

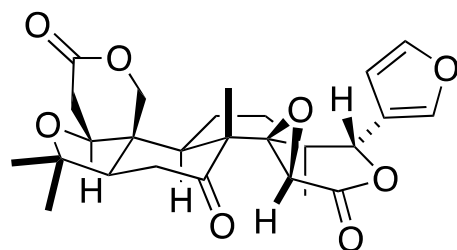
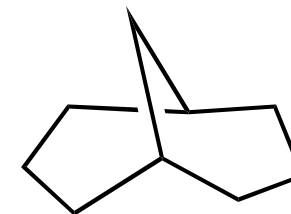
Assembly of the Limonoid
Architecture by a Divergent
Approach: Total Synthesis of
(+/-)-Andirolide N via
(+/-)-8 α -Hydroxycarapin

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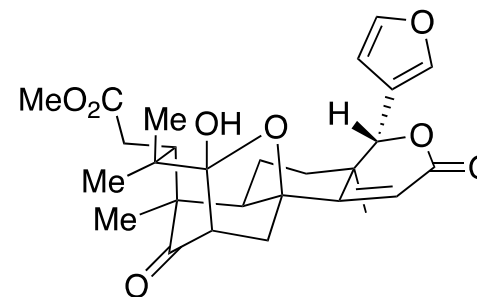
Presented by: Sophia Staerz

Background

- Limonoid tetranortriterpenoid natural product
- Found in flowers of the mahogany tree indigenous to the Amazonian rainforest, *Carapa guianensis*
- Contains a bicyclo[3.3.1]nonane ring
 - Andiolide N contains a bridging tetrahydrofuran ring
- Limonoids have been seen to have numerous biological properties
 - Antimalarial
 - Anticancer treatment
 - Anti-inflammatory activities

