Tf_2O-mediated Reaction of Alkenyl Sulfoxides with Unprotected Anilines in Flow Microreactors

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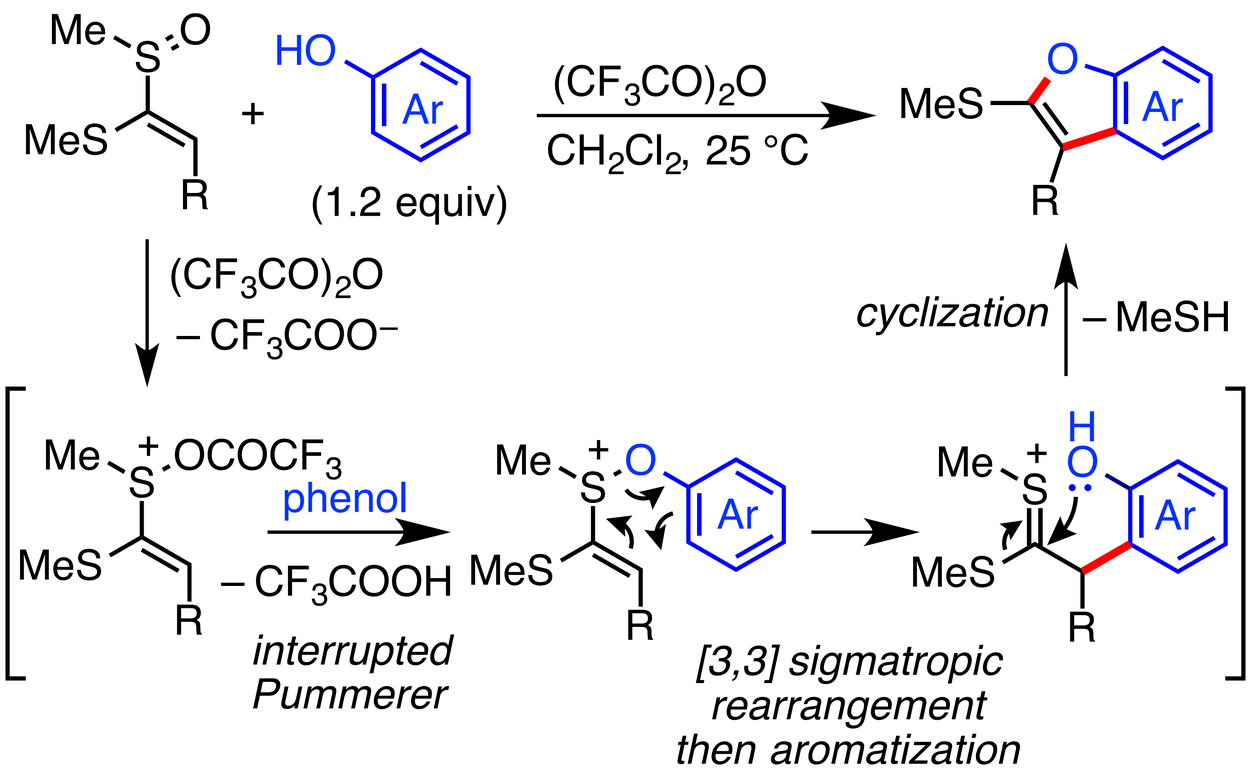
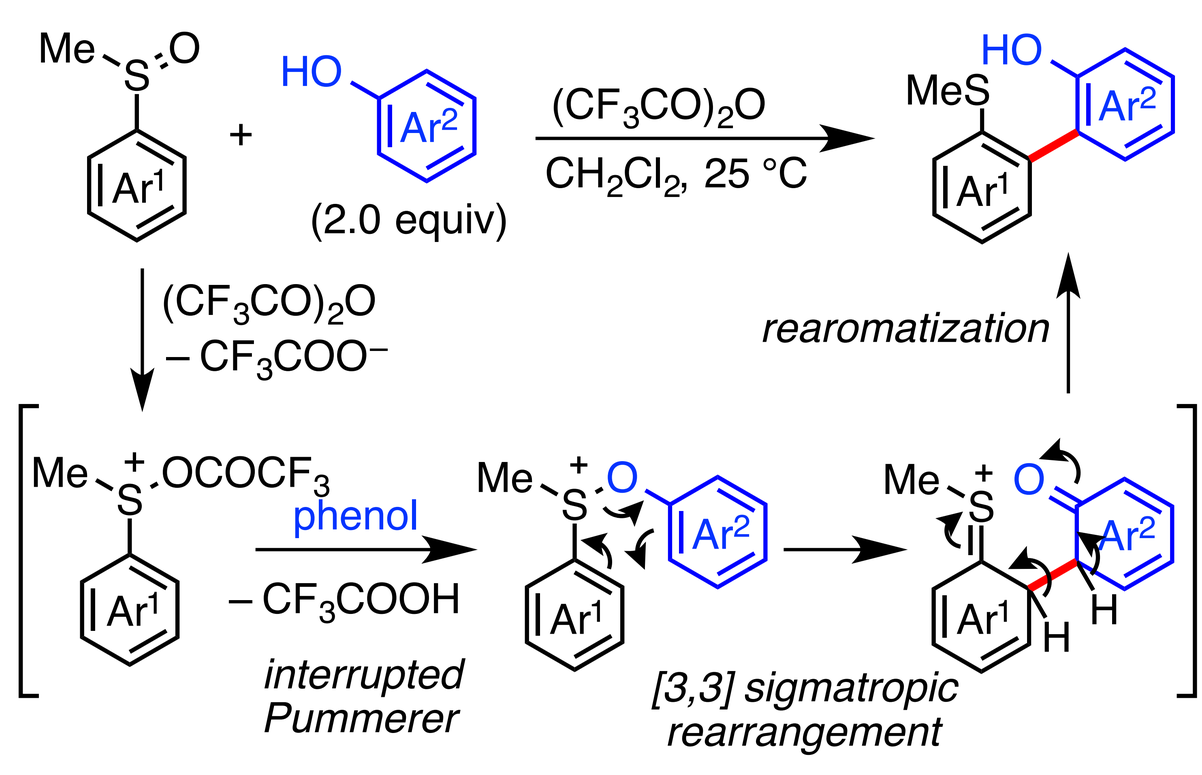
Previous Work: Extended Pummerer Reactions with Phenols

