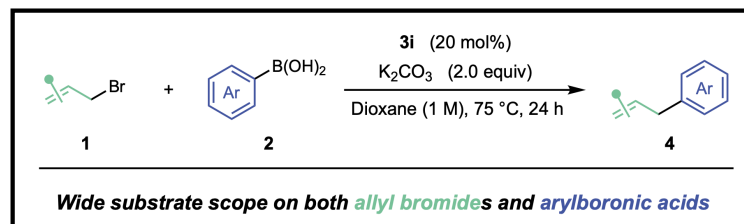
Xu J., He Z., Zhang J., Chen J., and Huang Y.

## 1. INTRODUCTION

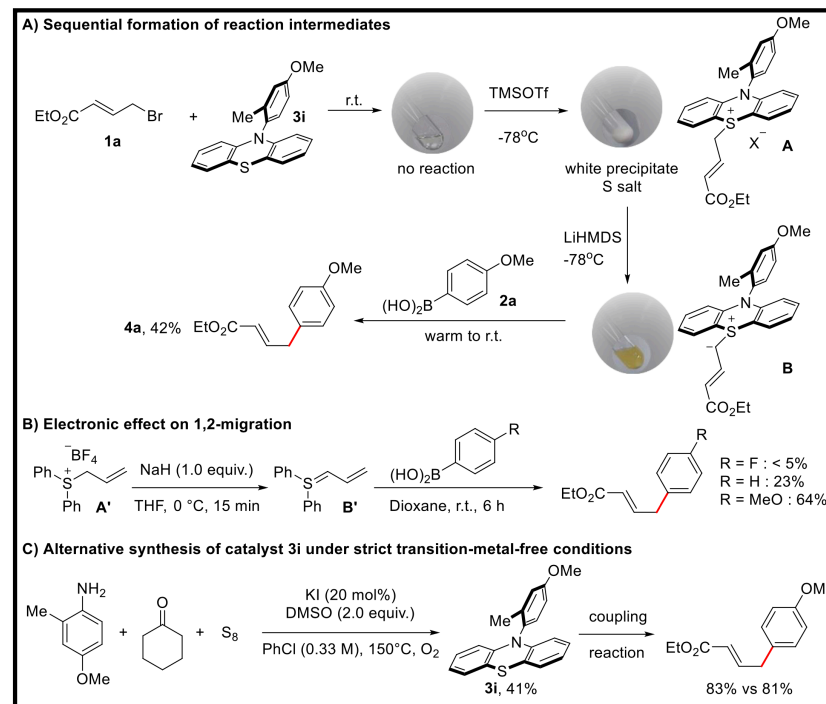


TM catalysis requires limited conditions

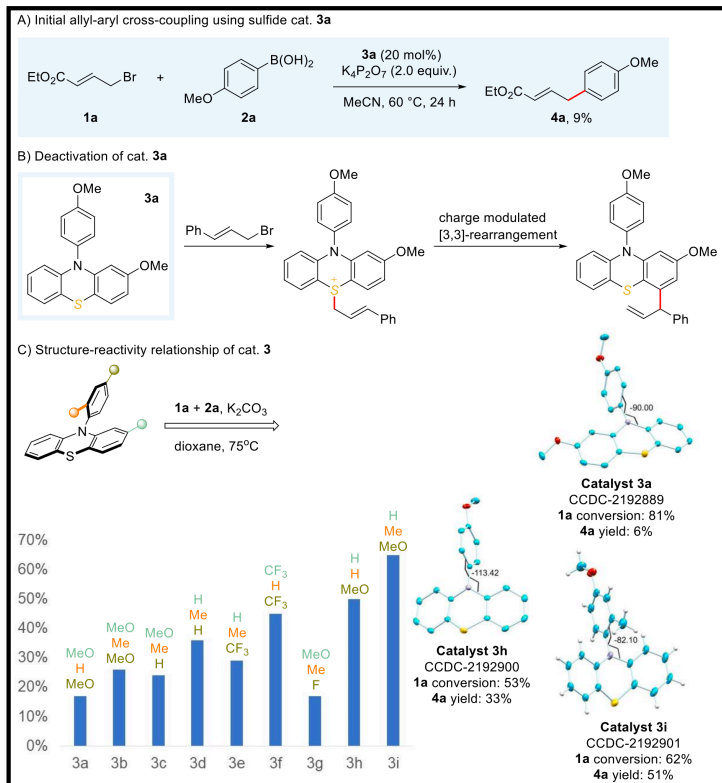
## 3. SUBSTRATE SCOPE



## 4. MECHANISTIC STUDIES



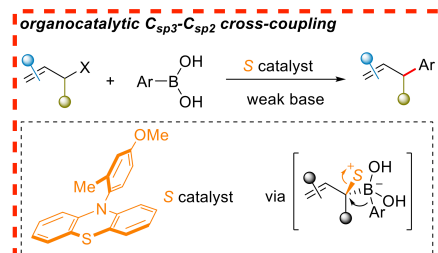
## 2. THIS WORK



Initial attempt used thioether **3a** gave low yield.

Deactivation by charge-accelerated rearrangement of **3a**, resulted species has a high steric hindrance on sulfur center.

Charge optimization of thioether **3** revealed **3i** to be the most efficient catalyst.



A thioether-catalyzed  $C_{sp^2}$ - $C_{sp^3}$  cross-coupling is demonstrated, that performs under milder conditions than those previously reported ones using transition-metal catalysts.

In reaction mechanism, a sulfonium ylide as the key intermediate triggers 1,2-aryl migration to fulfill the transformation.