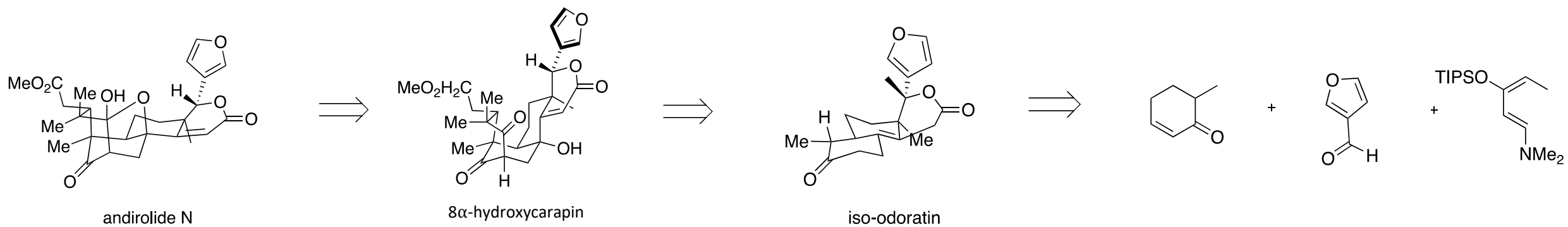


limonin

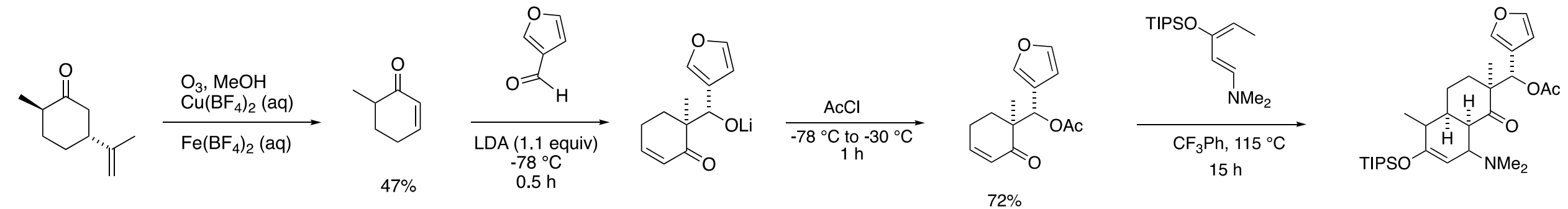


andiolide N

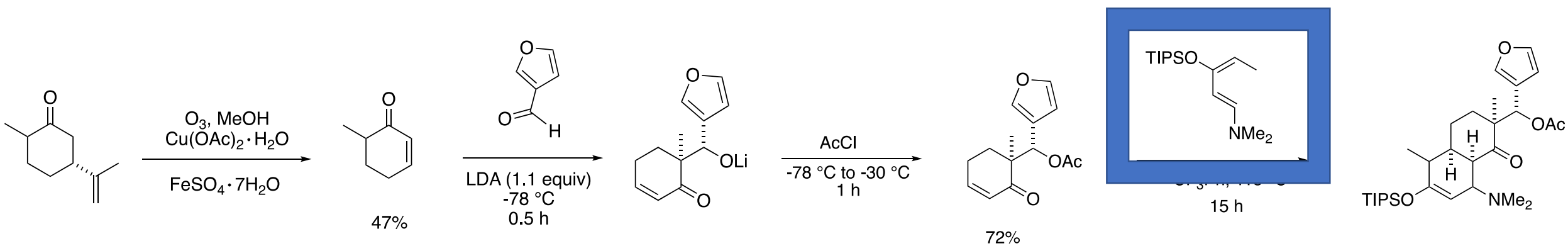
Retro-Synthesis



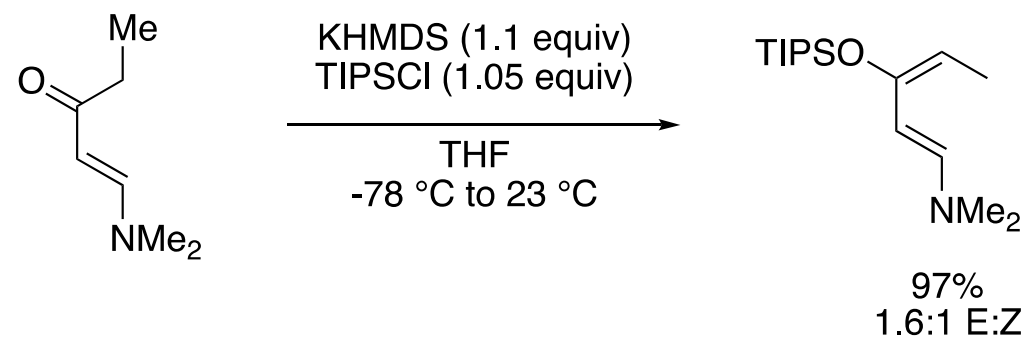