Benzofuran synthesis



JACS, **2010**, *132*, 11838; *CEJ*, **2012**, *18*, 12690; *ACIE*, **2014**, *53*, 7510.

Dehydrogenative cross-coupling



JACS, **2016**, *138*, 14582.

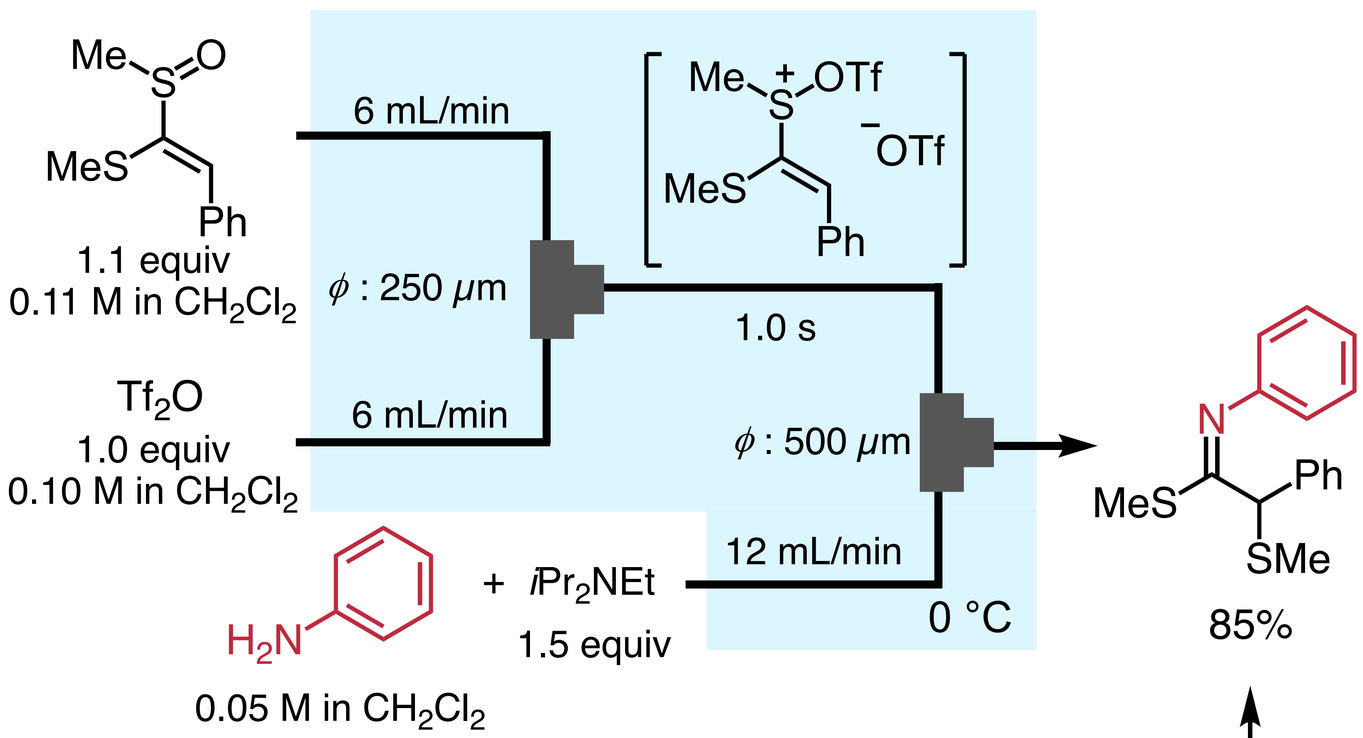
Our Plan **Extended Pummerer Reaction with Anilines**

