Joint Group Meeting Problems Naveen Diddi Oct 30, 2014

1. Please propose a suitable mechanism for the following transformation

$$\begin{array}{c|c} \text{MeO} & \text{O} \\ \text{N} \\ \text{O} & \text{N} \\ \end{array} \begin{array}{c} \text{toluene} \\ \text{reflux} \\ \text{30 h, 74\%} \end{array} \left[\begin{array}{c} \text{A} \\ \text{(C}_6 \text{H}_8 \text{O}_2) \end{array} \right] \\ \begin{array}{c} \text{O} \\ \text{OH} \\ \end{array} \begin{array}{c} \text{OMe} \\ \text{CO}_2 \text{Me} \\ \text{OH} \\ \end{array} \right]$$

Hint: Mechanism proceeds via dialkoxycarbene.

2. Please propose a reasonable mechanism for the following transformation