Synthesis of Andiolide N



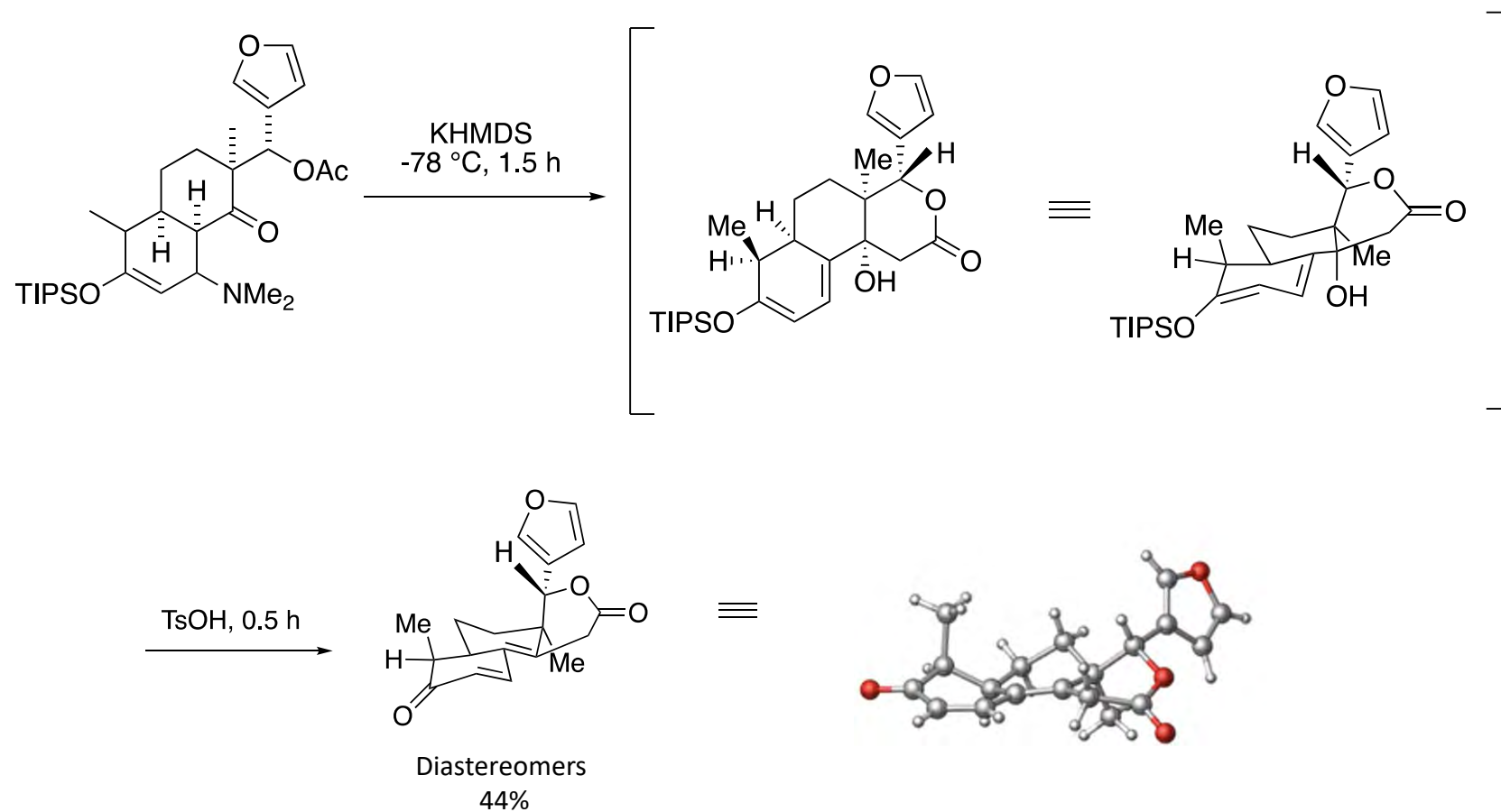
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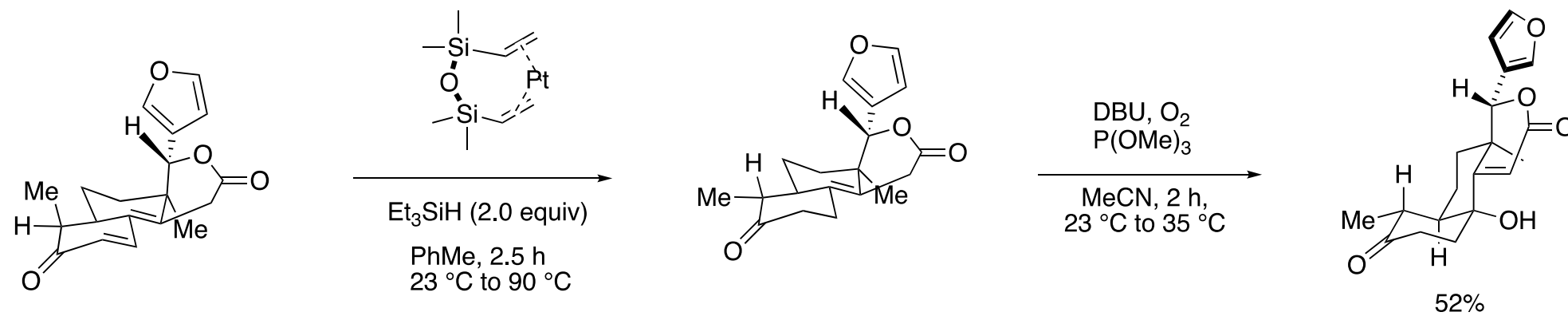
Synthesis of Andiolide N