Problem Anilines react with acid anhydrides directly in a batch reactor

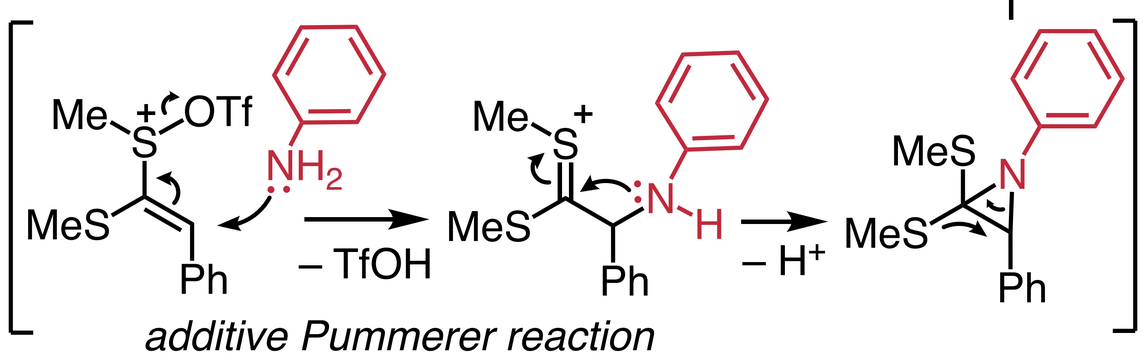
Solution Formation of sulfonium intermediates in a flow microreactor

This Work: Flow Microreactor System for Pummerer Chemistry with Anilines

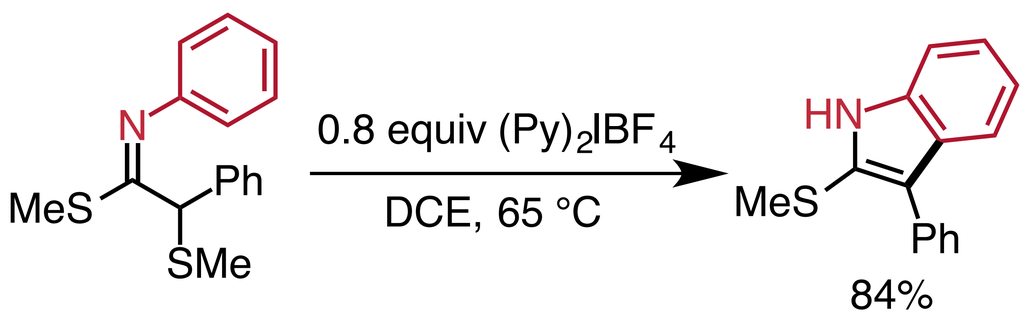
Chem. Lett. **2020**, *49*, 160-163.



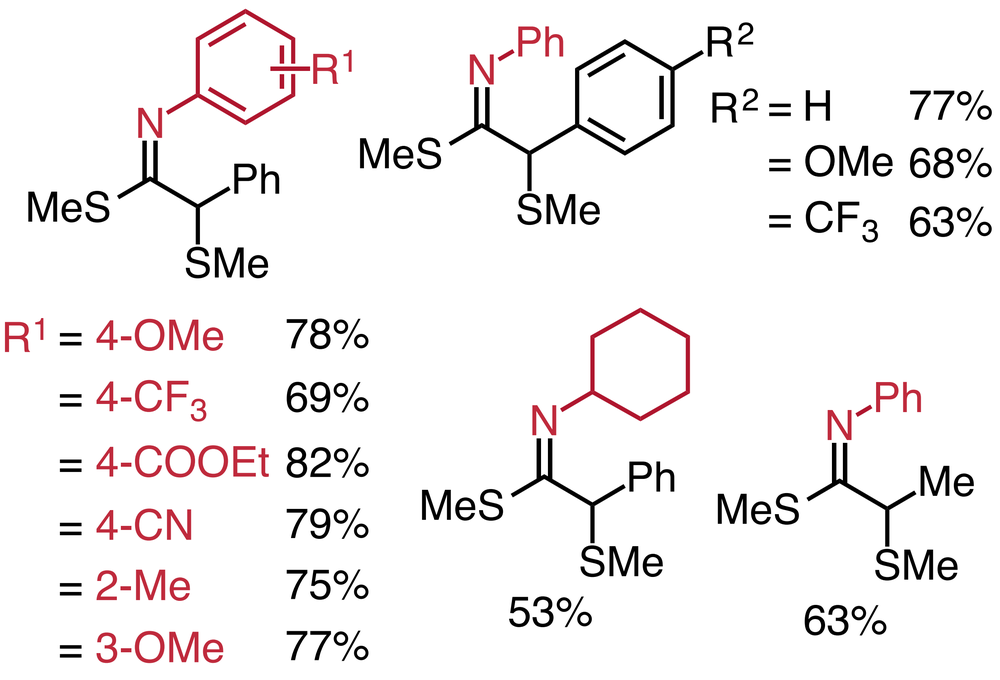
A possible reaction mechanism



Derivatization into indole



Scope of substrates



Temperature-residence time map (for Pummerer activation step)