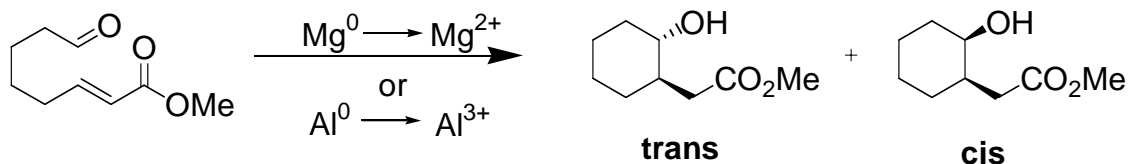
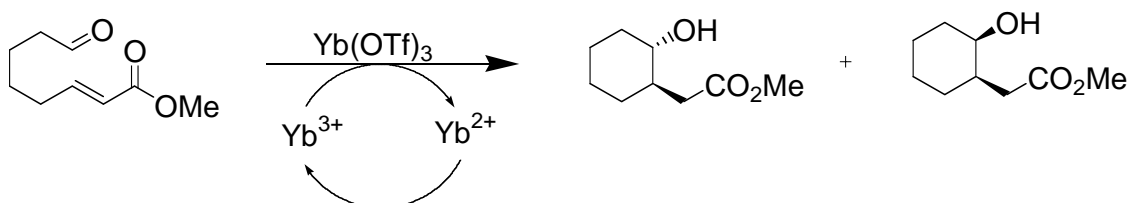


## Jennifer Mallory

My current project focuses on the use of [electrogenerated metal ions to control stereochemistry](#) in electroreductive cyclization (ERC) reactions. Electrogenerated  $\text{Mg}^{2+}$  has been shown to give a trans to cis ratio of 8:1.



We are also hoping to develop a catalytic version of the ERC reaction using  $\text{Yb}(\text{OTf})_3$ :

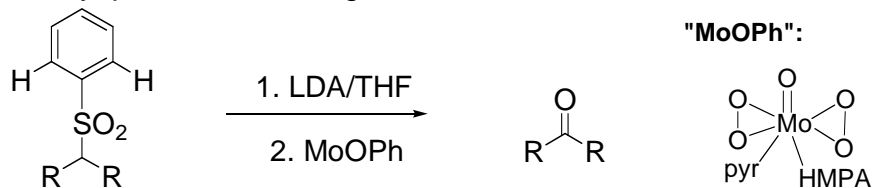


### [Recent Publication:](#)

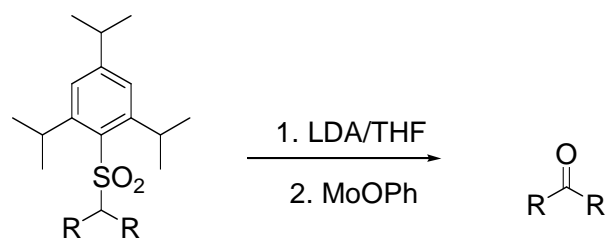
Richard Yee, [Jennifer Mallory](#), J. D. Parrish, Georgia Law Carroll, R. Daniel Little, **The Influence of Electrogenerated Sm(II), Electrogenerated Yb(II), and Magnesium Ions Produced at a Sacrificial Anode, Upon the Diastereoselectivity of Electroreductive Cyclization Reactions**, *Electroanalytical Chemistry* (Special issue in honor of Peter Zuman), in press, 2006.

### [Trisyl sulfone conversion to the carbonyl unit](#)

Previously, it has been found that the carbonyl group can be generated by oxygenation of sulfonyl carbanions.<sup>1</sup> These reactions however, required a ratio of sulfone to LDA to oxidant of 1:6:3. The large amount of LDA required may indicate that the aryl protons are being removed.



One of my current objectives is to use 2,4,6-triisopropylbenzene sulfone to “block” the possibility of proton removal. Hopefully this will minimize the amount of LDA and MoOPh required, possibly even giving a ratio of 1:1:1.



**Reference:**

- 1) R. Daniel Little and Sun Ok Myong. **Oxidative Desulfonation. Phenyl vinyl sulfone as a ketene synthetic equivalent.** *Tet. Lett.* **1980.** 21. 3339-3342.