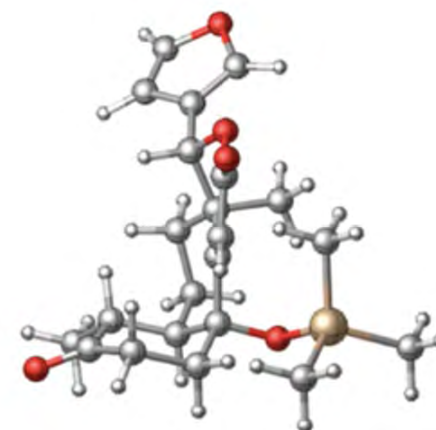
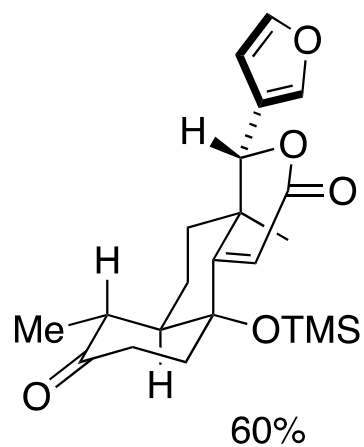
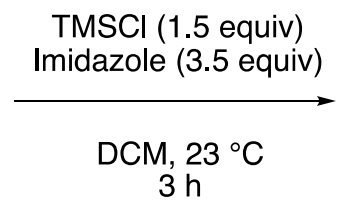
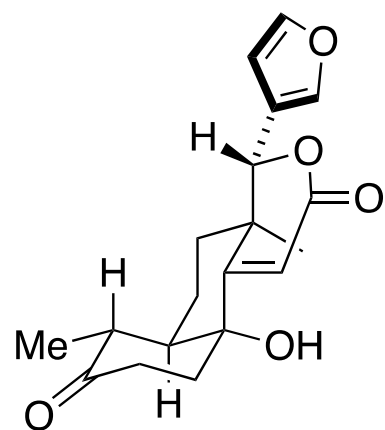
Synthesis of Andiolide N



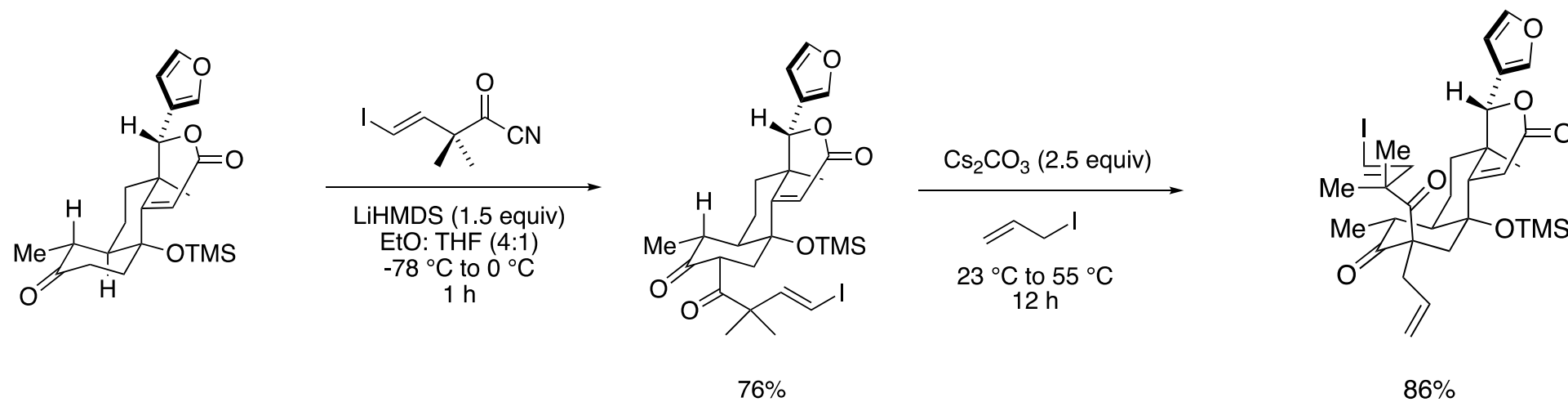
Synthesis of Andiolide N



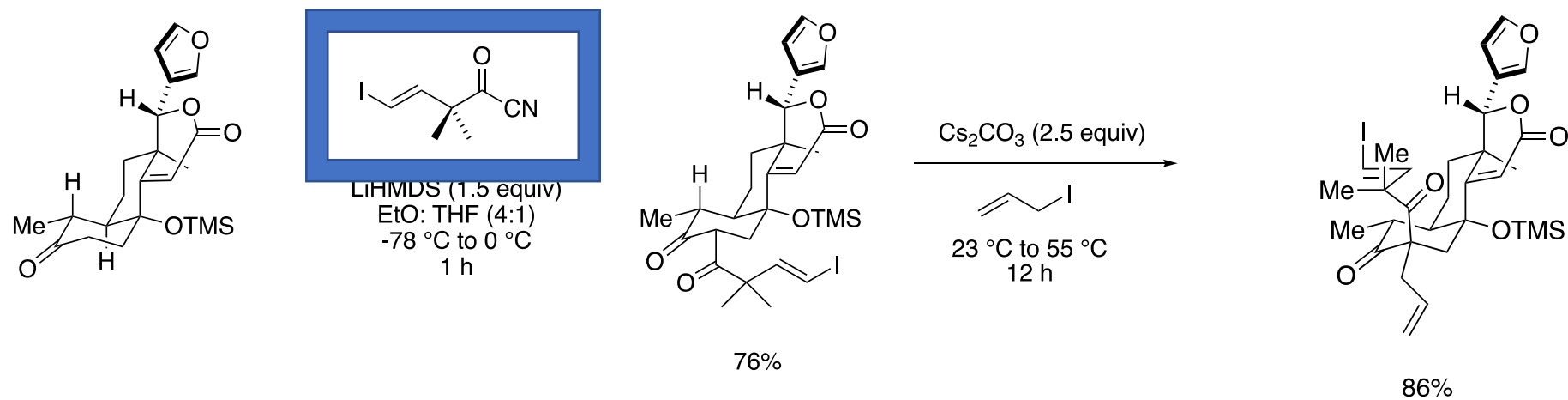
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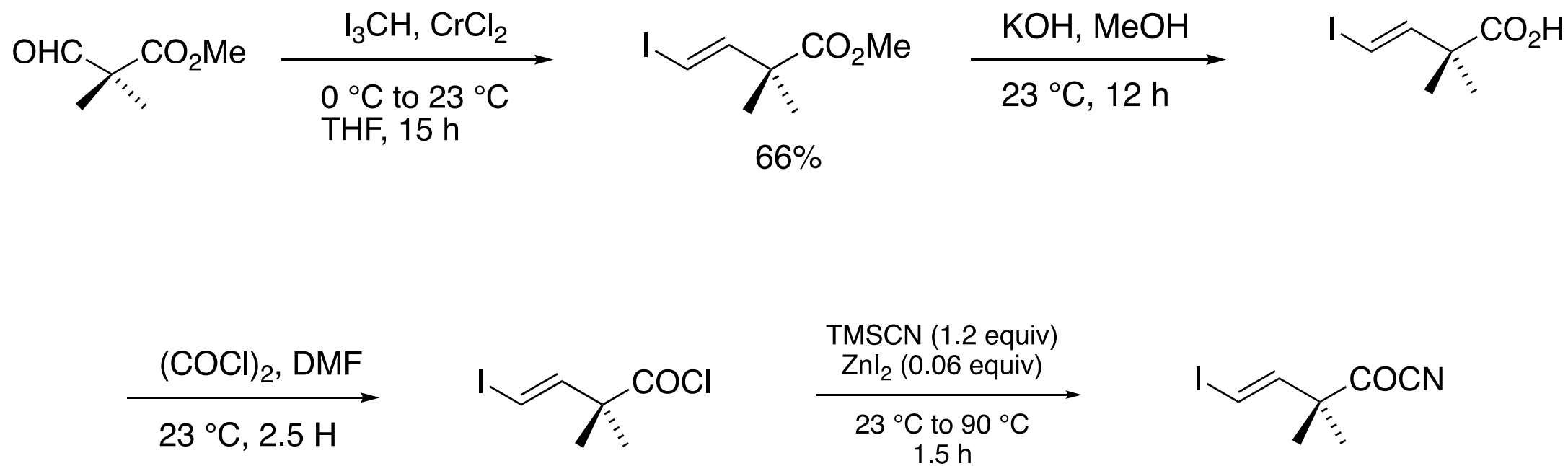
Synthesis of Andiolide N



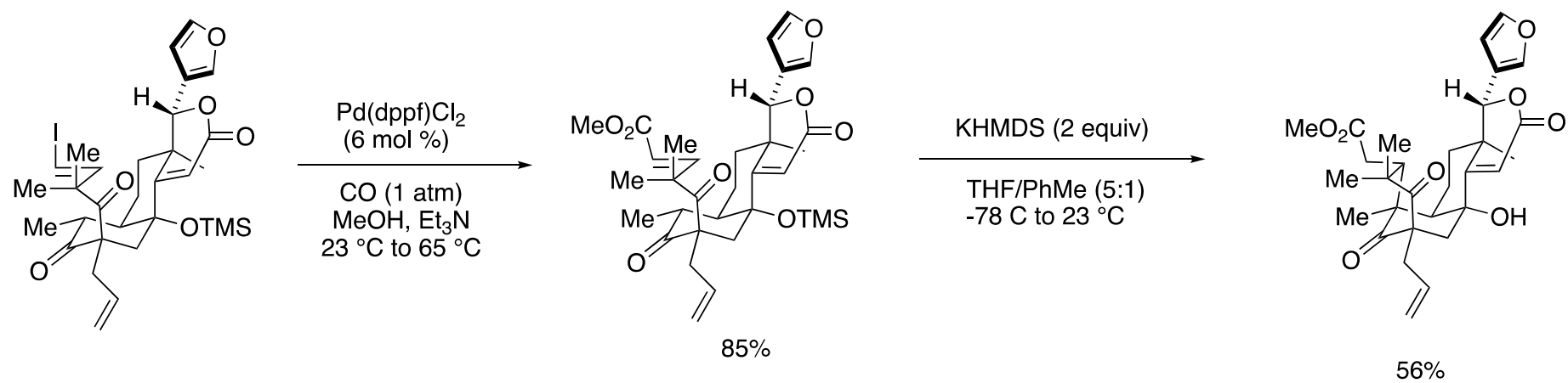
Synthesis of Andiolide N



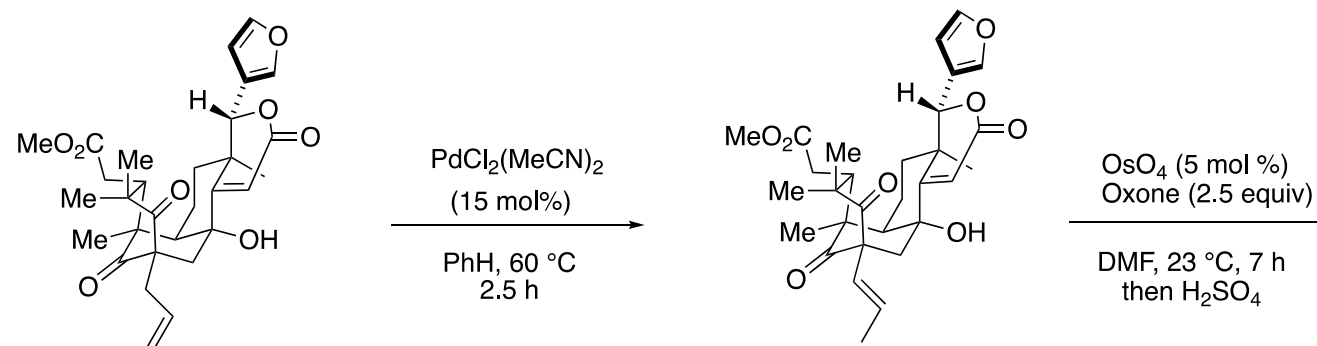
Synthesis of Andiolide N



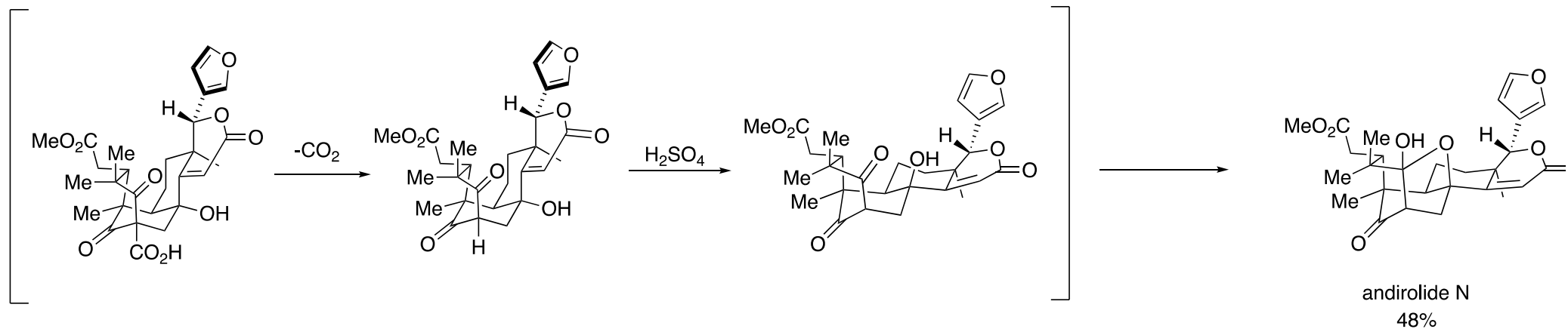
Synthesis of Andiolide N



Synthesis of Andiolide N



80%





Thank You!
Questions?